LING646 FALL 2013
LAB 4

In the final lab, you will propose an experiment using cognitive neuroscience methods to investigate a question about linguistic representations, language processing, or their neural implementation. **The proposal should include the following sections:**

Motivation: define the key question(s) addressed by the proposed experiment. Also note explicitly whether the experiment addresses a question about linguistic representations, language processing, their neural implementation, or a combination.

Background: review prior literature relevant for your proposal (does not need to be exhaustive).

Design: describe the design and if possible, give examples of stimuli using a table

Procedure: briefly outline the procedure for presenting the stimuli

Analysis: this does not need to be fully fleshed out, but try to be as explicit as possible about what measures will provide the key test of your hypothesis. E.g., don't just say you will look at activity in the VWFA--say something about how you would identify this region (existing atlas? functional localizer?), what will be the critical contrast, what control conditions if any are needed. Don't just say you will look at N400 amplitude, but specify the time-window and what subset of electrodes, if any, you would focus on.

Predictions: describe the pattern of results that would be predicted by the theories under consideration

References

A couple additional points:

* Try to clearly identify what assumptions, if any, are necessary for your design to hold—it's ok if they're controversial, but just identify them. E.g., you will be assuming the reanalysis theory of the P600, or the unification theory of IFG function.

* Make sure to discuss any practical challenges that will arise in making stimuli. This is often one of the biggest challenges of a cognitive neuroscience of language experiment, because these techniques usually require many more items than a behavioral experiment. You don't have to actually solve this in your proposal, but you should identify the issues and at least gesture to some possible solutions.