

Esoteric morphology: vocable affixes in Máíhĩki shamanic song

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Keywords: metrics, ethnopoetics, Tukanoan family, Amazonian languages

1. Introduction

1.1. Poetry and its grammar

Many poetic traditions allow the grammar of song, chant, and poetry to depart from the grammar of other registers in the language of composition. Certain English poetic forms tolerate stress patterns and syntactic structures that are dispreferred or ungrammatical in the everyday language (Kiparsky 1975, 1977). Classical Greek and Latin poetry used a specialized poetic lexicon and certain archaic morphological constructions to meet the requirements of complex quantitative meters (Coleman 1999, Penney 1999). In languages of India, the Toda (Dravidian) songs documented by Emeneau (1966) display vowel epenthesis, again to satisfy quantitative meter, absent from the spoken language, and case markers can be deleted for metrical purposes in Gujarati song (Durbin 1971).

Poetry has a special grammar in languages of the Americas as well. Havasupai songs display poetry-specific phonological processes, lexicon, and syntax (Hinton 1984); practitioners of Kuna chant employ an esoteric lexicon (Sherzer 1990). In Tohono O'Odham traditional songs, singers meet metrical requirements for the position of stress through song-specific forms of total reduplication (Fitzgerald 1998). Likewise, performers of Nanti *karintaa* chants fit the lexical contents of each line to a strict quantitative meter by means of vowel lengthening, word truncation, and reduplication (Michael 2004).

As the miniature typology above shows, a major parameter of variation between poetic traditions resides in the nature of the module(s) of the grammar which poets can manipulate for artistic or metrical effect. A large number of documented poetic

*I thank all of the Máíhuna people who have shared their language with me, especially Adriano Ríos Sanchez, a wonderful teacher and friend, and Federico López Algoba -- *mísá úá sòò sáàrè ásòbì*. Thanks to the CILLA VII audience, an audience at UC Berkeley, Stephanie Farmer, Sharon Inkelas, and Lev Michael for comments on this data. My research on Máíhĩki has been supported by a Parker Huang Undergraduate Travel Fellowship from Yale University, an NSF Graduate Research Fellowship, and NSF BCS-1065621. All errors and omissions are my own.

traditions use a specialized or archaic lexicon, and many permit unusual syntax as well. In a much smaller number of traditions -- Toda, Tohono O'Odham, Nanti -- poets also (or instead) have recourse to phonological operations which alter lexical items to fit the poetic meter. Yet morphology, and especially morphology other than reduplication, seems to play a minor role in the grammar of poetry.

Is this a real gap? No: I argue here that, in one genre of traditional songs associated with Máíhiki (a Tukanoan language of Peru) and documented through my original fieldwork, poets primarily manipulate morphology -- employing referentially contentless vocable morphs, and grammatical morphs without their referential content -- to fit the message to the meter and to index the discourse's participation in the relevant poetic genre. Although songs in this genre employ the same lexicon, the same syntax, and most of the same phonology as the everyday language, the language of songs is rendered radically different from spoken Máíhiki by the use of this poetry-specific morphology.

1.2. Theoretical framework

I approach Máíhiki song from the perspective of generative metrics (Halle & Keyser 1971, Kiparsky 1977, Hanson & Kiparsky 1996, Hayes 1989). Generative metrics, a parallel enterprise to generative phonology, seeks to describe and account for the diversity in the metrical structures of the world's poetic traditions, on the theory that meter can reveal phonological principles which are active in a language but difficult to observe in its general phonology.

As in the ethnopoetics tradition established by Tedlock (1977, 1978) and Hymes (1958, 1981, *et seq.*), generative metrics assumes that the structure of verbal art in a language and the structure of the language's non-poetic registers -- for metrics, poetic meter and general phonology -- draw on a common linguistic source (see e.g. Sherzer 1982: 372). Metrics, though, has focused on the characteristics of explicitly lineated poetry over those of other forms of verbal art, such as narrative and oratory. In line with this emphasis, I focus here on a specific genre of song in Máíhiki, although a subset of the poetic devices I describe are also found in other song genres and in spoken myth narrative.

1.3. Organization

The remainder of this paper is organized as follows. §2 provides background information about Máíhiki, its speakers, the fieldwork on which this paper is based, and the genre of songs which it describes (2.1, 2.2), as well as on aspects of Máíhiki phonology which are crucial to understanding the poetic meter (2.3). In §3, I describe the overall supra-linear structure of the songs (3.1) and the metrical structure of the line (3.2, 3.3). I then examine, in §4, the unique morphology of these songs, looking first to the referentially contentless affixes *-ma* and *-mani* (4.1), then to the referentially light use in song of certain grammatical morphemes (4.2). §5 con-

cludes the paper with discussion of the relationship between this data and theories of (poetic and non-poetic) prosodic morphology.

2. Background

Máíhiki is the Western Tukanoan language of the Máíhuna ethnic group, an indigenous people who traditionally occupied the interfluvial zone between the Napo and Putumayo rivers in extreme northeastern Peruvian Amazonia.¹ The language is severely endangered, with 75-100 speakers, all born after 1965, in an ethnic population of approximately 500. Traditional Máíhuna discourse forms such as song are even more endangered than the language. At most 10 senior men, born between 1930 and 1955, still command the song genre that I describe here.

2.1. Data in this paper

Data in this paper is drawn primarily from my fieldwork with two speakers of Máíhiki, Adriano Ríos Sanchez ("ARS") and Federico Lopez Algoba ("FLA"), in January to May of 2014 and June 2015 in the mission town of San Antonio del Estrecho, located on the Putumayo River. Adriano and Federico were born on the Algodón River, a tributary of the Putumayo, in the late 1940s. They were monolingual in the Northern dialect of Máíhiki² until late childhood, but -- like most Máíhiki speakers -- now primarily speak regional Spanish. The two singers both learned the song tradition from their male consanguineal relatives and (especially) their fathers-in-law, who were born in the late 19th to early 20th century. They have the capacity both to perform songs learned from older kin and, especially in Adriano's case, to compose new songs.

The two singers worked with me to record a corpus of 26 songs in the genre examined here and to annotate them with line-by-line narrow phonetic transcriptions, paraphrases in spoken Máíhiki, and free translations into regional Spanish. I collected the spoken-register paraphrases by asking the consultants, after transcribing each line, *básá híkàkì mání, kímà híkàdžì?* "if you were just talking (i.e. not singing), how would you say it?." The paraphrases which they gave in response formed the basis both for the consultants' Spanish translations of the lines -- though both are fluent speakers of Spanish, they found it impossible to translate directly from the sung forms -- and for my view of certain morphemes found in song as referentially contentless or light (4.1, 4.2).

In comparison of song with other registers of Máíhiki, I also draw on (a) general

¹Previous literature refers to both this group and their language with the Spanish exonyms *Orejón* ("big ear") or *Coto* ("howler monkey"). Members of the group reject these pejorative terms in favor of the autonoms *máíhùnà* "people" for the group, and *mái híkì* "people's speech" for the language.

²The Northern dialect of Máíhiki is distinguished from other dialects by deletion of Pre-Máíhiki intervocalic *h, change of Pre-Máíhiki *k^w > k in certain environments, and morphosyntactic innovations (Skilton 2014). One consequence of /h/-deletion is that the Northern Máíhiki reflex of the Northwestern Amazonian Wanderwort *yáhe* "*Banisteriopsis caapi*," ubiquitous in chants, is *yáé*.

documentary fieldwork on the language by Lev Michael, Christine Beier, Stephanie Farmer, and myself between 2010-2015, and (b) a ~120,000-word morphologically parsed corpus of the language, recorded and processed primarily by me between June 2013 and July 2014.

2.2. The object of study: men's shamanic songs

Máihiki speakers lexically distinguish two genres of songs: "men's songs," the performance of which is referred to with the verb root *dài-*, and "women's songs," referred to with the verb root *ò-*.³ These song genres are gendered, but only insofar as gender regulates who may compose, and what the lyric may describe, in each genre. Only men may compose *dài*, only women *ò*; the lyric subject of *dài* is always male, that of *ò* always female. Nevertheless, male consultants were able and willing to perform *ò*, although they knew few, and women occasionally quoted or performed entire *dài* for me as well.

Dài are first-person lyric poetry describing the supernatural experiences of a shaman (*dábì*), who is always the lyric subject.⁴ He relates his conflicts and alliances with the "familiar spirit" who provides him with magical power (his *bétfi*); other human shamans; and the "familiar spirits" who attend them. *Dài* were traditionally associated with ceremonies in which men ingested the hallucinogens *yáé* (derived from *Banisteriopsis caapi*) and *pêi* (*Datura* sp.), which Máihuna people no longer use regularly. Men also performed and continue to perform *dài* outside a ceremonial context as a way of displaying their senior status and authority to younger men, especially their sons-in-law and junior brothers-in-law. Although song performance and shamanic ability are tightly linked in some Tukanoan societies (Hugh-Jones 1979, 2013), Máihuna men's ability in *dài* does not seem to be related to their knowledge of other shamanic practices, and my consultants do not view *dài* themselves as having therapeutic or magical effects. The shaman's abilities to harm and heal come, for them, from his relationship with a "familiar spirit" (developed through fasting, apprenticeships, and use of hallucinogens and other herbs) and preexist the songs that describe them.

Ò are also first-person lyrics, and appear very similar in metrical and syntactic structure to *dài*. The one *ò* which I have recorded, and others which I have heard, are fairly similar in content to European lyric poetry: they relate the thoughts and non-supernatural experiences of the lyric subject or describe the natural world. I

³In the text I refer to the genres using nominalized forms of these verbs, /*dài-i/ dài* and /*ò-i/ ò*.

⁴I characterize Máihuna songs as "lyric" in order to highlight the differences in content between these songs and the narrative and taxonomic song genres familiar from other societies of Northwestern Amazonia (e.g. Barasana narrative chants, Hugh-Jones 1979: 58, and taxonomic shamanic discourses in Hup, Epps and Ramos: this volume). Máihuna traditional songs, their association with shamanism notwithstanding, do not include taxonomies and do not straightforwardly narrate a sequence of events. In content, all three of the Máihuna genres more closely resemble the Eastern Tukanoan women's songs described by Chernela (1988) than they do narrative or taxonomic poetry.

lack the data on òì, however, to make further generalizations about their content or context of performance.

Beyond *dàì* and *òì*, there is a third, unnamed genre: songs traditionally performed at the manioc and peach palm (*Bactris gasipaes*) first-fruits festivals (see Bellier 1991 for a description of these festivals, which my consultants remember celebrating for the last time in the late 1990s). First-fruits songs have some properties in common with *dàì* as described above: the lyric subject is always male, and performance of the songs is sometimes described with the verb *dàì-* (though also with the verb *óté-* "sing, general; dance"). Yet first-fruits songs differ from more prototypical *dàì* in several ways. First-fruits songs are attached to specific rituals within the first-fruits festivals; do not narrate shamanic conflicts; were performed to dance, rattle, and percussion accompaniment; are not credited to specific composers; and have temporally longer lines and a faster musical tempo than *dàì* and *òì*. Because of these differences, I focus my generalizations here on *dàì* not linked to the first-fruits festivals, and refer to this sub-genre as "shamanic songs."

2.3. The phonology of spoken Máíhiki

Understanding the meter of men's shamanic song in Máíhiki requires understanding of two aspects of the language's general phonology: its Minimum Word Requirement (MWR) and its lexical tone system.

Like the other Western Tukanoan languages (Bruil 2014, Cook & Criswell 1993), Máíhiki has a (C)V syllable template and a bimoraic MWR, such that the minimum prosodic word has the shape (C)V(C)V (Farmer 2015: 20ff.). In addition, effectively all noun and verb roots are bimoraic and have the form (C)V(C)V. While noun roots can appear free, verb roots generally cannot appear without agreement morphology or nominalizing affixes. The minimal noun word is therefore bimoraic, the minimal verb usually trimoraic.⁵ The language has extremely productive compounding, but is otherwise fairly isolating; as a consequence, it is unusual for a verb that is not a compound to exceed four morae, and for a noun to exceed three. The only exceptions to these minimal and canonical size generalizations are lexicalized compounds, onomatopoeic nouns such as bird names, and the singular pronouns. Lexicalized compounds and onomatopoeic nouns are exceptionally large roots, with three or four morae. The singular pronouns -- 1SG *yì*, 2SG *mì*, and 3SG.M *í* ~ *ní* -- are monomoraic, escaping the otherwise unviolated MWR.

Máíhiki also displays a restricted lexical tone system (Farmer & Michael submitted).

⁵In spoken Máíhiki, there are two cases in which a word formed from a verb root can surface as bimoraic: a) if the word is composed of a root and the present-tense nominalizer *-i*, which replaces the final mora of the stem (e.g. /hìka-i/ "talk-PRS.NMLZ" > *hìkì* "talk, language") or b) if the word is composed of a root which has a suppletive monomoraic allomorph in the past tense (see Farmer 2015: 53ff.) and either a past-tense subject agreement affix or the clause-linking affix *-ni*. Bimoraic verbs of both (a) and (b) types appear in the song corpus.

The language has underlying H, L, and underspecified tones. Tone is specified only for roots and for two verbal affixes; roots (except in noun-noun compounds) always surface with their underlying tones, which may be HH, LL, or HL. LH melodies never occur on roots -- even where, in loan words from Spanish, stress-to-tone borrowing would be expected to create an LH melody. The rules which govern the tone of affixes, described in Farmer & Michael (submitted: 23ff.) likewise prohibit LH from appearing word-finally. The system also has certain culminative, stress-like properties. One of these, salient in the description of the vocable affixes *-ma* and *-mani*, is that prosodic words other than verbs inflected for the past or present tense and declarative mood (i.e. all nouns, future-tense verbs, and interrogative-mood verbs) can contain at most one HL tone sequence.

3. The structure of songs and lines

3.1. Nonmetrical aspects of structure

The shamanic songs in my corpus are typically composed of 10 to 16 lines. The majority of the lines of each song are arranged into couplets, while the last three lines usually form a tercet.⁶ Line breaks can be identified by the presence of dedicated line-initial vocable words⁷; respiration -- singers do not audibly breathe during lines, but loudly inhale at line breaks; and the line-edge phenomena discussed in §3.3. Although the line unit has no Máfhiki name, it was highly salient to the consultants, who always quoted and reperformed their songs in complete lines and often corrected me on misplaced line boundaries.

The lines recorded in the corpus belong to three types. A small number, such as the line in (1a), consist only of free-word vocables with no referential content. These tend to occur as the first line of a song or interleaved with lines consisting of referentially contentful words (such that a couplet consists of one line of vocables and one line of referentially contentful words); there are no examples in the corpus of two successive lines of vocables. Likewise, a small number of lines, like (1b), consist only of referentially contentful stems, some bearing vocable affixes (4.1).

The great majority of lines in the corpus, however, are like (1c) and (1d): they begin with a sequence of free-word vocables, then continue with a syntactically and semantically coherent string of referentially contentful words. The phrase of referential words may then be followed by a sequence of free-word vocables, so that the free-word vocable sequences bracket the contentful words of the line (1d). The number and location of free-word vocable sequences within the line seems to be a locus of individual variation and artistry in this genre. One of the consultants, Adriano, strongly favored lines with only an initial sequence of free-word vocables,

⁶I identify the couplets and tercets on the grounds of lexical and syntactic parallelism that, for reasons of space, I do not discuss here.

⁷In ethnomusicology, "vocables" are non-referential words which occur only in musical and poetic genres.

like (1c); the other, Federico, favored lines with both an initial and final sequence of vocables (1d).

(1) Types of lines (vocable words and affixes are underlined)

a. All free-word vocables

téè néè déè néè téè néè déè néè déè néè⁸
(no referential content) (ARS, mnb 0:18)

b. All referentially contentful words

yáyásàni hàrùkì yòòkírè jíàmà héàkì

yáyá -sani hàrù -kì yòò -kì -re jíà -ma
go.out.light -MOT sit -SUB.NF 'do' -SUB.NF -NON-SJ see -POET
-héã -kì
-PFV.PLACT -SUB.NF

Paraphrase: yáyásàni hàrùkì yòòkírè jíàkì

Speaker: "Cuando yendo se apaga y se sienta, le miro"

"I see as (the light) goes and goes out, then drifts down" (ARS, cca 1:32)

c. Free-word vocables followed by referentially contentful words

hî néè déè néè yáémà ákwémà mîábì tóémà yáyákì yòòhî í

hî néè néè déè néè yáé -ma ákwé -mia -mia
POET POET POET POET POET *B.caapi* -POET fruit -CLF.PL:unit -CLF.PL:unit
-bí tóme -ma yáyá -kì yòò -hî í
-CLF:unit fall -POET go.out.light -SUB.NF 'do' -3SG.NF.PRS 3SG.M

Paraphrase: yáéàkwémà tóémáyákì yòòhî

Speaker: "Los huayos de ayahuasca están cayendo y apagando"

"The fruits of *B. caapi* fall and (their lights) go out" (ARS, cca 1:26)

d. Free-word vocables followed by referentially contentful words, followed by free-word vocables

⁸The orthography used here is phonetic and follows the IPA, except that *kw* is IPA [k^w], *r* [r], and *y* [dʒ]. Examples are attributed, in parentheses following the gloss, to an author (ARS or FLA) and a song (named with a three-character code). The following abbreviations are used: 1 = first person, 2 = second person, 3 = third person, BEN = benefactive, CAUS = causative, CLF = classifier, DIM = diminutive, F = feminine, FOC = focus, FUT = future, INAN = inanimate, INFO = information-structural, M = masculine, MOT = associated motion, NEG = negative, NF = non-feminine, NMLZ = nominalizer, NON-SJ = non-subject, PFV = perfective, PL = plural, PLACT = pluractional, POET = poetic affix or word, PRS = present, SEQ = temporal sequence subordinate clause, SG = singular, SUB = temporal overlap subordinate clause.

hî tēè négi déè tēè négi négi néè déè néè mîrémà hî̀tîmání nîkákò, nésémàni kátimání nîkákòrè, nésémàni kátimání nîkákòrè, tēè négi négi néè déè néè

hî tēè négi déè tēè négi négi néè déè néè mî -ré
 POET POET POET POET POET POET POET POET POET POET POET POET 2SG -NON-SJ
 -mà hî̀tî -mání nîká -kò nésé -màni kátî -mání nîká
 -POET hand -POET stand -SUB.F grab.PLACT -POET hide -POET
 -kò -rè ... tēè négi négi néè déè néè
 stand -SUB.F -NON-SJ ... POET POET POET POET POET POET

Paraphrase: *mî hî̀tîrè nîkákò, nésékátînikákò*

Speaker: "(Tunchi), agarras (las ramas) y te escondes parada."

"Grabbing and grabbing with your hands, you hide standing up" (FLA, fc2 1:57)

All free-word vocables are potentially well-formed Máhîki lexical roots. Like roots, free-word vocables are bimoraic; meet the language's phonotactic constraints on the distribution of nasality and on possible sequences of vowels (Farmer 2015: 19); and have licit tonal melodies, usually HL.⁹ The free-word vocable *néè* is homophonous with the language's hesitation word and with an interrogative pronoun "who"; the interrogative pronoun *ígè* "what" also sometimes appears as a free-word vocable. Speakers are emphatic, however, that free-word vocables, including those homophonous with roots, are not "words," and they describe performance of vocable sequences with the verb *bî̀tî̀*- "make noise" rather than with *dầ*- "sing men's song style" or *hî̀kà*- "speak."

It bears mention that my consultants have not memorized their songs as fixed and complete texts. Rather, singers' linguistic knowledge of particular songs relates mainly to the referentially contentful part of the line and the arrangement of lines into couplets. When the consultants reperformed songs, they often employed different free-word vocable sequences, or inserted the sequence of free-word vocables at a different point in the line, between versions of a song. There was similar variability between performances in the order of couplets and in the way that vocables and semantically light morphs were used to fill the line (4.1). Like the heroic singers studied by Lord (1960), performers in this genre draw on memory for the lexical contents of songs (as well as the tempo and melody), but extemporize the rest of the lyric.

⁹The phonological well-formedness of free-word vocables distinguishes them from other non-root, quasi-referential morphs in the language, such as ideophones and imitations of bird cries. LH tonal contours are permitted on ideophones, for example, but banned on roots and free-word vocables. Thanks to Dan Suslak for a question to this effect.

3.2. Foot structure

Men's shamanic songs are composed in a non-rigid quantitative meter. Like the general phonology of the language, the meter counts moras. It requires that the portion of a song line which consists of referentially contentful words be exhaustively parsed into one to four "cola" (singular: "colon"), each consisting of n morae. n is constant throughout a song and must be a multiple of either three or four; the songs in the corpus display meters with six, eight, nine, and twelve morae per colon. The number of cola per line, on the other hand, can vary considerably between lines of the song.

I refer to the sub-line metrical constituents of this genre as "cola" rather than "feet" both because of their relatively large prosodic size and because of their internal composition. In the metrically most prototypical colon in the genre, there are exactly two prosodic words (in the six- and eight-mora meters) or exactly three prosodic words (in the nine- and twelve-mora meters), and all of the constituent words of the colon have exactly the same number of morae. Thus a six-mora colon contains two three-mora words (3 + 3), an eight-mora colon contains two four-mora words (4 + 4), a nine-mora colon contains three three-mora words (3 + 3 + 3), and a twelve-mora colon contains three four-mora words (4 + 4 + 4). Prosodic words do not cross colon boundaries: effectively, they are poetic feet.

The example lines in (2) and (4) demonstrate these generalizations for metrically prototypical lines with three cola of nine morae (2), two cola of nine morae (3), and four cola of twelve morae (4). The underlined morphs in (2) and all subsequent examples are vocable affixes.

- (2) Prototypical line with 9 morae per colon and 3 cola (referentially contentless morphs underlined)

[12 μ vocables] (yáémà báì mà máìbì)₃₊₃₊₃ (yáémà ókómà sàgùrè)₃₊₃₊₃ (gâìkì kákámà dáìkì)₃₊₃₊₃

yáé -ma -bai -ma máí -bì yáé -ma -ókó -ma
B.caapi -POET -CLF:people -POET people -INFO *B.caapi* -POET -water -POET
 -sagu -re gâì -kì káká -ma -dai -kì -H
 -CLF:fork -NON-SJ grab -SUB.NF enter -POET -MOT -SUB.NF -POET

Paraphrase: *yáébàì máí yáéòkòsàgùrè gâìkì kákádàìkì*

Speaker: "Cuando la gente de ayahuasca, agarrando la horquilla de ayahuasca, están entrando"

"When *B. caapi* people come enter, holding in their hands the forked *Psychotria viridis* (lit. *B. caapi* water)," (ARS, ycz 1:09)

- (3) Prototypical line with 9 morae per colon and 2 cola

[12 μ vocables] (yáémà ókómà sàgùrè)₃₊₃₊₃ (gâìkì kákámà dáìkì)₃₊₃₊₃

yáé -mà -ókó -mà -sagu -rè gǎì -kì káká -mà
B.caapi -POET -water -POET -CLF:fork -NON-SJ grab -SUB.NF enter -POET
 -dài -kí
 -MOT -SUB.NF

Paraphrase: *yáéòkòmìàrè gǎìkì kákádàikì*

Speaker: "Cuando agarrando la horquilla de ayahuasca están entrando"

"When they come enter, holding in their hands the forked *P. viridis*," (ARS, ycz 1:18)

(4) Prototypical line with 12 morae per colon

[20_μ vocables] (*sìṅdǐsí yèbèhúrù ákògàmà*)₄₊₄₊₄ (*sìṅdǐsí yèbèhúrù ákògàmà*)₄₊₄₊₄
 (*tóméyèbè sánímání níkáòrè*)₄₊₄₊₄ (*tóméyèbè sánímání níkáòrè*)₄₊₄₊₄

sìṅd- ísí yèbè -huru -ako -ga -ma ... tómé
 yellow- sun flash.lightning -CLF:zone -CLF:fem -FOC -POET ... fall
 yèbè sání -mani níká -ko -re
 flash.lightning go -POET stand -SUB.F -NON-SJ

Paraphrase: *sìṅdǐsí yèbèhúrùàkò...tóméyèbèsání níkáò*

Speaker: "Ella que aparece cuando el sol se pone amarillo y busila, está parado allá cuando el rayo cae y suena fuerte."

"She of the time of the yellow sun and lightning stands (there) when lightning goes and falls." (FLA, fc2 1:02)

Given these facts, one might ask whether the meter of this genre simply regulates the number of morae per prosodic word. A line of three internally symmetrical nine-mora cola, for instance, could also be described as a line of nine three-mora prosodic words. Two pieces of evidence, however, suggest that the meter regulates the size of cola and prosodic words but neglects the size of lines. First, the "syntax" of song refers to cola, not words. Entire cola -- not individual words or strings consisting of a non-integer number of cola -- are the fundamental units of lexical parallelism across lines. (2) and (3), which form a couplet, illustrate this generalization: (3) identically repeats exactly two cola of (2). In other cases, one line of a couplet repeats an integer number of cola from the previous line, then adds an additional, non-parallel colon of contentful words (e.g. where line 1 has three cola A B C, line 2 may consist of four cola A B C D). Second, cola which are not prototypical in internal structure generally still conform to the mora count of the meter. When the poet is grammatically compelled to use a four-mora word in a nine-mora meter, for example, the colon containing the four-mora item tends to have the internal structure 3 + 4 + 2 rather than 3 + 4 + 3.

It is noteworthy that the meter of this genre, despite its strong preference for identically sized words and cola, assigns a relatively low priority to identity in size

between lines. Neighboring lines, including couplet neighbors, often differ significantly in total mora count. (2) and (3), for example, respectively have 40 and 30 morae; the couplet following them consists of a line of 51 and a line of 30 morae. The meter is not completely insensitive to line size -- those lines which have only one or two cola of referentially contentful words do tend to have correspondingly longer line-initial and line-final strings of vocables -- but songs do not display target line sizes in the way that they display clear target word and colon sizes. Although the literature contains many more examples of meters which regulate the size of lines than of ones which regulate sub-line constituents, the meter of this song genre clearly belongs to the latter type.

Not every line in the song corpus fulfils the metrical requirements as neatly as (2)-(4). Just as European poetry written in quantitative meter sometimes includes mildly unmetrical lines -- for example, there are nine- and twelve-syllable variant lines in Shakespeare's iambic pentameter (Rasmussen 2003) -- many lines in my corpus contain one or two cola which are slightly smaller or larger than the mora-count target of the meter. (5), the line preceding (2), is metrically identical to (2) in the first two cola, but the last two cola are non-prototypical, with eight (3 + 3 + 2) and seven (3 + 3 + 1) moras each. Likewise, in (6), the line following (4), the second and third cola are well-formed twelve-mora units, but the first colon has only ten morae.

- (5) The line preceding (2): 9, 9, 8, 7

[vocables] (yáémà báìmà máìbì)₃₊₃₊₃ (yáémà ókómà míàrè)₃₊₃₊₃ (gáìkì kákámà dáì)₃₊₃₊₂ (dáìkì yòðhè í)₃₊₃₊₁

yáé -ma bai -ma máí -bì yáé -ma ókó
B.caapi -POET -CLF:people -POET people -INFO *B.caapi* -POET -water
 -ma -mia -re gáì -kì káká -ma -dai -dai
 -CLF.PL:container -POET -NON-SJ grab -SUB.NF enter -POET -MOT -MOT
 -kì yòð -hĩ í
 -SUB.NF 'do' -3SG.NF.PRS 3SG.M

Paraphrase: yáébàì máí yáéòkòmìàrè gáìkì kákáràìkì yòðhè

Speaker: "La gente de ayahuasca, agarrando sus pates de ayahuasca, están entrando."

"*B. caapi* people come enter, carrying vessels of *P. viridis*." (ARS, ycz 0:59)

- (6) The line following (4): 11, 12, 12 (repeated from 1d)

[vocables] (mìrémà híìmání níkákò)₃₊₄₊₃ (nésémàni kátimání níkákòrè)₄₊₄₊₄
 (nésémàni kátimání níkákòrè)₄₊₄₊₄ [vocables]

mì -re -ma híì -mani níká -ko nésé -mani kátì
 2SG -NON-SJ -POET hand -POET stand -SUB.F grab.PLACT -POET hide.VI

-mani nǐká -ko -re ...
-POET stand -SUB.F -NON-SJ ...

Paraphrase: *mìrè nésékátìnkákò, mìrè nésékátìnkákò*

Speaker: "(Tunchi), agarras (las ramas) y te escondes parada."

"Grabbing and grabbing with your hands, you hide standing up." (FLA, fc2 1:12)

Are the departures from metricality in (5) and (6) artistic choices, performance errors, or something else? In (5), the unmetrical eight-mora size of the third colon, *gǎǐkì kákámà dái*, may be an artistic compromise. Here the singer apparently wishes to use two tokens of the verb root/associated motion suffix *dái-* ~ *-dai* "come" in sequence (he regularly uses two tokens of *dái-* in sequence in lines lexically parallel to this one in the song), but the "syntax" of the genre disprefers sequences of identical words. He can achieve the repetition without violating this constraint by using two words with the root *dái-* and different suffixes (e.g. *dáimà dáíkì*) -- a strategy which he employs in the earlier lines -- or by using a bare token of *dái-* followed by a token with a suffix, as he does here. This choice creates a potentially artistic difference from prior lines at the expense of a (one-mora) departure from the meter. It is also possible that the absence of a suffix from the first *dái-* token is simply an error due to the semi-extemporaneous performance.

Some mildly unmetrical lines are amenable to an analysis like the one above, but in others, including (6), the putative unmetricality cannot reflect either artistic variance or error. In the song from which (6) is drawn, the singer employs the ten-mora colon *mìrémà hǐtímání nǐkákò* and a lexically parallel ten-mora colon beginning with *yìrémà* five times in a ten-line song. Although all of the other material in this song neatly obeys a twelve-mora meter, the repetition means we cannot view the ten-mora cola as isolated errors, and -- because of the morphological devices for metricality discussed in §4 -- we also cannot blame the unmetricality on general phonological properties of the lexical contents of the line. It could result, however, from the monomoraic size of the pronouns *yì* and *mì*, which open the line. These pronouns, which often appear in sub metrical cola, were historically bimoraic and remain bimoraic in the other Western Tukanoan languages. It is possible that *yì* and *mì* are still scanned as bimoraic, much as, in Greek epic poetry, syllables historically closed by *w continued to be scanned as closed even after the loss of coda *w from the spoken language (Fortson 2004: 265).

3.3. Line-edge phenomena

Both edges of the poetic line display a characteristic tonal contour in addition to this metrical structure. The left edge of the line tends to align with an HL sequence, the right edge with an LH sequence.¹⁰ The HL-left edge alignment reflects a constraint

¹⁰Both HL and LH sequences must occur over two morae. Máihiki does not allow contours on monomoraic vowels, even in song.

which causes HL sequences to align with the left edge of the prosodic word in spoken Máíhiki (Farmer & Michael submitted: 30) and the tendency of free-word vocables, which constitute the first several words of most lines, to be HL.

The LH-right edge alignment, on the other hand, is bizarre by comparison to the spoken language's phonology. Word-final LH is categorically banned in the lexical phonology of the spoken register, and postlexical phonology can generate it in only one environment.¹¹ Singers achieve the grammatically difficult LH contour by two means. In some lines, they simply realize monomoraic, underlyingly toneless suffix vowels as H; these vowels would be L in the spoken register, but realizing them as H does not compromise lexical or grammatical contrasts. The tone change therefore effectively represents application of a "poetic post-phonology" (Michael 2004), following the lexical and postlexical phonology, to meet the tonal requirements of the line. In other lines, singers simply append a token of the 3SG.M pronoun *í* -- the only monomoraic H word in the language -- to the end of the line following an L tone, as in (5). (7) provides examples of these two LH-creating strategies.

(7) Morphophonological and lexical strategies for line-final LH

a. Line-final toneless suffix, spoken as L, sung as H

(*yìkì mánì bàihágì hìkàkì*)₄₊₄₊₃ (*máimànì téákì mà yòòhì*)₄₊₄₊₃ (*yòòmánì hēákátìkìrè*)₄₊₆

yì -kì -mani bàì -ha -gì hìkà -kì máí -mani
 1SG -CLF:M -POET exist -FUTNMLZ -CLF:M speak -SUB.NF people -POET
 téá -kì -ma yòò -hì yòò -mani -hēā -kái
 reprove -SUB.NF -POET 'do' -3SG.NF.PRS 'do' -POET -PFV.PLACT -BEN
 -kì -re -H
 -SUB.NF -NON-SJ -POET

Paraphrase: *yìkì bàihágì hìkàkì, máitèàkì yòòhì, yòòhēákì,*

Speaker: "Aunque yo tambien quiero vivir, él me insulta."

"As I say to myself, '(I am) one who will/should survive,' he keeps reprovng (me) (i.e. by sorcery), doing so over and over" (ARS, ene 1:33)

b. Semantically light line-final token of *í* 3SG.M

(*mìrèmà hìkàkì mìnì*)₃₊₃₊₃ (*mìnì mánì ásókì*)₃₊₃₊₃ (*yòòhì í*)₃₊₁

mì -rè -mà hìkà -kì mìnì mìnì mánì
 2SG -NON-SJ -POET speak -SUB.NF intoxicate.SEQ intoxicate.SEQ hit.SEQ
 ásó -kì yòò -hì í
 make.perceive -SUB.NF 'do' -3SG.NF.PRS -3SG.M

Paraphrase: *mìrè mìnì mánì ásókì*

Speaker: "Quando (el chiric sanango) te marea"

¹¹Specifically: trimoraic nouns which are underlyingly LØØ may be realized as LLH phrase-finally or before another L. This is not the environment of the line-final LH sequences found in song.

"When (*Brunfelsia* hallucinogen) intoxicates you, strikes (you), makes (you) perceive (visions)" (ARS, ac# 0:28)

The semantically bleached use of *í* as a line-edge item in (7b), discussed further in (4.2), brings us to the most remarkable feature of this genre: the use of referentially contentless morphology to achieve metricality.

4. Genre-specific morphology

The song meters described in §3 demand three- and four-mora words, but the lexicon of spoken Máihiki contains relatively few words of this size. The morphologically minimal noun has only two morae, and the minimal verb, only three (2.3). Singers draw on two strategies to produce, from these lexical resources, the word sizes which the meter demands. They employ the genre-specific vocable affixes *-ma* and *-mani* (4.1) and they make referentially vacuous use of certain grammatical morphs and function words (4.2).

4.1. The vocable affixes *-ma* and *-mani*

The spoken register of Máihiki has four segmentally homophonous suffixes of the form *-ma* and three homophonous free words *mání*. High *-má* is the verbal negative suffix; underlyingly toneless *-ma* forms the imperative and the plural for inanimate nouns and acts as a classifier for paths. *mání* is a focus particle, a particle which marks the antecedent clause of a conditional, and an allomorph of the copula verb.

In addition, this song genre has two "vocable affixes" *-ma* and *-mani*. Poetic *-ma* and *-mani* have no referential content; their only meaning is to index the participation of the discourse in the poetic genre. Speakers omit them in spoken paraphrases of song lyric and judge them as ungrammatical when produced outside the sung vocal channel, even in quotation of song. Beyond these facts, the morphophonological properties of poetic *-ma* and *-mani* show that these affixes are distinct from the homophonous grammatical morphs. At least synchronically, the vocable affixes do not represent poetic use of register-unrestricted morphology, like poetic reduplication in Tohono O'odham (Fitzgerald 1998) or exuberant use of the optative in Kuna chant (Sherzer 1990). Rather, poetic *-ma* and *-mani* are "genre-specific" morphs unique to song.

4.1.1. The genre-specific status of poetic *-ma* and *-mani*

Evidence for the genre-specific status of poetic *-ma* and *-mani* comes from the conditions which *-ma* and *-mani* impose on the morphological base, their tone-spreading behavior, and their ordering relative to referential affixes. First, *-ma* and *-mani* differ from the homophonous referential affixes in morphological distribution. Poetic *-ma* appears on nonfinite verbs and nominals (deictic elements and nouns). On verbs, the restriction to non-finite verbs differentiates *-ma* POET from *-má* NEG, which can appear on both finite and nonfinite verbs. Likewise, *-ma* POET can ap-

pear on nominals referring to either animates or inanimates, while the plural and classifier morphs are permitted only on nominals referring to inanimates. Poetic *-mani* appears on words of all classes, but has a phonological condition on affixation: it can be affixed only to a base of two morae or fewer. While this likely reflects the affix's role in fitting bimoraic words to 4-moraic meters (see below), no other affix in Máihiki imposes phonological conditions on its base.

-ma and *-mani* likewise differ from their homophones -- and in fact, from all other affixes in the language -- in affix ordering. Both *-ma* and *-mani* have flexible ordering relative to referentially contentful affixes: they can appear either between the root and its referential affixes (schematized ROOT-POET-SFX) or following a base composed of a root and one referential affix (ROOT-SFX-POET). Some cases of the ROOT-POET-SFX order suggest that the language's morphological template includes a slot unique to the poetic affixes. Only *-ma* and *-mani* can intervene between nominal roots in a noun-noun compound (8a.i) or between roots in a serial verb (8b). As shown in (8), referential affixes, including referential *-ma* and *mání*, cannot appear in these positions. *-ma* and *-mani* are also unusual, though not unique, in their ability to appear between a nominal root and classifier (8a.ii).

- (8) Poetic *-ma* and *-mani* appear in morphological slots where no other suffix is permitted

a. Between nouns in N-N compound and between noun and classifier:

yáémà ókómà míàmàrè

yáé -mà ókó -mà -míà -mà -rè

B.caapi -POET water -POET -CLF.PL:container -POET -NON-SJ

Paraphrase: *yáèòkòmìà* "vessels of *B. caapi* beverage" (ARS, yc1 0:33)

i. Noun-affix-noun order in compound exceptional (banned in speech), cf.:

cf. **yáémàòkòmìà* (*B.caapi*-INANPL-water-CLF.PL:container),

**yáémìàòkò* (*B.caapi*-CLF.PL:container-water) unattested in speech

ii. Noun-affix-classifier order exceptional (permitted in speech only if intervening affix is exclusive NP focus suffix *-ra*), cf.:

**ókómàmìà* (water-INANPL-CLF.PL:container),

**ókómàkàmìà* (water-DIM-CLF.PL:container) ungrammatical

b. Between roots in serial verb:

tómémà yáyákì

tómé -mà yáyá -kì

fall -POET go.out.light -SUB.NF

Paraphrase: *tóméyáyákì* "(the lights,) falling and going out" (ARS, cca 1:26)

Verb-affix-verb-inflection order exceptional (banned in speech), cf:

**tómé-má-yáyá-kì* (fall-NEG-go.out.light-SUB.NF)

**tómégòndòyáyákì* (fall-CAUS-go.out.light-SUB.NF), etc. ungrammatical

-ma and *-mani* also have exceptional tonal behavior. The tones of the affixes themselves are not anomalous: *-ma* behaves like an ordinary (i.e. toneless) monomoraic suffix, while *-mani* has the prosodic behavior of the quasi-toneless causative suffix *-goŋo* (see Farmer & Michael submitted: 14). The tone phenomena which occur following these affixes, however, are very unusual relative to the spoken language's phonology. Both affixes induce an initial H tone on following affixal material which would otherwise surface as L. The word /*yáé-bai*/ (*B.caapi*-CLF:people), for example, is realized as *yáébàì* HH-LL in the spoken register, but becomes *yáémà báìmà* HHL HLL -- with a high tone on the first mora of the affix *-bai* -- when *-ma* is inserted between the root and affix in song (cf. 2). Two referential affixes which have underlying H tones, the clausal negative *-má* and the perfective *-hó*, can also induce a H on the following material within the prosodic word. Tone spreading from *-má* and *-hó*, however, causes **all** of the following affixal string to be realized as H, while the poetic affixes induce an H on only the first mora of the following affixal material. When *-ma* or *-mani* POET intervenes between two compounded roots, on the other hand, the second root in the compound simply surfaces with the tone which it bears in isolation. Thus the compound stem /*yáé-ókó*/ (*B.caapi*-water) is realized in (8a) above as *yáémà ókómà* HHLHHL, rather than as *yáémà ókòmà* HHL HLL, as we would find if the second element were an affix.

4.1.2. *-ma* and *-mani* and prosodic word breaks

For two reasons, I view the unique tonal behavior of *-ma* and *-mani* as evidence that they cause a following break in the prosodic word. I first discuss data from compounding. In spoken Máihiki, the noun appears with its underlying tones in only two environments: a) isolation and b) as the first element in a morphologically complex word (i.e. the base of a noun-suffix word or the first element of a noun-noun compound). When a noun appears as a non-first element in a complex word, its tone is delinked and deleted, and the TBUs of the noun are assigned a tone determined by the tone of the first element in the word (Farmer & Michael submitted: 30). As shown in §4.1.1, the poetic affixes block this process: when a poetic affix intervenes between elements of a compound, the second element has the same tone as isolation. Since the deletion of underlying tones from non-first nouns in compounding is otherwise exceptionless, this suggests that erstwhile compounds interrupted by poetic affixes represent two prosodic words (i.e. ROOT1-POET ROOT2).

Evidence from affixation further suggests that *-ma* and *-mani* also create prosodic word breaks in non-compounded words. First, recall that when *-ma* and *-mani* intervene between a root and affix, the affix surfaces with an H tone on the first mora and L tones on subsequent morae. This means that an ROOT-POET-SFX string

generally contains two HL sequences: one occurring within the ROOT-POET portion of the string and attributable to the language's regular lexical tonology, and one occurring on the first two morae of the referential suffix and induced by the poetic affix. Spoken Máihiki permits the appearance of multiple HL sequences in a single, non-compound prosodic word only if a) the prosodic word participates in the cophonology for present and past tense declarative verbs **and** b) the H of the second HL sequence is underlyingly present (Farmer & Michael submitted: 31). ROOT-POET-SFX constructions never meet the first of these requirements, since poetic affixes do not appear on declarative verbs.

This leaves us with two notionally possible accounts for the behavior of *-ma* and *-mani* in affix-bearing words: either *-ma* and *-mani* have a floating right-edge H tone, or they induce a break in the prosodic word. The floating-tone analysis predicts that an affix following *-ma* or *-mani* should have the same surface tone melody as an underlyingly H root -- since all affixes attested in song are underlyingly toneless, the floating H should associate with the first mora of the affix, then spread, so that the affix is surface HH. The prosodic word break analysis, on the other hand, predicts that the affix will behave like an underlyingly toneless root, surfacing with an HL melody. Here the prediction of the prosodic word break analysis is correct: affixes which follow *-ma* and *-mani* are HL (see above). Second, the floating-tone analysis also fails to account for the interaction of poetic affixation and prosodic minimality. The affix order ROOT-POET-SFX is unattested in my corpus for words in which the string of referential affixes consists of only one mora. On the prosodic word break analysis, this simply reflects the bimoraic MWR: if a prosodic word break appeared before a monomoraic affix, the affix would be stranded as a sub-minimal monomoraic word. The floating-tone analysis could predict this only on the grounds of the general constraint against word-final LH, which is violated elsewhere in song as well as in speech (cf. 3.3 and note 11). Third, and most important, the floating-tone analysis fails to predict the interaction of *-ma* and *-mani*. Recall from above that *-mani* permits a maximally bimoraic base (i.e. a root or a monomoraic pronoun plus monomoraic affix). *-mani* can also appear, however, following a bimoraic affix that itself follows *-ma* (e.g. *úí-yà-mà ákò-mànì*). This is expected if the material following *-ma* counts as a new prosodic word, but anomalous if the entire ROOT-POET-SFX string preceding the *-mani* token represents one prosodic word.

4.1.3. Metrical functions of *-ma* and *-mani*

Affixation with *-ma* and *-mani* POET serves two metrical purposes: to bring up the size of words which are smaller than the meter requires, and to break up morphologically complex words which would otherwise be too large for the meter. Poets use *-ma* for these purposes in all of the documented meters, *-mani* primarily in the meters (8-mora and 12-mora) that require 4-mora prosodic words. (9) and (10) illustrate the use of vocable affixes to meet metrical requirements for size and word

breaks in a line with 9-mora cola (9) and one with 12-mora cola (10).

- (9) Vocable affixation satisfying a 9-mora meter (repeated from 2)
- a. With vocable affix tokens:
*(yáémà báìmà máíbì)*₃₊₃₊₃ *(yáémà ókómà sàgùrè)*₃₊₃₊₃ *(gáǎkì kákámà dáìkì)*₃₊₃₊₃
- b. Without vocable affixes:
*(yáébàì máíbì)*₄₊₃ *(yáéòkòsàgùrè)*₇ *(gáǎkì kákádàìkì)*₃₊₅
- (10) Vocable affixation satisfying a 12-mora meter (repeated from 6)
- a. With vocable affix tokens:
*(mìrémà híìmání níkáàkò)*₃₊₄₊₃ *(nésémàni kátìmání níkáàkòrè)*₄₊₄₊₄ *(nésémàni kátìmání níkáàkòrè)*₄₊₄₊₄
- b. Without vocable affixes:
*(mìrè híì níkáàkò)*₂₊₂₊₃ *(nésékátìníkáàkòrè)*₈ *(nésékátìníkáàkòrè)*₈

I wish to stress that, while vocable affixes have a semi-predictable distribution and lack **referential** content, this does not entail that they are meaningless. Vocables, affixal and free, do have an indexical meaning: they mark the participation of the discourse in the song genre. The non-poetic lexicon of Máíhiki has enough three- and four-mora words that poets could fashion metrical lines without vocables, leaving constraints against referentially empty affixation (which must be active in the spoken language) unviolated. Yet instead, they use words of other sizes affixed with vocables -- suggesting that the grammar of song does not penalize the use of referentially contentless morphs. The poetic grammar is so tolerant of non-referential morphology, in fact, that it permits use of referentially contentful affixes and words without their usual semantic contribution. I now turn to this issue in §4.2.

4.2. Genre-specific uses of referentially contentful morphs

Poets in this genre also manipulate referentially contentful morphology to fit lines to the meter. To meet the quantitative requirements of the meter, they use a range of nominal and verbal derivational affixes which -- although they have referential meanings in spoken Máíhiki -- appear in song with little or no referential content. For the same ends, poets also regularly employ inflectional morphology in ways which are judged ungrammatical in the spoken language. Similarly, to create the line-final LH contours discussed in §3.3, singers use certain function words with no referential contribution and in contexts where the referential expression is semantically infelicitous.

I begin with non-referential uses of function words. A large proportion of lines in the song corpus end with the string *yòðhè í* (do3SG.NF.PRS 3SG.M) "he does (it)." The verb *yòð-* appears in spoken Máíhiki as an atelic lexical verb meaning "work, do," in one type of complex predicate with the meaning "try, be about to," and in another type of complex predicate as a marker of durative aspect. Some

uses of line-final $y\grave{o}d\grave{h}\grave{i}$ in song potentially support the durative aspect reading, and speakers sometimes do preserve line-final $y\grave{o}d\grave{h}\grave{i}$ in spoken paraphrases of lyric (as in 1b). Yet line-final $y\grave{o}d\grave{h}\grave{i} \acute{i}$ also regularly appears in song in contexts which do not support a referentially contentful reading, such as (11).

- (11) Referentially contentless use of $y\grave{o}d\grave{h}\grave{i} \acute{i}$ "he does (it)"
 ($y\acute{a}e\grave{m}\grave{a} \ g\acute{o}s\acute{a}k\grave{i}$)₃₊₃ ($\acute{o}n\grave{i}\grave{m}\grave{a} \ \acute{e}t\acute{a}m\grave{a}$)₃₊₃ ($d\acute{a}k\grave{i} \ y\grave{o}d\grave{h}\grave{i} \ \acute{i}$)₃₊₃₊₁

$y\acute{a}e$ $-ma$ $g\acute{o}s\acute{a}$ $-ki$ $\acute{o}n\grave{i}$ $-ma$ $\acute{e}t\acute{a}$ $-ma$ $d\acute{a}i$ $-ki$
Banisteriopsis -POET 'think' -SUB.NF weep -POET exit -POET come -SUB.NF
 $y\grave{o}d\grave{o}$ $-h\grave{i}$ \acute{i}
 'do' -3SG.NF.PRS 3SG.M

Paraphrase: $y\acute{a}e \ g\acute{o}s\acute{a}k\grave{i} \ \acute{o}n\grave{i} \ \acute{e}t\acute{a}d\grave{a}i$

Speaker: "Andando en la mareación de ayahuasca, vivo llorando."

"Intoxicated by the *Banisteriopsis*, I wander about weeping" (ARS, aca 0:29)

(11) comes from a discourse that is otherwise composed entirely in the first person and includes no 3SG.M referents, but the line nevertheless ends in $y\grave{o}d\grave{h}\grave{i} \acute{i}$. One could argue that $y\grave{o}d\grave{h}\grave{i} \acute{i}$ has some contextually salient but unexpressed referent -- except that the singer does not include any 3SG.M expression in his Máfhiki paraphrase and Spanish translation of the line. While line-final $y\grave{o}d\grave{h}\grave{i} \acute{i}$ is formally identical to the referentially contentful sentence $y\grave{o}d\grave{h}\grave{i} \acute{i}$ "he does (it)," line-final tokens of the expression in contexts like (11) cannot be read as referentially contentful. I therefore read line-final $y\grave{o}d\grave{h}\grave{i} \acute{i}$ tokens as serving a metrical purpose, not a referential one: the string creates an LH contour at the end of the line. For phonological reasons (2.3, 3.3), it is difficult to create a phrase-final LH sequence in Máfhiki, and the string $y\grave{o}d\grave{h}\grave{i} \acute{i}$ creates such a sequence in a way compatible with the quantitative meter (since the first word is trimoraic).

This non-referential use is not restricted to the string $y\grave{o}d\grave{h}\grave{i} \acute{i}$. Line-final tokens of \acute{i} 3SG.M also appear following verbs other than $y\grave{o}d\grave{h}\grave{i}$ in contexts where no semantically felicitous referent for \acute{i} is present (e.g. 1c). In such contexts, speakers judge tokens of both $y\grave{o}d\grave{h}\grave{i} \acute{i}$ and lone \acute{i} to be non-words, and refer to them with the same terms -- the verb *bítŷi*- "make noise" and the Spanish word *tono* -- that they use for free-word vocables.

Comparison of song lines with their spoken paraphrases suggest that poets make similar non-referential use of derivational morphology in order to boost the mora count of cola and lines without change to their referential contents. For example, when the benefactive affix *-kai*, which in spoken Máfhiki applies to a verb root or compound to derive a verb meaning "assist (someone) by VERBing," appears in song lines, the discourse context rarely supports a benefactive reading, and speakers do not preserve the affix in the spoken paraphrase. The same is true for uses in song of

the verbal number and frustrative affix *-nia*, the fusional verbal number-aspectual affix *-hěã*, the nominal diminutives *-maka* and *-ni*, the category prototype nominal affix *-reba*, and the information-structural affixes *-bi* and *-ga*. Unlike line-final *yòðhě* *í* and *í*, these affixes occur in song with effectively the same syntactic distribution as in speech, although conditions on the semantic class of the base are relaxed for some affixes in song -- for example, *-hěã* appears on both stative and dynamic verb roots in song, but only on dynamic verbs in speech.

From a linguistic perspective, though, the most striking case of this type is the referentially contentless use of the non-subject marker *-re* in song. *-re* is an inflectional morph which occurs in speech on noun phrases referring to patients, experiencers, and certain oblique arguments; it also appears on certain non-finite verbs as a switch-reference marker. In song, though, *-re* also occurs on agents, unergative subjects, and the verbs of non-switch-reference clauses, as in (12).

- (12) Poetic use of *-re* NON-SJ (repeated from 4)
(sìjòǐsí yèbèhúru àkògàmà)₄₊₄₊₄ ... (tóméyèbè sánimání níkákòrè)₄₊₄₊₄ (tóméyèbè sánimání níkákòrè)₄₊₄₊₄
 Paraphrase: *sìjòǐsí yèbèhúru àkò...tóméyèbè sáni níkákò*
 "She of the time of the yellow sun and lightning stands (there) when lightning goes and falls" (FLA, fc2 1:23)"

The two verbs marked with *-re* in (12) share a subject (the spirit who is referred to as *sìjòǐsí yèbèhúru àkò* "she of the time of the yellow sun and lightning"), and this subject is the subject of every clause in the song. The tokens of *níkákòrè* here cannot have either of their two possible readings in spoken Máíhiki: they are not switch-reference clauses and they are not deverbal nominalizations marked for a non-subject thematic role. The *-re* marking would therefore be ungrammatical in the spoken register, and it is presumably for this reason that the speaker removes it in his paraphrase. The poetic use of *-re* in (12) therefore resembles the line-final use of *yòðhě* in (11): the (inflectional) morph is used not only without its typical referential content, but in a manner which would be grammatically unacceptable outside the sung register.¹² Metrical motivations are again at play in the departure from the spoken grammar. Monomoraic *-re* effectively acts as an alternative to *-ma*, fitting trimoraic complex nouns and inflected verbs (as above) to four-moraic meters, and bimoraic nouns to trimoraic meters.

Hinton (1984: 63), in her linguistic study of Havasupai song, writes that certain spoken Havasupai demonstratives "shade off into the system of inserted vocables" in song. The categories of quasi-referential, non-referential, and vocable morphology likewise bleed into one another in Máíhiki. How much does the referentially light use of *-re*, (*yòðhě*) *í*, and derivational morphology in song differ from vocable

¹²Havasupai song makes extremely similar use of vacuous switch-reference (Hinton 1984: 63).

affixation? In semantics and pragmatics, not at all. Neither vocable affixes nor the light uses of grammatical morphs make any referential or grammatical contribution to the message, and speakers likely hear both vocables and non-canonical use of grammatical morphs as indexing the discourse's participation in the song genre. Rather, my distinction between vocable morphs and light uses of grammatical morphs refers exclusively to phonology and morphology. I categorize *-ma* and *-mani* as genre-specific poetic morphs because they differ in phonology and affix ordering from the segmentally homophonous referential affixes. Conversely, I treat poetic *-re* as a special use of the non-subject affix because the poetic and the referential uses of the affix are morphophonologically identical -- even though poetic and non-poetic *-re* display different syntactic distributions.

If we privilege syntax, though, poetic *-re* can be classified as a vocable morph as well, since *-re* POET differs just as much in syntactic distribution from grammatical *-re* as *-ma* POET does from *-ma* PL. To capture the ambiguous status of light uses of grammatical morphs like *-re*, (13) below represents the non-referential morphs found in this genre as forming a "poeticization" cline, analogous to a grammaticalization cline. On the cline, the poetic morphs which are distinct from their (segmentally) homophonous referential counterparts on more dimensions appear on the far left. Those which are most similar to their referential counterparts -- for example, which speakers still sometimes preserve in spoken paraphrase -- appear on the right.

(13) "Poeticization" cline

Property (cf. source morph)	<i>-ma, -mani</i>	<i>-re, ɿ</i>] _{Line}	<i>-hěã, -jia</i>	<i>yòðhĩ</i>] _{Line}
Phonology/prosody	Different	Same	Same	Same
Morphological distribution	Different	Same	Same	Same
Syntactic distribution	Different	Different	Same	Same
Referential contribution	None	None	None	Occasional
Degree of "poeticization"	Most			Least

5. Conclusions

The genre of Máihiki men's shamanic songs presents two novel phenomena for cross-linguistic poetics. Singers in this genre employ a typologically unusual meter -- unusual in that it regulates sub-line constituents more strictly than lines -- and fit the poetic message to that meter primarily through use of genre-specific and -specialized morphology. The centrality of poetry-specific morphology to Máihiki song represents a profound difference between this genre, in which almost any lexical content can be made metrical through affixation or light use of grammatical morphs, and European poetic genres, in which poets select lexical items and syntactic structures in order to achieve metricality. The ethnopoetic literature suggests that Máihiki-like genres, in which poets accommodate message to form through

poetry-specific morphophonological operations, are more common in languages of the Americas than lexicon- and syntax-focused genres (Hinton 1984, Sherzer 1990, Fitzgerald 1998, Michael 2004). The difference between genres which manipulate morphophonology and genres which manipulate lexicon and syntax, though, is one of degree rather than kind. European poets do not have vocable affixes at their disposal, but European poetic traditions do employ exceptional phonology and archaic (contentful) morphology in order to meet metrical requirements. Poetic use of *-eth*, *-est*, and *-éd* in English, the archaic third-person plural perfect *-ēre* in Latin, and initial syllable lengthening in Greek are cases in point.

This data also bears on a fundamental question in generative metrics: how different is the phonology of poetry from the phonology of non-poetic natural language? On the surface, Máihiki vocable affixation seems profoundly different from any morphological phenomenon in (non-poetic, non-game) natural language -- it adds morphs which neither refer nor mark grammatical relations. Yet vocable affixation can be seen as participating in a natural class of morphological constructions which augment stems with semantically empty morphs in order to fit a rigid prosodic template, usually one defined by minimum word requirements. In the Bantu languages Ndebele (Downing 2001, Sibanda 2004) and Chichewa (Hyman & Mtenje 1999), for example, a bisyllabic MWR prevents monosyllabic verb roots from forming a zero-marked imperative, as larger roots do. The imperative forms of monosyllabic roots therefore bear a semantically empty "stabilizer" prefix *yi-* (Ndebele) or *i-* (Chichewa), which fills out the root to the minimum bisyllabic size. Likewise, in the Athabaskan language Slave (Rice 1989), a semantically empty prefix (*h*)*e-* augments verb stems which lack lexical prefixes. Lengthening or partial reduplication of bare roots to meet MWRs is very common cross-linguistically (Hayes 1995, Garrett 1999). Such minimality-driven augmentation and reduplication phenomena represent a non-segmental analogue to the Ndebele, Chichewa, and Slave "stabilizers" -- and a non-poetic analogue to the vocable affixation I have described here.

6. References

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7. Final note

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