

**PROBLEM BOOK IN PHONOLOGY:**

**A Workbook for Introductory Courses  
in Linguistics and in Modern Phonology**

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## Rule Ordering in Klamath

In the "Morphophonemics" chapter of his *Klamath Grammar*, Barker lists a number of rules that account for the phonetic shape of Klamath words. Among them are (A)—(E):

**Note.** The change of [y] to [i] in the form given in B is accounted for by a separate rule not at issue here.

A.  $nl \rightarrow ll$   
/honli:na/ → holli:na                    'flies along the bank'

B.  $nl \rightarrow lh$   
/honly/ → holhi                         'flies into'

C.  $nl' \rightarrow l'$   
/honl'a:l'a/ → hol'a:l'a                 'flies into the fire'

D.  $ll \rightarrow lh$   
/pa:lla/ → pa:lha                       'dries on'

E.  $ll' \rightarrow l'$   
/yalyall'i/ → yalyal'i                    'clear'

In his grammar, Barker makes the following assumptions:

Phonological rules are unordered. All rules apply simultaneously to underlying representations to derive surface representations.

Show how Barker's set of rules can be simplified by abandoning these assumptions and assuming that phonological rules apply in order, each rule applying to the output of the preceding rule in the list of ordered rules. Write the rules sufficient to describe the above data, and state the order in which they apply.