NO MORE SCHWA FOR YAVAPAI

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My previous approaches to the complex problem of the inorganic vowel, the epenthetic vowel, schwa, or whatever other name the phenomenon has in the literature, have led to ad hoc and counterintuitive conclusions.

A vowel is introduced between consonants; the vowel is schwa. After it has been inserted, it may be deleted. The deletion may be obligatory or optional depending on the position of schwa with respect to the stressed vowel(s) in the word. If it remains, it is modified to assume the approximate quality of one of the five vowels. The quality and quantity of schwa is dependent on its environment.

The three processes, (1) schwa insertion, (2) schwa deletion, and (3) schwa modification, require at least three rules (usually many more). The resulting rules and their subparts tell us much about the properties of phonological rules but very little about Yavapai phonology: a vowel is inserted and then may be deleted before it attains acoustic reality; it leaves no trace of its supposed existence. If allowed to remain, the schwa may be modified and then appear on the surface as another vowel, leaving again no trace of its former identity. These are the reasons that previous approaches were both ad hoc and counterintuitive.

The reasons for this Yumanist's inability to formulate the phenomenon more precisely are manifold. Theoretical orientation played a large role at an earlier date: autonomous phonemics could not account for this aspect of the vocalism phonemically. Generative phonology allows a 'legal,' but for reasons stated above, an unsatisfactory explanation of the data.

I have failed to account for the phenomenon satisfactorily because I have not attempted to answer a question which is itself an answer to a question, which I might have asked, but surely answered incorrectly.

The first question is: What is the reason for or purpose of the phenomenon? The answer comes in two parts: (1) some of the reduced vowels were at one time full, stressed vowels but have now been reduced to a degree where we can no longer recognize them as such; and (2) the remaining problematic 'vowels' are inorganic, appearing between consonantal segments to ease the articulation of otherwise difficult clusters.

The first answer is correct. There is evidence that some of the
vowels under discussion were at one time full vowels; for example, the
derivational prefixes /sl-/ and /m-/ which figure in the names of body
parts, clearly seem to be related to /sal/ 'arm; hand' and /mi/
'foot.' There are many similar examples. Again, however, we have not
been rigorous enough. The first answer is only partially correct. It
does not actually answer the first question. It answers the question:
For what reason are the vowels there? This is a perfectly worthy
question and must be asked at some point in the analysis; however, it
is not a paraphrase of the original question: What is the reason for or
purpose of the phenomenon?

The second answer is also only partially correct. It is correct
in answering that the phenomenon has something to do with consonant
clusters and ease of articulation, but it, too, fails, and for the same
reason the first answer fails. Both answers can never succeed. They
contain the "instruments of their own destruction," as it were. A lack
of understanding of the linguistic processes involved here are implicit
in the formulation of both answers. It has not correctly identified
'the phenomenon.'

It is not a matter of vowels being inserted. By insisting on a
strict vowel-consonant dichotomy, one will always fail to capture the
phonological reality. There is a far more important dichotomy: syllabic
vs. non-syllabic.

Vowels are not inserted between consonants; it is syllabicity.
Each Yavapai consonant must have a syllabic representation, although it
may share its place in a syllable with another consonant. To achieve
syllabic the consonant "scans" the next segment. If the segment is
syllabic, the consonant has achieved syllabicity; nothing further
occurs. If the segment which the consonant is scanning in order to
achieve syllabic is not syllabic but capable of sustaining a syllabic
peak; i.e., all [+syllabic] segments (/ɛ, β, θ, s, ś, m, n, r, l, r, l', h, h', r, y, w/); that segment to the right is copied immediately to
the left and becomes syllabic. The [+syllabic] segment is now a
geminate consonant.

Example sets:

1. #?+čf#:  'fish'
    #?čč#:  
2. #k+βt#:  'which is large'
    #kβt#:  
3. #?+θf#:  'I drink (it)'
    #θf#:  
4. #?sft+#  '(is) one'
    #ssft#:  
5. #mšö#  'one fears'
    #mššö#  

130
(6) "má:l+1# 'is' foamy'
    "mmá:l# '
(7) "t+ña+k+β+l# 'one rolls (as a hill)'
    "tnña+kβl#

The rule proposed for gemination applies only optionally to the second [+syllabic] segment in (7) since /k/ has in effect achieved a syllabic prominence from the stressed vowel.

(8) "hñaq+a# 'beaver'
    "hñnaq#
(9) "h1l# 'moon'
    "h1l#
(10) "rú·+i# 'it is hot'
    "rrú·i#
(11) "q1v+o+p+l# 'it is disliked'
    "qi1Y$p1#

The preceding examples demonstrate the operation of the gemination rule on all the [+syllabic] segments but the glides. The effect of the rule on /y/ and /w/ is obvious: they are realized as /i/ and /u/, respectively.

(12) "+yå# 'my mouth'
    "+yå#
(13) "+wå# 'I sit'
    "+uwå#

One might propose an intermediate step in the derivation showing a syllabic y or w: i.e. /y/ and /w/. This would be gratuitous.

/y/ and /w/ and the role they play are notable only in that they hint at the emergence of a very interesting interplay in the phonology between the vowels and the glides in general.

At the First Conference on Hokan Languages (University of California at San Diego, 1970), I mentioned parenthetically in a paper that the only source of pretonic-a in Yavapai was /h/ or /h'/. The general discussion concerned the fact that /h/ plays a role in Yavapai phonology. It devoices nasals, liquids, and the fricative /β/ when it immediately precedes these; it preaspirates stops and the affricate; and it aspirates stops and the fricative /ζ/ if metathesis with them has occurred. After affecting the consonants in these ways, /h/, especially in rapid speech, is deleted. One of the arguments supporting these statements was the fact that the realization of /h/ or /h'/ pretonically was /a/. (For a more detailed discussion, see Shaterian, "Yavapai [+sonorant] Segments," in press).

Examples:
(14) #?+há:m+i#  
    #?ahí:m#  
    'I am looking away'

(15) #?+m+hwf#  
    #?mahw#  
    'smell it (imperative sg.)'

The roots in (14) and (15) are /há:m/ and /hwf/. /?-/ and /m-/ are personal prefixes, first and second respectively. For the purposes of exposition the proposal of an intermediate step in these derivations is not gratuitous. Applying the gemination rule to the lexical entries in (14) and (15), one derives:

#?hhá:m#  
#?hhw#  

The realization of /h/ as /a/ is as natural as the realizations of /y/ as /i/ and of /w/ as /u/, a compelling reason for treating /h/ together with /hw/ as glides.

The ineluctable questions posed by the foregoing evidence which clearly demonstrates the interplay between vowels and glides is: What can be said of the one remaining glide, /?/? Does it also alternate at some level with one of the vowels? What is its syllabic or vocalic realization? What is /?/?

The answers to the questions are at first somewhat confusing and disappointing. /?/ is not the realization of either remaining vowel, /e/ or /o/. One must remember, though, that /e/ and /o/ alternate with /ay/ and /aw/ in many lexical items. Therefore, it is not surprising that the syllabic realization of /?/ is neither /e/ or /o/. Indeed, it would upset the symmetry thus far established:

i - y  
|   
|   
|   
u - w  

a - h

It would also leave one vowel without a nonsyllabic alternate.

Consider the following derivations which include the intermediate /?/ step:

(16) #?+h?w#:  
    #?h??w#:  
    'wood'
(17) #?é#
    #??é#
    #?e?é#

(18) #?+é•#
    #??é•#
    #?e?é•#

(19) #?+é#
    #??é#
    #?e?é#

(20) #?+ô#
    #??ô#
    #?o?ô#

(21) #?+ú•#
    #??ú•#
    #?u?ú•#

The example sets (16) through (21) show that /?/ is realized vocalically as all five vowels; in this simplex environment, the vocalic realization of /?/ is the vowel of the stressed syllable.

More data need to be presented, however; later phonological rules alter the quality of the unstressed vowels in the examples given. The step in the derivation where (17) through (21) stop represents an idealized, very deliberate pronunciation of the forms. The more usual phonetic output would show the unstressed vowels somewhat lowered and centralized and devoiced. In rapid speech the centralization moves along a continuum toward the optimal neutral vowel [e], the 'essence' of neutral phonation. In very rapid speech, preto, the [a] may be elided completely, a cessation of phonation. One needs hardly to be reminded that /?/ is the onset of phonation.

The answer to the questions is accordingly that there is an interplay between all the vowels and the glides and that there is perfect symmetry throughout. The syllabic realization of /?/ is the 'essence' of vocalicity, both [a] and its modifications proceeding along a continuum to the five systemic phonemic vowels:

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/ɪ/   /u/   
\ a \   \ /   
/ e/   / o/   
\ /a/   
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PREFACE

The study and analysis of Yuman languages in the last decade have drawn many researchers into a field where previously there had been only a half-dozen active workers. Much of the credit for encouraging the study of these languages must go to Margaret Langdon. Her efforts in finding funding for the Yuman Archives and two conferences on Hokan and Yuman languages have spurred many researchers to put forth determined efforts to describe these languages while speakers who really control these languages are still available for consultation. These conferences have been especially fruitful in permitting face-to-face study and discussion of mutual problems, and many insights into the analysis of Yuman languages have resulted from these discussions. All of us in the study of Hokan and Yuman languages are especially grateful to her for all she has done for the study of these languages.

Unfortunately, everyone who presented a paper at the First Yuman Languages Workshop was not able to prepare a final version for inclusion in this volume before it went to press. All the papers in this volume were presented in an earlier version at the Yuman workshop except the one by Yamamoto, who was unable to attend the workshop.

The papers are presented according to the groups of languages presented at the Yuman workshop. Since there were some last minute changes in the program, I must plead faulty memory if I inadvertently placed some papers in an order different from that of the workshop presentation.

James E. Redden
Carbondale, March 1976
INTRODUCTION

The papers in this volume represent revised versions of presentations made at the First Workshop on Yuman Languages held on the campus of the University of California, San Diego, June 17-21, 1975. The specific aim of the Workshop was to allow for close interaction between all linguists interested in the structure of Yuman languages and exchange of data. The focus was on the area of syntax, where the least amount of published information had previously been available, with emphasis more on the discussion of interesting problems than on theoretical agreement. New data were presented for all Yuman languages still spoken. The decision to make the results of the Workshop more generally available was unanimously supported by the participants. This volume then is offered in the hope that the syntactic patterns illustrated and described will be interest not only to other Hokanists but to students of syntax in general.

Thanks are due to James Redden for arranging the publication of this volume and assuming responsibility for all editorial details, and to the National Science Foundation for including support for consultants in Grant GSO-C-7418043 (Yuman Languages of the Southwest--Margaret Langdon, Principal Investigator).

Margaret Langdon
La Jolla, January 1976.
CONTENTS

Langdon, Margaret
Syntactic Diversity in Diegueño Dialects 1

Gorbet, Larry
Diegueño Case Marking: Conditions of Optionality 10

Crawford, James M.
The Cocopa Auxiliary Verb ya’, be located, happen 18

Mixco, Mauricio J.
Oblique and Non-Oblique Surface Case in Kiliwa Syntax 29

Crook, Donald E.
Yuman *t 35

Crawford, Judith C.
The Reduction of idú: be in Mohave 45

Munro, Pamela
Mojave Modals 55

Harwell, Henry O.
The Say Auxiliary in Maricopa: Some Notes and Speculations 63

Slater, Carol E.
Not, in Yuman, I say 71

Norwood, Susan
Kwtsaan iyvi as an Enclitic 78

Sundheim, Beth M.
Internal and External Heads in Kwtsaan Relative Clauses 88

Kozlowski, Edwin
Havasupai Comparatives 93

Kendall, Martha B.
Yavap Irrealis Constructions 98

Chung, Sandra
Compound Tense Markers in Tolkapaya 119

Shaterian, A. V.
No More Schwa for Yavapai 129

Redden, James E.
Notes On Walapai Syntax 134

Joël, Judith
Some Notes on Paipai Object Order and Object-Marking 142

Yamamoto, Akira Y.
Notes on the Interpretation of /-m/ and /-k/ in Walapai 149