

Output-Output Correspondence in Optimality Theory

Mark Hale, Concordia University
Madelyn Kissock, Oakland University
Charles Reiss, Concordia University

1. Overview

Output-output correspondence (OOC) constraints, constraints which demand correspondence between independently occurring surface forms, have recently been added to the set of constraint types invoked in much OT work. In this paper we examine some of the better-known arguments originally adduced in support of OOC constraints, and argue that adoption of such a powerful mechanism is not justified, at least in the cases discussed. This paper deals specifically with the following: the incomplete/complete phase distinction of Rotuman, as analyzed by McCarthy (1995); English truncated hypocoristics, as discussed by Benua (1995); and the treatment of Base Identity and Uniform Exponence in Kenstowicz (1994).

Three criticisms are leveled at the OOC-based analyses cited above. First, we find cases of ‘opportunism.’ For example, there is an unprincipled culling of the data and an unprincipled choice of bases in correspondence relations. Second, there is misanalysis, in that clearly significant generalizations are overlooked, technical aspects of the theory are improperly treated and implausible

generalizations are accepted. Third, we believe that the analyses based on OOC lead to problematic predictions, some of which are strongly contraindicated by existing data, and others of which we consider highly suspect.

We offer simple, principled solutions which we hope will contribute to a more constrained theory of phonology — one that perhaps has no place for OOC.

2. Rotuman Phase: McCarthy (1995)

In discussing the distribution of the Rotuman phase distinctions, McCarthy (1995:2) adopts the view of Churchward (1940), though no details are provided: “Rotuman has a contrast in major-category words between two phases, the complete and the incomplete, distributed according to syntactico-semantic principles.” As we will see below, the phases are, instead, PHONOLOGICALLY conditioned. To account for the phonological differences between the (in his view syntactico-semantically conditioned) phases, McCarthy proposes the following constraint:

(1) INC-PH Constraint (McCarthy 1995:11)

Every incomplete-phase stem ends in monosyllabic foot (or heavy syllable).

Align(Stem_{Inc.Ph.}, Right, [σ]_{Foot}, Right) (or Align(Stem_{Inc.Ph.}, Right, σ_{μμ}, Right))

The ranking of this constraint within the larger OT constraint hierarchy, including the familiar types of OT Faithfulness and Well-formedness constraints, accounts for the descriptive observation that “the incomplete phase is identical to the complete phase, except for the fact that the *final foot* of the complete phase is realized as a *monosyllabic foot* in the incomplete phase” (McCarthy 1995:11). This accounts for alternations of the type *tokiri*_{comp} : *tokir*_{inc} (deletion), *seseva*_{comp} : *seseav*_{inc} (metathesis), etc.¹ McCarthy claims that the underlying representations of complete and incomplete phase forms in (2) differ in that the latter contains an additional morpheme which is sensitive to the constraint given in (1).

(2)	Complete Phase Input <i>tokiri</i>	Incomplete Phase Input <i>tokiri</i> + INCPH
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First, we believe that the assumption that there is a ‘syntactico-semantic’ basis for the phase distinctions must be rejected. According to Churchward (1940), the incomplete phase is associated with an ‘indefinite’ interpretation when applied to nouns; in the case of verbs, Churchward proposes an imperfective or non-completive reading for the incomplete phase. In contrast, the complete phase, is to be correlated with ‘definite’ interpretation, ‘positiveness, finality, or emphasis’, or a perfective or completive interpretation for verbs. We are dubious of Churchward’s equation of noun definiteness and verbal aspect, since it is apparently without parallel, but there are more basic reasons to discard the analysis.

A sentence like (3)² shows that even a personal pronoun like *gou* ‘I’, which corre-

1. See Hale and Kissock (1996, 1997) for discussion of a fuller range of data. The limited number of examples in this paper are sufficient to illustrate our points.

2. All examples are taken from Churchward (1940).

sponds to complete phase *goua*, can show phase distinctions. It seems highly unlikely that the first person pronoun could ever be interpreted as indefinite — it is certainly *not* to be so interpreted in (3).³

- (3) *gou la tük iris*
 I_{inc} / FUT / stop_{inc} / them_{inc}
 'I will stop them'

Sentences (4) and (5) further demonstrate the problem of attributing phase alternations to syntactico-semantic principles. The verb *noh(o)* 'live' shows precisely the same aspectual form and interpretation in the two sentences, yet it is in the incomplete phase in (4) and in the complete phase in (5). In fact, *all verbs* are in the complete phase before the anaphoric clitic *e*, regardless of the aspectual interpretation of the verb. Note also that an 'indefinite' interpretation of personal names such as *Titof* and *Rah* is semantically excluded — in spite of their being in the incomplete phase. The corresponding complete phase forms are *Titof* and *Raho*.

- (4) *ma Titof noh ma tupue' te'is 'e Faufano* (II.9)
 and / Titof_{inc} / lived_{inc} / with / tupu'a_{inc} / this_{inc} / at / Faufano
 'and Titof lived with this *tupu'a* at Faufano'
- (5) *ia tä puer se hanue=t ne Rah noho e* (I.3)
 he / TNS / rule_{inc} / over / land=the_{inc} / where / Raho_{inc} / lived_{cmp} / there(in)
 'he ruled over the land in which Raho lived'

In (6) and (7) we provide a partial list⁴ of suffixes and clitics which invariably trigger the complete phase and the incomplete phase, respectively.

- (6) Suffixes and clitics which invariably trigger the complete phase
 -*ga* 'nominalizer': *pu'a* 'to be greedy' *pu'aga* 'greed'
 -*me* 'hither': *ho'a* 'to take' *ho'ame* 'to bring'
 -*a* 'trans. suffix': *hili* 'to choose (intr.)' *hilia* 'to choose s.t. (tr.)'
e 'locative anaphor': *noho* 'to dwell, live' *noho e* 'to dwell therein'
- (7) Suffixes and clitics which invariably trigger the incomplete phase
 -*ia* 'ingressive': *sunu* 'to be hot' *sun'ia* 'to become hot'
 -*äki* 'causative': *tole* 'to carry' *tol'äki* 'to cause to be carried'
 -*kia* 'transitive': *ho'a* 'to take (intr.)' *hoa'kia* 'to take (tr.)'
ta'a 'that': *vaka* 'canoe' *vak ta'a* 'that canoe'

3. The form *iris* is also an incomplete phase pronoun, corresponding (irregularly) to *irisa*.

4. The lists in (6) and (7) represent only a selection of the relevant clitics and suffixes; for a more complete survey see Hale & Kisson (1996, 1997).

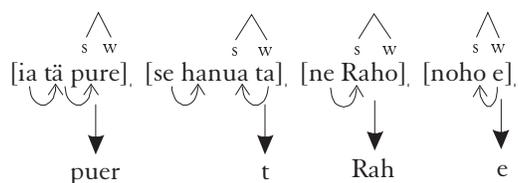
Note that there is no sense in which the *ho'a* of *ho'ame* 'to bring' is a 'definite' version of *ho'a* 'to take,' nor is *sun* of *sun'ia* 'to become hot' an 'indefinite' version of *sunu* 'to be hot.' Equally clearly, the incomplete phase *vak* (from *vaqa* 'canoe') in *vak ta'a* 'that canoe' refers to a 'definite' canoe. A coherent pattern does emerge, however, in that the suffixes and clitics in (6) are all *monosyllabic*, whereas those in (7) are *disyllabic*. It is not our goal to provide here a full OT analysis of the complete/incomplete alternations (deletion, metathesis, etc.). The details of our analysis can be found in Hale & Kissock (1996, 1997). Many aspects of McCarthy's analysis can be preserved in the purely phonologically-based account which we propose. We restrict ourselves here to stating the algorithm which describes where incomplete phase formation occurs within the prosodic domain of the clitic group:

(8a) Phonological Conditions for Clitic Group Incomplete phase

Build RL binary feet within each clitic group. If a vowel is both at the right edge of a foot and a morpheme, that vowel will undergo the effects of Incomplete phase formation.

An example of the application of this algorithm to the sentence in (5) is given in (8b). The arrows indicate directions of enclitics (rightward arrows showing proclisis, leftward arrows showing enclisis). Proclitics do not show phase distinctions.⁵

(8b)



Since the last vowel of *pure*, for example, occurs at the right edge of a morpheme *and* the right edge of a foot, it undergoes incomplete phase effects, as (9) predicts. In this particular case, incomplete phase formation involves metathesis. The next three cases, involving deletion, deletion and no change respectively, are completely regular phonological reflexes of these strings in the relevant, incomplete phase, environments.

McCarthy's description of the correspondence relations among underlying (lexical) form, complete phase surface form and incomplete phase surface form is described in (9) and sketched in (10):

5. Note that the incomplete phase of *noho e* is simply *noho e*. This is its expected form, given the rules for incomplete phase formation. The change of *a* to *e* in *hanue = t* is due to the 'narrow version' formation rule, to be discussed below.

(9) “With respect to its vocalism and its foot structure, the incomplete phase is faithful to the complete phase, rather than the lexical form, strongly supporting the correspondence-based model in (54)”. [McCarthy 1995:47]

(10) McCarthy’s (54) specifies the following correspondence relations:

$$\begin{array}{c} \text{Lexical Specification} \\ \Downarrow \\ \text{Complete Phase Surface} \Rightarrow \text{Incomplete Phase Surface} \end{array}$$

There exists, however, another set of phonologically conditioned alternations affecting Rotuman stems which interacts crucially with phase distinctions and which McCarthy apparently did not consider. This is the so-called ‘broad/narrow’ alternation which involves shifting the vowel *a* to *e* in well-defined phonological environments (see Hale and Kissonck 1996, 1997 for details). In (11) we see that a morpheme like *i’a* actually has four surface variants, depending on phase context and broad/narrow context. The morpheme *puga*, however, has only three variants, due to the phonological makeup of the stem.

(11) The broad/narrow alternation

	complete phase contexts	incomplete phase contexts
broad version contexts	<i>i’a</i> <i>puga</i>	<i>ia’</i> <i>puag</i>
narrow version contexts	<i>i’e-</i> <i>puge-</i>	<i>ie’-</i> <i>puag-</i>

The relevance of the broad/narrow alternation to an output-output analysis becomes apparent when we try to decide which complete phase form should serve as the basis of comparison in correspondence relations for narrow version incomplete phase forms. If we choose the narrow version complete phase form, we get the correct result in the case of *i’e-* and *ie’-*—since “[w]ith respect to its vocalism and its foot structure, the incomplete phase is faithful to the complete phase”; but we get the wrong result in the case of *puge-* and *puag*, since the latter has an *e* but the former has an *a*. If instead we choose the broad version complete phase form as the basis of correspondence, then we get the correct result for *puga/puag*, but not for *i’a/ie’*. This is sketched in (12):

(12) Which ‘Output’ is the base for Narrow Incomplete forms?

Broad Complete		Narrow Incomplete
<i>*i’a</i>	>	<i>ie’-</i>
<i>puga</i>	>	<i>puag-</i>
Narrow Complete		Narrow Incomplete
<i>i’e</i>	>	<i>ie’-</i>
<i>*puge-</i>	>	<i>puag-</i>

We can summarize the discussion so far as follows. The syntactico-semantic basis for the phase distinctions which McCarthy adopts from Churchward is implausible, since no known language expresses the range of meanings which Churchward associates with the incomplete phase through a single morpheme. Furthermore, the existence of a definiteness distinction on personal pronouns is semantically incoherent. In addition, we have demonstrated the phonological conditioning of the phases, making it clear that there is no incomplete phase morpheme, contra McCarthy’s analysis presented in (2) above. Therefore there can be no OOC between the phases since the two phases are *identical* in their underlyingly representation. Finally, even if we wanted to invoke OOC to capture the phase relations, we have no principled method of selecting a base that will also account for the productive broad/narrow alternation. It is the post-lexical prosodic environment which triggers the surface contrast of surface forms like *tokiri/tokir*, both of which have the UR /tokiri/.

3. English Hypocoristics: Benua (1995)

Benua’s discussion of OOC in the generation of truncated names in certain New York and Philadelphia dialects of English also appears to suffer from opportunism, misanalysis and implausible predictions. Benua posits a constraint against word-final sequences of *æ* followed by *r* in these dialects, based on an apparent distributional gap. The sequence in question does occur, but only in hypocoristic forms such as those listed in (13) which are related to forms containing medial *-ær-*.

(13) Posited constraint: **ær#*

Larry	Lar	[ær#]
Harry	Har	[ær#]
Sarah	Sar	[ær#]
		[kar] / *[kær]

This well-formedness constraint is violated in such forms, according to Benua, since it is outranked by constraints demanding correspondence between truncated and non-truncated forms. Note, first of all, that the analysis rests on the assumption that the absence of [ær#] in these dialects of English is the result of a phonological constraint rather than being an accidental gap. The oft-touted property of OT that grammars “repair” *any* input to conform to the surface phonology of the language in question now gives rise to a prediction. If there really is a **ær#* constraint and it is “active” in these dialects, then speakers of these dialects should be unable to pronounce -

æɾ# sequences when learning languages which *do* allow them. We strongly suspect that this is a false prediction.

The truncated names in (14) preserve the vowel quality of their corresponding full form. The full form, which must be lexically listed, serves, in Benua's analysis, as the basis of correspondence for the monosyllabic truncated forms. However, (15) shows that monosyllabic forms are not consistently faithful to the vowel of the full names, nor is the disyllabic hypocoristic consistently faithful to the full form. The absence of *Sarry, however, demonstrates that the truncated form need not be related to a disyllabic hypocoristic.

- | | | | |
|------|-------------------|--------------|---------------|
| (14) | Sarah | Sar | *Sarry |
| | Harold | Har | |
| (15) | Lawrence [lɔrəns] | Larry [læri] | *Lawry [lɔri] |
| | Lawrence [lɔrəns] | Lar [læɾ] | *Lawr [lɔɾ] |

Therefore, there can be no general principle of vowel quality faithfulness in the formation of truncated hypocoristics. Only by opportunistically restricting the data considered does the analysis succeed in capturing attested forms.

Benua's model of OOO in these forms essentially parallels that which McCarthy sketches for Rotuman. The following quotation can be compared to the model described in (9) and (10) above:

- (16) Discussing Larry:Lar, Benua (1995:6) says:
 ...there is no correspondence relation between the input and truncated output form. This predicts that truncated words will never be more faithful to the underlying stem than the base is. That is, there should be no case in which the base shows epenthesis, deletion, coalescence or other lack of faithfulness to the input that is not also observed in the corresponding truncated words.

This prediction is falsified by the forms in (17) which show that the underlying t/d contrast is maintained in truncated forms, but neutralized to flap [D] in the full forms.

- (17) Truncation forms show more faithful consonants
- | | | |
|----------|---------|--------|
| Pe[D]er | Pe[D]ey | Pe[t]e |
| Ju[D]ith | Ju[D]y | Ju[d]e |

In (18) we see that truncated forms may maintain vowel contrasts that are neutralized in full forms:

- (18) Truncation forms show more faithful vowels
- | | |
|------------|--------|
| P[ə]tricia | P[æ]t |
| G[ə]rard | G[ɛ]r |
| L[ə]rraine | L[o]ri |

To conclude this section, we propose that a far more plausible analysis is that truncated hypocoristics are lexicalized. Note that in a great number of common cases this is, in fact, the only possible analysis.

- (19) Nathaniel Nate [note *Nathe, *Nathy]
 Robert Bob
 MargaretPeg
 Edward Ted

In the case of English hypocoristics our command of the data, as native speakers, is clearly much better than in most other cases cited in the literature. Flaws discovered in an OOC analysis of this data, then, should serve as caution signals for cases where the data are much less understood and accessible.

4. Uniform Exponence: Kenstowicz (1994)

Kenstowicz (1994) discusses several types of OOC, including Uniform Exponence and Base-Identity. The Uniform Exponence constraint which Kenstowicz adopts is defined in (20):

- (20) Uniform Exponence: minimize the differences in the realization of a lexical item (morpheme, stem, affix, word).

Uniform Exponence, therefore, appears to be a functionally motivated constraint, the effect of which is to avoid allomorphy.

Kenstowicz invokes this constraint in his analysis of the *honor, hono:ris, hono:rem...* paradigm of Latin. Kenstowicz cites the adjective *honestus* ‘honest’ as providing evidence that this morpheme has in fact an underlying /s/. Crucial to the analysis is the claim that *honestus* is ‘close enough’ to *honor* to provide an acquirer with the critical evidence that, in spite of the invariant realization of the final segment of the nominal stem as [r], it should be taken as the realization of underlying /s/. The form *honestus* must therefore be analyzed by an acquirer as *hones-tu-s*, with the first morpheme being the same as that in *honor, hono:ris, hono:rem...* Note that there is variation in the vowel of the second syllable of this “morpheme” (e/o) as well as the r:s difference. Kenstowicz posits a constraint UE(N), to be interpreted as ‘uniform exponence within the nominal paradigm’. Critically, due to the interpretation of UE(N), *hones-tus* is left out of consideration in evaluating the ‘uniform exponence’ of this morpheme. This clearly represents opportunistic selection of the material considered for comparison. Kenstowicz’s evaluation of UE(N) for this Latin paradigm is given in (21) below where *VsV is the constraint responsible for Latin rhotacism, whereby underlying /s/ surfaces as [r] between vowels.

(21) Tableau for *honor, hono:ris*, etc. (from Kenstowicz 1994:44)

	/hono:s, hono:sis, hono:sem, .../		
	<u>UE(N)</u>	*VsV	Faith-/s/
☞ honor	<u>√</u>	√	***...
hono:r-is			
hono:r-em			
honos	*!	√	**...
hono:r-is			
hono:r-em			
honos	<u>√</u>	*!*...	√
hono:s-is			
hono:s-em			

The UE(N) satisfaction checkmarks for these three paradigms are clearly unjustified, given the *phonemic* differences in vowel length (*o:/o*) within the paradigm. We have used a double underline to highlight the offending marks. In order to remedy this inaccurate evaluation, we provide a new tableau which corrects the evaluation of UE(N) and also expands the candidate set.

(22) Tableau with fuller candidate set and corrected evaluation marks

	/hono:s, hono:sis, hono:sem, .../		
	<u>UE(N)</u>	*VsV	Faith-/s/
☞ hono:r	√	√	***...
hono:r-is			
hono:r-em			
hono:s	√	*!*...	√
hono:s-is			
hono:s-em			
honos	*!	√	**...
hono:r-is			
hono:r-em			
honor	<u>*!</u>	√	***...
hono:r-is			
hono:r-em			
honos	<u>*!</u>	**...	√
hono:s-is			
hono:s-em			

The winning candidate, that which shows uniformity in all aspects (consonant and

vowel quality) is not the attested paradigm in Latin. Note the corrected evaluation marks (with double underlining) of the sets from (21), as well as the fact that the actually attested paradigm (the winner in 21) comes in fourth in (22). The reader should confirm that a constraint banning the sequence $-o:r$ word-finally will not remedy the situation. Instead yet another candidate paradigm will win — one containing no long $o:$'s. Uniform Exponence does not appear to be relevant to the extension of stem-final $-r$ throughout these paradigms. We suggest that *honor* and *honestus* are no longer derivable from a single underlying representation.

5. Synchronic Analogy: Kenstowicz (1994)

In this section we examine two additional phenomena discussed by Kenstowicz (1994) as well as the more general claim of that paper that the use of OOC allows phonological theory to provide an account for the well-attested diachronic phenomenon of 'analogy.' We show that the analyses presented fail to account for the most salient generalization regarding the data under discussion. We also argue that the broader goal of accounting for 'analogy' within the synchronic grammar is misguided.

The standard analysis of Latin *honor*, *hono:ris*, *hono:rem*... is that the relationship of the nominal stem to *honestus* 'honest' is an etymological, rather than synchronic one. That is, whereas the 'stem' of *honestus* and the stem of *hono:rem* do bear some phonological similarity to each other, that similarity is insufficient to prevent an acquirer from positing two distinct morphemes (*hones-* and *hono:r-*). The vowel differences noted above, as well as the fact that the final segment of the stem *honestus* is invariably $-s$, and that of *hono:rem* is invariably $-r$, preclude the establishment of a single UR. Seen diachronically, then, it is clear that the underlying representation of the stem of *hono:r-* has been remade to $/hono:r/$. Similar histories appear to be at work in several of the examples cited by Kenstowicz in support of Uniform Exponence.

In the Korean case sketched in (23),⁶ taken from Kenstowicz, we are confronted by a 'younger generation' Korean grammar which generates an invariant stem $/kap/$ 'price.' Nevertheless, using evidence from *a different grammar* (that of Standard Korean), Kenstowicz posits a stem $/kaps/$. There is *no evidence* that younger generation speakers have anything other than the obvious form $/kap/$ stored — etymology is *not* the process whereby children construct underlying forms. The well-attested historical process of the restructuring of underlying forms has clearly taken place in this example, just as it has in the case of *hono:r-*.

- (23) Standard Korean: kap, kaps-i, kap-k'wa...
 Younger Generation Korean: kap, kap-i, kap-k'wa...
 K's underlying form for both: $/kaps/$

Similarly, in the unidentified Spanish dialect discussed by Kenstowicz (see 24), the data shows that the dialect has invariant $[deh-]$ as the realization of the verbal pre-

6. The Korean case is taken to be due to Base-Identity (rather than Uniform Exponence) by Kenstowicz. Our point regarding the remaking of UR's holds of either analysis.

fix which in other dialects of Spanish has the form /des-/. Note that the [h] of this prefix occurs both in codas (*deh.cal.zar*) and in onsets (*de.he.cho*). Again, the etymological connection between /deh-/ in this dialect and /des-/ in other dialects is irrelevant to the construction of the underlying form by acquirers of the dialect under discussion. The form — now invariably [deh-] — has undergone restructuring of its UR.

- (24) Spanish: des- “de-, un-”
 Dialectal forms of /des-/: deh.cal.zar, de.he.cho, deh- (invariant)
 K’s underlying form *for both*: /des-/

Kenstowicz does not explicitly name the dialect under discussion, but in the Spanish dialects which show *dehecho* known to the authors there are several other morphemes which are also always pronounced with [h], regardless of whether a vowel or consonant follows. These include the plural forms of the article, orthographic *las, los*, which are pronounced [lah], [loh], even in a form like *Lo[h] Angeles*, as well as uninflected forms like *ma[h]* ‘more.’

It is of some value to carefully consider these three cases. What we have found is that in each of them Kenstowicz has selected a poorly-motivated underlying form which differs from the invariant⁷ realization of the morpheme in question and then invoked Uniform Exponence to account for the form of this invariant realization. As Reiss (1997:7) points out:

We must ask whether the more salient linguistically significant generalization is this historical fact, or the fact that the morpheme in question has one, and only one, realization.

As Reiss goes on to point out, the matter has been addressed recently on the OT discussion list by Prince:

A correspondent to this list wonders why, in a grammar G such that $G(a)=G(b)$ for potential input elements /a/,/b/, a nonalternating observed element [a] is not (sometimes, always, freely) lexically /b/.

The correct answer is surely ‘why bother?’ — i.e. to set up /b/ for [a] when /a/ will do. This line of approach was taken up by Stampe in the late 60’s- early 70’s, (and independently noted by Dell in his text of roughly the same vintage). Hence the term ‘Stampean occultation’ — the possibility of /b/ for [a] is *hidden* by the possibility of /a/. The basic idea reappears as ‘lexicon optimization’ in recent discussions.

Prince (Nov 1996, OT electronic discussion)

We concur.

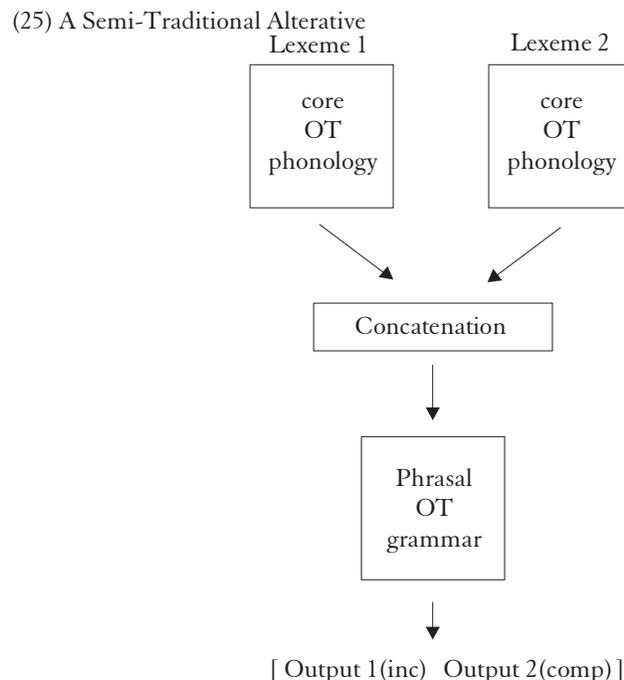
Kenstowicz (1994) also makes much of the comparison of OOO with the pho-

7. We leave temporarily to one side the issue of the Latin vowel length, as Kenstowicz apparently did.

nemonon known as ‘analogy’ in traditional historical linguistics. We find the attempt to relate these phenomena to be fundamentally misguided for a variety of reasons, including a failure to appropriately distinguish diachrony from synchrony (see Reiss 1997 for fuller discussion). Here we will merely point out that analogy is typically described in terms of two categories: intraparadigm leveling (a diachronic process which reduces allomorphy in paradigms) and interparadigm leveling (whereby morphologically unrelated forms appear to influence each other). An example of the former is the history of *reach/raught* > *reach/reached*; an example of the latter is the pronunciation by some speakers of a voicing alternation in forms such as singular *my*[θ], plural *my*[ðz] (as against the historically prior *my*[θ], *my*[θs]), parallel to singular *ba*[θ], plural *ba*[ðz]. Even if OOC were able to account for intraparadigm leveling effects such as Uniform Exponence, it would clearly be irrelevant to leveling between morphologically unrelated forms. The existence of a unified account of both types of leveling, namely lexical restructuring, makes an OOC-based account of one type unnecessary and undesirable.

6. Discussion and Conclusions

As stated above, we hope to make a positive contribution in this paper, besides merely pointing out flaws in attempts to analyse some very difficult data. Given the phonological conditioning of the Rotuman phase alternations, and given the fact that McCarthy acknowledges the *serial* nature of Rotuman derivations involving output-output correspondence, it may be justified to adopt a fairly conservative approach to Rotuman. By keeping a form of serialism, but doing away with output-output correspondence, we can capture pre-OT generalizations about the phonology of specific post-lexical prosodic domains (e.g., the clitic group in Rotuman). We sketch a model of such a grammar (or, to be more precise, pairing of optimality-theoretic phonological grammars) in (25).



It is obvious that we cannot prove that OOC is never justified. It is also obvious that we cannot provide here alternative analyses for all the cases of OOC discussed in the literature. However, a device as powerful as OOC should only be adopted as a last resort.

In the conclusion to a later paper (Kenstowicz 1995:433), Kenstowicz raises some fundamental questions regarding the use of OOC. “Can [OOC] be restricted to situations in which one structure is a substring of the other? Or should we allow identity constraints to hold among a family of related words, e.g. to get the effects of paradigm levelling?” Kenstowicz goes on to note the vagueness of terms like ‘family of related words’ and ‘isolation form’. Clearly, these terms need to be defined in order to select a base against which identity can be evaluated. As far as we can tell, these fundamental questions have yet to receive a satisfactory solution in the literature. The failings of the specific cases of OOC which we have discussed, those of McCarthy, Benua and Kenstowicz, are related to the absence of clear guiding principles concerning these fundamental questions. If phonological theory wishes to be constrained by standards of explicitness and rigor, OOC should be eschewed until these fundamental questions receive a more satisfactory treatment.

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