SOCIAL STATISTICS: MANAGING DATA, CONDUCTING ANALYSES, PRESENTING RESULTS

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Chapter 1: Life in a Data-Laden Age: Finding and Managing Datasets

Introduction: details the ways in which this book is unique
What Data Look Like: introduces the forms that data take in the rawest of ways, and what variables and categories are
Making the Data Work for You: covers the very important ways in which we manage data, such as recoding and indexing
Our Datasets: describes the datasets that are used throughout the book in examples and exercises: the General Social Survey, the American National Election Studies, the World Values Survey, and surveys from the Pew Internet and American Life Project
Other Great Datasets: briefly describes other commonly used datasets, such as the Panel Study of Income Dynamics, and the National Longitudinal Study of Adolescent Health
GSS Example: An Index of Work Hostility: illustrates how to recode and combine variables to develop an index of the hostility workers experience at their jobs
New Forms of Data: makes the case that there are many new forms of data available for analysis due to the explosion of media availability, old and new
Levels of Measurement: carefully delineates the differences among different types of variables and why knowing these differences are important
Major Types of Statistical Procedures: covers the three types of statistics that the book covers: descriptive, inferential, and explanatory
Literature Example: Wikipedia as a Data Source: describes a piece of research that argues that wiki-led organizations play by different rules than most organizations, and uses contested Wikipedia pages to make the argument
Literature Example: IMDb as a Data Source: provides an example of how researchers used the vast database of movies, actors, and directors to study social networks
SPSS Demonstrations: introduces students to SPSS, and covers very important ways to work with data, such as recoding and computing new variables
From Output to Presentation: recommends what to say about a dataset when you’re using it in a presentation or paper
Exercises: examine such topics as American attitudes toward wiretapping, concern over China’s economic expansion, and social desirability bias in a survey of teenagers

Chapter 2: The Art of Visual Storytelling: Creating Accurate Tables and Graphs

Introduction: makes the case for the importance of tables and graphs, and knowing how to make good ones that don’t lie
Tables with One Variable: Frequency Distributions: takes students step by step through the process of building a clear summary of a single variable
**GSS Example: Number of Children:** walks students through a typical frequency distribution from SPSS, such as the difference between percents and valid percents

**Grouped Frequency Distributions:** describes when it might be preferable to present a variable’s data in grouped form

**Tables with Two Variables: Crosstabulations:** offers a step-by-step demonstration of how to construct a table with an independent variable and a dependent variable

**GSS Example: Spanking and Child-Rearing Goals:** uses crosstabs to show how Americans’ propensity to spank their children is related to specific goals

**GSS Example: Education and Internet Access:** models for students every possible mistake you could make, resulting in a horrible crosstab; then reconstructs it correctly

**Tables with Three Variables: Elaboration in Crosstabs:** covers the very important process of elaborating a relationship, showing where a relationship is stronger or weaker, exists or doesn’t exist

**GSS Example: Chivalry, Age, and Gender:** uses elaboration to examine who is most likely to give up a seat for another person

**GSS Example: Racial Differences over Time:** offers an example of how a relationship changes over time, using elaboration to show this

**GSS Example: Gender, Unemployment, and Happiness:** investigates whether men or women are more affected by unemployment

**Graphs with One Variable:** examines how to choose among bar, line, and pie graphs

**Graphs with Two Variables:** covers clustered bar graphs and stacked bar graphs

**Graphs with Three Variables:** covers 3-D bar graphs and plotted pie graphs

**Tufte’s Lie Factor:** offers a classic way to judge the extent to which a graphic accurately represents the change in data

**GSS Example: Support for Marijuana Legalization:** compares two bar graphs that represent the same data in different ways, leading to different emphases

**Literature Example: Changing Racial Classification:** describes an article in a top research journal that presented a misleading graph

**SPSS Demonstrations:** goes through table and graph construction in numerous ways

**From Output to Presentation:** shows how crosstabs don’t usually appear in pure crosstab form in professional settings

**Exercises:** explore such issues as perceptions of racial discrimination, the effect of caring for a sick child on one’s quality of life, and how many parents say their children don’t use social networking sites, when actually they do

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**Chapter 3: Summarizing Center and Diversity: Basic Descriptive Statistics**

**Introduction:** discusses in general the field of descriptive statistics

**Three Ways of Thinking about the Center:** using a hypothetical example of housing prices, covers the mean, median, and mode
GSS Example: TV Watching: gives an example of how, just based on a few
descriptive statistics, we can develop a pretty good guess regarding what the
distribution for a variable looks like

Procedures for Finding the Median: covers the basics of median finding with
even and odd numbers of cases

Finding the Centers with a Frequency Distribution: goes through the
procedures for locating the mean, median, and mode when the data are in
frequency distribution format

Measures of Center and Levels of Measurement: explains the connections
among descriptive statistics and the levels of measurement covered in Chapter
One

Close Relatives of the Median: Quartiles and Percentiles: describes why we
might want to look at the 25th, 50th, and 75th percentiles when examining our
data

GSS Example: TV Watching Rerun: shows how to find the quartiles for the
frequency distribution we examined earlier in the chapter

Envisioning Variation: introduces the very important concept of variation,
showing how it exists throughout our daily lives

Assessing Variation among Groups: covers how to find the range, the
interquartile range, and, most importantly, the variance

GSS Example: Educational Attainment: offers an example of how the variance
for education differs among racial groups

Visual Variation: The Shapes of Distributions: uses a hypothetical series of
examples to show how we can observe different levels of variation graphically

Assessing the Variation of Individual Cases: introduces the standard deviation
and z-scores, and shows how to calculate them and talk about them

GSS Example: Internet Usage among Racial Groups: illustrates the uniqueness
of various types of people with regard to how many hours per week they use
the Internet

Finding s and s^2 with a Frequency Distribution: explains how the formulas
change once we’re looking at the data in grouped form

Variation When There Is No Mean: introduces the Index of Qualitative Variation

GSS Example: Attitudes toward Government Spending: using the IQV,
shows how variation in attitudes has changed over time for numerous social
issues

Other Measures of Diversity: briefly discusses two common measures: the
index of dissimilarity and the Gini coefficient

Literature Example: Cost of Medical Care: describes a student-led research
project that exposed frightening levels of variation in medical costs

SPSS Demonstrations: shows students numerous ways to get descriptive
statistics in SPSS, and how to represent them in graph form

From Output to Presentation: models the typical way descriptive statistics are
presented in professional settings

Exercises: examine such topics as gender differences in attitudes toward feminists,
variation in health for people in different income brackets, and teen texting
habits
Chapter 4: Using Sample Crosstabs to Talk about Populations: The Chi-Square Test

Introduction: discusses the importance of sampling, the difference between populations and samples, and what an inference is

A Series of Hypothetical Crosstabulations: illustrates different levels of relationship in a crosstab, from perfect to none, and how this relates to the inference we’re trying to make based on these results

Calculating Expected Frequencies: shows, based on what we’ve observed in our actual data, what these really mean (i.e. what are we actually expecting?)

Introducing Chi-Square: goes through the calculation of the chi-square value step by step, using one of the hypothetical crosstabs we’ve already covered

Statistical Significance: covers one of the most important concepts in social statistics, as it determines what we can say about our population based on our sample crosstab; explains, in reference to the hypothetical crosstabs, the idea of Type One and Type Two Error; shows how to use the chi-square table

The Effect of Sample Size: drives home the point that the chi-square procedure and statistical significance are reliant on sample size

Chi-Square with Larger Crosstabs: covers the concept of degrees of freedom and what, in the context of a crosstab, this actually means

GSS Example: Gun Ownership and Sex: goes through the entire chi-square procedure again, this time using real data

GSS Example: Age and Cynicism: emphasizes the importance of looking out for a few cells that are causing a high chi-square value and statistical significance

The Language of Hypothesis Testing: introduces the oft-used language of null and alternative hypotheses

The Chi-Square Distribution: shows, now that we know what chi-square does, what is really going on in terms of a probability distribution; builds a chi-square distribution step by step to make clear the connection between this distribution and statistical significance

GSS Example: Catholic Confidence in Organized Religion: combines chi-square with elaboration to show how time, gender, and confidence are related

GSS Example: Guns, Age, and Sex: returns to an earlier example and shows how elaboration and chi-square can be used to summarize an interesting story

Video Link: this example is available in “From Idea to Presentation” format on the book’s website

Literature Example: Real Research about Poop, Really: goes over a fascinating example in which researchers used crosstabs and chi-square to illuminate differences based on sex and sexual orientation with regard to college students’ paranoia over public restrooms

Literature Example: Obesity in the United States and France: summarizes a cross-cultural study of media coverage of obesity, using crosstabs and chi-square to show differences in how this social problem is framed in the two countries

SPSS Demonstrations: goes through how to conduct a chi-square test in SPSS and interpret the output
From Output to Presentation: models how to present chi-square results in a professional format
Exercises: examine such topics as the relationship between smoking and sexual orientation, the phenomenon of customer showroming in retail stores, and parental propensity for friending their children on social networks

Chapter 5: Using a Sample Mean or Proportion to Talk about a Population: Confidence Intervals

Introduction: makes connections between what we did in the chi-square chapter and where we are headed in this chapter
Sampling Distributions of Sample Means: illustrates the step-by-step building of a sampling distribution, showing the probabilities of pulling various sample means
The Standard Error: makes very clear, based on the previous example, what the standard error really is, why it might be useful, and how we can estimate it
Claims about the Population Mean: introduces the first use of these new ideas: using sample data to refute a claim someone makes about a population mean
GSS Example: TV Watching among Young Women: puts to use the population claim procedure using real data
Confidence Intervals: introduces the second use of these new ideas: based on sample data, confidently predicting where the population mean can fall
GSS Example: Police Violence: builds confidence intervals for various racial groups with regard to their support for police use of violence
GSS Example: Job Stress and Satisfaction: shows how variation in a sample can affect confidence interval width
Confidence Intervals with Proportions: modifies the confidence interval procedure to build margins of error around sample proportions
GSS Example: Support for Marijuana Legalization: puts the student in the situation of working for a politician speaking on this issue before two different age groups
Literature Example: Black Characters in Film: recounts a content analysis of recent popular films that feature certain types of black characters, and uses confidence intervals to do it
SPSS Demonstrations: cover the important and often tricky procedure of selecting cases, as well as covering confidence intervals
From Output to Presentation: shows how professionals often present confidence interval results
Exercises: examine such topics as internet news consumption, Hispanics’ acquisition of health insurance, and teenagers engaging in “sexting”

Chapter 6: Using Multiple Sample Means to Talk about Populations: T-Tests and ANOVA
Introduction: makes connections between the previous two chapters and where this chapter will take the student

A Different Kind of Sampling Distribution: builds, step by step, a sampling distribution of sample mean differences to illustrate the key concept of the chapter

Testing Differences between Two Means: the t-test: introduces the essence of the t-test and how the language of hypothesis testing is used with the test

GSS Example: Back to TV Watching: goes through the entire t-test procedure using real data

Looking More Closely at the Formula: manipulates the results from the previous example to illustrate how the t-test formula really works

GSS Example: Suicide, Age, and Political Party: compares strong Democrats and strong Republicans for three age groups on an index of suicide support

Testing the Difference among More than Two Means: ANOVA: walks students through the ANOVA procedure, pointing out its similarities to the t-test and chi-square test

A Comparative Graphical Approach to Understanding ANOVA: uses a series of three ANOVAs to show how variation affects the outcome

GSS Example: Attitude versus Behavior about Housework: uses two ANOVAs to see if men’s and women’s attitudes affect their actual housework behavior

Interchapter Connection: ANOVA and Chi-Square: describes how these two related tests both set up hypothetical situations to which to compare the actual data

GSS Example: Internet Use, Race, and Gender: shows that, similar to the chi-square test, a single group can be responsible for a statistically significant ANOVA

Literature Example: Overdoing Gender: recounts an article that uses t-tests to show that when men’s gender is threatened, they react in very interesting ways

Literature Example: Activism through the Life Course: covers an article that compares three groups of people who had different levels of activism in college in order to see how active they are a generation later

Conclusion...with Interchapter Connections: reviews how to choose which technique to use based on what types of variables you have

SPSS Demonstrations: covers t-tests and ANOVA

From Output to Presentation: models how to present a series of t-test results

Exercises: addresses such questions as: do those who vote trust government more than those who don’t vote? Do women use technology to shop more than men? Does residential location affect health?

Chapter 7: Give Me One Good Reason Why: Bivariate Correlation and Regression

Introduction: starts the hypothetical example that runs through the chapter: the relationship between men’s heights and incomes

Linear Equations: reviews the basics of linear equations, such as constants and slopes
Calculating the Regression Equation: takes things step by step to calculate the slope and constant

Calculating the Correlation Coefficient: describes how to find the correlation coefficient and what this number means

The Effects of an Outlier: modifies one of the original data points from the previous example to show that, particularly in a small dataset, an outlier can have a huge effect on the regression results

Explained Variation: covers one of the most important concepts in regression, and does so in a way that explains exactly what explained variation is

Example: Forecasting with Regression: shows how regression can be used to forecast into the future, using data regarding movie grosses

GSS Example: Education and Income: uses real data to analyze a classic relationship using simple regression

GSS Example: Income and Hours to Relax: switches income to independent variable status to see if it affects how much time people have to relax, emphasizing that sometimes a lack of effect is the most interesting finding of all

GSS Example: Explaining Cynicism: uses several demographic variables, one at a time, of course, to explain why some people are more cynical than others

GSS Example: Intergenerational Family Size: runs the same regression for several groups, foreshadowing a more advanced technique later in the book

Literature Example: Support for the War on Terror: covers an article that uses correlations to examine relationships between authoritarianism and support for various civil-rights-restricting policies

Literature Example: Physical Attractiveness: recounts an article that uses correlations to examine, for both men and women, which factors are related to people’s ratings of others’ physical attractiveness

SPSS Demonstration: Creating a Scatterplot: shows how to create a visual representation of the relationship between two ratio-level variables

Exercises: analyze such topics as traditionalism, environmentalism, and AIDS

Chapter 8: Using Sample Slopes to Talk about Populations: Inference and Regression

Introduction: links regression-related inference with the types of inference already covered in the book

One More Sampling Distribution: builds one last sampling distribution, showing how the repeated random sampling of slopes gives us another useful probability distribution

From Standard Error to a t-Value to a p-Conclusion: introduces the standard error of the slope, and how to use it to conduct a t-test to determine the statistical significance of our sample slope, making connections to previous similar techniques, and emphasizing the importance of sample size

GSS Example: Education and Sexual Activity: investigates the relationship between education and amount of sex, looking at different age groups with differing sample sizes
GSS Example: Income and Sexual Activity: drives home the point that statistical significance can differ from substantive significance

GSS Example: Work Time and Sexual Activity: provides another example how a lack of a statistically significant finding can still be thought of as interesting

Literature Example: Grade Point Averages: recounts an article that tried to find evidence for a commonly assumed relationship: how much a student studies and her G.P.A.

Literature Example: Family Size and Grades: tells the story of an article that investigates whether kids from large families have lower grades, and provide another distinction between statistical and substantive significance

SPSS Demonstration: Regression: walks through the SPSS Regression procedure and how to make sense of the output

SPSS Demonstration: Creating a Correlation Matrix: shows how to run and read a set of correlations in the form of a matrix

From Output to Presentation: presents the first example of what will soon become a theme: how to present regression results in a format similar to that in professional research

Exercises: investigate such topics as the relationship between age and concern about privacy, the relationships among health conditions, and kids’ perceptions of their parents’ cyberblocking behavior

Chapter 9: It’s All Relative: Dichotomies as Independent Variables in Regression

Introduction: recalls the importance of levels of measurement and why we may want to use variables other than those at the ratio level in regression

Dichotomies: shows how, once you recode a dichotomy into 0 and 1, interpreting the slope of a dichotomy is quite simple

Interchapter Connection: t-Tests versus Regression: reruns the previous regression example as a t-test, showing the similarities and differences between t-tests and regression

Categorical Variables: introduces the technique of reference grouping, where we create dichotomies for all but one of the categories of a (typically) nominal-level variable, leaving one group as the reference category

GSS Example: Variation in STEM Achievement: investigates variation in science and math achievement using sex, race, and political views as independent variables

GSS Example: TV Watching and Work Status: shows how to use various work status variables as a set of reference-group variables

GSS Example: Happiness and Partnership Status: investigates variation in happiness based on a set of reference-group variables regarding partnership status
**GSS Example: Party Identification and Political Knowledge:** uses a set of reference-group variables to see if strength of political affiliation affects self-reported political knowledge

**Literature Example: Gender and Housework:** examines an article that uses ratio-level variables, dichotomies, and reference groups to explain variation in time spent on housework

**Literature Example: Tracking Changes over Time:** reports from an article that uses reference groups to show the changes over time in attitudes toward homosexuality

**SPSS Demonstration: Reference Grouping:** walks through the process of creating a set of reference-group variables and running a regression with them

**From Output to Presentation:** continues the reporting of regression results in tabular form, showing how it is really useful when using reference groups

**Exercises:** examine such issues as political efficacy, conspiracy theories, and economic optimism

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**Chapter 10: Above and Beyond: The Logic of Controlling and the Power of Nested Regression Models**

**Introduction:** introduces the very important concept of statistical control by explaining how this concept exists throughout many aspects of our lives

**GSS Example: Gender and Income:** walks very step by step through a simple example, examining the effect of gender on income, and then how the effect diminishes but does not go away once we control for hours worked

**A Different Way to Present Results:** illustrates how to present results from multiple regression models side by side to emphasize how the models are nested inside of one another

**GSS Example: Age and Income:** takes students through an example very similar to the first GSS example, but this time using age instead of gender, showing how the effect of age completely disappears once we control for hours worked

**GSS Example: Perceptions of U.S. Racial Makeup:** offers another example of an original effect going away completely once we control for another variable of interest

**Interchapter Connection: Controlling with Crosstabs:** recreates the previous example using hypothetical elaborated crosstabs to show how elaboration and nested models are related

**GSS Example: Attitudes toward State Assistance:** uses nested models to examine racial differences in support for welfare-related policies. *Video Link:* this example is available in “From Idea to Presentation” form on the book’s website

**GSS Example: Support for Same-Sex Parenting:** this example introduces - after reviewing the various nested stories covered thus far - the type of nested story in which the original effect of interest grows upon the introduction of a new variable

**Judging Improvement from Model to Model:** briefly covers the F-test used in nested modeling to show if adding a new independent variable actually improved our ability to explain variation in the dependent variable
Sample Size from Model to Model: emphasizes the importance of keeping sample size constant from model to model, and gives an example of the consequences of not doing so

Literature Example: Oppositional Culture in Schools: explains how researchers used nested modeling to refute a popular explanation of racial differences in grades

Literature Example: Media Exposure and Fear of Crime: shows how a researcher used nested models to examine the commonly held assumption that certain types of media consumption lead people to be more fearful of crime

SPSS Demonstrations: cover how to run a set of nested models, keeping the number of cases constant

From Output to Presentation: reviews how to present models side by side, and offers several tips for creating a clear table

Exercises: examine such topics as the Affordable Care Act, affirmative action, and the relationship between age of parents and the extent to which they monitor their children’s technology use

Chapter 11: Some Slopes Are Bigger Than Others: Calculating and Interpreting Beta Coefficients

Introduction: explains why comparing regular regression slopes is a very bad idea

The Process of Standardizing Slopes: takes a step-by-step approach to standardizing the slopes

A Shortcut: reveals, now that a full understanding of standardizing slopes has been reached, a quick shortcut to getting the betas

Interchapter Connection: Standardization and z-Scores: returns to z-scores and covers a regression example using z-scores to see what the betas look like

GSS Example: Religion and Abortion Attitudes: determines, through use of betas, which aspect of religiosity affects abortion attitudes the most

GSS Example: Following in Your Parents’ Educational Footsteps: shows the gendered nature of educational generational connections

GSS Example: Gender and Happiness: examines how different aspects of life satisfaction (family, job, health) affect overall happiness for men and women

Literature Example: Racial Threat and School Discipline: covers a piece of research that uses betas in its regressions to examine racial attitudes and how they affect feelings about punishment

Literature Example: Country Music and Suicide: recounts a classic piece of social research that uses betas to show a very interesting relationship

SPSS Demonstration: reviews where in regression output one can find the betas

From Output to Presentation: models how to present both unstandardized and standardized slopes in the same table

Exercises: explore such issues as the relationship between political views and attitudes toward business, which factors most affect the seeking of health information on the Internet, and ownership of technology

Chapter 12: Different Slopes for Different Folks: Interaction Effects
Introduction: describes the type of situation in which we would want to look at an interaction effect in contrast to other, simpler effects.

Interchapter Connection: Elaborated Crosstabs: eases our way into interaction effects by showing how they are connected to the elaborated crosstabs covered earlier in the book.

Creating the Interaction Effect: covers how to compute a new variable that multiplies two parent variables, at first with simply one ratio-level variable and one dichotomy (coded 0 and 1).

GSS Example: Sex, Number of Children, and Relaxation: models how to tell the story of an interaction effect through the use of graphs.

GSS Example: Work Hours and Job Satisfaction: addresses the question: are men’s and women’s job satisfaction differentially affected by lengthy work hours?

GSS Example: Civil Rights and Race: uses a set of controversial variables to see if whites and non-whites are differentially affected by education. Video Link: this example is available in “From Idea to Presentation” form on the book’s website.

GSS Example: Race, Sex, and Religion: explores a different kind of interaction, one between two dichotomies.

GSS Example: Age, Education, and Sexual Activity: explores yet another kind of interaction, one between two ratio-level variables.

GSS Example: Knowing Someone with AIDS: goes back to 1988 GSS data to examine how knowing someone with AIDS interacts with political views.

Literature Example: Religion and Political Participation: plays around with results from an article that examines African American men and women and how their political activism is differentially affected by religious participation.

Literature Example: Gender, Work, and Guilt: returns to the example that started the chapter by working with results from an article about how men and women are differentially affected by work/home conflict.

SPSS Demonstration: shows how to create an interaction effect and put it into a regression model.

From Output to Presentation: switches to Excel to show how to create professional graphs that illustrate an interaction effect.

Exercises: address such interaction-ready questions as: does income affect attitudes toward equality the same for whites and blacks? Does education have the same effect on technology acquisition for men as it does for women? Does saving money lead to happiness in all types of countries?

Chapter 13: Explaining Dichotomous Outcomes: Logistic Regression

Introduction: recaps what our dependent variables in regression have been thus far, and introduces the use of dichotomous dependent variables.

Regular Regression with a Dichotomous Dependent Variable: What Could Possibly Go Wrong? shows that bad things can happen when we do this.
What Logistic Regression Does: explains, on a fairly straightforward level, how logistic regression uses a natural logarithm and how that natural logarithm works

GSS Example: Home Ownership: goes through the entire interpretive process of creating an equation, calculating a z-value, and using a simple little equation to change this z-value into a predicted probability

GSS Example: Support of Gun Control: taking into account that the primary GSS question regarding gun control is asked dichotomously, this example shows how sex, age, and owning a gun affect gun control support

GSS Example: Interracial Friendships: raises the possibility that, even if a variable is measured at the ratio-level, its distribution might lead you to dichotomize it and use logistic regression

GSS Example: Charitable Giving: combines logistic regression with nested modeling to explain why some people give to charity while others do not

GSS Example: Capital Punishment: combines logistic regression with an interaction effect to explain the relationships among race, education, and support for capital punishment

GSS Example: Condom Usage: uses another interaction effect to show how amount of sex and number of partners affects the dichotomous outcome of condom usage

Another Way of Looking at Things: Odds Ratios: takes into account the fact that many social researchers use odds ratios to present their logistic regression results, and carefully covers how to interpret these ratios

GSS Example: Capital Punishment Revisited: codes a dichotomous race variable in two different ways, showing how this affects the logistic results and odds ratios

Literature Example: War and Presidential Disapproval: recounts a piece of research that uses a dichotomous measure of presidential disapproval to see if connections to 9/11 fatalities or war fatalities have an effect

Literature Example: Global Warming: walks through an article that uses logistic regression and two interaction effects to explain attitudes toward global warming

SPSS Demonstration: Running a Logistic Regression: shows how to sift through the copious SPSS output from running a logistic regression

From Output to Presentation: switches to Excel to show how to create a graph to convey logistic regression results

Exercises: explore such topics as smoking, passport ownership, and having health insurance

Chapter 14: Visualizing Causal Stories: Path Analysis

Introduction: reviews how we’ve examined relationships up to this point, and previews how path analysis adds to our understanding

GSS Example: Housework: carefully covers the details of path analysis, emphasizing the importance of direct and indirect effects

Interchapter Connection: Nested versus Path: shows how path analysis has some similarities to nested modeling
**GSS Example: Same-Sex Parenting Revisited:** revises an example from earlier in the book by using path analysis

**GSS Example: Education, Income, and Political Party:** uses path analyses to analyze the sometimes contradictory relationships among these variables

**GSS Example: Explaining Drinking Behavior:** investigates how education and age affect drinking behavior through indirect effects with bar going

**GSS Example: Like Father, Like Son?** applies a classic use of path analysis: showing intergenerational status attainment relationships

**Literature Example: The Effects of Activism:** introduces a classic example of the use of path analysis: to study how participating in high-risk activism affected the activists’ subsequent lives

**Literature Example: Emotions in Service Work:** recounts a study done in a bank, which used path analysis to see if positive emotions are contagious

**SPSS Demonstration:** teaches how to trick SPSS when running the models necessary for a path analysis

**From Output to Presentation:** shows how to present a path model professionally

**Exercises:** cover such topics as the contradictory relationships among age, religious attendance, and abortion attitudes; education, health problems, and health-related internet use; and age, health problems, and health-related internet use

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**Chapter 15: Questioning the Greatness of Straightness: Nonlinear Relationships**

**Introduction:** explains how some relationships are better modeled as nonlinear relationships, using the common education-and-income example, showing that income does not increase in a linear fashion for every year of education

**Modeling Nonlinear Relationships:** walks students through the process of creating a squared term, using hypothetical, small-sample-size examples; graphically shows the relationship between the squared and non-squared effects

**GSS Example: Age and Income:** offers a classic example, using real data now, of age’s nonlinear relationship with income

**GSS Example: Income and Financial Satisfaction:** introduces the concept of diminishing returns and how we can examine such a phenomenon using nonlinear regression, such as the fact that rising income eventually loses its ability to increase financial satisfaction

**GSS Example: Education and Income:** revisits the example that started the chapter, using a squared term now

**GSS Example: Income and Political Party:** shows how the relationship between these two variables is linear for one racial group but nonlinear for another racial group, akin to an interaction effect

**Using Logarithms to Straighten out a Relationship:** briefly covers how to transform variables using logarithms, especially when you have variables with huge ranges.
Literature Example: Housework and Gender: shows how a researcher modeled the nonlinear effect that gendered occupations have on men’s propensity to do only “masculine” types of housework

Literature Example: Effectiveness of Congresswomen: tells the story of how political scientists found that the relationship between vote share and effectiveness is nonlinear

SPSS Demonstration: covers how to create a squared term and put it into a regression model

From Output to Presentation: returns to Excel to show how to create a graph to represent a nonlinear relationship

Exercises: investigate such topics as the relationship between age and economic peril, middle-aged people being “sandwiched” by care responsibilities for their children and their parents, and the global relationship between health and happiness

Chapter 16: Problems and Prospects: Regression Diagnostics, Advanced Techniques, and Where to Go Now

Introduction: explains how this chapter will cover a few advanced topics at an “awareness” level

Potential Problem One: Outliers: gives advice for how to spot whether an outlier might be having an effect on regression results

Potential Problem Two: Multicollinearity: introduces a common problem in regression and discusses how to recognize if it is really a problem or not

Advanced Techniques Concerning Variables: goes beyond regular and logistic regression and introduces on a very basic level ordered logistic, multinomial, probit, tobit, negative binomial, and poisson regression

Advanced Techniques Concerning Samples: introduces multilevel modeling, which is used with the complex samples so common in today’s social research

Other Advanced Techniques: introduces structural equation modeling and hazard modeling

No, Really, We’re Done, Go Home! suggests how to continue your exploration of social statistics on your own

Exercises: present scenarios that might call for these advanced techniques

Appendix A: Variables and Indexes from the American National Election Studies, the World Values Survey, and Three Surveys from the Pew Internet and American Life Project

Codebooks of the variables used in the SPSS demonstrations and end-of-chapter exercises; explanations of the dozens of indexes created from these variables

Appendix B: Eighty-Six Articles That Use Statistics in Less than Scary Ways
Descriptions of 86 fascinating but relatively straightforward articles from sociology, political science, criminology, public health, and business; plus, for each article, confusing things to watch out for, and, for each article, a few questions to think about

Appendix C: Statistical Tables

Appendix D: Answers to Selected End-of-Chapter Exercises