

Chapter 1

Overview and Outline

Science, Society, and Criminological Research

Overview

This chapter introduces the issues and methods that will concern us throughout the text. The chapter begins with a discussion of recent school violence and how it raises questions that must be addressed by social science researchers. This chapter also defines some of the basic concepts needed for topics covered later in the text, including social science, experiments, and validity. Everyday errors in reasoning and research types are also explained in some detail.

Outline

- I. Chapter Overview: What Do We Have in Mind?
- II. Reasoning About the Social World
 - a. Questions and Answers
 - i. Asking questions about the actions and attitudes of others
 - ii. The role of perspective in generating answers
 - b. Everyday Errors in Reasoning
 - i. We can overgeneralize when we forget the limitations of our experiences
 - ii. Selective or inaccurate observation is possible due to our emotional reactions to events
 - iii. Illogical reasoning occurs when we make false assumptions
 - iv. Resistance to change
 1. Ego-based commitments cause us to make statements that concur with our own beliefs and make it difficult to admit when we're wrong
 2. Excessive devotion to tradition causes us to alter our reasoning to maintain familiar beliefs
 3. Uncritical agreement with authority can hinder our ability to assert our own opinions
- III. How the Scientific Approach is Different
 - a. Why We Do Criminological Research
 - i. Those motivated by policy can identify needs and allocate responsibility among agencies that could meet those needs
 - ii. Academic researchers can evaluate cause and effect
 - iii. Personal motives may drive someone to help prevent problems
 - b. Social Criminological Research in Action
 - i. Description: Youth Risk Behavior Survey and the magnitude of youth violence
 - ii. Exploration: Graduate student gunman and how schools react to gun violence
 - iii. Explanation: What factors are related to Youth Delinquency and Violence?
 - iv. Evaluation: Do Violence Prevention Programs in School Work?

- IV. Strengths and Limitations of Social Research
 - a. Reduction of error in everyday reasoning
 - b. Always subject to some error
 - c. Always subject to different interpretations
- V. Types of Research Methods
 - a. Techniques
 - i. Experimental approach
 - ii. Surveys
 - iii. Observation
 - iv. Interviews
 - v. Secondary data analysis
 - b. Qualitative and Quantitative Methods
- VI. Social Research Philosophies
 - a. Positivism and Postpositivism
 - i. Positivist is the believe, shared by most scientists, that there is a reality that exists apart from our own perception of it, although our knowledge of it may never be complete
 - ii. Postpositivism holds that there is an empirical reality but that our understanding of it is limited by its complexity and by the biases and other limitations of researchers.
 - b. Interpretivism and Constructivism
 - i. Interpretivism is the believe that reality is socially constructs and that social scientists try to understand the meanings people give to that reality
 - ii. The constructivist paradigm emphasizes how different stakeholders in social settings construct their beliefs
 - c. An Integrated Philosophy
- VII. Validity: The Goal of Social Research
 - a. Measurement validity
 - b. Generalizability
 - c. Causal or internal validity

Chapter 2

Overview and Outline

The Process and Problems of Criminological Research

Overview

This chapter introduces important first steps in social science research: theory and hypothesis, formulating and refining a question, deductive and inductive methods, and variables. A recurring example is the Sherman and Berk study of the Minneapolis Domestic Violence Experiment, which illustrates how a theory leads to a hypothesis, which is then tested, replicated, and refined. In addition, this example also brings up important issues regarding scientific and ethical guidelines in criminological research.

Outline

- I. Chapter Overview: What Do We Have in Mind?
- II. Criminological Research Questions
 - a. Identifying criminological research questions through personal experiences, others' experiences, and criminological theory
 - b. Refining Criminological Research Questions
 - c. Evaluating Criminological Research Questions
 - i. Feasibility requires that a study be conducted within the time frame and with the resources available
 - ii. Social Importance requires that the topic be important to the researcher and the field
 - iii. Scientific Relevance requires that the study be grounded in existing empirical literature
- III. The Role of Criminological Theory
 - a. Help us explain or understand things
 - b. Help us make predictions
 - c. Help organize and make sense out of empirical findings
 - d. Help guide research
 - e. Help guide public policy
 - f. The role of theory is important for guiding criminological research
- IV. Social Research Strategies
 - a. The Research Circle
 - i. Deductive Research involves a hypothesis drawn from a theory and variables that can be tested
 - ii. Inductive Research involves data that is summarized in one or more empirical generalizations
 - iii. A Qualitative Exploration of the Response to Domestic Violence
 - iv. Descriptive Research
 - b. Domestic Violence and the Research Circle
 - i. Phase 1: Deductive research lead Sherman and Berk to test the deterrence theory in this situation
 1. Generalizability was not confirmed at this point

2. Causal validity was ensured by the random order in which abusers were arrested
 - ii. Phase 2: Deductive Research was used in replications
 1. Some cities showed long-term increases in incidents
 2. Other cities showed the same results as Minneapolis
 - iii. Phase 3: Inductive Research lead the investigators to examine the data to explain the lack of generalizability
 1. The data seemed to correlate with control theory
 2. Individuals who were married and employed were less likely to commit repeat offenses if arrested
 - iv. Phase 4: Deductive Research lead Paternoster et al. to test the procedural justice theory to explain the anomalous findings
 1. Data was reexamined for evidence of their hypothesis
 2. Those arrestees who felt that had been treated fairly were less likely to re-offend, confirming their hypothesis
- V. Guidelines for Criminologists
 - a. Scientific Guidelines
 - i. Test ideas against empirical reality without becoming too personally invested in a particular outcome
 - ii. Plan and carry out investigations systematically
 - iii. Document all procedures and disclose them publicly
 - iv. Clarify assumptions on which the research rests
 - v. Specify the meaning of all terms
 - vi. Maintain a skeptical stance towards current knowledge
 - vii. Replicate research and accumulate knowledge
 - viii. Maintain an interest in theory
 - ix. Search for regularities or patterns
 - b. Ethical Guidelines
 - i. Honest and Openness
 1. Sir Cyril Burt's fabricated evidence set back research on the heredity of intelligence
 2. Isaac Ehrlich concluded that the death penalty was an effective deterrent, but was reluctant to disclose his data
 - ii. The Uses of Science
 1. Should scientists actively promote their work?
 2. Sherman and Berk were criticized for publicizing their findings in the mass media
 - iii. Research on People
 1. Criminologists should not knowingly place the well-being of any subject in jeopardy in their professional work
 2. They should respect the rights, dignity, and worth of all people, including their students, research subjects, and colleagues
 3. They should fully advise research subjects of the risks of any research and obtain their full consent
 4. They should fully disclose their identity to research subjects
 5. They should fully report their research findings and not misrepresent their work
 6. They must openly report sources of financial support

Chapter 3

Overview and Outline

Conceptualization and Measurement

Overview

This chapter takes us a step further, going from the initial stages of forming a research question to conceptualizing and operationalizing the key terms so they can be widely understood and easily tested. Following this procedure, this chapter raises the notions of evaluating measures for validity and reliability and the levels of measurement that can be used to express the relationship between a variable's values.

Outline

- I. Chapter Overview: What Do We Have in Mind?
 - a. Concepts are mental images that summarize a set of similar observations, feelings, or ideas
- II. Concepts
 - a. Conceptualization is the process of specifying what is meant by a concept
- III. Concepts and Variables
 - a. Conceptualization in Practice
 - i. Identify variables corresponding to the concepts
 - ii. Develop procedures to measure them
- IV. How Will We Know When We've Found It?
 - a. Concepts become variables when they have been operationalized
 - i. Indicators are operations used to indicate the value of a variable
 - b. Operations
 - i. Using available data
 - ii. Constructing questions
 - iii. Making observations
 - iv. Collecting unobtrusive measures
 - v. Combining measurement operations
- V. How Much Information Do We Really Have?
 - a. Nominal levels vary in quality but not quantity
 - i. A variable's attributes are mutually exclusive when every case can have only one attribute
 - ii. A variable's attributes are exhaustive if every case can be classified
 - b. Ordinal levels indicate greater or lesser not how much
 - c. Interval levels indicate fixed measurement units but have no absolute zero
 - d. Ratio levels have fixed measurement units and an absolute zero
 - e. The Case of Dichotomies, or variables with only two values
 - f. Comparison of the Levels of Measurement
- VI. Did We Measure What We Wanted to Measure?
 - a. Measurement Validity ensures that a measure indicates what it is intended to measure
 - i. Face validity ensures that a concept meets measurement validity "on its face"

- ii. Content Validity establishes that a measure covers the full range of a concept's meaning
- iii. Criterion Validity is established when the scores obtained on one measure can be accurately compared to those obtained with a more direct or already validated measure of the same phenomenon
- iv. Construct Validity shows that a measure is related to a variety of other measures
- b. Reliability ensures that a measure yields consistent scores on different occasions
 - i. Test-retest reliability or intraobserver reliability
 - ii. Interitem reliability or internal consistency
 - iii. Alternate-forms reliability or split-halves reliability
 - iv. Interobserver reliability
- c. Ways to Improve Reliability and Validity
 - i. Reliable measures are not necessarily valid measures
 - ii. Differences in context can affect validity and reliability

Chapter 4

Overview and Outline

Sampling

Overview

This chapter reviews the rationale for using sampling in social research, then introduces specific sampling methods and their appropriate uses. A variety of examples from criminological research literature are used to illustrate each method. Sampling distribution is briefly covered to explain how it helps in estimating degrees of confidence in statistical generalizations.

Outline

- I. Chapter Overview: What Do We Have in Mind?
- II. Sample Planning
 - a. Define Sample Components and the Population
 - b. Evaluate Generalizability
 - i. Sample generalizability exists when a conclusion based on a sample of a population holds true for that population
 - ii. Cross-population generalizability exists when findings about one group hold true for other groups (also called external validity)
 - iii. Sample generalizability depends on the amount of sampling error
 - c. Assess Population Diversity
 - i. Generalizability rests on how well a sample represents the diversity of the population from which it is drawn
 - ii. A representative sample looks like the population from which it was selected in all respects that are potentially relevant to the study
 - d. Consider a Census
- III. Sampling Methods
 - a. The list from which the elements of the population are selected is the sampling frame
 - b. Probability Sampling Methods
 - i. Since the probability of selection is known, probability sampling methods eliminate systematic bias
 - ii. Simple random sampling requires a procedure that generates numbers or identifies cases strictly on the basis of chance
 1. Done with random number tables or random digit dialing, for example
 2. Sampling with or without replacement
 - iii. Systematic random sampling involves randomly selecting the first element from a list, and then choose every nth element thereafter
 1. The sampling interval is the number of cases from one sampled case to another and does not have to be a whole number
 2. Not useful in lists that are ordered in a meaningful way and thus exhibit periodicity
 - iv. Stratified random sampling uses information known about the total information prior to sampling to make the process more efficient

1. Proportionate random sampling represents each stratum exactly in proportion to its size
 2. Disproportionate random sampling can be used to overrepresent small strata
 - v. Cluster sampling can be useful when a sampling frame is not available
 - c. Nonprobability Sampling Methods
 - i. Availability sampling selects elements because they're available or easy to find
 - ii. Quota sampling ensures that the sample represents certain characteristics in proportion to their prevalence in the population
 - iii. Purposive or judgment sampling is used when each sample element is selected for a purpose
 - iv. Snowball sampling involves identifying one member of the population then asking that person to identify others in the population, and so on
 - v. Lessons about sample quality
 - IV. Sampling Distributions
 - a. Estimating Sampling Error
 - i. Inferential statistics are mathematical tools for estimating how likely it is that a statistical result based on data from a random sample is representative of the population from which the sample was selected
 - ii. The normal distribution on a graph looks like a bell and is produced by random sampling error
 - iii. Systematic vs. random sampling error
 - iv. Confidence intervals and confidence limits
 - V. Units of Analysis and Errors in Causal Reasoning
 - a. Individual and Group Units of Analysis
 - b. The Ecological Fallacy and Reductionism

Chapter 5

Overview and Outline

Causation and Research Design

Overview

This chapter considers the meaning of causation and the five criteria for establishing causal explanations. It also covers experimental and quasi-experimental designs and discusses how their suitability for testing causal hypotheses.

Outline

- I. Chapter Overview: What Do We Mean by Causation?
- II. Causal Explanations
 - a. Association
 - b. Time Order
 - c. Nonspuriousness
 - i. Extraneous variables can create spurious relationships
 - ii. Random assignment can reduce the likelihood of extraneous variables
 - d. Mechanisms
 - e. Context
- III. Why Experiment?
 - a. Experimental and Control Groups
 - b. Pretest and Posttest Measures
 - c. Random Assignment
 - i. Random assignment ensures that systematic bias does not affect the assignment to groups
 - ii. Matching might be used to pair persons on the basis of similarity in certain characteristics
- IV. What If a True Experiment Isn't Possible?
 - a. Nonequivalent Control Group Designs
 - i. Individual matching
 - ii. Aggregate matching
 - b. Before-and-After Designs
 - c. Ex Post Facto Designs
- V. What Are the Threats to Internal Validity and Generalizability in Experiments?
 - a. Causal (Internal Validity)
 - i. Selection bias
 1. Occurs when characteristics of the experimental and comparison group subjects differ
 2. Groups can differ over time because of differential attrition
 - ii. Endogenous change occurs when the subjects change during the experiment independently of the treatment
 1. Testing
 2. Maturation
 3. Regression

- iii. External events are events other than the treatment which occur during the experiment and affect the outcome
 - 1. Also called the history effect
 - 2. Multiple-group before-and-after designs can reveal whether external events have affected results
 - iv. Contamination
 - 1. Occurs when either group is aware of the other group and thus influences the posttest
 - 2. Compensatory rivalry or the John Henry effect occurs when comparison group members become aware they are being denied some advantage and influence the posttest results
 - v. Treatment misidentification occurs when change in the dependent variable is not due to the independent variable but to an unidentified process
 - 1. Expectancies of experimental staff
 - a. Positive staff expectations can create a self-fulfilling prophecy
 - b. Double-blind procedures can prevent this problem
 - 2. Placebo effects produce positive health effects in those not receiving treatment
 - 3. The Hawthorne effect causes changes in the dependent variable because participants feel special simply from being in the study
 - 4. Process analysis can be used periodically to assess whether treatment is being delivered as planned
 - b. Generalizability
 - c. Interaction of testing and treatment can be reduced with a Solomon four-group design
 - d. The Element of Time in Research
 - i. Repeated cross-sectional research designs or trend studies use data collected at two or more points in time from different samples of the same population
 - ii. Fixed-sample panel designs use data from the same individuals from two or more points in time
 - 1. Expense and attrition can make it difficult to keep track of people over a long period of time
 - 2. Subject fatigue may cause participants to drop out or give stock answers when asked the same questions repeatedly
 - iii. Event-based research designs use data from two or more points in time from individuals in a population defined by a common starting point or event
- VI. How Do Experimenters Protect Their Subjects?
- a. Deception
 - b. Selective Distribution of Benefits

Chapter 6

Overview and Outline

Survey Research

Overview

This chapter addresses the key features of survey research, including reasons for using surveys, questionnaire design, and the advantages and disadvantages of four types of surveys. Examples used to illustrate these features include the Uniform Crime Reporting program and the National Crime Victimization Survey. In addition, ethical issues brought up by survey research are discussed.

Outline

- I. Chapter Overview
- II. Survey Research in Action
 - a. Attractive Features of Survey Research
 - i. Surveys are versatile since they can be used to explore almost any topic
 - ii. Surveys are efficient because more data can be collected at a lower cost and relatively quickly compared to other methods
 - iii. Surveys can have high generalizability since they lend themselves to probability sampling from large populations
 - b. The Omnibus Survey and the General Social Survey
- III. Questionnaire Development and Assessment
 - a. Maintain Consistent Focus
 - b. Build on Existing Instruments
- IV. Writing Questions
 - a. Write Clear and Meaningful Questions
 - b. Avoid Confusing Phrasing
 - i. Avoid vagueness
 - ii. Avoid negatives and double negatives
 - iii. Avoid double-barreled questions
 - c. Additional Guidelines for Fixed-Response Questions
 - i. Response choices should be mutually exclusive
 - ii. Make the response categories exhaustive
 - iii. Utilize Likert-type response categories
 - iv. Minimize fence-sitting and floating
 - v. Utilize filter questions
- V. Combining Questions Into Indexes
 - i. Single questions may lead to idiosyncratic variation
 - ii. Reliability measures of multiple questions can help determine if answers are consistent
- b. Demographic Questions
 - i. May be considered intrusive
 - ii. Take care when asking about race and ethnicity
- c. Don't Forget to Pretest!

- VI. Organization Matters
 - a. Use major topic division with brief introductions
 - b. Introductions should be liberal and clear
 - c. Design should be attractive and easy to complete
 - d. A properly designed cover letter can increase response rates
- VII. Survey Designs
 - a. Mailed, Self-Administered Surveys
 - i. The central concern is maximizing the response rate
 - ii. Follow-up mailings can encourage initial nonrespondents to return a completed questionnaire
 - b. Group Administered Surveys
 - c. Surveys by Telephone
 - i. Reaching sample units
 - ii. Maximizing response to phone surveys
 - d. In-Person Interviews
 - i. Balancing rapport and control
 - ii. Maximizing response to interviews
 - e. Electronic Surveys
 - f. Mixed-Mode Surveys
 - g. A Comparison of Survey Designs
- VIII. Ethical Issues in Survey Research
 - a. Protection of Respondents
 - b. Confidentiality

Chapter 7

Overview and Outline

Qualitative Methods and Data Analysis

Overview

This chapter explains the methods of qualitative research, from participant observation to intensive interviewing and focus groups. Examples brought up throughout the chapter to illustrate various points include gang studies from Decker and Van Winkle (1996) and Whyte (1943) and police studies from Miller (1999). Then, the chapter discusses various methods used in analyzing and evaluating qualitative research. In addition, ethical issues that qualitative research raises are addressed at the end of the chapter.

Outline

- I. Chapter Overview: What We Mean by Qualitative Methods
 - a. Origins of Qualitative Research
 - b. Case Study: Life in the Gang from Decker and Van Winkle (1996)
- II. Participant Observation
 - a. Choosing a Role
 - i. Complete observation prevents researchers from participating with subjects
 - ii. Participation and observation involve varying degrees of participation with subjects
 - iii. Covert participation prevents researchers from revealing their identity and poses some unique ethical issues
 - b. Entering the Field
 - i. Whyte (1943) established himself in the community by learning the language and developing trust with one member, Doc
 - ii. Miller (1999) gained access to the police department through friends and a chief open to research
 - c. Developing and Maintaining Relationships
 - d. Sampling People and Events
 - e. Taking Notes
 - f. Managing the Personal Dimensions
 - i. Field researchers are bound to be affected on a personal, emotional level
 - ii. The impact of personal issues varies with the depth of involvement
- III. Intensive Interviewing
 - a. Establishing and Maintaining a Partnership
 - b. Asking Questions and Recording Answers
 - i. Decker and Van Winkle (1996) used short, to-the-point questions and encouraged respondents to elaborate on answers
 - ii. Tape recorders are commonly used, with note-taking occasionally supplementing
 - c. Combining Participant Observation and Intensive Interviewing
- IV. Focus Groups

- V. Analyzing Qualitative Data
 - a. Progressive focusing: the process by which a qualitative analyst interacts with the data and gradually refines her focus.
 - b. Qualitative Data Analysis as an Art
 - c. Qualitative Compared with Quantitative Data Analysis
- VI. Techniques of Qualitative Data-Analysis
 - a. Documentation
 - b. Conceptualization, Coding, and Categorizing
 - c. Examining Relationships and Displaying Data
 - d. Authenticating Conclusions
 - i. Tactic knowledge: “the largely unarticulated, contextual understanding that is often manifested in nods, silences, humor, and naughty nuances”
 - e. Reflexivity
- VII. Alternatives in Qualitative Data Analysis
 - a. Ethnography: the study of a culture or cultures that a group of people share.
 - b. Ethnomethodology: Focuses on the way that participants construct the social world in which they live, “how they create reality.”
 - c. Qualitative Comparative Analysis
 - d. Narrative Analysis: focuses on “the story itself.” Seeks to explain the analysis as a whole, instead of individual elements.
 - e. Conversation Analysis: Analyzes ordinary conversation
 - f. Case-Oriented Understanding: attempts to understand a phenomenon from the stand-point of the participants.
 - g. Grounded Theory: Build a theory that is “grounded” or based on the observations
- VIII. Visual Sociology
 - a. Margolis (2004) photographic representation of American Indians
 - b. Provide richer descriptions of the social world.
 - c. Newbury’s (2005:1) claim: “images cannot be simply taken of the world, but have to be made within it.”
- IX. Computer-Assisted Qualitative Data Analysis
 - a. Preparation
 - b. Coding
 - c. Analysis
 - d. Reporting
- X. Ethical Issues in Qualitative Research
 - a. Voluntary participation
 - b. Subject well-being
 - c. Identity disclosure
 - d. Confidentiality
 - e. Ethics in Qualitative Data Analysis
 - i. Privacy, confidentiality, and anonymity
 - ii. Intervention and advocacy
 - iii. Research integrity and quality
 - iv. Ownership of data and conclusions
 - v. Use and misuse of results

Chapter 8

Overview and Outline

Analyzing Content: Historical, Secondary, and Content Analysis, and Crime Mapping

Overview

This chapter discusses the sources, methods, and methodological and ethical issues surrounding secondary data analysis. Each of the methods includes a case study involving secondary data analysis, including Heimer and De Coster's (1999) study of gender and violent offending, Rise's (1995) study of the Martinsville Seven, Archer and Gartner's (1984) Comparative Crime Data File, and Cavender and Bond-Maupin's (2000) study on media representations of crime.

Outline

- I. What Is Secondary Data?
 - a. Sources for secondary data include the ICPSR, Census statistics, and NACJD
 - b. Heimer and De Coster (1999) used the National Youth Survey to explain disparities in violent delinquency between boys and girls
- II. Historical Events Research
 - a. Historical research in social science involves developing general theoretical explanations rather than simply describing events
 - b. Rise (1995) evaluated the case of the Martinsville Seven through historical documents
- III. Comparative Methods
 - a. Archer and Gartner (1984) created the Comparative Crime Data File to examine the effects of postwar violence
 - b. The data file was used to overcome the perceived problems surrounding generalizability, controlled comparison, causal inference, intervening variables, and methodological uncertainty in criminological research
- IV. Content Analysis
 - a. Content analysis makes inferences from text through systematic analysis
 - b. Cavender and Bond-Maupin (2000) evaluated the shows America's Most Wanted and Unsolved Mysteries to determine how criminals were depicted
- V. Crime Mapping
 - a. Shaw and McKay (1942) conducted a landmark crime mapping project by analyzing juvenile delinquency in Chicago neighborhoods
 - b. Rosenfeld et al. (1999) analyzed the mechanisms through which gangs facilitate violent offending in St. Louis through crime mapping

- VI. Methodological Issues When Using Secondary Data
 - a. Measuring Across Contexts
 - b. Sampling Across Time and Place
 - c. Identifying Causes
- VII. Combining Research Designs
 - a. Comparing Research Designs
 - b. Triangulating Research Designs
 - i. Triangulation: The use of multiple methods to study one research question.
 - c. Triangulation In Action: American Indian Homicide
 - i. While other researchers had noted high rates of American Indian homicide, Bachman's (1992) triangulated study sought to explore the factors that contributed to the high rates
 - ii. Using American Indian homicide rates and interviews with homicide offenders, she found that social disorganization and economic deprivation led to higher homicide rates
- VIII. Ethical Issues when Analyzing Available Data and Content

Chapter 10

Overview and Outline

Quantitative Data Analysis

Overview

This chapter discusses the role of statistics in research, especially regarding descriptive statistics. First it explains analysis of variable values in terms of distributions and graphs. Second, it then elaborates on the measures applied to distributions, such as mean, median, mode, and variability. Also, the process of crosstabulation of variables is reviewed and demonstrates how associations are described and evaluated. Finally, ethical data analysis is covered in the final section, including how to discuss information revealed from data analysis without stretching the truth about what trends are present in the analysis. In addition, a case study on the causes of delinquency illustrates points made throughout the chapter.

Outline

- I. Why We Need Statistics
 - a. Case Study: The Causes of Delinquency
- II. Displaying Univariate Distributions
 - a. Central tendency, variability, and skewness shape the distribution
 - b. Graphs
 - i. Bar charts
 - ii. Histograms
 - iii. Frequency polygons
 - c. Frequency Distributions
 - i. Ungrouped Data
 - ii. Grouped Data
 - 1. Useful if there are more than 20 values or if the distribution will be clearer if some values are combined
 - 2. Certain guidelines must be followed to prevent distortion of the distribution
- III. Summarizing Univariate Distributions
 - a. Measures of Central Tendency
 - i. Mode
 - ii. Median
 - iii. Mean
 - iv. Median or Mode?
 - b. Measures of Variation
 - i. Range
 - ii. Standard Deviation

- IV. Crosstabulating Variables
 - a. Describing Association
 - b. Controlling for a Third Variable
 - i. Intervening Variables
 - ii. Extraneous Variables
 - iii. Specification
- V. Analyzing Data Ethically: How Not to Lie About Relationships