

## ACTIVITY 4

### PART C – Thursday, March 14

**Due:** Thursday, March 21

A hard copy of Activity #4 is due on Thursday, March 21 (Week 9).

To answer these questions, use the midterm dataset (user: pls205; pass: !pls205\*).

Using the midterm dataset (user: pls205; pass: !pls205\*) , evaluate the following hypotheses:

**Hypothesis 1:** There is a difference amongst the categories of party identification (info\_pid) on their feelings about racial resentment (resentmentscore).

- (1) What is your **independent variable**?
  - (a) What is the **level of measurement** for this variable?
  - (b) Report the value(s) for the most appropriate measure of **central tendency**.
  - (c) Report the value(s) for **variability**.
  - (d) Draw the most appropriate graph for this variable.
- (2) What is **dependent variable**?
  - (a) What is the **level of measurement** for this variable?
  - (b) Report the value(s) for the most appropriate measure of **central tendency**.
  - (c) Report the value(s) for **variability**.
  - (d) Draw the most appropriate graph for this variable.
- (3) Discuss a possible **causal mechanism** for this hypothesis. *Explain your logic.*
- (4) State the **null hypothesis**.
- (5) What is the appropriate **test statistic** you should calculate for this hypothesis?
  - (a) What is the value of that **test statistic**?
  - (b) What are the **degrees of freedom** for this test?
  - (c) What is this test's **significance value**?
  - (d) *Interpret.* Is there a significant difference on how people feel about racial resentment based on their partisan identification? Is this result what you expected?

Answer the following questions using the midterm dataset. You'll have to perform ANOVAs for each of these questions.

- (6) Evaluate the hypothesis: There is a difference amongst the categories of education (info\_educ) on the chance that they would vote in the 2016 election (willvote2016).
  - (a) Copy and paste the "ANOVA" output box onto your document.
  - (b) What is the F-value for this test statistic?
  - (c) What is the probability that this relationship is due to chance?
  - (d) Do we accept or reject the hypothesis?

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- (7) Evaluate the hypothesis: There is a difference amongst how much discrimination a respondent has faced (skin\_discrimination) on their feelings about blacks (score\_black).
- Copy and paste the "ANOVA" output box onto your document.
  - What is the F-value for this test statistic?
  - What is the probability that this relationship is due to chance?
  - Do we accept or reject the hypothesis?
- (8) Evaluate the hypothesis: There is a difference amongst how respondents feel about Barack Obama's job performance (obamajob) on their level of political participation (actionindex).
- Copy and paste the "ANOVA" output box onto your document.
  - What is the F-value for this test statistic?
  - What is the probability that this relationship is due to chance?
  - Do we accept or reject the hypothesis?
- (9) Evaluate the hypothesis: There is a difference amongst church attendance (info\_church) on their cognitive skills and abilities (cognitionscore). Answer the following questions:
- Copy and paste the "ANOVA" output box onto your document.
  - What is the F-value for this test statistic?
  - What is the probability that this relationship is due to chance?
  - Do we accept or reject the hypothesis?
- (10) Evaluate the hypothesis: There is a difference amongst how respondents feel about discrimination against men (discrim\_men) on their belief that women elected officials benefit women (women\_index).
- Copy and paste the "ANOVA" output box onto your document.
  - What is the F-value for this test statistic?
  - What is the probability that this relationship is due to chance?
  - Do we accept or reject the hypothesis?

The remaining questions do not require you to use SPSS:

- (11) If you have the following hypothesis, "There is a difference between males and females on their categories of party identification," which test statistic would you use? a) T-test; b) ANOVA; c) Other
- (12) If you have the following hypothesis, "There is a difference amongst multiple levels of income on their thermometer score for Paul Ryan," which test statistic would you use? a) T-test; b) ANOVA; c) Other
- (13) If your independent variable is nominal with two categories and your dependent variable is interval-ratio, what test-statistic would you use?
- (14) After performing an ANOVA, you receive a significance value of .051. Convert this to a percentage and write out the complete interpretation of the hypothesis by explaining the probability the relationship is due to chance.