A most convincing way to demonstrate that an acoustic property is a cue for the listener is the "minimal pairs" test. A minimal pair at the level of the segmental phoneme, for instance, is two words such as rapid and rabid, which differ only in one phonetic feature, but as many as sixteen acoustic properties are candidate cues to the lexical distinction. It is not certain, however, that any of these acoustic properties is capable of signaling a lexical distinction by itself. Even if a given acoustic property can be shown to have such power to affect perception, it need not be true that this property functions, independently, in nature.

Here I want to report some listener responses to sets of stimuli derived by waveform editing of some naturally produced tokens of rapid and rabid. Three properties served as experimental variables: the duration of the closure interval, the glottal buzz/silence difference during closure, and the duration of the pre-closure vowel. Unlike many tests of this kind, in which the values assigned to a variable range over a span in steps of a size determined to establish category boundaries, in the tests reported here each variable was given just two values, each chosen on the basis of naturalness.

A token of each of the sentences I think it's rapid and I think it's rabid was recorded by a speaker of American English used in context. For each of the variables a change to a value not normally associated with the original stimulus type has, with one exception, no great effect on labeling behavior. Only when glottal buzz replaces the silence of the /p/ closure is there a decided shift of "rapid" judgments. It does not follow, of course, that the three features of negligible importance for the perception of the two words. Thus a combination of shortening and lengthening of the /b/ closure elicited an overwhelmingly "rapid" response, a result in conformity with earlier findings. A shortening of the /p/ closure together with a lengthening of the preceding vocalic interval yielded mostly "rabid" responses. Original "rapid" was heard largely as "rabid," while "rabid" went to "rapid" when all three variable features were assigned values appropriate to the competing form. The results summarized above indicate that an acoustic feature to which cue value has been attributed does not always effect a significant effect on linguistic labeling behavior; its effect is quite context-dependent. Indeed it may well be, in the case of certain properties, that the context in which it can be decisive can only (?) be contrived in the laboratory. The status of an acoustic feature of speech is therefore very different from that of a phonetic feature, which we generally suppose to possess the power, for at least some natural phonetic systems, to mark differentially some words from others, and to do this independently of other phonetic features.