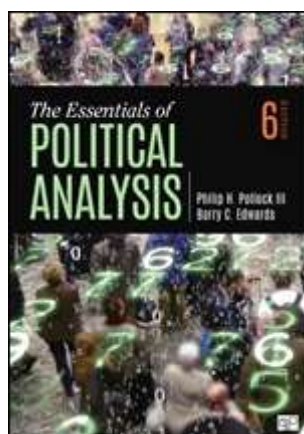


Instructor's Solution Manual to Chapter Exercises in



The Essentials of Political Analysis, Sixth Edition

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Introduction

There are no end-of-chapter exercises in the Introduction.

Chapter 1: The Definition and Measurement of Concepts

1.

- A. Some possibilities for completing inventory of contrasting characteristics:
- frequently / never attends religious services;
 - believes / does not believe in supreme deity;
 - says that religion is most important / least important aspect of their lives;
 - frequently / never contributes time or money to a religious organization;
 - frequently / never attends group discussions of religious texts;
 - displays / does not display religious symbols or imagery;
 - feels proud / does not feel proud of a faith tradition;
 - feels / does not feel joy [sorrow] when something good [bad] happens to a fellow believer.
- B. Students must justify choices in A. This may be easier to do for some attributes. For example, when someone says that religion is the most (or least) important aspect of his or her life, it is plausible to assume that the response is tapping the concept of religiosity and is not tapping any other concept. However, religious attendance may tap a generalized desire for a sense of belonging to a group (frequent attendance) or the absence of that desire (no attendance). In any event, the purpose of this part of the exercise is to encourage students to think empirically and justify their choices.
- C. Example (using attendance): The concept of religiosity is defined as the extent to which individuals exhibit the characteristic of frequently attending religious services.

2.

- A. No, the conclusion is not supported. The ecological fallacy could be at work here. The ecological fallacy occurs when the researcher uses findings obtained from aggregate-level units of analysis (in this case, states) to make cross-level inferences about individuals (low-income and high-income individuals).
- B. Low-income individuals, who are less likely to vote than are high-income individuals, are more likely to reside in states with higher percentages of high-income individuals. So, when one compares states having high percentages of low-income residents with states having low percentages of low-income residents, one is also comparing states having higher percentages of voters with states have lower percentages of voters.

3.

- A. (i) It is likely that a sizeable number of gun owners would be less willing to tell female interviews that they own guns compared to male interviewers. (ii) The social desirability effect is a type of response bias that occurs when human subjects alter their responses to survey questions to appear more likeable to the researcher. Because males tend to favor gun ownership more than females, gun owners may be more willing to tell a male

interviewer they own a gun compared to a female because some subjects tell interviewers what they want to hear in order to be liked in a social setting.

B. (i) Systematic measurement error. (ii) The social desirability effect would be a consistent and chronic distortion in the measurement of gun ownership. The problem would cause researchers to consistently underestimate the true proportion of gun ownership. It is a not a random measurement error because it doesn't cause nongun owners to say they own guns; there's a pattern to the measurement error.

4.

A. Yolanda's measure has high validity and high reliability. Is it valid because all of the measurements are very close to the true value of 50. It is reliable because the differences among the four measurements are very small.

B. Xavier's measure has high validity and low reliability. Is it valid because the measurements are close to the true value of 50: one is on the true value; two are two units below; one is four units above. Compared with Yolanda's measurements, Xavier's are less reliable, because the differences among the four measurements are larger, ranging from 48 to 54.

C. Zelda's measure has low validity and high reliability. It has low validity because it underestimates true knowledge by 4–6 points. It is reliable because the measurements are very consistent, within 2 points of each other.

D. Warren's measure has low validity and low reliability. It has low validity because none of the measurements is at all close to the true value. It is unreliable because the measures vary wildly in a 30-point range, from 40 to 70.

5.

Following are several reasons why “number of yard signs” is not a valid measure of “pre-election support”: Because yard signs require public commitment by the sign displayers, yard signs measure intensity of support among a handful of people, not breadth of support in the electorate. Because some people display yard signs at the request of the candidate (not on the initiative of the displayer), yard signs measure candidate initiative and/or campaign strategy, not voter sentiment. If the number of yard signs is counted, a large family home will be counted as having the same electoral support as a single person's home. Some districts, such as dense urban districts and large rural districts, don't have a lot of homes with yards to display signs. Using the yard signs measurement strategy, individuals who don't own homes will not be counted at all.

6.

A. Reliable but not valid.

B. Mutt Jeffley's strategy for weighing his dog is reliable because it will yield consistent

results. Each time his steps on the scale holding his dog, the scale will report the same weight (or very close to it). The measurements are not valid, however, because Muttt is stepping on the scale with his dog, thereby adding his weight to the dog's weight every time he attempts to measure his dog's weight.

- C. Muttt could weigh himself without the dog and subtract his weight from the combined weight he obtains when he steps on the scale holding his dog.

7.

- A. (i) This question has high face validity.

(ii) The question is intended to measure individual preferences on the trade-off between creating jobs and protecting the environment. It does so by forcing respondents to choose between one value and the other.¹

B. The jobs versus environment question is meant to measure individuals' opinions on the relative importance of creating jobs and protecting the environment when these two values come into conflict. If the measure has construct validity, it will be related to other opinions one would expect it to be related to. Comparing responses to the jobs versus environment question to individual opinions about (iii) business regulation would provide the best test of construct validity because one would expect those who favor creating jobs over protecting the environment to have less favorable opinions about business regulation compared to those who favor protecting the environment. The relationship between the jobs versus environment question and opinions about abortion and climate change are more tenuous.

8.

A. (i) This data set would be both cross-sectional and longitudinal. (ii) It's a cross-section of Internet use/availability across 100 countries. It also allows researchers to compare the variable over time (from 1990 to the present) within these countries.

B. (i) This dataset is cross-sectional. (ii) The observed values of GDP and civil unrest across 100 countries are limited to the most current year.

¹ Interestingly, this traditional ANES survey question was revised starting in 2012. Respondents are asked to choose between "Regulate business to protect the environment and create jobs" and "No regulation because it will not work and will costs." This revised question has low face validity. A respondent who wants to "create jobs" is not forced to choose between creating jobs and protecting the environment.

9.

A. This question calls for students to search for and identify a recent article on polarization in one of the following publications: *American Journal of Political Science*, *Journal of Politics*, or *American Political Science Review*. There are many possibilities. The student should identify author(s), title, journal, and date.

B. The student should describe how the concept of polarization is operationalized in the article identified in Part A. The student should describe how the article's authors define, and possibly measure, polarization. Again, there are many possibilities, but students should focus on the article's operational definition of polarization (as opposed to its causes/consequences or the student's subjective opinions of the article and contemporary politics).

Chapter 2: Measuring and Describing Variables

1.

- Age: variable name / interval;
- Independent-leaner: value / ordinal;
- Abortion opinion: variable name / nominal or ordinal;
- Taxable income: variable name / interval;
- 57 years: value / interval;
- Millennial: value / nominal;
- Lenient: value / ordinal;
- Religious denomination: variable name / nominal.

2.

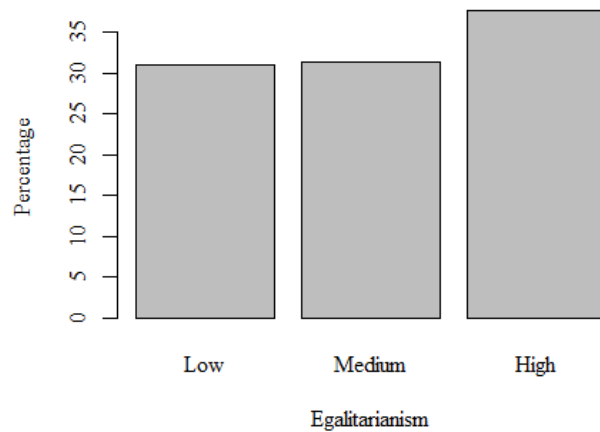
For each variable, students are asked to do the following: (i) Construct a frequency distribution including frequencies, percentages, and cumulative percentages. (ii) Sketch a bar chart. (iii) Identify the mode. (iv) Identify the median. (v) State whether the variable has high dispersion or low dispersion. (vi) Explain their answer regarding dispersion.

A. Egalitarianism

(i)

Support for Egalitarianism	Frequency	Percentage	Cumulative Percentage
<i>Low</i>	1,121	31.0	31.0
<i>Medium</i>	1,133	31.4	62.4
<i>High</i>	1,359	37.6	100.0
Total	3,613	100.0	

(ii) Students should sketch a bar chart that looks something like this:



(iii) Mode is high egalitarianism.

(iv) Median is medium egalitarianism.

(v) High dispersion.

(vi) The median and mode are different values, indicating high dispersion. Also, the cases are spread out across the three values.

B. Equal pay

(i)

Support for Equal Pay	Frequency	Percentage	Cumulative Percentage
<i>Favor</i>	3,187	87.7	87.7
<i>Middle</i>	308	8.5	96.2
<i>Oppose</i>	141	3.9	100.0
Total	917	100.0	

(ii) Students should sketch a bar chart that looks something like this:



(iii) Mode is support.

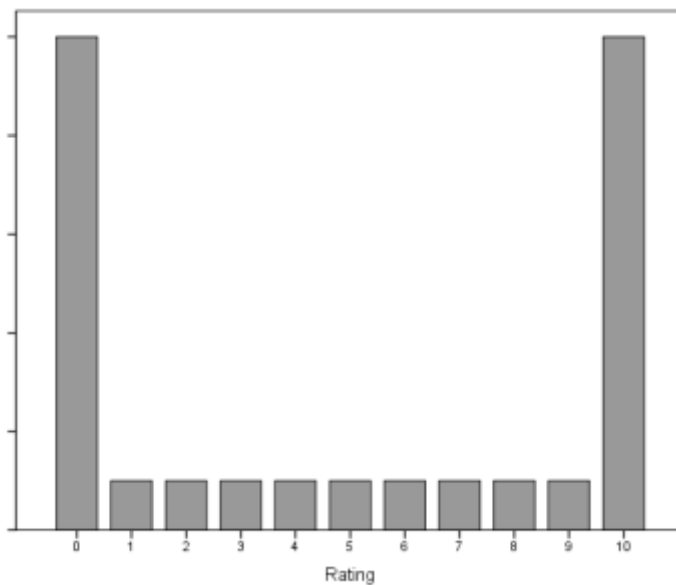
(iv) Median is strongly favor.

(v) Low dispersion.

(vi) The median and mode are the same value, indicating low dispersion. Also, the cases are heavily concentrated in the modal (median) category, support.

3.

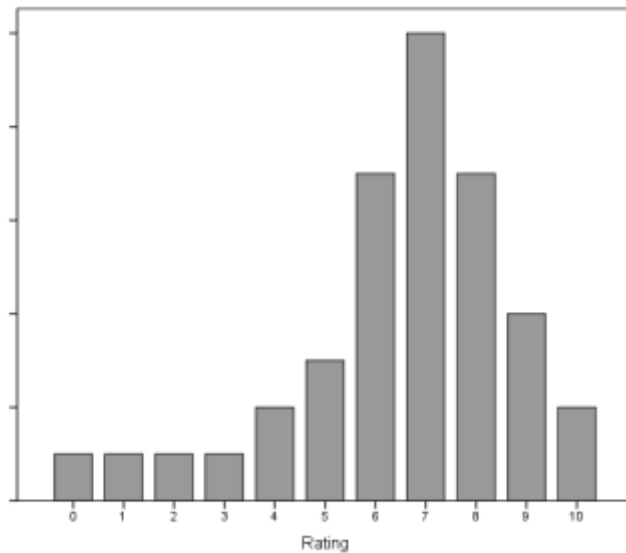
A. Students should sketch a bar chart showing large percentages of respondents grouped at the extreme values of the approval rating scale, such as the following:



B. Set 2 (median, 5, two modes (bimodal), 2 and 7) is more plausible. The commentator

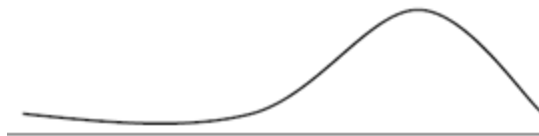
claims that the distribution of opinions is bimodal, creating a mean and median at or near the center of the scale (a score of around 5). Polarization implies a bimodal distribution, with cases clustered near each extreme, such as around scores of 2 and 7.

C. Students should sketch a bar chart showing a clustering of respondents toward higher values of the scale. Plausible values would be high and fairly uniform. For example, mode, 7; median, 6:

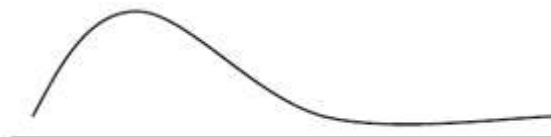


4.

A. Distribution with negative skew would look something like this:



B. Distribution with positive skew would look something like this:



C. Distribution with no skew would look something like this:



5.

- A. *The Tim Kane feeling thermometer has a negative skew.* (i) TRUE. (ii) The thermometer's mean (46.0) is below its median (50.0), suggesting some negative skew.
- B. The mean of the Mike Pence thermometer provides an accurate measure of central tendency. (i) TRUE. (ii) This is a judgment call, but the mean (48.2) and the median (50) are close to each other, suggesting that the distribution is not badly skewed. Therefore, the mean may be used to measure central tendency.
- C. *Mike Pence's ratings have a greater amount of variation than Tim Kane's ratings.* (i) TRUE. (ii) The standard deviation of the Pence feeling thermometer is 29.4, compared to 25.9 for the Kane feeling thermometer. Additionally, the interquartile range for Pence falls between 30 and 40. For the Kane thermometer, the interquartile range falls between 30 and 60. The larger interquartile range for the Pence thermometer indicates that his ratings are more spread out; that is, that the Pence scale has greater variation.
- D. *A respondent who rated Mike Pence at 58 would have a mean-centered score of about 10.* (i) TRUE. (ii) The mean of the Pence feeling thermometer is 48.2. Therefore, the mean-centered score of someone who rated Pence at 58 would equal 9.8 ($58 - 48.2 = 9.8$).
- E. *A respondent who rated Time Kane at 33 would have a standardized score of -5 .* (i) TRUE. (ii) The mean of the Kane feeling thermometer is 46.0 and its standard deviation is 25.9. Therefore, the standardized score of someone who rated Kane at 33 would equal -5 , $(33 - 46)/25.9 = -5$.

6.

- A. Student starts with an empty frequency distribution table, like the one below:

Level of Membership	Frequency	Percentage
<i>None</i>		
<i>Low</i>		
<i>Moderate</i>		
<i>High</i>		
Total	3,558	100.0

- B. Student should write down the number of memberships he or she would combine to create the “Low” category, the “Moderate” category, and the “High” categories based on variable that ranges from 0 to 6+. For example, student might say that Low includes respondents who are members of one or two groups, Moderate includes those who are

members of three or four groups, and High includes those who are members of five or more groups.

C. Student should produce a frequency distribution table like this (entries in the low, moderate, and high rows may vary depending on how the student answered part B).

Level of Membership	Frequency	Percentage
<i>None</i>	1,908	53.6
<i>Low</i>	1,146	32.2
<i>Moderate</i>	381	10.7
<i>High</i>	125	3.5
Total	3,558	100.0

7.

- A. Standardized scores for raw nationalism scores are -1.8 , -1.0 , 0 , $.4$, and 1 .
- B. Low nationalism, 0–9; medium–low nationalism, 9–14; medium–high nationalism, 14–19; high nationalism, 19–24.

8.

- A. The additive index would range from 2 (lowest value) to 10 (highest values).
- B. 9. The “always” pays attention to politics and elections response has value 5 and the pays “a lot” of attention to the news response has value 4. $5 + 4 = 9$.
- C. 5. The pays attention to politics and elections “about half the time” response has value 3 and the follows the news “a little” response has value 2. $3 + 2 = 5$.

9.

- A. 10. Calculation: $(0 + 6 + 8 + 10 + 12 + 14 + 20)/7 = 10$.
- B.

Respondent	Health Care Opinion Score	Deviation from the Mean	Deviation Squared	Standardized Score
1	0	-10	100	-1.58
2	6	-4	16	-0.63
3	8	-2	4	-0.32
4	10	0	0	0
5	12	2	4	0.32
6	14	4	16	0.63
7	20	10	100	1.58

C. Note: The seven individual opinions on health care should be treated as a sample of responses from the population.

Variance = 40. Calculation: $(100 + 16 + 4 + 0 + 4 + 16 + 100)/(7 - 1) = 240/6 = 40$.

Standard deviation = 6.32. Calculation: $\sqrt{40} = 6.32$.

If students treat the seven individual opinions about health care as the full population of opinions, they'll get population variance = 34.29 and standard deviation = 5.86.

D. In part D, students fill in the "Standardized Score" column above.