

The Interpretation of L*H In English¹

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1. Introduction

In this paper, I examine the distribution of a particular form of phrase-final rise, described in Section 2 below, within a sorority speech community at the University of Texas. The purpose of this study is to identify the interpretation of a single intonational form with respect to text, context, and culture, in order to isolate the meaning that can be attributed solely to the intonation, and to suggest the ways in which it interacts with other factors to convey meaning. The findings of this work bear on issues of intonational meaning and pragmatic interpretation more generally; in particular, results suggest that the representation of intonational meaning is rather more abstract than previous work has found, with much of the interpretive burden placed on the particulars of context. Furthermore, attitudes previously attributed to the intonational form itself are shown to arise, rather, from its use in particular situations.

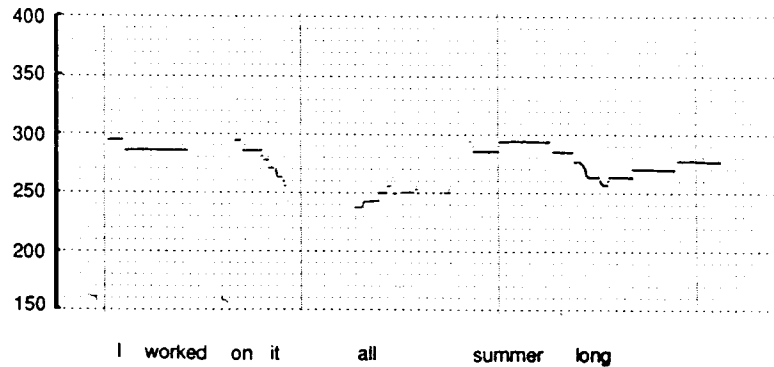
This paper is organized as follows. In Section 2, I define the intonation under study; in Section 3, previous work on this and related forms is reviewed briefly. In Section 4, I describe the methods of

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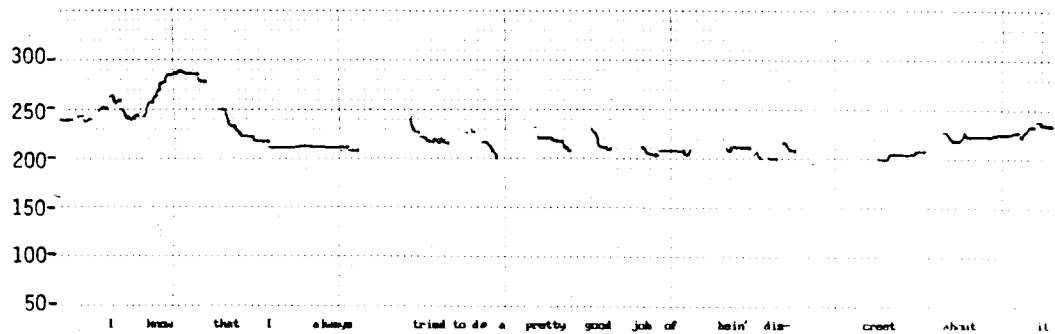
investigation, the speech community under study, and patterns of use in discourse, situational, and cultural context. The analysis is discussed in Section 5.

2. Definition

In the type of phrase-final rise to be examined here, a Low pitch excursion aligns with stress, followed by an upward trend in pitch. Two slightly different realizations of this intonation are shown below.²



(1) I worked on it **all** SUMMER long?



(2) I KNOW that I always tried to do a pretty good **job** of bein' **discreet** about it?

²Throughout this paper, the following transcription conventions will be observed:

- SMALL CAPS - High pitch excursion (stress alignment not indicated)
- boldface** - Low pitch excursion (stress alignment not indicated)
- ? - High tone aligned with text boundary
- . - Low tone aligned with text boundary
- - Level pitch at text boundary (last tone value sustained)
- < > - pauses, in seconds
- = - 'latching' of turns
- () - unclear or deleted material
- [] - non-speech sounds

In example (1), the Low pitch excursion and the rise are both associated with the single syllable of "long," which is stressed. In (2), the Low pitch excursion is aligned with the stress on the second syllable of "discreet," and the rise to High begins on that syllable.

In Pierrehumbert's (1980) notation, this form can be described either as L* H- or L* H- H%; the former represents an intermediate phrase, and the latter represents an intonational phrase (IP). In isolated utterances, the two phrasing levels are distinguished by their correlation with catathesis, differences in pitch scaling values, and syntactic structure (as discussed in Beckman & Pierrehumbert 1986). The application of these criteria to naturally occurring discourse raises the larger problem of providing a consistent account of recurrent forms and hierarchical relations, including gradient scaling. Since the important feature of the forms shown in (1) and (2) is the rise to H from L*, I will refer to them as instances of phrase-final L*H. See McLemore (forthcoming) for further discussion.

L*H is formally distinct from a high-rise, H*H, and from phrase-final level intonation. However, for much of the data discussed in this paper, the occasional occurrences of H*H pattern with L*H in use and interpretation.

3. Background

The meaning of L*H – comparable to Bolinger's C Accent (cf. Bolinger 1986) – has been characterized as "non-finality," "anti-assertiveness," "incompletion," and "leaving the utterance 'open' to further comment or to continuation within a larger utterance" (Bolinger 1978: 471, 493; Bolinger 1982: 513, 525). Bolinger (1986, 1989) stresses the fundamentally emotional or attitudinal nature of intonation generally, and attributes to intonational rises a universal primary meaning of "inconclusiveness" traceable to (ethologically based) symbols of relaxation (low frequency) and excitement (high frequency).

Ladd (1980) identifies appropriate uses of low-rises (in which the rise may be scaled lower and timed later than the forms in (1) and (2)) as self-assured answers to WH-questions; polite/curious questions; and contradiction (111). In addition, he notes that low-rise used on an answer to a call ("I'm coming") could seem insolent, and it is often used on oaths and epithets ("you bastard") (180-181).

Researchers concerned with verbal interaction (e.g., Schegloff & Sacks 1973; Sacks, Schegloff & Jefferson 1974) have noted that rises in general function to regulate turn-taking. They occur as the first

part in a two-part adjacency pair; just as a question elicits an answer, a turn-final rise more generally elicits a response. When a speaker clearly has the floor for a longer turn at talk, a rise can function to hold it, often eliciting a backchannel cue that functions to ratify the speaker's right to continue (cf. Schegloff 1981).

Consistent with the latter line of research, Guy & Vonwiller (1984) and Guy et. al. (1986), examine intonational rises on declaratives in Australian English (Australian Question Intonation, or AQI), and find that the meaning of a final rise is "interactive": "seeking verification of the listener's understanding of what has been said." Although these authors note that AQI differs in form from rises in American English – specifically, it is described as a "swift upward trajectory," (which suggests at least a difference in scaling that might well affect interpretation, and possibly a difference in tonal specification – i.e. H*H rather than L*H), they consider it comparable in meaning to L*H in American English.

Gussenhoven (1984) proposes that straight rises in English (LH, distinguished from fall rises, HLH) test the relevance of a communicative contribution. In narrative, he suggests that they are metaphorically manipulated to mean "there's more to come" and would typically be used to create suspense.

Research on the discourse structural role of intonation has found that phrase-final rises create cohesion between stretches of text in Central Alaskan Yupik (Woodbury, 1985), or may reflect the logical structure of a discourse by subordinating a phrase to one which bears a subsequent fall in English (Hirschberg & Pierrehumbert 1986).

The most general conclusion that can be drawn from these studies is that phrase-final rises, of which L*H is a type, mark a relation between textual or interactive units, i.e. constituents or turns, that can be characterized as less final or complete than that marked by a phrase-final fall.³ This is consistent with Bolinger's (1978) observation that final rises have a universal tendency to convey non-finality, while falls tend to convey finality. However, in this study I propose that, rather than reducing high and low phrasal values to such bipolar meanings, they are better viewed as diagrammatic icons, with no inherent meaning beyond the representation of a (phonetically symbolized) structural relation. In the following sections, I

³Ladd's (1980) observations about the meaning of low-rise intonation do not strictly conform to this generalization, for reasons discussed in Section 5, where the "contradiction contour" is also discussed.

discuss data that show some ways in which aspects of context constrain the interpretation of L*H, and return to a discussion of the representation of meaning in the final section.

4. Use and Interpretation of L*H in a Sorority

4.1 Methods

This study is based on 25 hours of naturally occurring speech collected in a University of Texas sorority.⁴ The data were collected by the author as participant observer, in a variety of contexts – meetings, meals, social events, and interviews, most of which took place in the sorority house. The data were transcribed, and fundamental frequency was extracted from the recordings using an autocorrelation pitch tracker written by Kenneth Whistler of Dr. LST Software and Metaphor, Inc., based on an algorithm developed by Mark Liberman and John McCarthy of AT&T Bell Laboratories.

The choice of a sorority as the speech community in which to observe intonational patterns, and the ethnographic approach to data collection, were motivated by two primary considerations. First, because of the immense variation in intonational form, even within a well-defined speech community, the preferred site of study would be one in which potential sources of variation were reduced; that is, one in which participants share culturally grounded patterns of speech use and interpretation. The sorority is a relatively well-bounded speech community (a dense, multiplex network in Milroy's 1980 terms): members coordinate meals, meetings, social events, fundraising events, and study sessions within the sorority context. Furthermore, the sorority is socially homogeneous: members of the group under study are all white, female, upper-middle-class university students between the ages of 18-21. Of approximately 150 members, more than 90% are native Texans, and slightly more than 30% reside in the sorority house, which is the center of activity for all members. The group fosters conformity in behavior generally, and communicative behavior in particular; emblems of ethnicity, social class, gender, age, and regional affiliation are evaluated as criteria for membership, and continue to play an important role, along with more specific symbols of sorority identity, in the negotiation of status within the group. (This is

⁴In order to protect the privacy of sorority members, only approximate membership data is given. A fictional name is used to refer to the sorority ("Beta Delta," or "BD"), names of speakers have been changed, and references to sorority-associated events have been changed or deleted.

characteristic of the age and social group more generally; see Eckert 1989.) Sorority members are stratified into distinct roles: "pledges," usually college freshmen, are uninitiated members; "actives" are full members; "seniors" (college seniors) are distinguished from non-seniors; and "officers" are seniors who occupy elected sorority offices such as president, vice president of social activities, vice president of pledge instruction, vice president of rush (recruitment), etc.

The second consideration in choosing to study speech within a sorority, and doing so ethnographically, is that patterns of intonational use are in part conventionalized, and vary by context within a speech community (cf. Gumperz 1982). In order to understand precisely how intonational choice is related to situations of use, some understanding of speech norms for a given community is necessary. An ethnography of speaking which describes communicative patterns and explicates participants' evaluation of linguistic forms is most appropriate to this end, particularly since socio-cultural factors affecting intonational variation are not very well understood.

The reader is referred to McLemore (forthcoming) for a comprehensive ethnography of speaking of the sorority.

4.2 Patterns of Use

In order to distinguish the effects of textual structure and content, situation-specific conventions, and cultural ideology from any stable meaningful element of the form itself, the distributional patterns of L*H will be discussed below in terms of discourse context, situational context, and cultural context.

4.2.1 Discourse Context

L*H signals a relation between two textual units. For example:

- (3) And I also wanted to thank
Heidi **Larson**?
Tina **Nowell**?
Heather **Nelson**?
- (4) After **meeting**?
<.> everybody move your CAR.
- (5) I went to **Campbell**?
I got BUSSED.

The effect that L*H has on textual structure is similar to the effects of the conjunctive particle "and" (Haiman 1983, McLemore 1987): intrasentential occurrences create disjunction, while intersentential ones create cohesion. That is, both L*H and "and" connect preceding and subsequent text. Connection implies segmentation; since sentences are clearly defined syntactic "segments," the relation created between sentences by a connective is more salient than the segmentation that it presupposes. Within a sentence, however, L*H has the effect of setting off a constituent as a separate unit of text, because the overt intonational marking of a relation between sentential constituents is redundant; signalling a connection that is already apparent from syntactic structure highlights the segmentation that L*H presupposes. For example, in (4) above, L*H on the preposed prepositional phrase "After meeting" connects that constituent to the rest of the sentence, but has the more noticeable effect of separating it.

A phrase-final L, on the other hand, marks the end of a textual unit, but does not connect it to the text that follows.⁵

Unlike "and," L*H is not constrained by syntax. Selkirk (1984) argues for semantic constraints on intonational phrasing within sentences formulated with reference to syntactic units; she proposes the Sense Unit Condition (SUC) which stipulates that "the immediate constituents of an intonational phrase must together form a sense unit," where "sense unit" is defined as two syntactic constituents which stand in semantic head-modifier or head-argument relation to each other (291). However, in situated discourse, phrasing is interpretable regardless of its relation to syntactic structure. For example, occurrences of L*H which violate the SUC can be interpreted as connecting speaking turns as well as text:

- (6) Also we're [gonna?
[background noise becomes louder]
um <.> try to start up aerobics at the **house** this semester?

The cliticization of "to" makes (6) a borderline case. A clearer violation of SUC is shown in (7) below, where an intrasentential occurrence of L*H has the effect of separating text, for rhetorical effect:

⁵The gradient scaling of phrase-final falls is relevant to their interpretation; for example, as Hirschberg & Pierrehumbert (1986) show, it can define a hierarchical prosodic structure in discourse. Intonational gradience presents its own set of problems; for present purposes, I will take the view that scaling of phrase-final H more or less connects, while that of L more or less segments.

- (7) and I'D **really**?
 <.> **love** some **BD** support?

A representation of speech which reflects the multi-functionality of intonational form – i.e. that doesn't make assumptions about the relation between syntax and prosody – is most useful in an examination of intonational meaning. Accordingly, the data in this study are transcribed in terms of rhetorical structure, in which syntax, intonational phrasing, and pause phrasing are represented as separate but co-occurring formal systems (Woodbury 1985, 1987).

L*H connects turns at talk, as well as text. The following exchange occurred during a conversation involving six participants:

- (8) A: They have their **shirts** already?
 B: Yeah (...)
 They **OR**dered like **one** shirt to have at the very beginning of **rush**?
 A: <.> OH.
 B: <.> and then they have a**NO**ther one that's coming at the **END**.

L*H can be interpreted both as connecting text and connecting turns – that is, it can comment simultaneously on both textual structure and interactional norms. (This can be expressed more generally in terms of connecting utterances, regardless of which participant, speaker or hearer, is expected to supply the second one, with such expectations arising from interactional norms.) L*H often elicits backchannel cues or other responses; minimally, this counts as (the hearer) declining a longer turn. However, no response at all – silence – can also indicate that the hearer is foregoing a possible turn at talk, so that the speaking floor is effectively solicited. Sorority speakers often use L*H in the first intonational phrase of a monologue when other participants are assumed to have equal rights to the speaking floor:

- (9) Y'ALL I was gonna **tell** y'all?
 um

This use of L*H not only has the effect of securing a turn at talk; impressionistically, it seems to elicit hearers' attention. However, H*L would also direct hearers' attention; the difference in using L*H for

such an effect is that its basic connective structure can be interpreted as connecting not only turns at talk, but participants (the speaker-hearer dyad). In (10) below, the first utterance secures a turn at talk; the second defines the subset of participants addressed.

- (10) Y'ALL I just want to say somethin' about this **football** game?
Those of you who came **out** there?

Similarly, in (11) the speaker addresses a large group ("y'all") in securing the speaking floor, then uses L*H when she defines a more specific audience:

- (11) Y'all–
 would Y'ALL be QUIet for a SEcond–
 so I can make an anNOUncement real QUICK?
 <.> um
 <.> People–
 Y'ALL who are DREssing up for Halloween and stuff?

Text most obviously constrains the interpretation of L*H as establishing a connection between participants when it is an address form, e.g.:

- (12) **Pledges?**

In addition to connecting text, turns, and participants, L*H can be interpreted in more specific ways that depend largely on the topic or type of a discourse and its context of use. It can be interpreted as eliciting agreement, approval, or confirmation of comprehension; however, these "meanings" are inferred from the discourse context. L*H connects turns, but doesn't itself specify the appropriate response (or second turn). In the simplest case, tag words constrain the kind of response elicited by L*H, e.g.:

- (13) Y'ALL were the **ones** that had the conference with HEAther, **right?**
 (14) but SOMething **laying** on the **table like** a bulletin board you know?

The responses to (13) were head nods indicating agreement; the appropriate response to (14) would indicate confirmation of comprehension ((14) was addressed to 150 hearers, and while no specific responses were noted, there would almost certainly be head-nods in response to such an utterance).

In the context of a discussion of a controversial topic, use of L*H in the expression of an opinion is interpreted as eliciting agreement:

- (15) The THING is I think that it's **up** to the people like us that **aren't** twenty-one?
I KNOW that I always tried to do a pretty good **Job** of bein' **discreet** about it?
An' I think that it's **up** to people to be really **discreet**?

In a subsequent line of this monologue, a tag form which would appear to elicit confirmation of comprehension,

- (16) An' **she's** NOT **twenty one**? <.> you know?

actually elicits responses indicating consensus: "exactly," "right."

The following monologue, delivered by a sorority senior to the entire sorority membership at a weekly meeting, illustrates the ambiguity (or more precisely, the vagueness) inherent in L*H itself, and suggests some of the ways in which interpretation is and isn't constrained:

- (17) 1 y'all
2 can I ask y'all something real quick
3 I'm sorry
4 they told me I could make an announcement and it's real important
5 'cause I worked on it **all SUMMER long**?
6 <.5> an'
7 <.> I'm **reaLLY stressin' About** it?
8 I **HAVE Interview? workshop?**
9 it's a **program** put on by the **business council**?
10 =Yay=
11 =an' it's **WeDNEsDAY night**?
12 It's the sa- it's like **beFORE** our **party**?
13 It's from **four to six**?
14 <.7> an'
15 I KNOW. ALL **y'all** NEED it.

In lines 1-4, the speaker is shouting over the noise of approximately 150 sorority members talking. In lines 5-13, L*H functions to structure the text by connecting clauses and defining a discourse section. This announcement is made in the time slot called "pre-meeting," when it is up to the speaker to solicit and hold the speaking floor (i.e. she doesn't have official recognition to speak). Given the situation and the explicit request for a turn at talk in line 2, the use of L*H in lines 5-15 can be interpreted as repeatedly

securing the speaking turn. Since new information is introduced in lines 8-13, L*H can also be interpreted as eliciting confirmation of comprehension (this is discussed further below).

16 <.2> 'cause it's **all** About Interviewing –
 17 <.> an' HOW to **dress** –
 18 <.> an' WHAT to **wear** –
 19 <.3> an' HOW to put together a **resume** –
 20 <.5> an' I'VE **like** WORKED on **this** ALL Summer **getting** PEOPLE to COME –
 21 an' I'D **really**?
 22 <.> **love** some **BD support**? 'cause.
 23 <.5> **this** IS a **real** important **program** to **me**?
 24 <.6> so if **any** of Y'ALL **like** me. **AT all**?
 25 an' **y'all** can COME –
 26 =[laughter]=
 27 =PLEASE **come** –

In line 27, the speaker explicitly requests participation, expressed more generally as "support," or approval, in lines 21-25. In line 24, the request for approval is explicitly couched in terms of the speaker-hearer relation ("so if any of y'all like me at all"), which evokes laughter from the entire group. L*H in these phrases is more likely to be interpreted as connecting participants – all of whom are members of the sorority, in which "support" is a stated value – with the appropriate response of approval/attendance constrained by the choice of text.

28 and there's **FLYERS** –
 29 there's **flyers** on the **table**?
 30 an' it's **REALLY**. **GOOD**.
 31 I m(ean), I learned **SO** much from it **last** year?
 32 an' it's helped me with **all** my **Interviews**? I've done on **campus**?
 33 <.5> and
 34 <.2> I'D just **really** appreciate it if y'all would show **up**?

In the final seven phrases of this discourse, noise from the audience begins to drown out the speaker, and she speaks with increased loudness. While L*H in these phrases is most clearly functioning to secure the speaking turn, several interpretations are possible at this point in the discourse: appropriate responses would include confirmation of comprehension, approval or agreement, or more broadly, participation in the workshop announced. All of these options for interpretation converge to give the effect of L*H as a highly involving communicative strategy.

Discourses on unexpected topics or about optional activities – i.e. activities that members haven't committed themselves to explicitly or implicitly by having joined the group, such as sorority league football games, a proposed aerobics class, and purchasing t-shirts for a sorority event – are usually structured with L*H. For example, while "Dad's Day" is an annual event for all UT sororities, participation is optional, and signing up for a block of hotel rooms for Dad's Day is neither expected nor obligatory:

- (20) Um
 I put a **sign-up** sheet?
 over on the **board** it's for **Dad's** Day?
 you **need** to go and sign up about **how** many **people** you're gonna have?

Two conclusions can be drawn from the distributional pattern of L*H in the weekly meeting: 1) its use indicates that a meeting contribution is in some sense new; and 2) its use reflects an assumption that it is appropriate for the speaker to elicit audience involvement. These are related; involvement in 'new' topics isn't taken for granted. However, it is important to note that the choice of L*H is meaningful because other intonational forms could be used to indicate newness, e.g. a contour with (non-downstepped) H*s:

- (21) I put a SIGN-up sheet on the BOARD it's for DAD'S Day. [constructed example]

Similarly, alternate forms could be used to involve participants (as discussed further below) – for example, an expansion of pitch range for (21). The crucial difference in interpretation between L*H and a widely scaled H*L lies in a speaker's ability to use L*H creatively to implicate the whole range of its interpretations and a hearer's ability to map the connective structure of L*H to the speaker-hearer dyad. Finally, the preferred use of L* pitch accents preceding the final rise in a single intonational phrase has the effect of making that utterance-level symbol (i.e. H) the most salient pitch excursion in the phrase, which appears to have a focus effect at the utterance and discourse level.

If speakers use L*H to elicit involvement, its use could conceivably be interpreted as deferential, i.e. indexing an asymmetry in speaker-hearer status. However, the relative social status of speaker and hearer – like text, other linguistic cues, and situational conventions – interacts with the interpretation of

L*H, but doesn't determine its use. Monologues structured with L*H in the weekly meeting are usually performed by senior members, or other active members, who have been given the speaking floor by the president. While the status of a speaker with respect to the group does not appear to affect intonational choice in this situation, speaker status can affect interpretation of L*H. For example, the use of L*H (as well as hesitation pauses, self-corrections, and hedges) in a narrative performed by a pledge contributed to an impression of insecurity, evident in the expressions exchanged by older members, and in their subsequent comments. Pledges are marginal, uninitiated members, and almost never speak at meetings; given their position in the group, it is inappropriate for them to elicit participation in either their discourses or an announced activity.

However, it is appropriate for pledges to use L*H in other contexts. In the following discourse, a pledge is addressing two other women at a noisy, outdoor social event:

- (22) 1 My key- [my key]
 2 [oh my god]
 3 was in my **pocket**?
 4 and I went **dancing** last night?
 5 and I kept pulling my **pants** up like this?
 6 'cause I was REAL HOT?
 7 and it just SLipped OUT of my POcket.
 8 and I- so we called a **locksmith**?
 9 'cause I THOUGHT my spare key was **in my car**?
 10 Y'ALL it was not IN my CAR.

This discourse fragment occurs in a quick conversational exchange about members who have lost keys. Considerations of turn-holding and floor-holding are relevant to the use and interpretation of L*H; furthermore, every phrase ending in L*H (or H*H) introduces new information, in contrast to lines 7 and 10 (with phrase-final falls), which are repetitions of the speaker's conversational contributions a few turns earlier.

The intonational structure in (22) is not uncommon in the larger American English-speaking community. Gussenhoven (1984) proposes that in narrative, rises are typically used metaphorically to create suspense. Guy et.al. speculate that AQL is used in discourse types that are composed of steps, including narrative, making the interpretation of 'request for confirmation of comprehension' appropriate.

The data discussed in this study, however, suggest that both of these proposals are too specific to be generalized across discourse types, situations, and speech communities. While a given intonational form in English may be commonly used, and even used frequently in certain types of discourse, its interpretation depends in part on culturally grounded rules of use.

4.2.3 Cultural Context

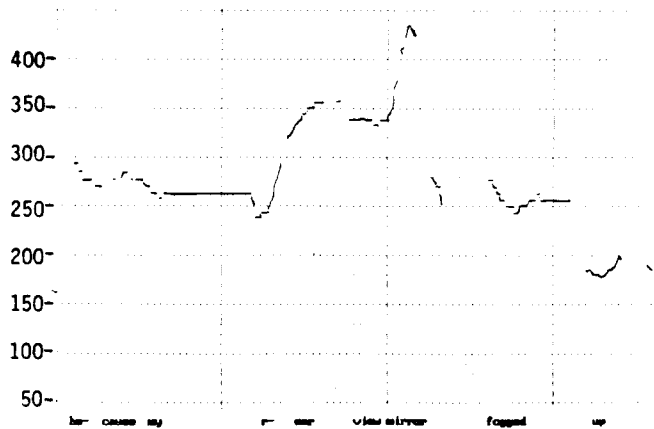
In the sorority, the use of L*H is consistent with the use of other speech forms that can be characterized as highly involving. It can be used relate participants – speaker to hearer(s) – and the salient characteristic of participants is shared sorority membership. Since sorority culture is based on an ideology that values involvement and participation, a speech behavior that increases involvement is an appropriate way to symbolize group values and display group membership.

Although the ability of speakers to accurately reflect on the functions of (especially prosodic) pragmatic forms is limited (Silverstein 1981), judgments about the appropriateness of a form in a particular context are revealing. Speakers themselves report that the use of L*H in meeting presentations promotes group participation, "like a consensus is important."

Sorority speakers' metapragmatic ideology about the function of L*H reflects a pervasive theme in sorority culture. Several frequently occurring speech forms facilitate involvement in verbal interaction: the use of "y'all" as a vocative ("Y'all I just wanted to tell y'all ..."); imitation in direct quotation ("an' [she] was like, "Oh my god, y'all! I'm so excited!"); and in narrative, evaluative forms such as the historical present, and the use of "you" as an impersonal pronoun ("An' you go home, and we roll down the window ..."). In addition, consider the following three types of recurring intonational patterns.

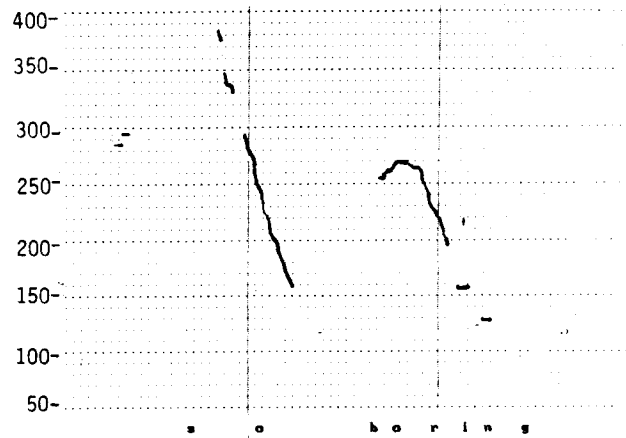
Widened pitch range scaling for bitonal pitch accents:

(23)



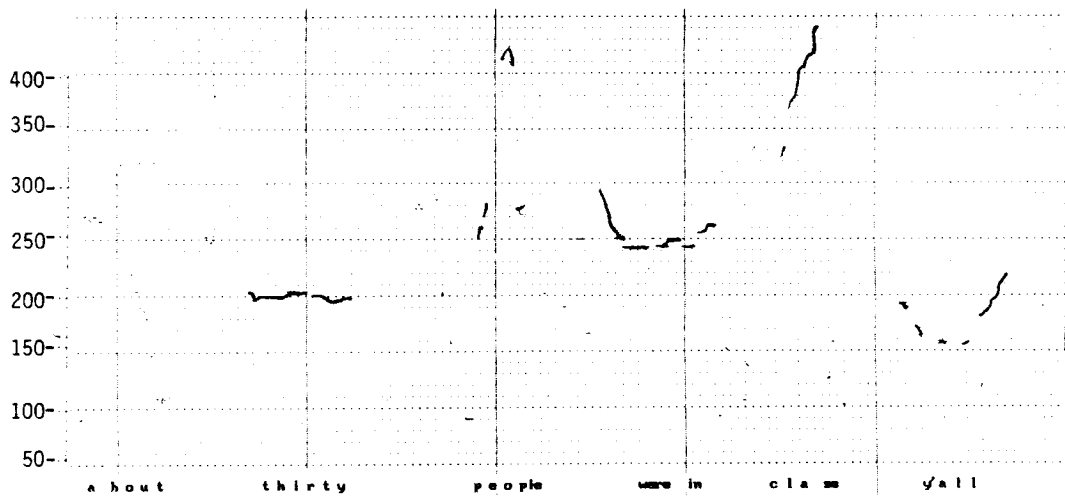
Widely scaled peaks on intensifiers:

(24)



Vocative tags with widely scaled L*H:

(25)



Use of these forms has the effect of involving participants in an exchange. (Exactly what this means is slightly different in detail from the use of L*H; each form has its own distributional pattern and corresponding appropriateness conditions). In particular, one speaker reported, and several concurred, that upon hearing the intonational features in (23) (also present in (25)), she "can't help but start talking that way too"; others remarked that stories told with that intonation in the dining room were likely to get a larger audience.

Interestingly, several sorority officers reported that, while they would use "this kind of intonation" (L*H) when addressing another sorority, they wouldn't use it when addressing a fraternity because it would make them appear "weak." The relative status of fraternity-sorority participants is asymmetric to the extent that sex roles are; when L*H is interpreted as connecting participants, a speaker with lower status is more likely to be viewed as eliciting approval, as when a sorority pledge uses the form in addressing active members in a weekly meeting. The relative status of participants is distinct from the attitudinal 'meaning' of L*H; suggestions that women use phrase-final rises more frequently than men because they more frequently want to convey uncertainty or deference (Lakoff 1975) or inconclusiveness (Bolinger 1989) are mistaken in attributing these meanings to the intonational form. Further study, particularly of usage patterns among men, and between men and women, would be useful in unraveling the effects of speaker sex and sex role norms and expectations (i.e. gender) on the use and interpretation of L*H.⁶

5. Discussion

The data discussed in this paper show that sorority speakers use and interpret L*H across contexts to signal a relation between two things: i.e. as an icon with the diagrammatic structure of $-|-$. An iconic sign is a representation interpreted by some intrinsic property it shares with its object; Peirce (1932) distinguishes diagrammatic icons as those "which represent the relations, mainly dyadic, or so regarded, of the parts of one thing by analogous relations in their own parts" (157).⁷ The iconic element most

⁶Edelsky (1979) reports an experiment showing that the only statistically significant sex-related difference in phrase final values was a greater tendency for women to use rise-fall-rises (L*H) when responding to questions asked by women. Although Guy et. al. report that women use AQI more frequently than men, sex of interviewer is not noted.

⁷Diffloth's work on iconicity in morphology and segmental sound symbolism (e.g., 1986) has been extremely suggestive in this area, as noted by Liberman (1975), who proposes viewing intonation as iconic and ideophonic (nonarbitrary) as well as morphemic (arbitrary and conventionalized). Ladd (1980)

important to the interpretation of L*H is the pitch excursion represented by H; in light of the present account, as well as studies by other authors, a strong generalization seems plausible: an H tone at the end of an IP connects that IP (including the preceding L*) with the IP that follows; the phonetic realization of this structure is interpreted as representing analogous relations in text and context.⁸ What speakers and hearers consider to be analogous depends on culture – their pattern of expectations about appropriate behaviors and beliefs – including interactional norms, the evaluation of situations, and conventions in structuring discourse.

In the sorority culture, L*H is used as a communicative strategy for realizing the group's stated values of participation, involvement, and inclusion. Patterns of use and interpretation discussed above suggest that the range of interpretations of the form can be narrowed by textual structure and content, turn-taking conventions, and relative speaker-hearer status. Responses to discourses with recurrent L*H indicate that local (IP to IP) application of the connective icon may be suspended until the point of the discourse is made and the range of appropriate responses is narrowed (e.g., 15). When several interpretations are equally plausible, hearers can presumably choose any one, or most likely, default to the speaker-hearer dyad – which is inclusive of turn-turn, text-text relations. In certain situations, conventions for structuring culturally-recognized types of discourses can result in additional interpretations (e.g., 'newness') which are related to the range of local interpretations of the form.

Previous accounts have treated more restricted sets of data. One of the most widely-discussed forms in the intonation literature which has L*H as one of its characteristic components is the so-called "contradiction contour" (Lieberman & Sag 1974; see also Bolinger 1982, Cutler 1977):

(26) eLEphantiasis isn't incurable? [from Lieberman & Sag]

Note the similarity between this form and the data in (15) above (see also 2). Consensus is at issue in both cases, but (15) doesn't convey contradiction. The utterance in (26) presupposes that the

takes issue with Lieberman's use of "iconic"; however, diagrammatic iconicity is precisely what he argues the term should mean: "there is some element of geometrical similarity between the [word] and its meaning" (199; cited from Hockett 1958:577).

⁸The effect of preceding variable contour components – e.g., L*, H* – warrants a closer examination, as does scaling values and phrasing cues.

interlocutor has the opposite view – as Bolinger points out, contradiction is conveyed by the choice of text – while the utterance in (15) contains no such presupposition. In both, L*H connects turns, and functions to elicit a response, but in (26) an appropriate response would address the disagreement, while in (15) the type of response is less constrained. (In terms of the interaction, the use of L*H in (26) mitigates the disagreement; consider the strikingly different effect of a phrase-final fall).

The use of L*H to convey 'contradiction' under certain circumstances is similar to the kinds of uses Ladd (1980) notes for "low-rises," in which the scaling of H in L*H may be lower. The use of L*H on epithets like "you **bastard**?" still elicits a response (compare "you **BAstard**."); used under the appropriate conditions, it can also convey threat, as in "all **right** then?" – in which the final H can be interpreted as connecting to what *doesn't* follow, i.e. a range of inferrable consequences.⁹ These uses and interpretations demonstrate that while the iconic structure of a phrase-final H is stable, 'connective', its specific contribution to the interpretation of an utterance depends largely on discourse and situational context.

Another contour discussed in the intonation literature that has L*H as a component is the Fall-Rise, which Ward & Hirschberg (1985) represent in Pierrehumbert's notation as L*+H L- H%: the first LH is a bitonal pitch accent in which the L tone is aligned with stress, and the second LH is composed of phrasal and boundary tones, neither of which align with stress.¹⁰ For example, (27) answers a question like "Is he a good athlete?":

(27) He's a good **badMINTon** player?

Ward & Hirschberg's proposal is that this contour 1) evokes a scale and picks out an entity on it (in (27), "athletes" and "badminton player," respectively), and 2) conventionally implicates uncertainty about the entity or the scale. Their examination of this intonation is limited to contexts in which the contour is on an answer to a question, and the plausibility of uncertainty is stipulated as a necessary condition of its use.

⁹I thank Tony Woodbury for bringing this example to my attention.

¹⁰Note, however, that the meaning of (27) doesn't seem to be crucially affected by alternately specifying the contour as L*+H L*+H H- H% – that is, with both L's aligned with stress – or as two phrases, [L*+H H- H%] [L*+H H- H%].

Consider the effect of a final fall on the interpretation of this contour, i.e. L*+H L- L%; any uncertainty disappears with the final H. The phrase-final H is connective; in the examples given in W&H, it connects turns (i.e. gives the speaking floor to the interlocutor), and the question-answer discourse context, and perhaps the scale-entity textual content, further constrain its interpretation. This doesn't rule out the possibility that the contour has a conventionalized meaning for a given group of speakers in a specific discourse context; the point is that phrase-final H makes an identifiable contribution to the interpretation of the whole intonation. The nature of that contribution lies in the basic connection indicated by H, and its use in context.

Finally, a comment should be made about the role of L*H in the structuring of discourse. As the narrative in (22) above illustrates, repeated use of IPs ending with L*H are often, but not always, followed by an IP ending with a phrase-final fall. In this case, the phrasing sequence (rise, rise... fall) happens to coincide with the semantic structure of the text: falls end thematic sections. However, this is not necessarily the case; in (17) above, for example, a sequence of IPs ending in L*H are followed by an IP that falls, but the textual content in this IP doesn't resolve the preceding topic as much as it begins the next one. Therefore, we can conclude that while an IP with a phrase-final fall may be connected to preceding IPs which end in rises, this relation is independent of the logical, or semantic, relations in a discourse; intonational structure can reflect meaning, but it can also be used to create it.

This analysis of L*H has demonstrated that by varying text and context, and explicating cultural assumptions, the 'meaning' of an intonational form can be distinguished from other factors that contribute to utterance interpretation. The intonational form defines a structure of sound; the interpretation of that structure interacts with text and context to produce what are often very vivid effects.

References

- Beckman, M. and J. Pierrehumbert. 1986. Intonational Structure in Japanese and English. Phonology Yearbook 3.
- Bolinger, D. 1978. Intonation Across Languages. In J. Greenberg, ed., Universals of Human Language, vol. 2, Phonology, pp. 471-524. Stanford, Calif.: Stanford University Press.
- Bolinger, D. 1982. Intonation and Its Parts. Language.
- Bolinger, D. 1986. Intonation and Its Parts: The Melody of Speech. Stanford: Stanford Univ. Press.
- Bolinger, D. 1989. Intonation and Its Uses. Stanford: Stanford Univ. Press.
- Cutler, A. 1977. The Context-Dependence of "Intonational Meanings". CLS 13.104-15.
- Diffloth, G. 1986. Iconicity in the Aesthetic Component of Grammar. Paper presented at the Berkeley Sound Symbolism Conference, University of California at Berkeley, January 1986.
- Eckert, P. 1989. Jocks and Burnouts: Social Categories in the High School. New York: Teachers College Press.
- Edelsky, C. 1979. Question Intonation and Sex Roles. Language in Society 8: 15-32.
- Gumperz, J.J. 1982. Discourse Strategies. London: Cambridge University Press.
- Gussenhoven, C. 1984. On the Grammar and Semantics of Sentence Accents. Dordrecht-Holland: Foris Publications.
- Guy, G. & J. Vonwiller. 1984. The Meaning of an Intonation in Australian English. Australian Journal of Linguistics 4, 1-17.
- Guy, G., B. Horvath, J. Vonwiller, E. Daisley, & I. Rogers. 1986. An Intonational Change in Progress in Australian English. Language in Society 15, 23-52.
- Haiman, J. 1983. Iconic and Economic Motivation. Language 59: 781-819.
- Hirschberg, J. and J. Pierrehumbert. 1986. The Intonational Structuring of Discourse. MS, AT&T Bell Labs.
- Ladd, D.R. 1978. The Structure of Intonational Meaning: Evidence from English. Bloomington: Indiana University Press.
- Lakoff, R. 1975. Language and Women's Place. New York: Harper & Row.
- Liberman, M. & I. Sag. 1974. Prosodic form and discourse function. CLS 10.416-27.
- Liberman, M. 1975. The Intonational System of English. MIT Ph.D. Diss. (Published 1979 by Garland, New York.)
- McLemore, C. 1987. And in Discourse. University of Texas M.A. Report.
- McLemore, C. (forthcoming.) The Pragmatic Interpretation of English Intonation: Sorority Speech. University of Texas Ph.D. dissertation.
- Milroy, Lesley. 1980. Language and Social Networks. Baltimore: University Park Press.
- Peirce, C.S. 1932. Collected Papers, v. II. Cambridge, Mass.: Harvard University Press.
- Pierrehumbert, J. 1980. The Phonology and Phonetics of English Intonation. PhD diss., MIT.
- Sacks, H., E. Schegloff & G. Jefferson. 1974. A Simple Systematics for the Organization of Turn-Taking for Conversation. Language 50:4, 696-734.
- Schegloff E. 1981. Discourse as an Interactional Achievement: Some Uses of 'uh huh' and Other Things That Come Between Sentences. 1982. In: Georgetown University Round Table on Languages and Linguistics 1981. Edited by Deborah Tannen. Washington, D.C.: Georgetown University Press. 71-93.
- Schegloff E. & H. Sacks, 1973. Opening Up Closings. Semiotica 8:289-327.
- Selkirk, L. 1984. Phonology and Syntax: The Relation Between Sound and Structure. Cambridge: MIT Press.
- Silverstein, M. 1981. The Limits of Awareness. Working Papers in Sociolinguistics. Austin: Southwest Educational Laboratory.
- Ward, G., & J. Hirschberg. 1985. Implicating Uncertainty: the Pragmatics of Fall-Rise Intonation. Language 61.4, pp. 747-776.
- Woodbury, A.C. 1985. The Functions of Rhetorical Structure: A Study of Central Alaskan Yupik Eskimo Discourse. Language in Society 14.
- Woodbury, A. C. 1987. Rhetorical structure in a Central Alaskan Yupik Eskimo traditional narrative. In Native American discourse: poetics and rhetoric, J. Sherzer & A. C. Woodbury, eds. Cambridge: Cambridge University Press.