

## Much ado about nothing? English *r* and phonological opacity

Martin Krämer

Universitetet i Tromsø / CASTL

The phenomenon of English *r*-deletion and insertion played a central role in a debate between rule-based phonology and constraint-based phonology (McCarthy 1993, Halle and Idsardi 1997, Orgun 2001). In particular, it was argued by Halle and Idsardi that *r*-deletion interacts with schwa epenthesis in an opaque way that cannot be handled in Optimality Theory. This view was challenged in an OT account exploring Sympathy Theory (Orgun 2001). In this paper, I argue that the interaction between schwa and *r* can be analysed much more straightforwardly in OT without reference to phonological opacity or Sympathy, building on proposals by Kamińska (1995), Ortmann (1998), Gick (1999). With this analysis, which understands the crucial patterns as *r*-weakening and low glide formation, respectively, this argument on opacity vanishes.

Massachusetts English, like most non-rhotic varieties of English, has no *r* in preconsonantal and in phrase-final position (1a and 1b, respectively). However, *r* occurs where it is present in the orthography in intervocalic position (1e). This results in an alternation which is generally referred to as linking-*r* (compare 1d and e). Intrusive *r* is an overgeneralisation of the same phenomenon in that *r* is inserted in intervocalic position after a nonhigh vowel also in cases where no *r* was present historically (1f and g; h and i).

- |     |    |          |         |    |          |            |    |           |           |
|-----|----|----------|---------|----|----------|------------|----|-----------|-----------|
| (1) | a. | [kɜ:l]   | 'curl'  | d. | [klɪə]   | 'clear'    | g. | [sɔ:ɪŋ]   | 'sawing'  |
|     | b. | [kɑ:]    | 'car'   | e. | [klɪəɪŋ] | 'clearing' | h. | [aɪdɪə]   | 'idea'    |
|     | c. | [kɜ:lɪj] | 'curly' | f. | [sɔ:]    | 'saw'      | i. | [aɪdɪəɪz] | 'idea is' |

The processes of *r*-deletion and insertion interact with schwa epenthesis. In an *r*-deletion account, as assumed by Halle and Idsardi, and by Orgun, the occurrence of schwa in this context is linked to the occurrence of schwa before *l*, as in [kuəl] 'cool'. Hence, schwa has to be inserted in (1d) before the deletion of *r* in a rule based approach, because the *r* provides the environment triggering the schwa insertion rule. In OT terms, the surface form stands in a correspondence relation with a failed candidate containing the *r*. In *r* weakening accounts, this kind of opacity disappears: Underlying /r/ is weakened to schwa and surface *r* is analysed as a glide inserted in certain positions similar to the high glides *j* and *w* in the context of high vowels (as in [sij] 'see' and [tʃuw] 'chew'). The only difference between the high glides and the low glide is that the latter is not allowed in the coda. However, in OT, we still have to wonder why the *r* is not directly syllabified in onset position in forms such as [klɪəɪŋ], avoiding the seemingly unnecessary schwa (-isation or insertion).

In this paper, I give an OT analysis of *r* weakening and account for the schwa-*r* pattern in terms of Output-Output Correspondence (McCarthy & Prince 1995, Benua 1995, and others). The forms with intrusive or linking *r* have to be faithful to the morphologically simpler or isolated surface form (rather than a failed candidate). The *r*'s in the forms (1e) and (1i) emerge from the same source: glide formation by extension of the features of the preceding low vowel. In addition, this analysis avoids the stipulation that *r* is the unmarked consonant of English or any other ad hoc mechanism to determine *r* as the epenthetic consonant. The assumption that *r* is a glide in these contexts is also supported by an observation mentioned by McCarthy in passing, the phonetic difference between *r* in the above contexts and non-postvocalic *r*: the former has much more vocalic energy at all frequencies than the latter.

Example tableaux

(2) *r* weakening

		MAX OO	IDENT OO	CODA COND	ONSET	MAX IO	IDENT IO
a.	/klɪr/ ~ [klɪr]			*!			
b.	/klɪr/ ~ [klɪ]					*!	
c.	/k <sub>1</sub> l <sub>2</sub> ɪ <sub>3</sub> r <sub>4</sub> / ~ [k <sub>1</sub> l <sub>2</sub> ɪ <sub>3</sub> ə <sub>5</sub> ]					*!	
☞ d.	/k <sub>1</sub> l <sub>2</sub> ɪ <sub>3</sub> r <sub>4</sub> / ~ [k <sub>1</sub> l <sub>2</sub> ɪ <sub>3</sub> ə <sub>4</sub> ]						*

(3) Linking *r*

		MAX OO	IDENT OO	CODA COND	ONSET	MAX IO	DEP OO
a.	/klɪr+ɪŋ/ ~ [klɪrɪŋ]		*!				
b.	/klɪr+ɪŋ/ ~ [klɪjɪŋ]		*!				
c.	/klɪr+ɪŋ/ ~ [klɪŋ]	*!			*	*	
d.	/klɪr+ɪŋ/ ~ [klɪəŋ]				*!		
☞ e.	/klɪr+ɪŋ/ ~ [klɪəɪŋ]						*
	Base: [klɪə](2d)						

(4) Choosing intrusive *r* over less marked options

		MAX OO	IDENT OO	CODA COND	ONSET	SPECIFY	*MC
a.	/aɪdɪə ɪz/ ~ [aɪdɪə ɪz]				*!		
b.	/aɪdɪə ɪz/ ~ [aɪdɪəʔɪz]					*!	
☞ c.	/aɪdɪə ɪz/ ~ [aɪdɪərɪz]						*

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