Phonetics Qualifying Examination
University of Pennsylvania — May 2002

Complete both parts of the examination.

1. Interpretation of Acoustic Displays

Attached are spectrograms and waveforms of two utterances in a language with which you are not familiar. Your task is to transcribe the two utterances as best you can. You are not expected to be able to determine every detail. Please list the features that you are able to determine and in each case explain what evidence leads you to that conclusion. Please show the approximate alignment of your transcription with the spectrograms.

Neither of the two utterances contains any very exotic sounds. All of the sounds in these utterances are similar to sounds that occur in English. You will however discover that in one respect the phonological/phonetic rules of this language, specifically, those governing what happens in certain clusters, are different from those of English. Identify the difference if you can.

2. Paper Commentary

Answer either 2.1 or 2.2.

2.1. Acoustic Correlates of Stress

Discuss the two papers:


Among the questions that you should address are:

1. How do the results of perceptual experiments and acoustic measurements relate to each other? Is one approach superior to the other? Do we learn anything new through combining information from both?

2. The Fry paper is an important paper in the history of the study of English stress, but there has been considerable subsequent work. What do we know now that this paper does not address?

3. In light of what is known about stress in other languages, what questions does the Bertinetto paper leave open about the nature of stress in Italian? What experiments would help to answer them?
2.2. Vowels and the Mental Representation of Speech

Discuss the paper:


In addition to any comments you may have on the specific points made in this paper, you should address its implications for our view of the relationship between mental representation and physical substance. Among the ideas that you may wish to include in your discussion are the Motor Theory of speech perception and the proposal, in *The Sound Pattern of English* and much other work, that phonological features are defined in articulatory rather than acoustic terms.