Multilevel Models - Day 1 Homework

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Assigned: Monday, May 22, 2011

1. Load the dataset `PPMD_summary_day1.dta`. You can do this from Stata using the command:

   ```
   use http://www.kenbenoit.net/courses/mlm/PPMD_summary_day1.dta
   ```

   (a) Examine the different levels in the dataset. What are the level 1 variables, and at what level do they vary? What are the level 2 variables, and at what levels do these vary? Note that there are different possible methods of interpreting the level 2 variation in this context.

   (b) Produce a table of means of Dimension by by the "Scale" variable, using the `table` command with the `table Dimension Scale, c(mean Mean)` command. Could you have done this using `tabstat`?.

   (c) Reshape the data so that the `Dimension` variable is in wide format. Why did numbers get assigned to the new variables names and where did these numbers come from?

   (d) Now reload the dataset so that it is in its original `long` format. Reshape it so that the `Scale` variable is in wide format. Plot the relationship, for all cases, between the two scales (Position and Importance).

2. Load the Wright peak flow dataset, using the command

   ```
   use http://www.stata-press.com/data/mlmus2/pefr, clear
   ```

   (a) Reshape this dataset into `long` format so that occasion becomes a variable rather than a column qualifier.

   (b) Now reshape the data so that the type of measure (`wp` versus `wm`) also becomes a variable. Hint: you will need to rename these two wide variables with numeric suffixes before you can reshape them, or you will need to use the `string` option with reshape.

   (c) Why might we want the data in this format?