THE OLD LADY'S SONG· A POETIC ANALYSIS

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Poetics and musicology are two fields which have remained quite separate in the past, despite frequent references to the similarities of the material analyzed in both fields. Songs, the genre which should unite the fields, have generally been themselves torn asunder instead: musicologists study the music only, and linguists and literary analysts ignore the music and concentrate solely on the texts. The fact is that the techniques of poetic analysis, as developed and practiced by scholars such as Jakobson, Levin, Halle and Keiser, are equally applicable to music. I should like to illustrate this fact here by analyzing a short song, taking into consideration both the text and the music.

The analysis of this song will further function to illustrate some of the poetic devices used in a tradition foriegn to our own. The song selected here comes from the rich musical tradition of the Havasupai Indians of Northern Arizona, who speak a Yuman language. Basically, Havasupai poetry differs only in details from other poetry. The principles of sound euphony, meter, coupling, and other devices explicated by poeticists are not culture-bound-- they are in fact what make us define a linguistic entity as a poem. It takes, of course, only the addition of a melodic component to make us call it a song instead. It should be added that it is song, not poetry, that is universal to mankind. The Havasupais, for example, have no poetry per se: only prose stories, and songs.

The Flood Story, a great Havasupai myth, contains several songs, of which this is the second or third in most versions. The old lady's son wants to collect arrowweed to make arrows, but the plant grows only in a canyon where the walls clap together to kill all comers. There also lives there the evil being Owl Man. This song is the old lady's warning to her son not to make the trip. (Naturally he does so anyway, and comes out victorious.) The song is transcribed on the next three pages.

The melody. Jakobson, Klima and other poeticists stress in various ways the notion that the function of poetic devices is to integrate a poem. Two lines of spoken poetry, necessarily separated in time, are integrated, brought together, by such features as repetition of lexical items, rhyme or other types of sound euphony, by metric principles, by parallel syntactic structures or semantic themes, and so forth. In a song, the function of integration is further fulfilled by the melody itself. The old lady's song is strophic -- that is, it is sung to a tune that repeats itself over and over. This is itself an integrating device -- each group of four lines of text is integrated with every other group by virtue of having the same melodic line and the same metric pattern.

A single strophe is an integrated whole in several ways. (1) It can be divided into four sections; the first two are identical

Tempo: ♩ =138

line 1 (A)

?əθa we ?e-- kə mo le ?e

2(A)

θa we ?e-- kə mo le ?e

3(B)   4(1/2 A)

θa we ?e-- kə mo le ?e-- kə mo le ?m

VERSION AS SUNG [1]	ANALYSIS [2]	ENGLISH
1:1. ?əθawé?é kəmólé?é	θaw kmól-é	My only baby
2. θawé?é kəmólé?é	baby only-vocative	My only baby
3. θawé?é kəmólé?é		My only baby
4. kəmólé?m		My only one
2:1. ?apá?á hániga?á	?páa háni -k [3]	A healthy man
2. ?apá?á ?əhaníga?á	man good, -affix	A healthy man
3. gavo?ó ñiyúga?á	healthy	How will you be that
4. ñiyúga?m		Will you be
	ka -vú	
	ind.dem. [4] -dem. [5]	
	(question)	
	ñ-yú-k	
	dem.-be-affix	
3:1. ñiwá?á ñiyíjika?á	ñ-wá ñ-yí-č-k	The ones who want that
2. ñiya?á ñiyojəka?m	dem-dem dem-want-	(i.e., to be healthy
3. ?akweé jijamuga?á	plural-affix	men)
4. ñiyújəveče		The ones who are like
	ñ-yá ñ-yú-č-k-m	that(i.e. want to be
	dem-dem dem-be-plural-	healthy men)
	affix-affix	Making mistakes
		If that is how they are

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                              ?kʋé          č-čám-k
                              something  distributive
                                          (reduplication)-
                                                affix

                              ñ-yú-č-v-č
                              dem-be-plural-dem-
                                    nominal

4:1. ñívó?ó´ñiyúhuwá?á´       ñ-vú    ñ-yú-h          If someone is like
  2. ñíwá?á´ti?opəmé?e         dem-dem dem-be-irrealis  that (i.e. makes
  3. Өawéé kəmólée               wá                     mistakes)
  4.       kəmólé?m              be in such a position,He is'nt that way
                                 such a state          (i.e. he isn't a
                                                        healthy man)
                              ñ-wá    ti?óp-m          My only baby
                              dem-dem negative-affix   My only one

                              Өáw    kmól-e
                              baby   only-vocative

5:1. ?ápá?á´?iyúhí?čé         ?páa  ?iyúh-č           Owl Man
  2. ?awé?e´kəkápá?á          man   owl-nominal        Rocks Clapping To-
  3. káyaṇá ve?ičimé?é                                   gether
  4.        ve?ičimé?é        ?wíi  k-káp              This is what they
                              rocks distbtv              say
                                   (redup)-           What they say
                                    clap together

                              ka-yáv
                              indef.dem.-speech
                                 ?í-č-me
                                   say-plural-affix

6:1. káӨá?á´l ñiwáká?m        ka-Өa-l               He lives in there
  2. ?apa?á´ha?í wá?á         indef.dem-there-in    That man lives there
  3. ñévó?u´ñiwéká?á            ñ-wá-k-m            He owns that place
  4.        káӨá´ñiwá           dem-live-aff-aff    He lives there

                              ?páa-ha    ?i-wá
                              man-dem    ?-live

                              ñ-vú ñ-wé-k
                              dem-dem dem-own-aff

                              ka-Өá    _  ..
                              indef.dem-there
                                 ñ-wá
                                   dem-live
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7:1. ʔáwáá ʔiʔí máʔm
   2. metéʔe tikáyveká
   3. kaθáa miyámagaʔá
   4.   miyújəhaʔá

ʔá-wá ʔiʔí má -m [6]
?-? I say you-aff

m-té [7]
you-negative
   tikáyv-k
   make a mistake-aff

ka-θá
indef.dem-there
   m-yám-k
   you-go-aff

m[8]-yú-č-há
distbtv-be-distbtv-
   exhortative

I'm telling you
Don't make a
   mistake
Don't go there
Ever

8:1. áyuʔú keitéʔe
   2. θawéʔe kəmóleʔe m
   3. káyaʔá məʔevokáʔá
   4.   miyújəhaʔá

á-yú-k ʔiʔí-t
?-be-aff I say-
   completive

θaw kmól-é -m
baby only-vocatv-aff

ka-yáv
indef.dem-speech
   m-év-k
   you-listen-aff

m-yú-č-há
distbtv-be-distbtv-
   exhortative

This is what I say
My only baby
Listen to my words
Always

9:1. ʔáyuʔú keimáʔá

ʔa-yú-k   ʔiʔí-m
?-be-aff I say-aff

This is what I say

(labelled A), the third is new material, and the fourth is a
repetition of the last half of A (labelled 1/2 A). By this return
to the original melodic line, the end of the melody is tied to
the beginning. (2) Line 3, which is labelled as B, is different
from A in that it contains a different set of tones. Nevertheless,
the relationships between those tones are very similar to those
of A. In other words, they have very similar contours, as shown
in the graph below. The intervals are different, and the tonality,
but the tune ascends and descends in exactly the same places.

Horizontal axis: 1 space = a time value of ♪
Vertical axis: 1 space = one semitone

SECTION A
begins on the tone C

SECTION B
begins on the tone G
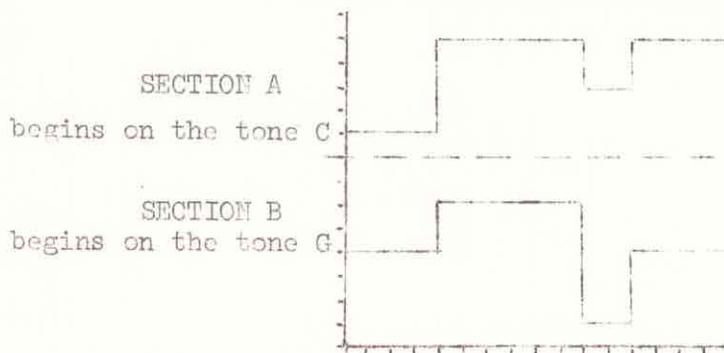
(3) The melody is further unified by the use of what, for lack of
a better term, we can call the tonic tone. This tone is E in the
transcription; lines 1, 2 and 4 all end on that tone; and if we
count up in eighth-note values the total occurance of E we come up
with a value of 30, as opposed to 8 for C, 6 for D, 7 for G and
6 for A. The melody as a whole, then, can be seen as a series of
departures from and returns to this base, the tonic tone.

Meter. Meter is an integrating device for both poems and songs.
Lines 1, 2 and 3 consist of 8 beats each and are rhythmically
identical, and line 4 consists of 4 beats and is rhythmically ident-
ical to the last half of any of the preceding lines. In general,
the precise rhythmic pattern is as shown below.

LINE 4

LINES 1,2,3
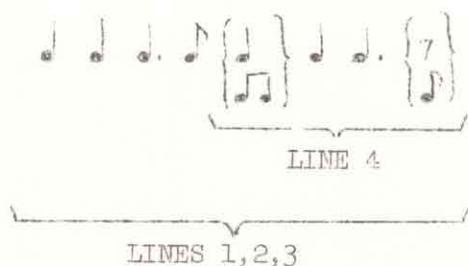
Metrically, each full-length line (1, 2 or 3) can be divided into halves of equal length, each having the abstract pattern below.

$$ \quad \text{♩} \quad \text{♩} \quad \text{♩.} \quad \left\{ \begin{matrix} \text{♪} \\ 7 \end{matrix} \right\} $$

A reinforcing motivation for the division is found in the fact that line 4 represents the second half of a full-length line. It will be seen that this division is reflected in other facets of the song as well, in particular vowel harmony.

Lexical patterns. Going on to the textual material, let us first investigate it line by line. Repetition is an important integrating device in this song. Many lines are absolutely identical to each other, and others change only by a syllable or two. Below is a chart of the textual material, with identical or close-to-identical lines labelled by the same letter. The numbers at the top represent the line number; the numbers along the vertical axis represent the verse number.

	1	2	3	4
1	A	A	A	1/2A
2	B	B	C	1/2C
3	D	D	E	1/2D
4	D	F	A	1/2A
5	B	G	H	1/2H
6	I	B	J	1/2I
7	K	L	M	N
8	O	A	P	N
9	O			

Notice that the song ends on the first line of the strophe. Verse 8 and 9 together have a sort of mirror symmetry; that is, in both tune and text the last group of five lines ends with the same line it began with.

The pattern of repetition in this song is not regular. Nor, I must stress, will it remain the same from performance to performance of the same song, even by the same singer. The repetition of text A throughout the first verse does not change from performance to

performance, but the rest does. There are many patterns that remain the same through performances, but rather than go into them here, I will simply deal with this one performance as a complete artistic creation in itself. The fact that some of the patterns change through performances does not mean that the patterns are accidental. Variation is itself highly valued among the Havasupais; it is more realistic to think of variation as a conscious choice between possible alternative patterns rather than to think of the patterns as randomly produced accidents.

The text parallels the melody in certain obvious ways. Line 4, which is half the length of the other lines and is melodically the same as the last half of lines 1 and 2, is usually a repetition of half of one of the previous lines. Only in verses 7 and 8 is this pattern broken. In the first 3 verses, the melodically identical lines 1 and 2 also have identical texts. Note that the amount of repetition of lines decreases as the song goes on. If the singer desires to make the song longer, he uses more repetition, but the pattern of decreasing the amount of repetition as the song goes on seems to be prevalent in most performances.

Syntactic patterns. I will not attempt to make a thorough syntactic analysis of this song, but will instead confine myself to a few comments. One of the most basic and obvious ways in which a text and a melody relate is that melodic units and syntactic units coincide. A syntactic unit might be defined as corresponding to a node on a tree structure. A melodic unit would correspond to a verse, or line, or half-line, in this song. (The form of a melody could of course also be represented in tree-structure form.) An obvious example of the correspondence is that at no time in this song does a word overlap a boundary between two melodic units. Furthermore, the end of a sentence or clause always comes at the end of a line, and often at the end of a verse. Also, each line in this song corresponds to either a noun phrase or a clause; and every line (with the exception of line 4 in certain verses) is headed by a noun phrase.

So an isolated verb phrase as a line of text is nonexistent in this song (with exceptions in line 4, where sometimes the line consists of an auxiliary verb). One way that isolated VP's are avoided is by the use of demonstrative pronouns. A sample series of these is found in verse 3 and 4 (see transcription). The subtle differences between /ñ-vá/, /ñ-yá/ and /ñ-vú/ are not easily understood; further study must be done to elucidate the semantics of the very rich Havasupai demonstrative system. This prolific use of demonstrative pronouns that take the place of earlier clauses functions, among other things, to allow a line that would otherwise be headed by a verb, to be headed by a noun phrase instead.

Semantic patterns. There is a kind of mirror imagery in the semantic pattern of this song. The first and last person mentioned overtly is SELF (that is, the old lady): the first syllable of the song is the possessive first person prefix /?-/ (see sung version--

this morpheme was not glossed in the analysis column), and the last
line carries the first person subject prefix /ʔ-ʔ/. Frequently
overt mention of the self is deleted in the song, but of course
by a performative analysis the addressor is present throughout in
the underlying form.

The second character mentioned is also the second-to-last to
be mentioned, and that is the addressee, "my only baby". The
third and third-to-last theme (beginning in verse 2, ending in
verse 7) is that of "not making a mistake", not being foolish.
Note the change in tone as the old lady's song progresses: the
first mention of "not making mistakes" is not a command -- she
merely says that in general people who want to become healthy men
don't make fatal errors. It is only at the end of the song that
she turns this theme into a command.

The final theme is the specific mention of the Rock Place and
Owl Man, beginning in verse 5 and ending in verse 7. These four
general themes, then, are imbedded in each other in the manner
illustrated below.

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SELF
 |
 |    ADRESSEE
 |     |
 |     |    DON'T MAKE A MISTAKE
 |     |     |
 |     |     |              DON'T GO TO THE ROCK PLACE
 |     |     |               |
 |     |     |               |
 |     |     |               ↓
 |     |     |               _
 |     |     ↓
 |     |     _
 |     ↓
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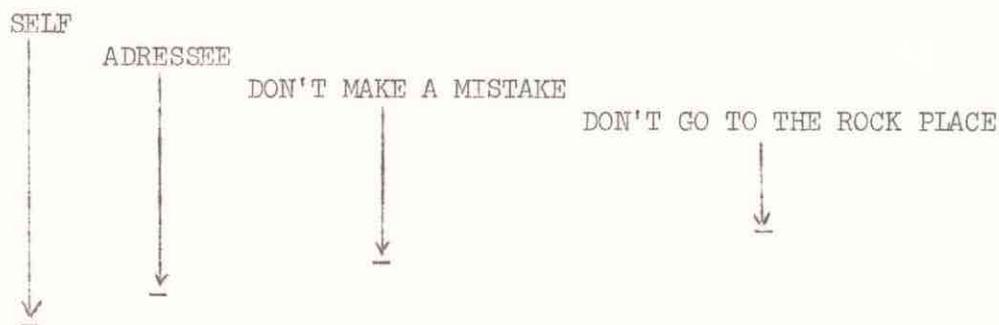
The majority of Havasupai songs, stories and orations end with
some formula such as "This is what I say", or "This is what they
say," or "Listen to my words." In this song, these statements are
sprinkled throughout verses 7-9. Given the Havasupai tradition,
this set of statements is what makes the song complete. Without
it, the song could not be perceived as an integrated whole.

Phonological patterns: Vowel harmony. One of the most
interesting aspects of this song is the pattern of vowel harmony
or assonance. On the next page you will find a chart of the text
which separates each line into its component eight beats. In the
chart, the space between each solid line represents a quarter-note
time value. Dotted lines have been drawn to segment the off-beat
syllables. The double line down the middle of the page divides the
first half of each line from the second half. At the bottom of the
chart is a set of numbers indicating the total number of occurances
of each vowel (a,e,i,o,u,ə) in each column. At the bottom right are
the number of occurances of each vowel in the song as a whole. Stressed
vowel totals are written without parentheses; unstressed vowel totals
are written with parentheses.

LINE	BEAT 1	2	3	4	5	6	7	8
1-1	Θa	we	e---------		kə	mo	le	e---------
2	Θa	we	e---------		kə	mo	le	e---------
3	Θa	we	e---------		kə	mo	le	e---------
4					kə	mo	le	?m	₰
2-1	?a	pa	?a---------		ha	ni	ga	?a---------
2	?a	pa	?a---------	?ə	ha	ni	ga	?a---------
3	ga	vo	o---------	ñi	yu		ga	?a---------
4				ñi	yu		ga	?m	ʒ
3-1	ñi	wa	?a---------	ñi	yi	či ka		?a---------
2	ñi	ya	?a---------	ñi	yo	či ka		?m---------
3	ə	kwe	e---------	ji	ja	mu ga		?a---------
4				ñi	yu	ǰə ve		če---------
4-1	ñi	vo	?o---------	ñi	yu	hu wa		?a---------
2	ñi	wa	?a---------	ti	?o	pə me		?e---------
3	Θa	we	e---------	kə	mo	le		e---------
4				kə	mo	le		?m---------
5-1	?a	pa	?a---------	?i	yu	hi		je---------
2	?a	we	?e---------	kə	ka	pa		?a---------
3	ka	ya	ŋa---------	və	?i či me			?e---------
4				və	?i či me			?e---------
6-1	ka	Θa	?a---------al	ñi	wa	ka		?m	ʒ
2	?a	pa	?a---------	ha	?i	wa		?a---------
3	ñe	vo	?o---------	ñi	we	ñi ka		?a---------
4				ka	Θa	ñi	wa---------	
7-1	?a	wa	a---------	?i	?i	ma		?m---------
2	me	te	?e---------	ti	ka	ye ve		ka---------
3	ka	Θa	?a---------	mi	ya	ma ga		?a---------
4				mi	yu	ǰə ha		?a	ʒ
8-1	?a	yu	?u---------	kə	?i i	te		?o---------
2	Θa	we	?e---------	kə	mo	le		?em
3	ka	ya	a---------	mə	?e vo ka			?a---------
4				mi	yu ča ha			?a---------
9-1	?a	yu	u---------	ke	?i	ma		?a?

TOTAL IN SONG

U N S T R E S S E D ↓   S T R E S S E D ↓

	BEAT 1	2	3	4	5	6	7	8		
T	a=19	10	11	(1)	8	(1) 19	0	16	83	(2)
O	e= 2	8	8	(1)	2	(1) 13	0	11	44	(2)
T	o= 0	3	3	(0)	8	(5) 0	0	0	14	(1)
A	i= 4	0	0	(16)	6	(2) 1	1	0	11	(17)
L	u= 0	1	1	(0)	6	(4) 0	0	0	8	(1)
S	ə= 0	0	0	(12)	0	0	0	0	0	(17)

The most noticeable characteristic of the text that comes out in the chart is the strong predominance of the vowel /a/. Ignoring the totals that occur in parentheses, we wee that /a/ has by far the greatest frequency of occurance in every column; its dominance is especially striking on the first beat of the line and the last three beats. The second most common vowel is /e/; /i/ is very rare. /o/ and /u/ are also rare, but of the two /o/ is most common. One general statement we can make is that [-high] vowels are strongly preferred over [+high] (141 total occurrences of [-high] vowels as compared to only 19 occurrences of [+high]). This is in contrast to a preference for peripheral vowels (a,i,u) in spoken Havasupai. In speaking, e and o occur relatively rarely.

If peripheral vowels are preferred in spoken Havasupai, how is it that [-high] vowels predominate in a sung text? There are three ways to obtain this result: (1) vowel insertion; (2) vowel shift; and (3) choice of lexical item. I will go over these devices one by one.

(1) <u>Vowel insertion</u>: In spoken Havasupai, vowels are inserted into most consonant clusters and at the end of a word after a non-sonorant consonant. The mid-vowels /o/ and /e/ are almost never inserted. Generally, /a/ is inserted word-finally, /u/ before a rounded segment, /i/ both before and after palatals and alveolars (e.g. /s/, /ñ/, /t/,/č/), and before /y/; and /ə/ elsewhere. These rules are violated in a number of places in this song. Many of the 'violations' fall under the heading of vowel-shift, and so will be discussed under that heading. In some places vowels are inserted in the song where they are not inserted in speech: for example, the first line: θáwe-é kəmó-lé-é is in speech /θaw kəmóle/. The choice of /e/ as the inserted syllable after /θaw/ appears to have been made because it makes the first half of the line rhyme with the last half. More often, /a/ is the vowel inserted in the song where there would be no vowel in the spoken version. In line 5-3, for example, we have an entire CV syllable inserted: káyəŋá-á (spoken version /kayá/ -- /ŋ/ does not exist in spoken Havasupai).

Another way in which speech vowel-insertion rules are violated is that the expected /u/ insertion before rounded segments does not occur frequently. In fact, u-insertion occurs only in one place in the song (the unstressed syllable in the 5th beat of line 4-1). Elsewhere, we find /i/ instead of /u/. For example, in line 3-1, we get sung [ñíwá] instead of the predicted [ñúwá]. The same happens in lines 4-2, 6-1 and 6-3. We see then that while the feature [-high] is not being selected for in this particular case, another feature [-round] <u>is</u> being selected for. To generalize, the choice in this song is for the more <u>open</u> vowels -- low, or unrounded -- over the more closed vowels -- high, or rounded.

With only one exception -- the /ha/ in line 6-2, which is a demonstrative affix -- the vowels in the off-beat syllables (the ones to the right of the dashed lines) are inserted vowels. In

the off-beat syllables, note that there is a preference for /i/ --
just the opposite of the /a/ preference in the on-beat syllables.
The high occurance of /i/ in the off-beat syllables works to
create a contrast with the rest of the song.

(2) _Vowel shift_: In spoken Havasupai, there is a reduction
rule that operates on unstressed vowels. I have stated that /a/
is inserted at the ends of words; phonetically, this is actually
realized as [ʌ] or sometimes [ə]. Underlying /a/ is also reduced
to [ʌ] or [ə] if it is unstressed. Thus we can postulate the
following reduction rule:

$$\text{a-reduction:} \quad a \rightarrow \begin{Bmatrix} \Lambda \\ \vartheta \end{Bmatrix} / \left[\overline{\text{-stress}} \right]$$

In a song, stress patterns change considerably. Let us define
a syllable that occurs on the beat as being stressed. This means
that every syllable _may_ be stressed in any given word. Thus the
a-reduction rule does not apply except in off-beat syllables,
where, we have seen, it applies regularly. (The occurance of the
demonstrative -ha is the one exception.)

Beyond this there are a set of rules specifically for songs,
which appear to be optional. They are:

$$i \rightarrow e \ / \ \left[\overline{\text{+stress}} \right] \qquad \text{in songs}$$

$$u \rightarrow o \ / \ \left[\overline{\text{+stress}} \right] \qquad \text{in songs}$$

Or, more generally:

$$V \rightarrow [\text{-high}] \ / \ \left[\overline{\text{+stress}} \right] \text{ in songs}$$

Examples of the vowel lowering rule are:

line 2-3:   spoken: [kávu ˌñiyúkʌ]
            sung: [kavó-ó˝ ñiyúkʌ-á´]

line 5-2:   spoken: [ʔəwíi ˌkəkéapʌ]
            sung: [ʔáwe-e˝ kəkápʌ-á]

line 6-3:   spoken: [ñívú ñiwíkʌ]
            sung: [ñevó-ó´ ñiweká-á˝]

The vowel-lowering rule works both for inserted vowels and
underlying vowels.

(3) _Lexical choice_. Looking primarily at the predominance of
/a/, how much of this can be explained as a natural consequence of
vowel-shift? And how about the predominance of /i/ in the off-
beat syllables? We have seen that /a/ is especially common in the
first beat and last three beats of each line (beats 1, 6, 7 and 8).

This is at least partly a natural consequenc of vowel shift: these beats consist primarily of prefixes and suffixes, where vowel insertion takes place. Nevertheless, in beat 1 many of the /a/ vowels are the consequence of lexical choice rather than vowel insertion. Underlying /a/'s are found in beat 1 of lines 1-1,2,3,4; 2-3; 4-3; 5-3; 6-1; 7-3; and 8-2,3. These underlying /a/'s account for 11 out of the 19 occurrences of /a/ in the first beat -- over half. Furthermore, /a/ is fairly predominant in beats 2,3,4 and 5 as well, where all the vowels are present in the underlying representations. Finally, despite the fact that /ə/ is the most common inserted vowel in speech, we find that it is /i/ that predominates in all the off-beat syllables. All of these facts show that the choice of lexical items plays some role in the song's vowel harmony.

Rhyme. In the first verse, the spoken version of the text is [θáw kəmólè]. Note the addition of /e/ to θaw in the sung version; if anything were to be added to the spoken version it would be /ə/ or /a/, not /e/. We would expect /a/ in the sung version if other processes were not at work. The /e/ must have been inserted for the purpose of rhyming with the final syllable of the line. So, the two halves of the line, separated already by metrical means, can now be divided on the basis of rhyme as well. The same happens in verse 2 (lines 1 and 2, and 4), and in fact throughout the song. Below is a chart of the vowels ending each half-line.

1-1	e	e		5-1	ə	e
2	e	e		2	e	a
3	e	e		3	a	e
4		e		4		e
2-1	ə	a		6-1	a	ə
2	a	ə		2	a	a
3	o	o		3	u	a
4		ə		4		a
3-1	a	ə		7-1	ə	a
2	ə	a		2	e	a
3	e	a		3	a	a
4		e		4		a
4-1	o	a		8-1	u	e
2	a	e		2	e	e
3	e	e		3	a	a
4		e		4		ə
				9-1	u	a

Dividing each line into halves, then, we see a changing
rhyming pattern in the song. In the first verse, each half-line
ends in /e/. In the second each half-line of lines 1 and 2 end in
/a/; in line 3, the half-lines end in /o/; line 4 goes back to /a/.
In verse 3, each half of the first two lines ends in /a/; lines
3 and 4 have an e-a-e pattern. Throughout the song, then, there
is a shifting rhyming relation between the half-lines, almost always
based on /a/ and /e/. As we saw in the first verse, the rhyme is
not accidental, but contrived. The disinclination to use high
vowels and rounded vowels is even more clear here; /i/ does not
occur at all in the half-line-final position; /u/ and /o/ occur
only three times each (o rhymes in one pair of half-lines; u is
scattered and does not appear to join in the rhyme scheme).
/a/ occurs 31 times; /e/ occurs 23 times.

Glottal stop insertion. One device specific to this song
is the strong use of glottal stops. Notice that in most half-lines,
the vowel occuring on the second beat of the half-line is followed
by a glottal stop and then a repetition of the same vowel. The
glottal stop, then, precedes the third beat of each half-line,
which is also the one place where the melody moves upward. This
correspondence between glottal-stop and upward movement of the
melody is just one more way in which text and melody interact.

Conclusion. In this paper, I have concentrated most on the
various aspects of sound euphony exhibited in the song. Melodic,
metric, syntactic and semantic poetic devices were also brought
out. As a conclusion, I would like to review some of the ways
in which text and melody interrelate and reinforce each other.

(1) In the study of poetry, meter is an important component;
in music, meter is equally important. In a song, then, meter is
an element that belongs to both the music and the text. Just as
meter can be related by correspondence rules to linguistic stress
patterns (Halle and Kaiser, 1966,1969), it can also be related in
much the same manner in songs. We can call a syllable of text
"strong" in this song if it is sung on a beat. There is no rule
that a strong syllable must correspond to one which is stressed
in spoken Havasupai. It appears that any syllable may be stressed
in singing. For example, line 1 of verse 2 shows two strong
syllables per word (not counting the extra syllables added by the
glottal stop and echo vowel in each word): [ʔəpá] and [hániga],
though in speaking each word has only one stressed syllable [ʔəpáa],
[hánigə]. The only restriction on the relation between stress and
syllable strength in the song appears to be that a weak syllable
(i.e., one that occurs off the beat, such as the [kə-] in the first
line of verse 1) may not be a syllable that would be stressed in
spoken Havasupai. It was noted earlier that vowel-insertion rules
in this song are tied up with meter as well. /i/, which is not
a preferred vowel in singing, is used primarily in metrically weak
syllables. Metrically strong syllables use the /-high/ vowels

/ɑ/, /e/ or /o/.

We can see, in any case, that although meter is considered to be a _musical_ component in songs (or at least it is so considered by musicologists), the text relates to and reinforces it.

(2) As discussed earlier, melodic divisions correspond to syntactic divisions of the text.

(3) Vowel harmony is tied up intimately with melodic divisions. Rhyming patterns are set up that correspond to the half-line divisions of the melody.

(4) Glottal-stop insertion corresponds with a rising contour in the melody.

As is the case with any analysis of an aesthetic creation, one always feels he might be able to delve yet further. We only scratched the surface of this song. It is to be hoped, however, that this partial analysis has served both to show some of the richness of the poetic devices utilized in Havasupai songs and to illustrate the intimate connection between text and melody that one finds not only in this song, but in songs in general.

FOOTNOTES

1. Each ´ shows the stressed syllable of a beat. If a vowel has two stress marks (é´), it means that it lasts for two beats.

2. The Havasupai words in this column are written phonemically, while the sung version is written phonetically. Some differences the transcriptions are due to regular phonetic rules, such as /k/ being voiced ([g]) in certain positions. Other differences are due to rules that apply only in songs. Some of these will be discussed below.

3. /-k/ and /-m/ are difficult to assign meaning to. For discussions of /-k/ and /-m/ in various Yuman languages, see Langdon 1970 (pp. 151-154), Kendall (unpublished), and Winter (1970). In singing, /-m/ is used more often than in speaking, and it appears to be semantically more generalized.

4. ind.dem. = indefinite demonstrative

5. dem.= demonstrative
   The Havasupai demonstrative system is very complex, and will not be analyzed in detail here. For some comments on the Havasupai demonstrative, see Langdon, 1970, Redden,1966(Walapai), and Koslowski, 1972.

6. Unusual construction. In speaking, object pronouns always precede the verb, and the verbal affix /-m/ is never attached to a noun or pronoun.

7. Unusual construction. Negative commands generally put /té/ after the verb being negated, and the personal prefix is not used with it. See Koslowski 1972 for a partial description of negation in Havasupai. (Commands, however, are not dealt with in his thesis.)

8. /m...č/ is used with an auxiliary verb to denote a habitual action. In this case the habitual form means "don't ever be like that", i.e. "make a habit of not being like that".

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