Study questions on Moreton 2008

de Tuesday, Feb. 14

Notes

- Sections 1, 2, and 8 are the most important (though of course the actual study is very interesting too!). This is a very subtle issue and I think Moreton does a great job of explaining it.
- Don't worry too much about unfamiliar statistics (it's our friend logistic regression, for those of you who were in phonology seminar this week!).
    - "Fixed effects" means, roughly, independent variables that would be the same if you replicated the study, like HH vs. HV.
    - "Random effects" means independent variables that would be different if you replicated the study, like the participants and the exact stimuli.
    - "Subject intercept" is a way of factoring out each individual's baseline rate of "choosing the test item that was consistent with the familiarisation pattern" (p. 99).
    - In Table IV (p. 101) and others like it, if a variable has a positive coefficient, that means it encouraged subjects to choose the familiarization-consistent item. If negative, it discouraged them. The value in the rightmost column is how often we'd expect to see a coefficient that different from zero just by chance; so low values mean that the coefficient is surprisingly ("significantly") far from zero. The *s indicate the most significant variables.
- In Table III on page 99, keep in mind that if participants were answering completely at random, they'd be 50% correct. So, the results for the HV condition—where participants were supposed to learn that V1 is high iff C2 is voiced—show that participants didn't learn much: regardless whether the vowels were identical, height-agreeing, or differing in height, they did only slightly better than guessing overall. Whereas the participants in the HH conditions—who were supposed to learn that vowels agree in height—did quite a bit better than chance, regardless of whether the vowels were the same and regarless of the relationship between V1 height and C2 voicing.

Question

Suppose we wanted to test the idea that there is an analytic bias favoring vowel harmony over consonant harmony. Don't worry about the issue of phonetic precursors. Taking Moreton's experiments as inspiration, sketch out how you could test this idea. List some of the sample stimuli you'd give participants and say what pattern of results the idea predict. Be brief—less than a page is plenty of detail.

Moreton, Elliott. 2008. Analytic Bias and Phonological Typology. *Phonology* 25(01). 83-127. doi:10.1017/S0952675708001413.