

Prosodic Constructions for Contrast, Complaint, and Contradiction; and their Common Elements

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Most utterances in dialog are multifunctional, simultaneously conveying more than one message or function. We would like to model how prosody contributes to function in such cases.

I investigated this by examining utterances in English dialog that include a specific prosodic pattern involving a region of narrow pitch. This pattern was identified as common by bottom-up automatic analysis of unscripted conversations (Ward 2014). This pattern includes three components: first a fairly loud region with wide pitch range and fast speaking rate; second a region of narrow pitch range lasting at least about 400 milliseconds, often in creaky voice; and third a region of wider pitch range. The initial wide-pitch region can be performed by either speaker.

To investigate the uses of this pattern, I examined places in dialog where it was strongly evident, as determined by a process that scored the presence of the components, and I also reviewed descriptions in the intonation-contours literature. This pattern has at least four functions: a) expressing a contrast to what came before, b) complaining (Ogden 2007), c) expressing grudging appreciation, and d) contradicting. In the following examples, the start and end of the narrow-pitch region is indicated by underlining.

- a) A: easier to program on that, per se, so I don't know why
B: well, the, I mean the problem with that is, to do like uh, to to compile
- b) A: can you hear me?
B: yeah, but I hear a lot of static
- c) A: wow, I didn't know that
B: yeah, it's, it's pretty cool
- d) A: I'm not going to Japan (Hedberg, Sosa, Fadden 2003, example 2)

Pragmatically, these uses share a common element: the person producing the narrow pitch region is referencing specific, personal knowledge, and is inviting the other person to consider that fact or perspective. Thus there is a direct form-function mapping, and we can consider this pattern to be a construction: I dub it the Bookended-Narrow Construction.

The functional differences among these four uses can be explained by specific phonetic differences, each of which contributes its own component of meaning. Grudging appreciation (c) has creaky voice as befits speaking from authority, and has relatively smaller pitch excursions before and after the narrow pitch, as befits a factual perspective, whereas complaining (b) has comparatively wider pitch range before and after, as befits an expression of attitude or feeling. Complaints also frequently co-occur with a nasalization, indicating a bid for sympathy. Contradictions (d) have even wider pitch ranges before and after, and end high with a possible volume fade out, indicating that there's an unstated implication that the other person should consider and probably respond to.

These observations are consistent with a model in which prosodic constructions are compositional: observed prosody is the superimposition of the co-present constructions' prosody, and the observed meanings are the summations of their meanings.