

## PLSC 503: “Multivariate Analysis for Political Research”

### Exercise Nine

In the interest of continuing our analyses of only-marginally-political phenomena in a graduate-level course in political science, we’ll return this week to Washington University’s [American Panel Study](#) (TAPS) study. As noted in Exercise Eight, in July 2016 that survey asked roughly 1200 U.S. survey respondents a series of questions that included both conventional and unconventional survey items, including one question which asked:

What size is your bed?

1. Twin
2. Full
3. Queen
4. King

The survey also included response options for “Don’t Know” and “Refused,” which we’ll treat as missing. As in the street-sign-theft example in Exercise Eight, we’ll assess the correlates of respondents’ answers to this burning political question. The data we use here (`PLSC503-2021-ExerciseNine.csv`) code respondents’ answers to the above question as the (ordinal) numeric values listed above.

We’ll examine the association between answers to this question and the same demographic and political variables we considered last time:

- Political party identification indicators – binary variables for `Democrat` and `GOP`, with independents serving as the reference category,
- Ideology – a seven-point indicator variable, where higher values indicate greater political conservatism,
- Education – measured as a twelve-category ordinal variable with values ranging from 3 to 15,
- Income – a 15-category ordinal indicator,
- The respondent’s Age in years, as of 2016,
- Female – a binary indicator of sex, naturally-coded, and
- Racial classifications – indicator variables for `White`, `Black`, and `Asian` identification (with “other” as the reference category),

Your assignment is:

1. Begin by fitting an ordinal-response model to the above data, using a regression specification (or specifications) of your choosing. Interpret your findings: What characteristics are and are not associated with bed size? How do changes in those variables related to our expectations about that variable?
2. In the interest of science, repeat the analysis in (1), using a multinomial logistic regression (thus treating *Bed Size* as if it was an unordered categorical variable). Again, interpret your findings, using the techniques discussed in class.

This assignment is due (electronically) at 11:59 p.m. EST on Friday, April 23, 2021, and is worth the usual 50 points.