**Political Science 202**
**Introduction to Political Analysis**
**Spring 2023: Problem Set #3**

**Due in Turnitin (Blackboard) on Friday, February 17 at 9:30 AM. 5 points in total. Late submissions are penalized with 1 point per 24 hours. MAKE SURE THAT YOU RECEIVE AN UPLOAD CONFIRMATION and SAVE THE CONFIRMATION (submission date and confirmation number). If you have trouble uploading to Blackboard, email as an attachment to your TA before the deadline. If you don't get a reply confirming that you handed it in, send it again.**

1. A researcher wants to create a measure of media coverage of presidents. She therefore comes up a set of rules to code sentences in *New York Times* articles as positive or negative towards the president. She hires several students to implement these rules. She then counts the number of positive and negative statements for each president to assess how biased the media are towards them. Evaluate the validity and reliability of this measurement strategy.

2. Provide one example each for a nominal, ordinal, and interval-level variable (different one's than we discussed in class and section). Make sure to give variable labels as well as variable values.

3. Table 1 below shows the distribution of the "Freedom House" measure of democracy from 2020, which categorizes countries as "free", "partly free", or "not free."

    a. What is the level of measurement of the variable? Why?

    b. Calculate all appropriate measures of the central tendency of the variable.

Table 1: Frequency of categories in Freedom House Democracy Measure, 2022

| **Category** | **Frequency** |
|---|---|
| Free | 83 |
| Partly Free | 56 |
| Not Free | 56 |

4. Table 2 below shows the age distribution of students in (a previous semester of ) PSC 202.

    a. What is the level of measurement of the variable? Why?

    b. Calculate all appropriate measures of the central tendency of the variable.

Table 2: Table of age of students in PSC 202.

| Age | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 18 | 1 | 1.1 | 1.1 |
| 19 | 27 | 31.8 | 32.9 |
| 20 | 27 | 31.8 | 64.7 |
| 21 | 23 | 27.1 | 91.8 |
| 22 | 5 | 5.9 | 97.7 |
| 23 | 2 | 2.3 | 100.0 |