

Homework 2
Ling 151
Phonetic Analysis
Due Monday, 2/1/10

Headphone Analysis

The equipment you use in phonetics research is vitally important to getting accurate, interpretable results. In this homework you will analyze the performance of two pairs of headphones and write up a report of your findings.

Your first step is to divide into groups of 4-5. In your group, find two pairs of headphones. They can be of any type, but the more different they are from each other, the more interesting the report will be. You then must come up with some criteria with which to evaluate these headphones and some method you can use to test the headphones against these criteria. You are free to use equipment in the fledgling Phonetics Lab at UCSC where we have two sound-proof booths, a decibel meter, various sound recording software, and a handful of other pieces of equipment. If you want to use any of this equipment, you must schedule lab time with myself or Jeremy. We will act as your research assistant and help with use of equipment, but will be otherwise hands-off. Our time is limited, so come to the lab with a strong plan.

When determining your methodology, keep in mind what is useful in a pair of headphones and how this might differ across models. Headphones are designed for different uses and optimized accordingly. What kind of headphones should a phonetics lab have? What should you look for?

Once you have your data, each person should write up a report that is no longer than three typed pages, though graphs and tables do not count against you. Please list your group members. The report should have the following sections:

- 1) Introduction: Lay out the criteria you plan on using to evaluate the headphones and what you think you may find. This should take only a paragraph or two.
- 2) Methods: Several paragraphs or even pages describing in detail what you did and why you did it. I should be able to read this and reproduce your experiment **exactly** with no further instruction.
- 3) Results: Several paragraphs detailing what you found. This can and probably should include graphs and / or tables. Please quantify your data as best you can.
- 4) Discussion: This section should put your results in context, i.e. what do they tell you? How does what you found compare with what you were looking for? Keep it to a few paragraphs.

Good luck!