**Homework 9 General Feedback**

**Data Analysis**

When you’re testing a simple effect, remember you want to look at the line in the output of the *other* variable than the one you’ve recentered around your variable of interest. The logic is you’re interested in seeing how a given value of variable X1 changes the effect of X2.

Many people had trouble interpreting the interaction correctly. Here are a few ways to write about an interaction correctly, in generic terms:

* There was a significant interaction between X1 and X2 on Y, *stats*.
* The relationship of X1 on Y changes depending on X2, *stats*.
* There was a significant interaction between X1 and X2, such that the relationship of X1 on Y became more positive/negative at increasing values of X2, *stats*.
* X2 moderated the effect of X1 on Y, such that a one unit increase/decrease of X2 increased/decreased the relationship of X1 on Y by \_\_ units, *stats*.

See key for specific examples related to this homework. Usually it’s going to be easier to write something mildly less specific, which honestly is just fine in most situations.

As we mentioned in lab, there was some confusion about the definitions of “division” and “polarization.” Rather than rehash it here, I’ll just say I was operating using a social psych definition of polarization, wherein the behaviors of members of small groups are more extreme than the behaviors the members of the group would engage in individually (that is, a group behaves in a similar and extreme way). This is different than many conventional definitions of polarity, which would imply similar meanings to how I was using “divided.” To me, a divided family has equal numbers of both political persuasions while a polarized family universally shares the same beliefs.

When you’re plotting, make savvy choices about which variable to put on the x axis and which to use to distinguish the lines. In this assignment, I think putting the conversation time variables on the x axis was preferable, since they’re larger in range, more useful to think about continuously, and more focal for the hypotheses. The other way wasn’t wrong, but always take a minute to think about which way makes more sense.

**Write-ups**

“Data” is plural (e.g., “the data are,” “the data suggest”). In the future, I will be persnickety about this fact. Part of it is a grammar obsession, but part of it is pragmatic. Journals receive many, many more submissions than they can publish, which means when reading manuscripts, they’re just looking for reasons to reject things. Small errors like this one could have an influence on the impression an editor forms of your work, and might play a role in that work being judged below the standard of the journal (this is a testable hypothesis). Writing that is clear and free from errors will fare better in the review process (pending scientific support for this hypothesis).

Many of you included the omnibus test in your write-ups (which is a test of whether a model is significant “overall,” where you conduct a multiple degrees of freedom *F* test). I was sort of perplexed by this but then Daniel pointed out it appeared in the reading. For reasons we can talk about in lab (and are discussed in the reading, actually), an omnibus test is useless in most situations, and you should not report it in the future.

When you include a figure in your homework and then do a write-up, reference it! Say something like “(see figure 1)” and, better yet, clarify what the lines on the figure represent.

Many of the write-ups were relatively unclear, most notably in lacking real-world terminology and interpretation of effects. Obviously Daniel, John, and I will know what you’re talking about because of our familiarity with the material, but the whole point of making you do these is to improve your scientific writing and make it interpretable to a general (if educated) audience. After you finish a write-up, have a friend, family member, or random stranger read it and see if they can explain the results back to you. If they can, pat yourself on the back and turn it in. If they can’t, or have difficulty doing so, go back and try again. And don’t forget to add some kind of conclusion (imagine this is a one-sentence discussion section). My impression is many of the write-ups for this homework would not have passed this test, despite the concrete real-world example provided in the assignment.