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Publication Date

2017

Peer reviewed|Thesis/dissertation

UNIVERSITY OF CALIFORNIA

Santa Barbara

"They just had such a sweet way of speaking":
Constructed voices and prosodic styles in Kodiak Alutiiq

A thesis submitted in partial satisfaction of the
requirements for the degree Master of Arts
in Linguistics

by

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March 2018

The thesis of Julia Coombs Fine is approved.

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December 2017

"They just had such a sweet way of speaking":

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Julia Coombs Fine

Abstract

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Recent research in sociocultural linguistics has increasingly focused on the interplay of prosodic style, interactional stance, and personahood (Bucholtz 2009; Kiesling 2009; Mendoza-Denton 2011; Podesva 2013; Starr 2015; Zimman 2017). Within this vein of research, indigenous languages remain understudied. Furthermore, those sociophonetic studies that do address indigenous languages tend to focus on segmental rather than suprasegmental variation. This analysis investigates the prosodic stylization of constructed dialogue in Kodiak Alutiiq, an endangered Aleut-Yupik-Inuit language spoken on Kodiak Island. Following Coupland's (1980) understanding of style as being comprised of multiple variables, I analyze each speaker's average F0, F0 range, voice quality, speech rate, and intonation contour across excerpts of constructed dialogue and non-constructed dialogue speech. The results emphasize the importance of considering interactional stance in conjunction with persona and of examining the interactions of prosodic variables rather than analyzing them in isolation. Finally, the results demonstrate the important role narrative has to play in language revitalization efforts both as a method for improving fluency and as a conduit for the transmission of polyphony.

1. Introduction

Researchers in sociocultural linguistics are increasingly attending to the interplay between prosodic styles, interactional stances, social roles, and personae: how speakers take stances and construct social roles through prosodic styles, and how interlocutors interpret those stances with reference to their observations and assumptions about the social role the speaker is portraying (Bucholtz 2009; Kiesling 2009; Zimman 2017). As sociophonetic research has shown (Coupland 1980; Drager 2008; Eckert 2000), speakers often perform stances and social roles through the use of multiple meaningful phonetic and prosodic features. While this vein of research has provided insights into the nature of stances and personae in majority languages such as English, endangered and minoritized languages remain understudied from this perspective. Extending these lines of inquiry to a non-English, non-majority language community, this thesis analyzes the prosodic stylization of personae in constructed dialogue in Kodiak Alutiiq, an endangered Aleut-Yupik-Inuit language spoken on Kodiak Island. The results 1) unpack the concept of persona into the conjunction of stance and social role, 2) emphasize the fundamental interconnectedness of stance and social role, and 3) demonstrate the value of a multi-feature approach to analyzing this interconnectedness.

As an integral part of Alutiiq culture, narrative is central to the transmission of traditional Alutiiq knowledge, beliefs, and values (Drabek 2012:18). Alutiiq speakers often make use of constructed dialogue in narratives, voicing a rich array of personae characterized both by their social roles and by the stances they habitually assume: authoritative priests, sweet old ladies, snotty teenagers, and many more. Speakers often supply overt labels for the personae they voice, making it possible to infer the constructed

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social role and interactional stance based not only on the content of the voiced utterances, but also on the way in which the speaker frames those utterances. Key properties of Alutiiq narrative make it ideal for the analysis of prosodic styles, interactional stances, social roles, and personae.

The majority of the personae analyzed in this study are characterized by a change in multiple prosodic features relative to the speaker's baseline, e.g. by a difference in both average F0, F0 variability, and voice quality. Some general trends emerge across speakers: for instance, speakers tend to use higher average F0 and more modal voice quality in constructed dialogue than elsewhere. Additionally, speakers use higher and more variable F0 when voicing young speakers and female speakers, and lower and less variable F0 when voicing old speakers and male speakers. Speakers also employ higher and more variable F0 when animating the expression of epistemically weak stances such as curiosity and anxiety, and lower and less variable F0 when animating the expression of epistemically strong stances such as anger and authority. The use of F0 to perform epistemically weak or strong stances is overlaid on its role in the construction of age and gender, so that anxious adult male voices are constructed with moderately high and variable F0, while authoritative young female voices are constructed with moderately low and narrow F0. These results show that it is the interaction of social roles and stances, rather than social roles or stances alone, that is relevant to speakers' use of prosodic features in constructed dialogue—and, furthermore, that this interaction can only be observed by analyzing the interplay of multiple prosodic features.

2. Persona, stance, and prosodic style in constructed dialogue: Literature review

The examination of the performance of style, stance, and personahood is one of the focal points of third-wave sociolinguistics (Eckert 2012). As Kiesling (2009), Du Bois and Kärkkäinnen (2012), and Goodwin et al. (2012) note, these concepts are closely interrelated. However, most research on prosodic styles tends to focus on the relationship of only one of these characteristics to one prosodic feature. For example, one set of studies links the performance of stance to F0, F0 range, voice quality, intonation, and rhythm (Gobl & Chasaide 2003; Gülich and Lindemann 2010; Protopapas 1997; Paeschke & Sedlmeir 2000; Tainio 2012; Williams and Kenneth 1972; Yuasa 2001; Zimman 2017), while another relates the performance of gendered and racialized personae to F0, F0 variability, intonation, syllable timing, post-tonic lengthening, and voice quality (Calder et al. 2013; Callier 2011; Fine 2017; Henton 1995; Holliday 2016; Szakay 2012; Thomas & Carter 2006).

These approaches are valuable in that they allow for detailed analysis of the prosodic or phonetic feature under consideration. Multi-feature analyses, however, allow for a more holistic and contextually grounded consideration of prosodic style. Sociophonetic studies that address the performance of both interactional stances and social roles simultaneously—such as Mendoza-Denton's (2011) analysis of the role of creaky voice in the construction of a tough Chicana identity, Starr's (2015) analysis of

the role of voice quality in the construction of "sweet voice" in Japanese anime, and Stanford's (2010) analysis of the authoritative stance assumed by older Hmong men speaking to young, female Hmong interviewers—shed light on both the stancetaking components of social roles and on how social roles shape the construction and interpretation of stance. This thesis therefore follows the multi-feature approach, analyzing interactional stances and social roles in constructed dialogue in Kodiak Alutiiq with respect to voice quality, intonation, speech rate, and F0.

Constructed dialogue (Tannen 2007), elsewhere termed *reported speech* (Coulmas 1986) or *voicing* (Couper-Kuhlen 1999), provides a valuable window into the performance of stances and social roles (Podesva 2013; Günthner 1997; Couper-Kuhlen 1999). Constructed dialogue is embedded in narratives, which shed light on the qualities that speakers ascribe to the voices they construct. The interactional stance of a constructed voice is not usually made explicit, but it can be inferred both from context and from the performance itself. Additionally, as Günthner (1999) argues, polyphony— specifically the layering of multiple different constructed voices by a single speaker (Bakhtin 1981)—is primarily accomplished through prosody in spoken discourse. This "layering" can also be understood as a process of lamination (Goffman 1974), with speakers simultaneously projecting both the constructed voice's social role and interactional stance and their own social roles and stances in relation to the constructed voice. Constructed dialogue is therefore well-suited for the analysis of stylistic prosody, both because it is a locus of heightened stylistic activity and because it lends itself to contextually grounded analysis that obviates the need to impose top-down conceptualizations of stance and persona.

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In addition to contributing to the research on prosodic stylization in constructed dialogue, this study adds to existing research on prosodic stylization in non-English, non-majority languages and cultures. Research on prosody in indigenous languages (Clopper & Tonhauser 2013; Nascimento et al. 2016; Palancar 2004; Palakurthy 2016; Woodbury 1987) typically focuses on the phonological and information-structural properties of prosody rather than on its social functions in stylization and stancetaking; meanwhile, sociophonetic work on indigenous languages—such as the studies presented in Stanford and Preston (2009)—focuses primarily on segmental rather than suprasegmental variation. Sicoli's (2010) analysis of voice quality and speech register in Lachixío Zapotec is a rare example of a study on an indigenous language that addresses the social functions of prosody (see also Blythe's 2011 analysis of prosodic rhythm in Murriny Patha). Research on the social functions of prosody in indigenous languages is especially important in broadening the sociolinguistic study of prosody. Furthermore, by shedding light on discourse practices that indigenous speakers themselves value, such research yields richer, more multidimensional language descriptions that may be useful to revitalization efforts.

3. Kodiak Alutiiq: Ethnographic Context

Also known as Sugpiaq, Aleut, or Pacific Gulf Yupik, Alutiiq is a polysynthetic, ergative language spoken on the Kodiak Archipelago by fewer than 150 speakers (Counceller 2010:10, 19). Alutiiq has two dialects: Chugach Alutiiq, spoken on the Kenai Peninsula and in Prince William Sound, and Kodiak Alutiiq, spoken on Kodiak Island

(Counceller 2010:11). Kodiak Alutiiq is spoken by approximately 54 speakers residing in six villages on Kodiak Island—Old Harbor, Akhiok, Karluk, Larsen Bay, Port Lions, and Ouzinkie—as well as in Kodiak City (Counceller 2010:13). Within Kodiak Alutiiq, there is a further distinction between the Northern style[1], which is spoken in Kodiak City, Karluk, Larsen Bay, Port Lions, and Ouzinkie, and the Southern style, which is spoken in Kodiak City, Old Harbor, and Akhiok (Counceller & Leer 2006).

Kodiak Alutiiq has undergone two waves of language contact in recent history, first with Russian and then with English. The Russian conquest of Kodiak in the late eighteenth century was characterized both by outright violence and by subtler forms of cultural subjugation, such as the eradication of shamanism and conversion to Russian Orthodoxy (Drabek 2012: 3-4). This history of subjugation continued throughout the subsequent process of Americanization, particularly in the abusive English-only schools which Alutiiq children were forced to attend, which played an instrumental role in the disruption of intergenerational transmission and led to the current severe endangerment of Alutiiq (Drabek 2012). The influences of Russian and English are reflected in the lexicon of modern Alutiiq, which incorporates many Russian and English loanwords. Today, all fluent speakers of Alutiiq are bilingual in English, and many have some familiarity with Russian as well.

Against a backdrop of historical trauma and language endangerment, the past three decades have seen a resurgence of language vitality in the form of the Alutiiq revitalization movement. The revitalization movement began in the 1990s with language

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[1] I follow Counceller (2012) in my use of the term *style*, which was chosen by the Alutiiq community to emphasize the similarities between the varieties.

classes at Kodiak High School and Kodiak College (Counceller 2010:22) and continued with a Master-Apprentice program (Hinton et al. 2002) that lasted until 2007. The Master-Apprentice program generated a small core group of semi-fluent adult Alutiiq speakers (Counceller 2010:24-25), who have since gone on to work as language specialists at the local Alutiiq Museum, lead Alutiiq dance groups, and teach Alutiiq in high school, college classes, summer camp fluency intensives, and an immersion preschool. While the enterprise of language teaching may necessitate some degree of prescriptivism, linguistic authenticity and accuracy is typically pursued by learners rather than enforced by Elders. Elders themselves emphasize the importance of mutual intelligibility over ideals of linguistic purity. Additionally, they stress the need to preserve the polyphony of the language through the inclusion of both the Northern and Southern styles of Alutiiq in pedagogical materials. These anti-purist, anti-essentialist ideologies are reflected in narrative performances of stylized, parodic, polyphonic voices, which provide a counterpoint to the seriousness and homogeneity typically prescribed by linguistic purism and language essentialism.

As a result of my own multiple roles and identities throughout my engagement with the Alutiiq revitalization movement, my positionality with respect to the Alutiiq community is multifaceted. I first was introduced to the community through Evan Gardner, the founder of the Where Are Your Keys (WAYK) immersion-based language teaching methodology (Gardner 2017), and I interned with WAYK during the summer of 2014 to create Alutiiq curriculum materials. Since then, I have collaborated with the Alutiiq community on a variety of revitalization-related projects, as well as conducting sociolinguistic fieldwork. Simplistic binaries—outsider versus insider, researcher versus

object of research—do not apply unproblematically in this situation. While I am unequivocally an outsider to the Kodiak Alutiiq community in that I am non-Alutiiq, white, from Boston, and not a resident of Kodiak, I take on the role of an Alutiiq learner both in order to help create curriculum materials and as part of participant-observation. At the same time, my position as a white researcher brings with it unearned power and prestige that I try to be aware of and mitigate as much as possible.

The data analyzed below are drawn from 22 audio and video recordings collected from the 1990s to 2016. Two of the recordings come from an archival collection housed at the Alutiiq Museum: one dates from 1990 and was recorded by linguist Jeff Leer, and the other dates from 2005 and was recorded by scholar and language activist April Counceller. These recordings consist primarily of narratives, but also feature conversations between fluent Elders. Eleven of the recordings are drawn from an elicitation-based fieldwork project that I conducted in 2014 on the coreference properties of agentive and patientive verbs, mostly through dyadic interactions between me and an Elder. The 2014 data are drawn not from elicited speech, but from informal conversation that occurred at the periphery of the elicitations. The remaining nine recordings are taken from sociolinguistic and ethnographic fieldwork I conducted in the summer of 2016 for the purposes of this analysis. Whereas dyadic interactions make up the majority of the 2014 recordings, the 2016 recordings feature multiparty conversations between me, one or more other learners, and one or more Elders.

The sample includes all instances of constructed dialogue in the recordings and contains excerpts from the speech of eight Alutiiq speakers (Table 1).

Table 1: Demographic information

Speaker	Community role	Place(s) of residence before Kodiak	Alutiiq style
Clyda Christensen	Elder	Karluk, Larsen Bay	Northern
Florence Pestrikoff	Elder	Akhiok, Old Harbor	Southern
Kathryn Chichenoff	Elder	Karluk, Afognak	Northern
Sophie Shepherd	Elder	Karluk	Northern
Nick Alokli	Elder	Akhiok, Egkuq	Southern
April Counceller	Learner/teacher	Old Harbor	Primarily Southern
Peggy Azuyak	Learner/teacher	Old Harbor	Primarily Southern
Michael Bach	Learner/teacher	Minnesota	Both

With the exception of Clyda and Nida, these Elders and learners all currently reside in Kodiak and interact with each other on at least a semi-weekly basis. Therefore, although learners are influenced by the Elders and learners they initially learned from and with in the Master-Apprentice program, these learner-teacher relationships are not the only conduits for the spread of sociolinguistic features such as prosody.

4. Prosodic features, identity, and stance: Coding methods

In determining which utterances qualify as constructed dialogue, I take an approach that is at once inclusive and conservative. It is inclusive in that I define constructed dialogue as inclusive of interior discourse, e.g. phrases introduced by thought-related verbs such as *umialinguaqaa* ('I wondered') (1). It is conservative in that I exclude instances of constructed dialogue that are not introduced by a speech-related verb such as *niugtallria* ('s/he always said') or *apllua* ('s/he asked me') unless they are unambiguously identifiable as constructed dialogue based on the discourse context, as in (2), where Sophie's use of her own name clearly signals a shift in footing:

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(1) CLYDA; Umialinguaqa,   *I wondered,*
            "Qayu-mi gwa'i,   *"Why,*
            akimek minartagu?"   *is he giving him money?"*

<div align="right">(Alutiiq Museum Archives: AM470_177)</div>

(2) SOPHIE; Gui Larsen Bay-men agkuma,   *If I go to Larsen Bay,*
             awa'i tainingaitua.   *I won't come anymore.*
             Tamar-   *All-*
             tamarp'ci,   *all of you,*
             kumegnayartuci ai?   *would be angry huh?*
             "Awa'i Sophie piituq,   *"Now Sophie is gone,*
             liitnauwista-   *our teach-*
             liitnauwistarpet piituq awa'i."   *our teacher is gone now."*

<div align="right">(Sophie_626_14)</div>

In order to analyze the prosodic stylization of each instance of constructed dialogue, I employ a variety of both quantitative and qualitative methods, considering the stance and social role of the narrator and the constructed voice; the discourse context; and the narrator's use of variation in pitch, intonation, voice quality, and speech rate in stancetaking. Practical considerations necessitated the use of auditory analysis to supplement the automated analysis of the more vulnerable prosodic variables: the sample contains a range of sound qualities, including some recordings in which the presence of background noise or the poor quality of the recording prohibit the automatic analysis of voice quality and intonation. Additionally, in the absence of automatic segmentation software such as FAVE for Alutiiq, it was not possible to automate the analysis of rhythm. However, because F0 is less susceptible to the effects of poor recording quality and background noise, it was possible to extract F0 measurements for each intonation unit. Following Chafe (1993) and Du Bois et al. (1993), I define an intonation unit as a small section of discourse characterized by a cohesive prosodic contour, an initial increase and a final decrease in speech rate, and a preceding or following pause or breath.

<div align="center">10</div>

The F0 measurements consist of the average F0 and F0 range for each intonation unit in semitones. Via a Praat script that automatically extracted F0 measurements, I excluded F0 values over 300 Hz and under 75 Hz, the recommended range for male speakers (Boersma & Weenink 2017), on the grounds that these are likely to be due to F0 tracking errors. I then converted these measurements to semitones. I chose the recommended F0 thresholds for male speakers rather than female speakers because the female speakers in the sample had low average F0 measurements, with an interspeaker average of 184 Hz; for the male speakers in the sample, F0 values over 250 Hz and under 50 Hz were excluded. F0 range is not a perfect measurement of F0 variability in that a wide F0 range does not necessarily imply variable F0 throughout the intonation units. However, it provides a reasonable proxy for F0 variability that is more easily implementable than metrics that measure the velocity of the intonation contour, such as those discussed in Henton (1995).

The team of ten interns was trained to code intonational contours, voice quality, and speech rate based on both their auditory perceptions and—in the case of voice quality—the Praat spectrogram. Examining each intonation unit of constructed dialogue and the five intonation units that preceded it, each intern coded intonational contours as either rising, falling, level, rising-falling, or falling-rising; voice quality as modal, creaky, or breathy; and speech rate as the same as the speaker's baseline, faster than the speaker's baseline, or slower than the speaker's baseline. If more than one voice quality was present in the intonation unit, the intern coded each voice quality in the order it appeared, e.g. "creaky modal breathy". In order to establish a baseline speech rate for the speakers, the interns were provided with longer excerpts of each speaker that did not contain any

constructed dialogue. To ensure reliability, each intonation unit was coded by two coders, and I recoded intonation units in which the coders disagreed.

The following example demonstrates these coding guidelines in the context of learner Michael Bach's animation of a hypothetical guest's reaction to a disturbing painting hanging on his wall, which depicts two babies that appear to be dead (3, Table 2, Figure 1):

(3) 1 MICHAEL;   Cali amlertut suuget ap'taaratnga,   *And a lot of people ask me,*
    2 JULIA;   @@"Caqiq-llrak-llu taugna?"   *"What the heck is that thing?"*
    3 MICHAEL;   @Yeah.
    4   "Caqiq taugna?"   *"What is that?"*
    5 JULIA;   @@@@@
    6 MICHAEL;   "Pingak–   *"I don't li–*
    7   Pingaken'itaqa taugna patRaitaq." *I don't like that painting."*

(Michael_88_16)

Table 2: Example of prosodic feature coding methods

Speaker	Intonation Unit	Intonation contour	Voice quality	Speech rate
MICHAEL	Cali amlertut suuget ap'taaratnga, *And a lot of people ask me,*	rising	creaky	same rate
JULIA	@@"Caqiq-llrak-llu taugna?" *"What the heck is that thing?*	rising-falling	modal	same rate
MICHAEL	@Yeah.	falling	modal	same rate
MICHAEL	"Caqiq taugna?" *"What is that?"*	rising-falling	modal	slower
MICHAEL	"Pingaken'itaqa taugna patRaitaq." *"I don't like that picture."*	falling-rising	creaky	slower

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"Caqiq taugna?"
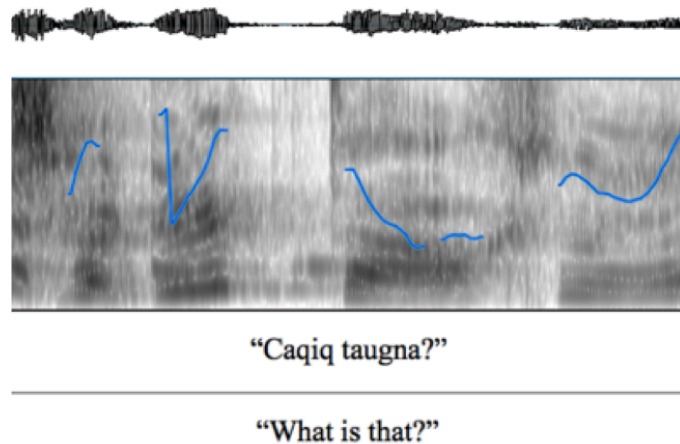
"What is that?"

Figure 1: "Caqiq taugna?" ("'What is that?'") (rising-falling, modal, slower)

To determine the stances both of the narrator and of the constructed voice, I analyze the surrounding discourse and draw on ethnographic knowledge obtained through participant observation. While it was necessary to assign labels to the stances in order to integrate them into the quantitative analysis discussed in the next section, I kept the labels as descriptive and specific as possible so as not to sacrifice potentially relevant social categorizations. For instance, in addition to coding for broad social categories such as age and gender, I identify social roles such as "mother" and "priest". Similarly, I describe interactional stances as precisely as possible at the expense of statistical power, e.g. by distinguishing between "authoritative" and "adamant", in order to analyze stance at the high level of detail evident in speakers' narrative framing and metapragmatic comments. The following example, in which Elder Sophie Shepherd describes how she belatedly discovered her husband's dislike for the canned meat product Spam, illustrates the complexities of describing the stances and social roles of both the speaker and the constructed voice (4):

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(4) 1	SOPHIE;	Nalluk'gka staupi uh,	*I didn't know that uh,*
2		Spam-mek,	*Spam,*
3		pingaktan'illkii.	*he didn't like it.*
4		A'inguallraq gui,	*Poor thing I,*
5		Spam-mek,	*out of Spam,*
6		sandwi-liluku.	*made him sandwiches.*
7		Elliin pitusaagluku.	*He ate it.*
8		Allringumek niu'utaanga,	*One time he told me,*
9		"@Spam @pingaken'itaqa."	*"I don't like Spam."*
10		"Qayu-llu?"	*"What?"*
11		Uh,	*Uh,*
12		"War-mi et'cama,"	*"When I was in the war,"*
13		uh,	*uh,*
14		"Spam sandwich-nek,	*"Spam sandwiches,*
15		minartaqaitkut.	*they'd give them to us.*
16		Nothing but Spam.	*Nothing but Spam.*
17		Spam.	*Spam.*
18		Tawaten gwa'i pingak'gkunaku."	*That's why I don't like it."*

(Sophie_83_16)

Sophie's interactional stance as a narrator is multifaceted, including both sympathy and humor. She conveys her sympathy towards her husband not only through prosodic stylization, but also through lexical features such as the term *a'inguallraq* ('poor thing') and the endearment postbase *saag* in *pitusaagluku* ('he ate it'). Sophie's humorous stance is evident in her laughter as she voices her husband admitting that he hates Spam. The humor is laminated onto her construction of her husband's utterance, which does not appear to take a stance of humor, but rather of ruefulness and reluctance to tell his well-meaning wife that he has not been enjoying her sandwiches. Immediately after animating his admission, Sophie pivots to animate her younger self asking him *qayu-llu,* which may be translated as 'what?' or 'why?', taking a stance of surprise that is couched in her more general stance of mildly self-deprecating humor. In addition to—and

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inextricably from—performing these stances, Sophie also performs at least three distinct social roles: that of her late husband, of herself as his young wife, and of herself as a storyteller. Packaged together with stances, these performances of social roles are likewise laminated, so that Sophie conveys her stance as a sympathetic, self-deprecating, gently amused storyteller around and through her animations of her late husband's stance as a rueful, embarrassed husband and her former self's stance as a shocked and perhaps indignant wife. These laminations are discussed in more depth in section 5.4, as is the inadequacy of even relatively specific labels such as "husband" and "wife" to capture the full range of meaningful social roles. However, as demonstrated in section 5.3, even these inadequate labels are more informative than social categories such as age and gender.

5. Prosodic features across speakers: Results and discussion

This section begins with a broad analysis of prosodic stylization, comparing speakers' use of prosodic features in constructed dialogue versus non-constructed dialogue speech and across social categories such as gender and age. In section 5.4, I move to a more specific, contextually situated examination of prosodic stylization, demonstrating that interspeaker similarities in multiple prosodic dimensions correlate with similarities in both interactional stances and performed social roles rather than with shared stances or social roles alone. Finally, in section 5.5, I discuss metapragmatic evidence that suggests that speakers orient to speech styles in terms of these stance- and social role-specific personae, and consider their relevance to hybridity, polyphony, and language revitalization as a whole.

5.1. Covariance between prosodic features

No significant correlations were found between average F0, F0 range, intonation contour, voice quality, and speech rate in the constructed dialogue data. However, there were very slight positive correlations between F0 and F0 range (r=0.381), between rising intonation and average F0 (r=0.202), rising-falling intonation and average F0 (r=0.124), and rising-falling intonation and F0 range (r=0.209). Overall, this set of slight correlations suggests that, in constructed dialogue, speakers tend to use rising and rising-falling intonation with higher and wider F0, and that they use wider F0 with higher F0.

5.2. Prosodic features of constructed dialogue

Previous research has found that constructed dialogue tends to have a higher pitch than non-constructed dialogue (Günthner 1999; Klewitz & Coupler-Kuhlen 1999), attributing this difference to the need to provide a prosodic contrast to the surrounding speech. The results of this analysis conform to this generalization, with the average F0 of all constructed dialogue intonation units in the sample (89.51 semitones) slightly exceeding the average F0 of all non-constructed dialogue intonation units (88.09 semitones) (p=2.141e-12). Additionally, the average F0 range is slightly wider for constructed dialogue (9.64 semitones) than non-constructed dialogue speech (8.58 semitones) (p=1.184e-06). Given that there is a slight correlation between average F0 and F0 range, it is possible that more variable F0 occurs in constructed dialogue as an artifact of higher F0 due to articulatory reasons. However, it is also possible that the stylization

that often occurs in some types of constructed dialogue is responsible for both the wider

F0 ranges and the higher average F0, perhaps as part of an increase in flamboyance or

expressivity.

Additionally, speakers used higher rates of breathy and modal voice in

constructed dialogue and higher rates of creaky voice in non-constructed dialogue
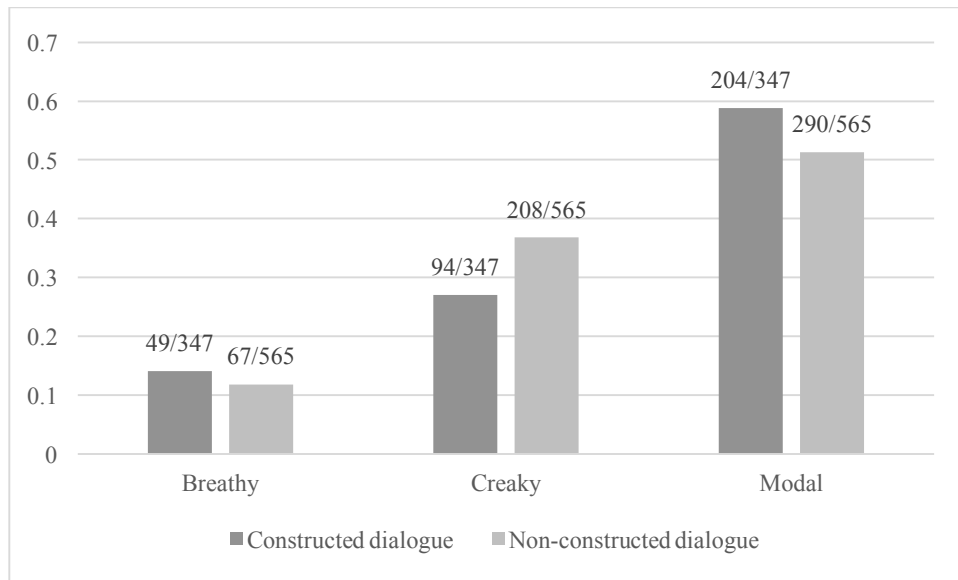
($p<2.2$e-16; Figure 1).

Figure 1: Voice quality in constructed dialogue vs. non-constructed dialogue (p<2.2e-16)

One possible explanation for the relative scarcity of creak in constructed dialogue

is that creak has been found to index passive recipiency (Grivičić & Nilep 2004), which

may not be a newsworthy enough stance to merit being performed in constructed

dialogue. It is also possible that speakers may use creak more in non-constructed dialogue

speech in conjunction with a fast speech rate in order to present background or framing

information. Alternatively, speakers may switch into modal voice as a result of raising

their pitch, since creaky voice has often found to be correlated with low pitch.

In addition to being associated with high F0, wide F0 range, and breathy or modal voice, constructed dialogue also appears to be characterized by a slightly slower speech rate than non-constructed dialogue. Coders marked approximately equal percentages of the constructed dialogue intonation units and the non-constructed dialogue intonation units as "same rate", but they marked more non-constructed dialogue as "faster" and more constructed dialogue as "slower" ($p<2.2e-16$; Figure 2).
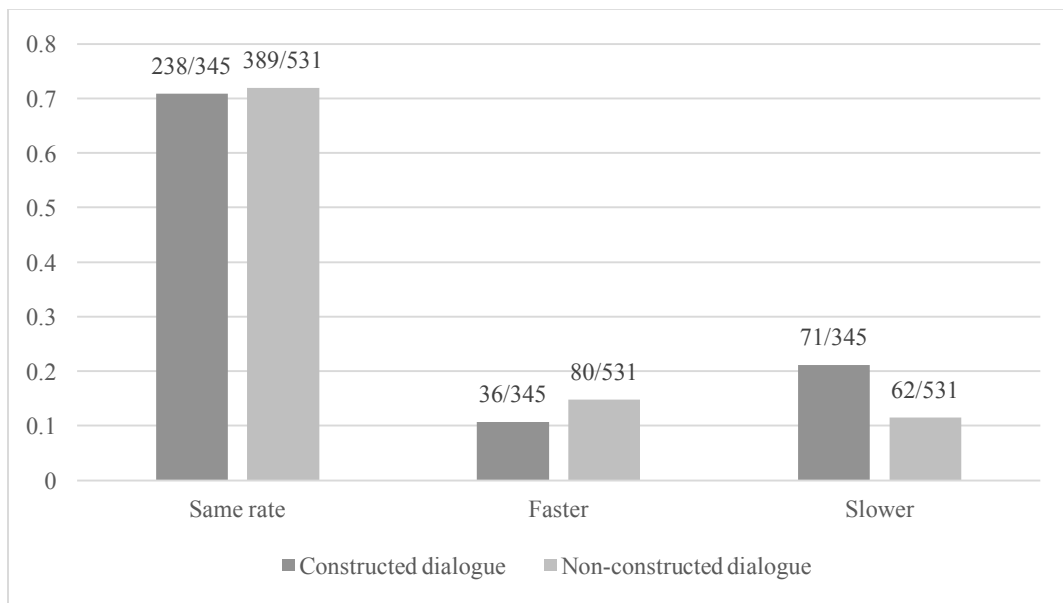

Figure 2: Speech rate in constructed dialogue vs. non-constructed dialogue (p<2.2e-16)

Furthermore, the constructed dialogue in the sample featured more rising and rising-falling intonation contours, while the non-constructed dialogue featured more level, falling, and falling-rising intonation contours ($p<2.2e-16$; Figure 3). While a full description of intonational phonology in Alutiiq has yet to be attempted, preliminary research suggests that level intonation contours are mostly used for continuations (although occasionally also for directives), while falling intonation contours are used for statements and directives, and rising intonation for emphatic directives.
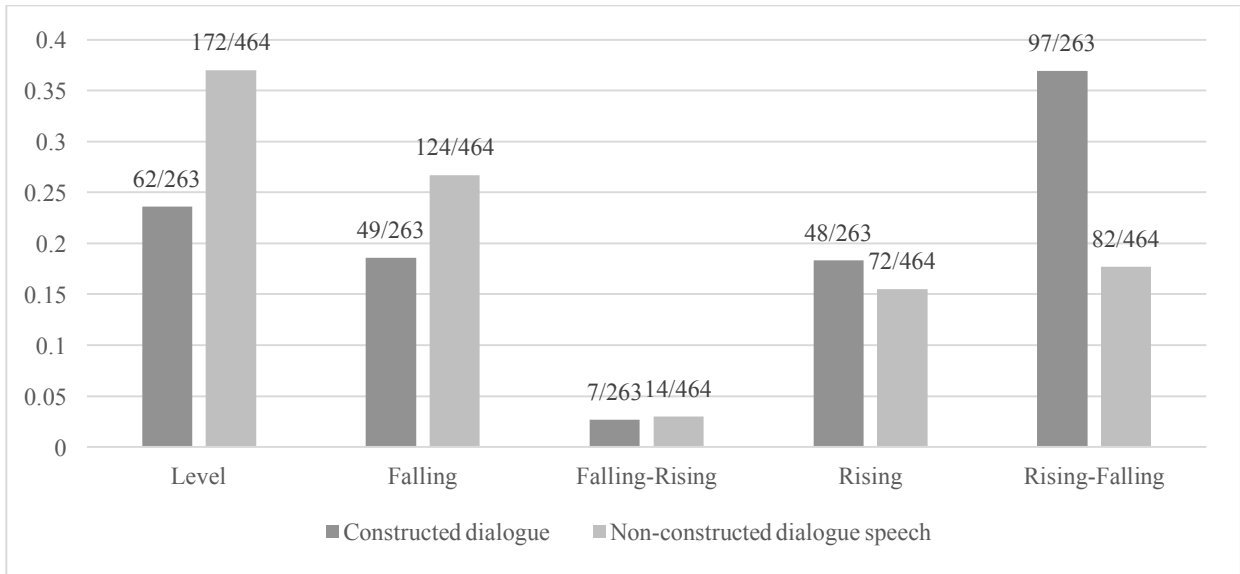
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Figure 3: Intonation contour in constructed dialogue vs. non-constructed dialogue
($p<2.2e\text{-}16$)

The frequencies of intonation contour types across constructed dialogue and non-constructed dialogue are likely used to produce the different distributions of phrase types across the two categories. The instances of constructed dialogue in the sample are often either exclamations or questions, both of which typically receive rising-falling intonation in Alutiiq. The preponderance of level and falling contours in the non-constructed dialogue is likely due to the higher frequency of continuing intonation and non-exclamatory declaratives, respectively.

The prevalence of exclamations and questions in constructed dialogue may also partially explain the association of constructed dialogue with high F0, wide F0, and breathy or modal voice. Particularly in the case of exclamations, these features may work together in the performance of heightened expressivity. Alternatively, or perhaps concurrently, the changes in F0, F0 variability, and voice quality may help to set off the constructed dialogue from the surrounding speech and make it more salient to interlocutors. In support of the latter explanation, most instances of constructed dialogue

in the sample are not introduced by a quotative marker, so the speaker must signal to the interlocutors in some other way that they are moving from narration to constructed dialogue.

5.3. Prosodic features and social categories

In addition to its role in setting off constructed dialogue from the surrounding speech, F0 is also a resource for the stylization of gender and age categories, differentiating the voices of men from women and of adults from children (see Figure 4). In order to avoid imposing top-down categories on the data, I refrained from inferring the gender and age of constructed voices. Instead, in this portion of the analysis, I considered examples in which the speaker provides a gender- and age-specific label for the constructed voice, e.g. *arya'aq* ('girl').
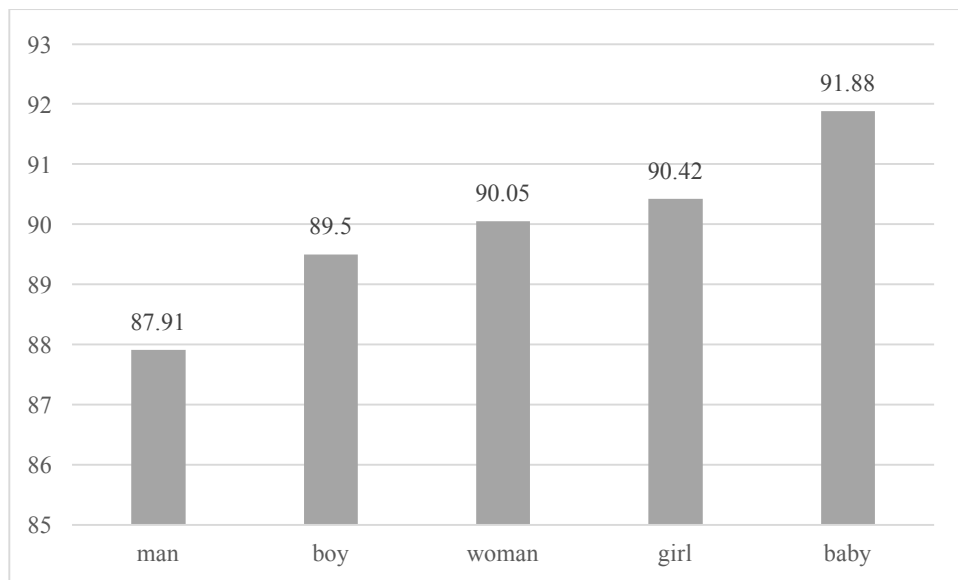

Figure 4: Average F0 of gendered and age-specific constructed voices (r=0.394)

As might be expected, speakers use lower F0 to construct male and adult voices, and higher F0 to construct female and young voices. The role of F0 range in the construction of age and gender appears to be similar, with speakers using narrower ranges to construct male and adult voices and wider ones to construct female and young voices (see Figure 5).
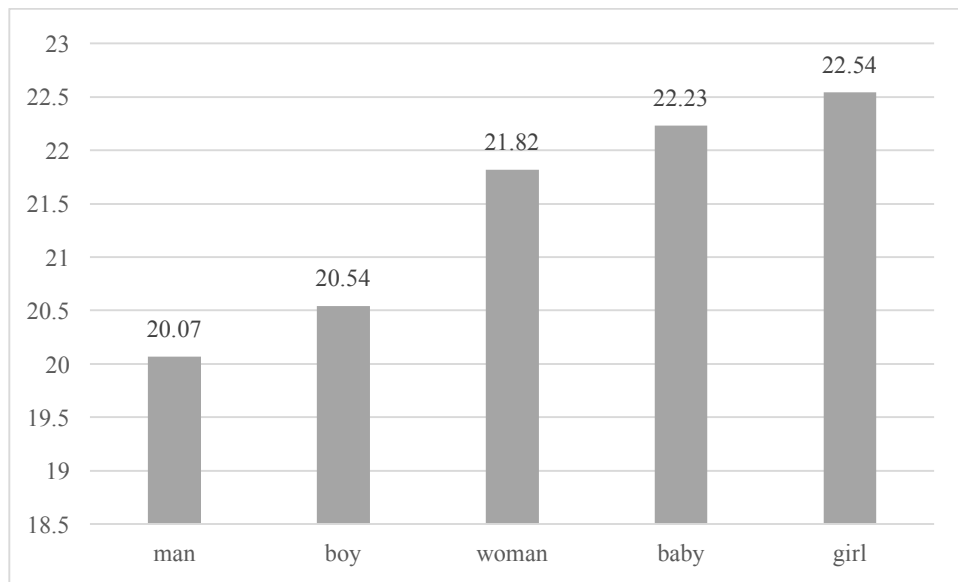

Figure 5: Average F0 range of gendered and age-specific constructed voices (r=0.315)

These results suggest that in addition to offsetting constructed dialogue from the surrounding discourse, average F0 and F0 range serve stylistic purposes related to the construction of age and gender.

5.4. Prosodic features, stances, and personae

Moving from broad social categories such as age and gender to a more detailed conceptualization of social roles and personae, and adding a consideration of interactional stance, section 5.4.1 discusses correlations between individual prosodic features such as

F0 and F0 range and personae. Section 5.4.2 then builds in a consideration of the interplay of prosodic features, showing that speakers' use of multiple prosodic features converges only when both social role and interactional stance are held constant. This finding reveals the interconnectedness of social role and interactional stance as key components of personae and demonstrates the value of multi-feature analysis.

5.4.1. Individual prosodic features

While section 5.3 demonstrated that both age and gender are relevant to speakers' use of F0, the association of high, variable F0 with women and children and low, non-variable F0 with men and adults is not absolute. Individual instances of constructed dialogue often run counter to this trend, with prosodic features conveying stances in conjunction with aged and gendered personae rather than monolithically indexing the gender or age of the constructed voice regardless of stance (although, of course, the construction of stances and personae contributes to and is informed by macrosocial conceptualizations of age and gender). Figure 7 demonstrates this in the case of average F0, showing how the stances of the constructed voices combine with their social roles— such as family role and vocation—to influence average F0 values.
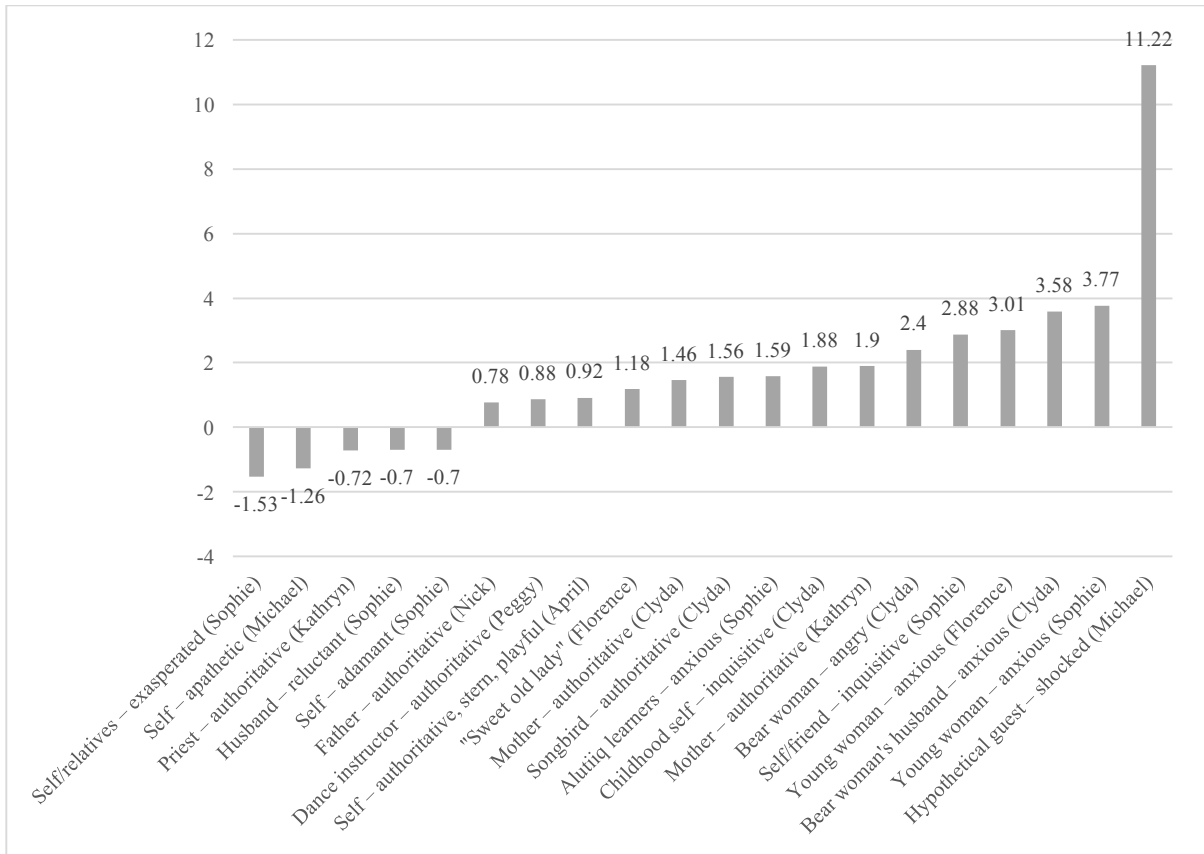
Figure 7: Average F0 of constructed voice relative to speaker's baseline (semitones)

As noted in section 5.3, elderly male social roles such as husbands, priests, and fathers tend to correlate with lowered F0, while young female social roles such as Alutiiq learners, girls, and young women tend to correlate with raised F0. Overlaid on this pattern of age and gender is a pattern of stances. Epistemically strong and low-arousal negative stances such as exasperation, apathy, reluctance, and refusal tend to correlate with lowered F0, while epistemically weak and high-arousal stances such as inquisitiveness, anxiety and shock tend to correlate with raised F0. Authoritative stances fall in the middle, without either a dramatic raising or lowering of F0; however, high-arousal authoritative stances such as anger are higher than low-arousal authoritative stances such as reluctance and apathy. The importance of considering stance in

conjunction with social role is exemplified by the high average F0 of an anxious male voice—that of the husband of a woman who turns into a bear in a traditional story—and the low average F0 of the exasperated female voice Sophie uses to construct herself expressing her irritation with a young woman who will not stop asking her about her hairstyle.

F0 range patterns roughly similarly, with older male voices and voices taking epistemically strong stances occurring with decreased F0 range, and younger female voices and speakers taking epistemically weak stances occurring with increased F0 range (Figure 8):
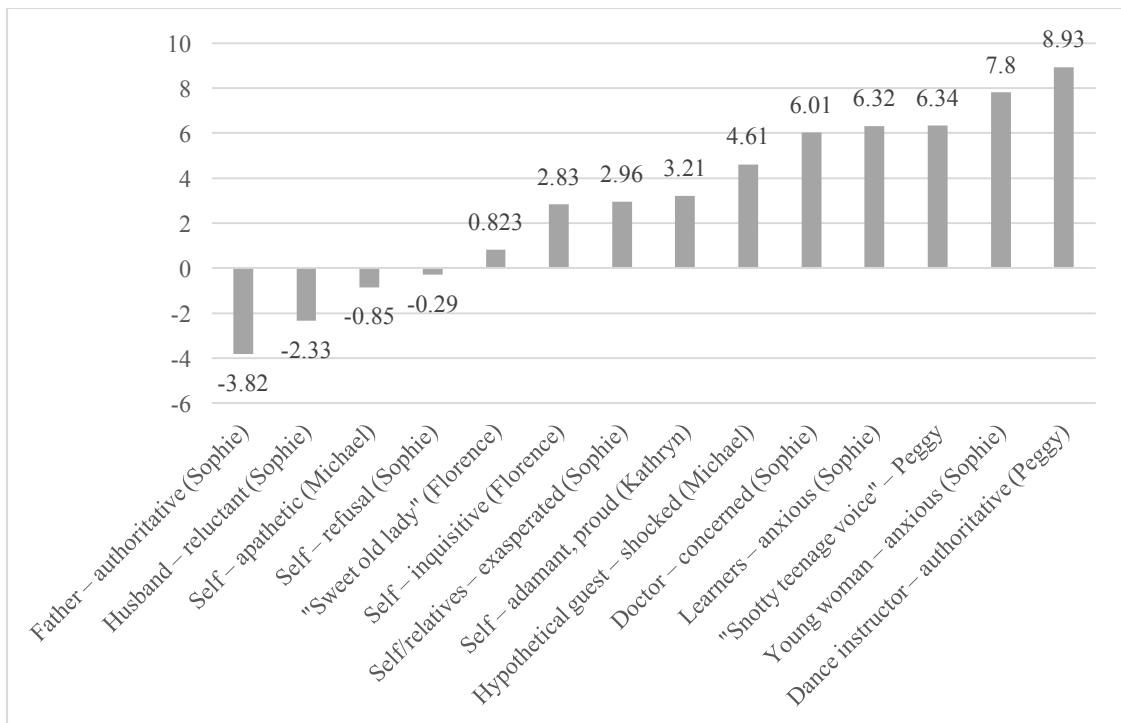

Figure 8: Average F0 range of constructed voice relative to speaker's baseline (semitones)

In addition to the association of stances of uncertainty with increased F0 range, it appears that certain exaggerated voices, such as Peggy's performance of the dance instructor and the "snotty teenage voice", are also associated with increased F0 range.

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These voices are also characterized by slow speech rate and, in the case of the "snotty teenage voice", post-tonic lengthening (Calder et al. 2013), suggesting that Peggy is using increased F0 range in combination with rhythmic and segmental variables in order to perform heightened, hyper-stylized expressivity (Podesva 2007). Peggy's hyperstylization of these personae may be an effect of the discourse context, occurring in response to my explicit questions about whether she knew of any distinctive personal speech styles within the Alutiiq community, which were designed to elicit both metapragmatic comments and performances.

5.4.2. Multiple prosodic features

The above results demonstrate that both the interactional stances and the social roles of constructed vocies are relevant to speakers' use of individual prosodic features such as F0 and F0 variability. However, the question remains as to whether multiple prosodic features are correlated with interactional stances and social roles across constructed voices and across speakers. The following examples show that there are indeed interspeaker similarities between multiple prosodic features and the stances and social roles of constructed voices. Additionally, the examples demonstrate that it is the conjunction of stance and social role that results in similar combinations of prosodic features across speakers, rather than stance or social role alone. In other words, while voiced personae that share both social roles and interactional stances are prosodically similar across speakers, personae that share only social roles or only interactional stances are prosodically heterogeneous across speakers. This heterogeneity may reflect an

underlying diversity of prosodic styles across speakers, such that similarities in both

social roles and interactional stances are necessary for different speakers to produce

prosodically similar styles.

5.4.2.1. Social role- and stance-specific personae

One noteworthy example of similar social role- and stance-specific personae

correlating with similar prosodic feature combinations across speakers is that of young

women expressing epistemically weak stances. This persona is characterized by an

increase in average F0, an increase in F0 range, rising-falling intonation, and modal voice

(Table 3).

Table 3: Prosodic characteristics of young women expressing epistemically weak stances

Speaker	# of IUs	Constructed voice(s)	Context(s)	Stance(s)	Mean F0	F0 var.	Int. cntr.	Voice quality	Speech rate
Sophie	13	Self; girl who works at the bingo hall	Wondering; asking questions with the enclitic *-llu*	Inquisitive	High (+2.99 s.t.)	Wide (range +4.8 s.t.)	Rising-falling (8/13 IUs)	Modal (7/13 IUs)	-
Florence	10	Hypothetical girl	Constructed conversation: girl asking boy if he likes her	Inquisitive; anxious	High (+3.02 s.t.)	-	Rising-falling (5/10 IUs)	Modal (9/10 IUs)	-
Clyda	4	Childhood self	Wondering, asking questions with the enclitic *-llu*	Inquisitive	High (+1.88 s.t.)	Wide (range +4.21 s.t.)	Rising-falling (3/4 IUs)	Modal (3/4 IUs)	-

The enclitic *-llu* used by Clyda and Sophie may be translated as 'I wonder'. Examples of Clyda's inquisitive childhood voice include her asking her mother about the identity of an unknown old lady (who turns out to be her grandmother), and wondering why her father is giving his friend money (to sell the house). Similarly, Sophie uses her inquisitive voice to construct herself wondering who an unknown guest is and to voice a young woman who works at the local bingo hall asking her why her hair is a purplish color. Florence's "hypothetical girl" voice emerged as part of her commentary on the elicitation materials that I was using at the time, which featured a girl and a boy as protagonists. "You have a whole section," Florence joked. "Boy, girl… Julia's special section on young love." She went on to adopt the voice of the girl, asking an imaginary boy, "Pingakarp'nga-qaa?" ('Do you like me?') and saying that she would talk to him if she weren't so afraid of him. Due to Florence's use of the term *alikamken* ('I'm afraid of you') in this excerpt, I selected the label "anxious" as well as "inquisitive" for this voice to reflect a more negative, urgent stance in addition to the weak epistemic stance that is conveyed by Florence's use of questions. The higher negativity and urgency of this stance may be the cause of the slight prosodic differences from the other stances, such as the greater increase in F0 and the lack of an increase in F0 variability. Additionally, it is important to note that falling-rising intonation characterizes questions in Alutiiq; therefore, the commonality of falling-rising intonation across these excerpts is likely a reflection of their shared use of questions. Nevertheless, given that no other constructed voices in the sample shared all three of the other prosodic features (higher F0, greater F0 variability, and modal voice), it is apparent that these features are linked to the intersection of epistemically weak stances, youth, and femininity.

5.4.2.2. Similar social roles, dissimilar stances

As discussed above, speakers use similar combinations of prosodic features to voice personae with similar social roles and stances. However, speakers use different combinations of prosodic features when voicing personae with dissimilar stances even when they have similar social roles, as in the following examples of the prosodic characteristics of the speech of constructed mothers (Table 4).

Table 4: Prosodic characteristics of mothers expressing a variety of stances

Speaker	# of IUs	Constructed voice(s)	Context(s)	Stance(s)	Mean F0	F0 range	Int. cntr.	Voice quality	Speech rate
Sophie	16	Sophie's mother	Talking about how much the world has changed since her childhood	Serious; wistful	Low (-1.5 s.t.)	Narrow (range -2.75 s.t.)	Rising-falling (8/16 IUs)	Final breathiness (4/16 IUs)	Slower (8/16 IUs)
Clyda	11	Clyda's mother	Telling children to pray before and after meals	Authoritative, devout	High (+2.42 s.t.)	-	Level (10/11 IUs)	Final breathiness (3/11 IUs)	Fast (5/11 IUs)
April	5	April (as mother)	Telling her kids not to take the tags off their McDonald's toys	Authoritative, stern; playful	High (+0.97 s.t.)	Wide (+1.3 s.t.)	-	-	-
Kathryn	2	Kathryn's mother	Telling the cat to lie down by the stove	Authoritative	High (+1.9 s.t.)	Wide (+1.58 s.t.)	-	-	-

While higher F0 is shared by three of the four speakers, other prosodic features range widely. Clyda's construction of her mother's voice is the only excerpt to make use of faster speech rate and level intonation, and only Sophie makes use of rising-falling

intonation and final breathiness. Of these excerpts, Kathryn and April's constructions of mothers are the most similar, sharing both higher F0 and greater F0 variability. This similarity may be due to the authoritativeness of the mother personae that Kathryn and April portray and to the non-seriousness of the discourse contexts in which the constructed dialogue was situated: in Kathryn's case, a fond reflection on how the family cat used to heed her mother's command to sit by the stove, and in April's, a playful lamination of herself sternly telling her children to stop squabbling over their McDonald's Happy Meal toys on the grounds that they belonged to her anyway as the one who paid for them. These partial similarities between Kathryn's and April's playful constructions of maternal authority underscore the reason for the dissimilarities across the other excerpts: speakers use different prosodic features to stylize different stances, even when those stances are assumed by constructed voices with similar social roles. This finding exposes the heterogeneity of even relatively specific social roles such as "mother", with speakers using prosodic features to index the many and varied stances— playfulness, authority, affection, devoutness—that may be affiliated with motherhood.

5.4.2.3. Similar stances, dissimilar social roles

Relatedly, similar interactional stances assumed by voices with different social roles are also performed through different prosodic features, showing that stance is colored by social role in much the same way that social role is colored by stance. The following example of Kathryn's construction of her father's voice versus the voice of a Russian Orthodox priest shows that she uses different prosodic features to construct their

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voices despite the similarity of the authoritative, prohibitive stances they each assume
(Table 5):

Table 5: Prosodic characteristics of religious vs. colonizing stances of prohibitive
authority

Speaker	# of IUs	Constructed voice(s)	Context(s)	Stance(s)	Mean F0	F0 range	Int. cntr.	Voice quality	Speech rate
Kathryn	5	Russian Orthodox Priest	Telling worshippers not to kneel in church Telling children what not to do during Lent	Authoritative, prohibitive	Low (-0.72 s.t.)	-	Level (4/5 IUs)	Modal (4/5 IUs)	-
Kathryn	2	*MeRikaansat* ('Americans'; 'white people')	Telling Alutiiq people not to speak Alutiiq	Authoritative, prohibitive	-	Wide (range +1.56 s.t.)	Rising-falling (2/2 IUs)	-	-

The former excerpt occurred in the context of changing Russian Orthodox traditions,
such as new instructions not to kneel in church conflicting with the old practice of
kneeling. The latter excerpt occurred as part of Kathryn's discussion of changing
attitudes towards speaking Alutiiq. The similarity of the stance of the Russian Orthodox
priest telling Kathryn not to kneel in church and the stance of white people who formerly
told Alutiiq people not to speak Alutiiq is evident in the similarity of the negative
imperative forms they use: *Cisqun'illkici* ('You shouldn't kneel') and *Alutiit'stun
niuwan'illkici* ('You shouldn't speak Alutiiq'). These forms both end in the deontic
ending *–n'illkici* ('you (pl.) shouldn't') rather than the plain negative imperative ending.
Furthermore, Kathryn takes a negative stance towards both the priest's command and that

of the white people she quotes. In the former case, she voices her own affronted response—*Uswiillra'in'itua awa'i* ('I'm not a child anymore')—questioning the basis of the priest's authority. In the latter, her previous comment—*Silugtua ellpeci Alutiit'stun niuwaluci* ('I'm happy that you (pl). are speaking Alutiiq')—indicates that she approves of the revitalization of Alutiiq, implying that she is differentially aligned (Du Bois & Kärkkäinen 2012) with the white people who told previous generations that they should not speak Alutiiq. Despite these similarities both in Kathryn's stance towards the constructed voices and in the stances the constructed voices themselves assume, Kathryn uses different prosodic features in the two excerpts, lowering her F0 and using level intonation to construct the voice of the priest but maintaining her baseline F0, widening her F0 range, and using rising-falling intonation to construct the voices of the white people. These prosodic differences demonstrate that, just as similarities in social roles are insufficient to ensure prosodic similarities in the absence of similar stances, similarities in stance are insufficient to ensure prosodic similarities in the absence of similar social roles.

5.5. Social role- and stance-specific personae: Metapragmatic labels, hybrid language practices, and polyphony

As the above results demonstrate, examining any single prosodic feature in isolation yields an incomplete picture of stylistic meaning. While it is possible to correlate individual features such as F0 with certain stances and social roles, analyzing multiple prosodic features reveals social role- and stance-based personae that are

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common across speakers. The centrality of both stance and social role to these personae

is reflected not only in the speakers' use of prosodic features, but also in their

metapragmatic comments. For instance, Peggy labels a prosodic style that fellow Alutiiq

language instructor Candace Branson uses to entertain her students as a "snotty teenage

voice". This voice is characterized by a wide F0 range, rising intonation, final

lengthening, and a fronted /u/ vowel; the association of the latter three features with the

valley girl stereotype (Bucholtz et al. 2007; D'Onofrio 2015) identify this as an instance

of hybrid language play (Gutiérrez et al. 1999). Similarly, Florence links one style she

performs to both a social role and a habitual interactional stance, attributing it to the "old

ladies" with whom she used to speak Alutiiq and commenting "They just had such a

sweet way of speaking". Peggy's use of "snotty" and Florence's use of "sweet" to

describe the styles they voice suggest that stance is a highly salient component of these

styles and may cohere with concurrent identity traits to form personae through processes

of stance accretion (Du Bois 2002; Rauniomaa 2003).

Florence's "sweet old lady" style is further noteworthy in that Florence ascribes it

to real people, specifically the members of an older generation of Alutiiq speakers. This

instance of prosodic stylization exemplifies the potential of constructed dialogue in

endangered languages like Alutiiq as a medium for passing on linguistic styles that might

otherwise be lost. Because of the scarcity of fluent Alutiiq speakers, learners may not

have access to certain demographic categories of speakers. However, each fluent

speaker's stylistic repertoire contains a diverse array of personae. The transmission of

these personae through narrative allows for the preservation of rich and varied stylistic

details such as interactions between social roles and interactional stances.

Hybrid language practices such as the "snotty teenage voice" that Peggy reports Candace using in pedagogical contexts is likewise integral to language revitalization. As Gutiérrez et al. (1999) note, hybridity is essential to learning. So is humor and play; moreover, as Drabek notes, humor is a traditional Alutiiq value that can act at times as a "means of survival" in the face of oppression and adversity (Drabek 2012:31). In addition to its use as a strategy for engaging students, playfully hybridizing Alutiiq with features of American English personae frames the Alutiiq language as accessible and variable, empowers learners to embrace their knowledge of both Alutiiq and American English linguistic styles as semiotic resources, and maintains the cultural centrality of humor and polyphony in Alutiiq culture. The value of hybrid language play and the transmission of polyphony demonstrate that prosodic stylization is relevant not only to the study of sociophonetics, but to the enterprise of language revitalization itself.

6. Conclusion

This analysis of prosodic stylization in Kodiak Alutiiq narratives contributes both to the crosslinguistic study of stylistic prosody and to the growing body of sociolinguistic research on indigenous languages. Drawing on a corpus of the speech of eight Alutiiq Elders and learners, I examined average F0, F0 variability, voice quality, intonation contour, and speech rate in constructed dialogue. I found that constructed dialogue is characterized by higher and more variable F0, less creaky and breathy voice, a slower speech rate, and more rising and rising-falling intonation contours relative to speakers' baselines. Expanding on these general trends, I showed that speakers use higher, more

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variable F0 to voice younger female speakers and lower, less variable F0 to voice older

male speakers. Moreover, I demonstrated that adding interactional stance complicates the

picture, with speakers using higher and more variable F0 to voice epistemically weak

stances such as anxiety and inquisitiveness, and lower and less variable F0 to voice

epistemically strong stances such as anger and authority. Finally, I argued that

considering multiple prosodic features in conjunction with the intersection of social role

and stance yields a more insightful analysis that more closely corresponds with speakers'

metapragmatic comments about the voices they portray, which they characterize through

both stance-related descriptors and social role labels.

By contrasting the prosodic stylization of constructed stances and social roles

across speakers, I found that only the prosodic stylization of social role- and stance-

specific personae—rather than social role or stance as individual variables—is constant

across speakers. These findings highlight the importance of analyzing social role in

conjunction with stance rather than treating them as isolated phenomena. Considering

social role alone is insufficient because it fails to account for stance, while examining

stance alone is insufficient because the same stances may be realized differently across

different social roles, in part as a function of the speakers' stances towards the personae

they construct. This interdependence of social role and stance can only be observed

through a multi-feature analysis: it is combinations of prosodic features, rather than

individual prosodic features, that characterize similar social role- and stance-specific

personae across speakers. In addition to showing the interconnectedness of stance and

social role, and the relevance of both to persona construction, this study therefore

demonstrates the advantages of multi-feature analyses in conjunction with contextually grounded analyses of personahood.

Furthermore, this study explicates the importance of prosodic stylization to language revitalization efforts. The transmission of fluent speakers' polyphonic stylistic repertoires through narrative allows for the preservation of linguistic diversity, sustaining speech styles that might be lost if speakers spoke only in the voices that they deemed their "own". Additionally, hybrid language practices—such as the use of the stereotypical American English valley girl accent in an Alutiiq language context—imbue language learning settings with humor and help to make indigenous languages more accessible to students. Documenting prosodic stylization is therefore worthwhile not only as a means of deepening and diversifying our understanding of sociophonetic variation, but also as a resource for communities engaged in language revitalization.

ACKNOWLEDGMENTS

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