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Chapter

Chapter 1

PERSONALITY AND THE
SCIENTIFIC OUTLOOK

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Why Study Personality?

- The study of human personality helps us understand ourselves and other people better, and gives us a greater appreciation for the complexity of the human experience
 - Being able to understand the behavior of others gives us a greater sense of control over our lives and makes the world more predictable and less threatening

Defining Personality

- **Personality** - dynamic and organized set of characteristics possessed by an individual that uniquely influences his or her cognitions, motivations, and behaviors in various situations
 - Encompasses a person's unique genetic background and learning history
- **Psychological construct** - highly complex abstraction that encompasses a variety of components or dimensions

The Scientific Study of Personality

- Scientific approach is the most effective way to gather accurate information about personality functioning
- Personality is a scientific enterprise concerned with the description, explanation, prediction, and control of events
- **Hypotheses** - tentative theoretical statements about how events are related to one another, often stated as predictions
- **Theory** - conceptual system that helps make sense out of existing information and aids in the prediction of relationships between events
- Science involves the interaction between two major processes: theory and research

Building Scientific Theories

- **Inductive theories:**
 - Created from a solid database of empirical observations
 - Theoretical summary statements of observed relationships among events containing a minimum of deductive logic
- **Deductive theories:**
 - Can be precisely stated and tested
 - Hypotheses are created as tentative answers to problems
 - Consist of postulates and a set of interrelated and internally consistent propositions

Building Scientific Theories (cont'd.)

- **Postulates** - fundamental or core assumptions of a theory that are taken as self-evidently true
- **Propositions** - general relational statements that may be true or false; not tested directly but used to derive hypotheses
- **Conceptual definitions** - concepts in the hypotheses are defined precisely so that accurate measures of the concepts can be devised
- **Operational definitions** - procedures (or operations) used to define particular constructs
- **Replication** - duplication or repetition of an experiment or study to determine whether or not the original findings are reliable

Building Scientific Theories (cont'd.)

- **Laws** - systematic and highly reliable associations between variables
 - Lawful relationships are established if the hypotheses receive strong and repeated empirical support in research conducted by a variety of investigators

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Testing the Theories: Research Methods

- Three major methods of empirical testing:
 - Experimental method
 - Correlational techniques
 - Case studies

Experimental Method

- **Experimental method** - technique for studying cause-and-effect relationships between variables; involves manipulation of independent variables and observation of these effects on dependent variables
 - **Independent variables** - variables actively manipulated by the experimenter so that their effects on individual behavior can be observed
 - **Dependent variables** - changes in behavior that occur as a result of the manipulation of conditions by an experimenter
 - **Experimental group** - group of study participants who experience the intentional alteration of factors in an experiment
 - **Control group** - group that does not receive the experimental treatment; provides baseline data against which the effects of the experimental manipulation on the dependent variable can be accurately judged

Experimental Method (cont'd.)

- **Informed consent** - practice of telling study participants about the nature of their participation in a proposed experiment and then obtaining their written agreement to participate
- **Debriefing** - informing study participants of the true nature and purpose of a study after it is completed

Correlational Method

- **Correlational method** - general procedure for establishing an association or relationship between events
- **Correlational coefficient** - numerical index of the size and direction of an association between two variables
 - Positive correlation - increases in the scores on one variable are associated with increases in the scores on the other variable
 - Negative correlation - increases in the scores on one variable are associated with decreases in the scores on the other
 - No association between two variables means that the scores on both variables are unrelated to one another
 - Size of a correlation indicates degree of relationship between two variables

Correlational Method (cont'd.)

- Correlation coefficients do not provide us with any information about which variable causes the other
- Researchers want to know if a relationship between two variables is real or whether it could simply have been a chance occurrence
 - **Statistical significance** - numerical index of the probability that a particular result occurred by chance
 - **Partial correlation** – assesses the relationship between two events by eliminating, or partialing out, the influence of other variables
 - **Multiple correlation** - determines the relationship between one variable and a combination of two or more other variables simultaneously

Case-Study Method

- **Case study** - technique involving the intensive study of a single person in order to understand his or her unique personality and behavior
 - Data is often impossible to apply to people in general; lacks the systematic control of variables inherent in laboratory experiments
 - Serendipitous findings may lead to new testable hypotheses and research, and the development of more adequate theory
 - **Post hoc explanation** - explanation of a phenomenon given *after* its occurrence
 - **A priori predictions** - predictions made before the collection of data
 - **Longitudinal studies** - data are collected on the same individuals over time so that investigators can determine the direction and extent of changes in their behavior

Criteria for Evaluating Theories

- **Comprehensiveness** - theories are judged as more adequate and useful if they encompass and account for a wide range and variety of phenomena
- **Precision and testability** - adequate theories should contain constructs and relational statements that are clearly and explicitly stated and measured
- **Parsimony** - adequate theories should be as economical as possible, while still accounting for the phenomena in their domain
- **Empirical validity** - the hypotheses of theories are tested by the collection of data to determine whether or not they are accurate
- **Heuristic value** - adequate theories should be challenging, and should stimulate new ideas and new research
- **Applied value** - adequate theories are capable of providing creative solutions to problems that are of interest and concern to people in society