

# Chapter 1

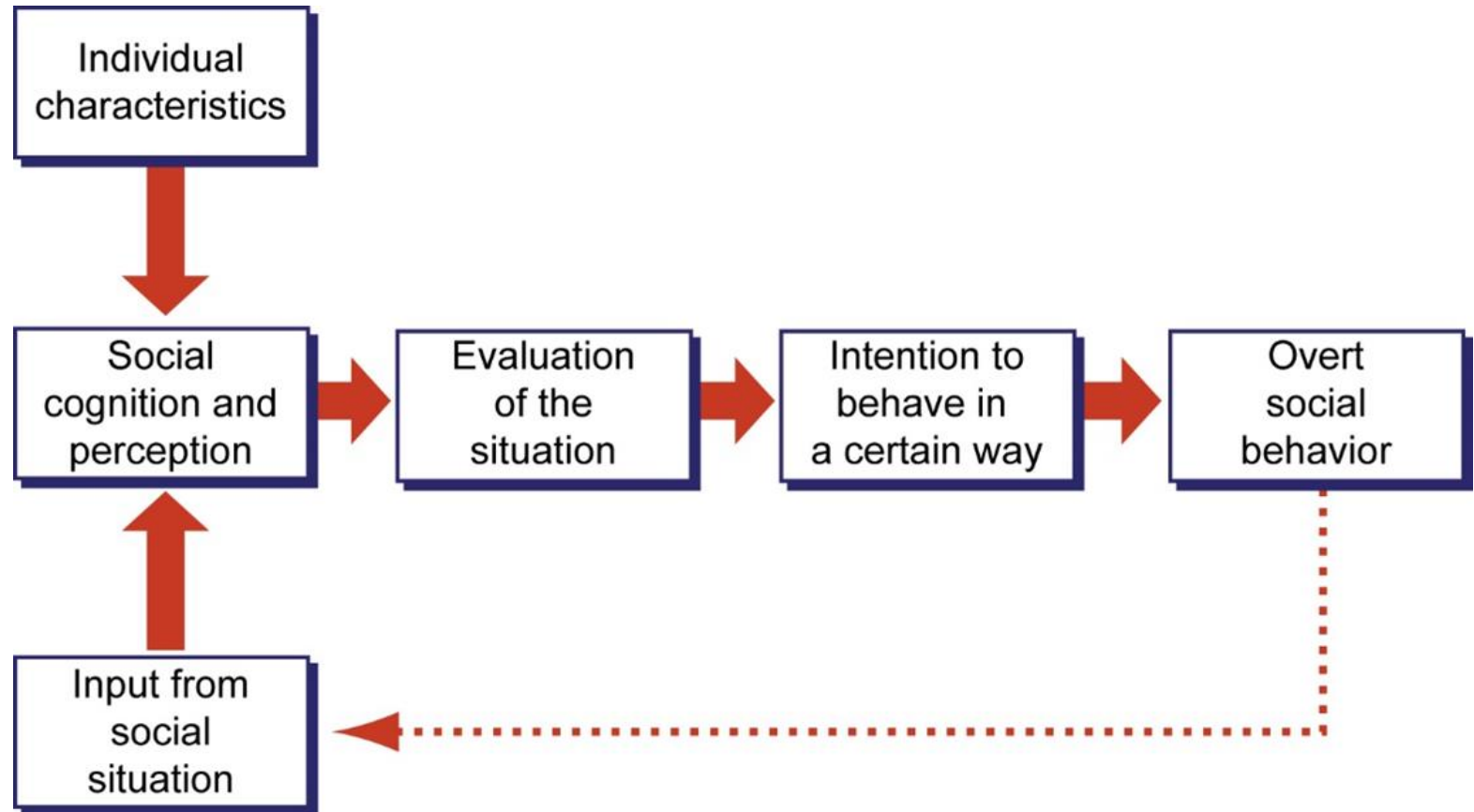
## Understanding Social Behavior

# Defining Social Psychology

- ▶ **Social psychology** is the scientific study of
  - how individuals think and feel about,
  - interact with, and influence each other
  - individually and in groups.
- ▶ Model for social behavior that social psychologists follow:
  - Behavior =  $f$  (Individual characteristics x Social situation)

- Individual characteristics are factors internal to the person
  - e.g., personality, attitudes, biases
- Social situation comprises any factors external to the person
  - e.g., presence of others, physical environment, culture
- Lewin's original model has been expanded
  - Takes into account research findings

# A Model of Social Behavior



# Applications of Social Psychology

- ▶ More than any other branch of psychology, social psychology helps us understand everyday events
  - Events in our own lives
    - Interpersonal attraction
  - Events that happen in the wider world
    - Terrorism and other violence in the world

# Major Subareas of Social Psychology

- ▶ Social Cognition
  - Social perception, construction of social reality, attribution processes, attitudes, prejudice
- ▶ Social Influence
  - Persuasion, conformity, compliance, obedience, group processes
- ▶ Social Relations
  - Interpersonal attraction, aggression, altruism
- ▶ Applied Social Psychology
  - Health, law, conflict and conflict resolution, environmental psychology

# Social Psychology and Related Fields

- ▶ SOCIAL PSYCHOLOGY focuses on individual behavior within the context of the immediate social situation (usually a small group)
- ▶ SOCIOLOGY looks at large-group behavior and systems in society
- ▶ BIOLOGY examines the role of genetics in behavior.
- ▶ ANTHROPOLOGY investigates the physical and cultural development of a species
- ▶ HISTORY determines how economic, political, and technological trends affect behavior

# Research in Social Psychology



# The Scientific Method

- ▶ Social psychology uses the scientific method
- ▶ The **scientific method** is the process of gathering information used to describe and explain behavior.
  - Involves four steps:
    - Identifying a phenomenon to study,
    - Developing a testable research **hypothesis**,
    - Designing a research study to test the hypothesis,
    - Carrying out the research study.

# Correlational and Experimental Research

- ▶ Two research strategies are used in social psychology
  - Correlational research
  - Experimental research

# Experimental Research

- ▶ In experimental research the researcher
  - manipulates (i.e., changes the value of) one variable, and
  - measures related changes in a second
  - The variable manipulated is the **independent variable (IV)**
    - The number of bystanders to an emergency (1, 3 or 5)
    - The amount of alcohol a participant is exposed to in an aggression experiment (0 or 2 ounces)
      - The value of the IV is **independent** of the subject's behavior
  - The variable that is measured is the **dependent variable (DV)**
    - How long it takes a bystander to offer help
    - The level of aggression shown by participants

- ▶ **Random assignment** used to ensure equivalence of groups before the experiment
- ▶ The simplest experiment includes one independent variable with two groups:
  - The **experimental group** receives some treatment
    - e.g., 2 ounces of alcohol are administered before an opportunity for aggression
  - The **control group** does not receive the treatment
    - serves as comparison group for the experimental group
    - e.g., no alcohol is administered before opportunity for aggression

- ▶ A well-designed experiment allows you to establish causal relationships between your independent and dependent variables
- ▶ Flaws in research may prevent this
  - **Extraneous variables** (unmanipulated variables that could affect the outcome of an experiment) are controlled
    - e.g., high temperature in the room
  - **Confounding variable**: An extraneous variable that varies systematically with your independent variable
    - Clouds a cause-effect relationship
    - Must be identified **before** an experiment is conducted

## ► Some terminology

- A *factor* is another term for an independent variable
  - A “one-factor” experiment has one independent variable
  - A “two-factor” experiment has two independent variables
- A *level* of an independent variable is another term for a group
  - 0 and 2 ounces of alcohol represent two levels of the alcohol consumption independent variable
  - 1, 3 or 5 bystanders represent three levels of the number of bystanders independent variable

# Example of the Simplest Experiment

- ▶ A one-factor (one IV) experiment with two levels (groups)

Experimental Group 2oz of alcohol	Control Group 0oz of alcohol
Participant 1	Participant 11
Participant 2	Participant 12
Participant 3	Participant 13
Participant 4	Participant 14
Participant 5	Participant 15
Participant 6	Participant 16
Participant 7	Participant 17
Participant 8	Participant 18
Participant 9	Participant 19
Participant 10	Participant 20

- ▶ The basic experiment can be expanded
  - Add levels (groups) of the independent variable
    - For example, include a different dose of alcohol to subjects in different experimental groups

Experimental Group 1 2oz of alcohol	Experimental Group 2 3oz of alcohol	Control Group 0oz of alcohol
Participant 1	Participant 11	Participant 21
Participant 2	Participant 12	Participant 22
Participant 3	Participant 13	Participant 23
Participant 4	Participant 14	Participant 24
Participant 5	Participant 15	Participant 25
Participant 6	Participant 16	Participant 26
Participant 7	Participant 17	Participant 27
Participant 8	Participant 18	Participant 28
Participant 9	Participant 19	Participant 29
Participant 10	Participant 20	Participant 30



# The Factorial Experiment

- ▶ One-factor experiments are rarely seen
- ▶ Experiments usually include at least two IVs
- ▶ A **factorial experiment** includes more than one independent variable
  - Dosage of alcohol (0 or 2 ounces)
  - Whether participant is angered (Angered or Not Angered)
- ▶ Most experiments in social psychology are factorial experiments
- ▶ “Mapping” the experiment helps understand what was done

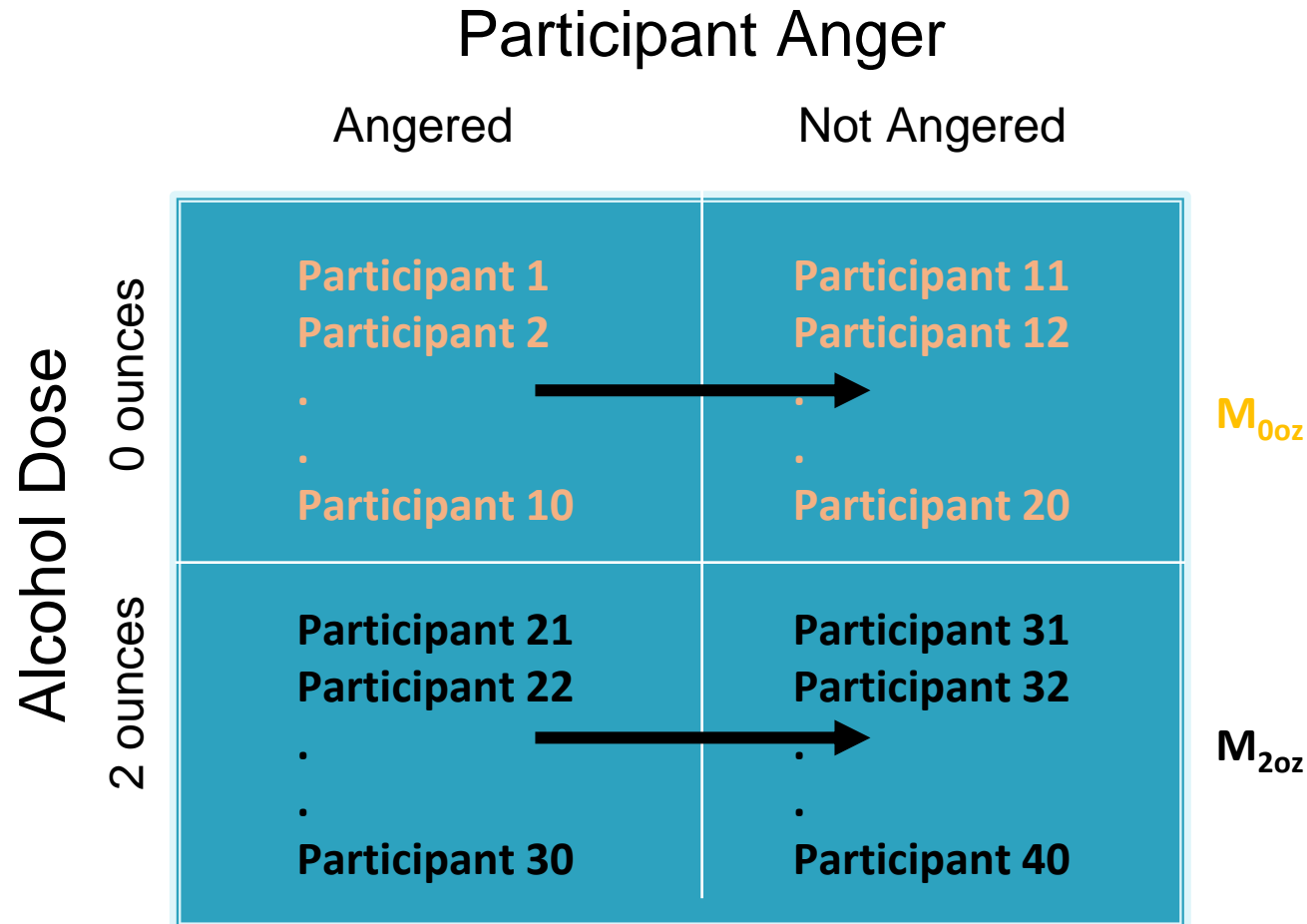
# Map of a Factorial Experiment: A Two-Factor Experiment

		Participant Anger	
		Angered	Not Angered
Alcohol Dose	0 ounces	Angered/0 ounces	Not Angered/0 ounces
	2 ounces	Angered/2 ounces	Not Angered/2 ounces

# Information Obtained from a Factorial Experiment

- ▶ Can evaluate the *main effect* of each independent variable
  - The effect of alcohol on aggression ( $M_{0oz}$  vs.  $M_{2oz}$ )
    - Average all scores within each level of alcohol dose to obtain the row *marginal means*

# Main Effect of Alcohol Consumption



# Main Effect of Anger

- The main effect of anger on aggression ( $M_{\text{angered}}$  vs.  $M_{\text{not angered}}$ )
  - Average all scores within each level of alcohol dose to obtain the column marginal means

# Main Effect of Participant Anger

		Participant Anger	
		Angered	Not Angered
Alcohol Dose	0 ounces	Participant 1 Participant 2 . . Participant 10	Participant 11 Participant 12 . . Participant 20
	2 ounces	Participant 21 Participant 22 . . Participant 30	Participant 31 Participant 32 . . Participant 40
		$M_{Angered}$	$M_{Not Angered}$

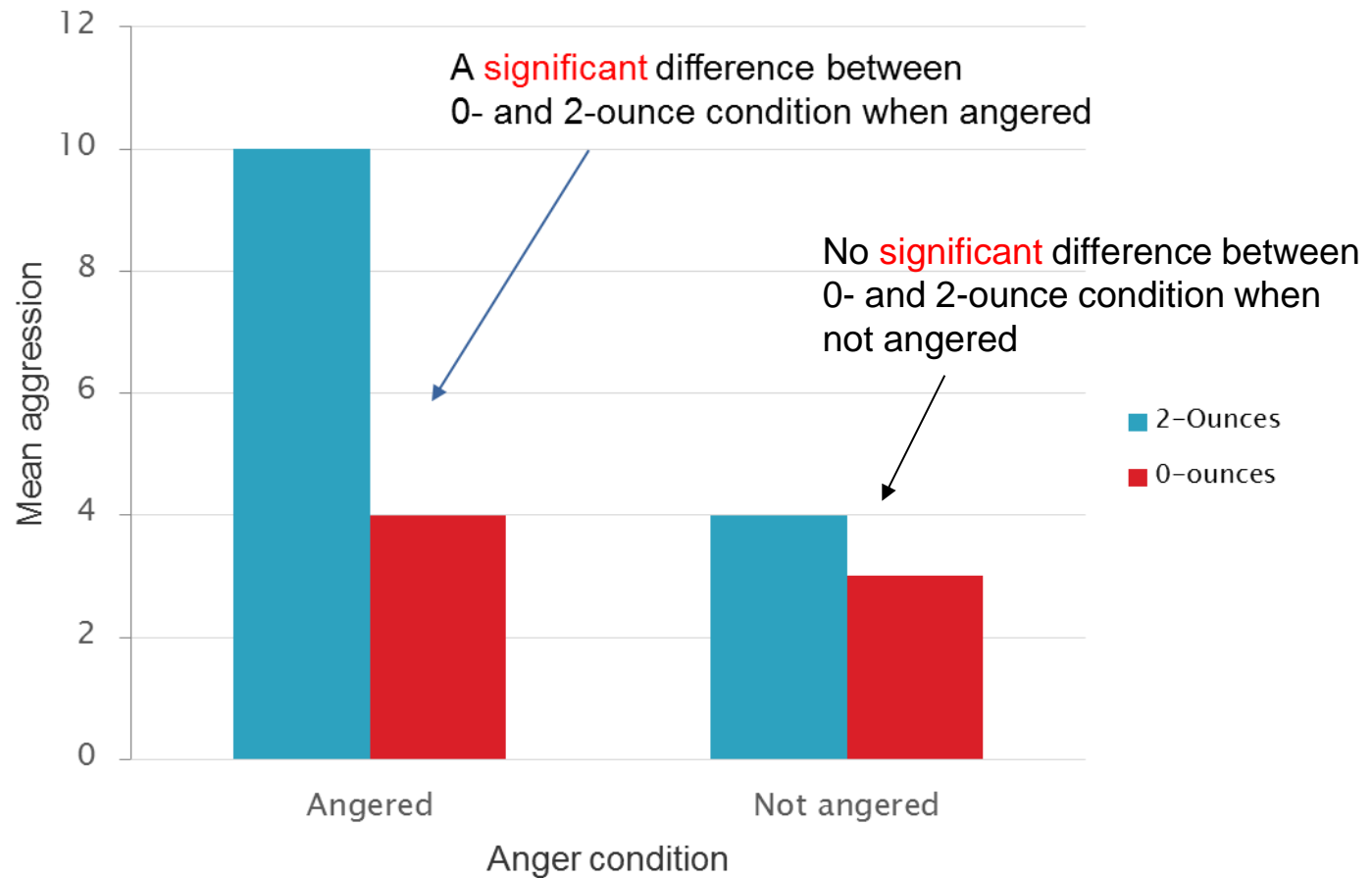
- ▶ Can evaluate the **interaction** between variables
  - The effect of one variable changes over levels of a second
    - Comparing the individual “cell means”
      - Average of all scores within each cell
    - Alcohol affects aggression when a person is angered but not when the person is not angered
      - The effect of alcohol on aggression ***depends*** on whether participant is angry or not
  - Unique to factorial experiment
  - Most experiments designed to find interactions

# Interaction Between Anger and Alcohol Consumption

		Participant Anger	
		Angered	Not Angered
Alcohol Dose	0 ounces	$M_{\text{Angered}/0\text{oz}}$	$M_{\text{Not Angered}/0\text{oz}}$
	2 ounces	$M_{\text{Angered}/2\text{oz}}$	$M_{\text{Not Angered}/2\text{oz}}$



# Example of an Interaction



# Drawbacks to Factorial Experiment

- ▶ Adding independent variables increases the complexity of an experiment
  - Adding independent variables increases the number and complexity of possible interactions
    - Complex interactions are difficult to analyze and interpret
  - The number of participants required increases

# Correlational Research

- ▶ Two or more variables are measured and a relationship is established
- ▶ The correlation coefficient ( $r$ ) is used to evaluate relationships between variables
- ▶ The **correlation coefficient** can range from -1 (negative correlations) through 0 to +1 (positive correlations)
  - **Positive correlation**
    - The values of two variables increase or decrease in the same direction
    - e.g., The more violent TV a child watches, the more aggressive is the child

- **Negative correlation**

- The value of one variable increases and the value of a second decreases
- e.g., The greater the number of bystanders to an emergency, the less likely the victim will receive help

► **The magnitude and sign of  $r$  give you independent information**

- The magnitude of  $r$  tells you the degree of relationship (higher number = stronger correlation)
- The sign of  $r$  tells you the direction (positive or negative) the relationship
- $r = -.78$  is a stronger correlation than  $r = +.57$

- ▶ Uses of correlational research
  - Finding relationships between real-world variables
  - When a variable of interest cannot be manipulated
  - In the early stages of research
  - When you are studying “subject variables” (e.g., age, gender, race)
    - These are always correlational variables
- ▶ Correlational research cannot establish a causal relationship between variables
  - Two reasons for this:

- The directionality problem:
  - It is often difficult to state clearly the direction in which the causal arrow runs
    - i.e., Does variable A cause changes in B, or does variable B cause changes in A?
- The third-variable problem:
  - There may be another, unmeasured variable that is the actual cause for behavior

# Correlational and Experimental Research Compared

Correlational Research	Experimental Research
No independent variable(s) manipulated	Independent variable(s) manipulated
A descriptive relationship between variables explored	A causal relationship between variables explored
Extraneous variables measured and controlled statistically	Extraneous variables tightly controlled
Causal inferences cannot be drawn	Causal relationships can be drawn

# Types of Research

- ▶ **Basic research:** Done primarily to test a theory (e.g., Does a prediction from balance theory hold)
- ▶ **Applied research:** Done to investigate a real-world problem (e.g., Does a defendant's race affect jury decisions)
- ▶ *Laboratory research:* Done in a tightly controlled laboratory environment
- ▶ *Field research:* Done in the subject's natural environment



# Theory in Social Psychology

- ▶ A **theory** is a set of interrelated statements or propositions about the causes for a particular phenomenon
- ▶ A theory has several roles:
  - Organizing research results
  - Making predictions about how variables influence social behavior
  - Giving direction to future research

- ▶ A good theory:
  - Is simple and explains a wide range of data
  - Can be modified and updated with new information
  - Drives future research through deducing new research hypotheses from the theory
- ▶ Examples of social psychological theories
  - Cognitive dissonance theory
  - Attribution theory
  - Equity theory
  - Social learning theory

# Making Sense of Social Psychological Research

## ▶ The **hindsight bias**

- It may seem that social psychological research findings are obvious and the research needed not have been done
- Results appear obvious in hindsight
- Individuals can predict outcomes of research no better than chance

- ▶ Exceptions to research findings do not invalidate the results
  - Social psychologists compare average performance across groups
  - Within any group there are some subjects who behave as expected, whereas others do not

# Results from a Hypothetical Experiment on Helping

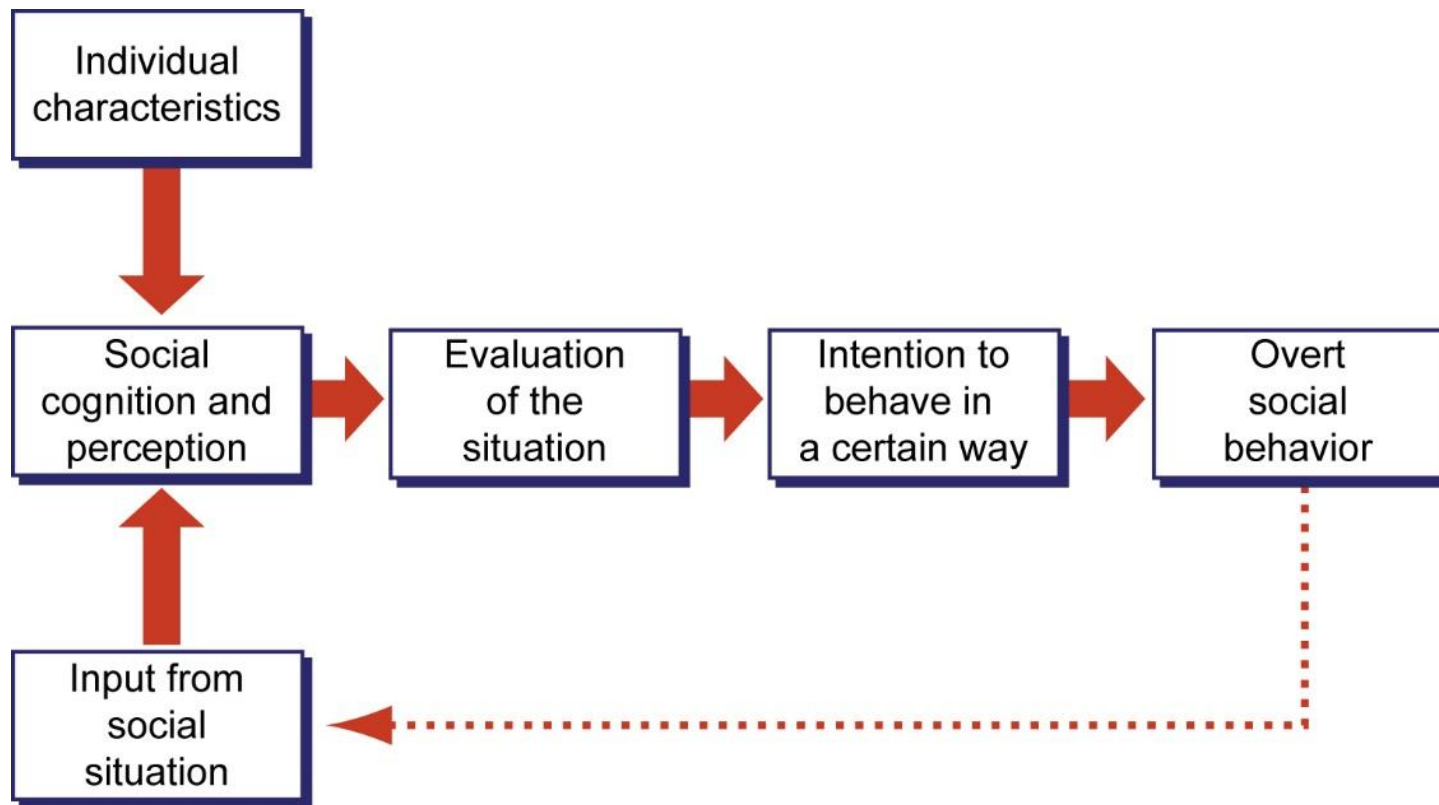
No Bystanders	Three Bystanders
Help	No help
Help	No help
No help	No help
Help	Help
Help	Help
Help	No help
No help	No help
No help	No help
Help	No help
Help	Help



# Research Ethics

- ▶ Because social psychological research uses living organisms, research ethics are important
  - Concern for how participants are treated in research
  - Consider long-term effects of research participation on participants
  - Social psychological research governed by APA code of ethics
  - Important ethical principle is obtaining **informed consent**
    - Participants informed of nature of study, requirements for participation, risks and benefits, and right to decline participation

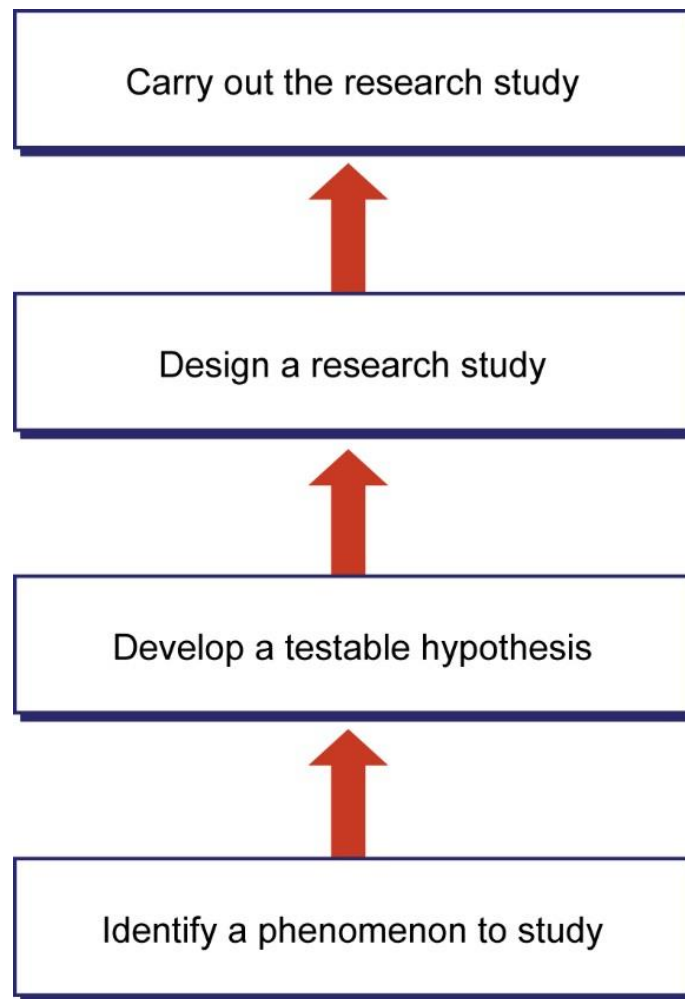
# Figures and Tables



**Figure 1.1**

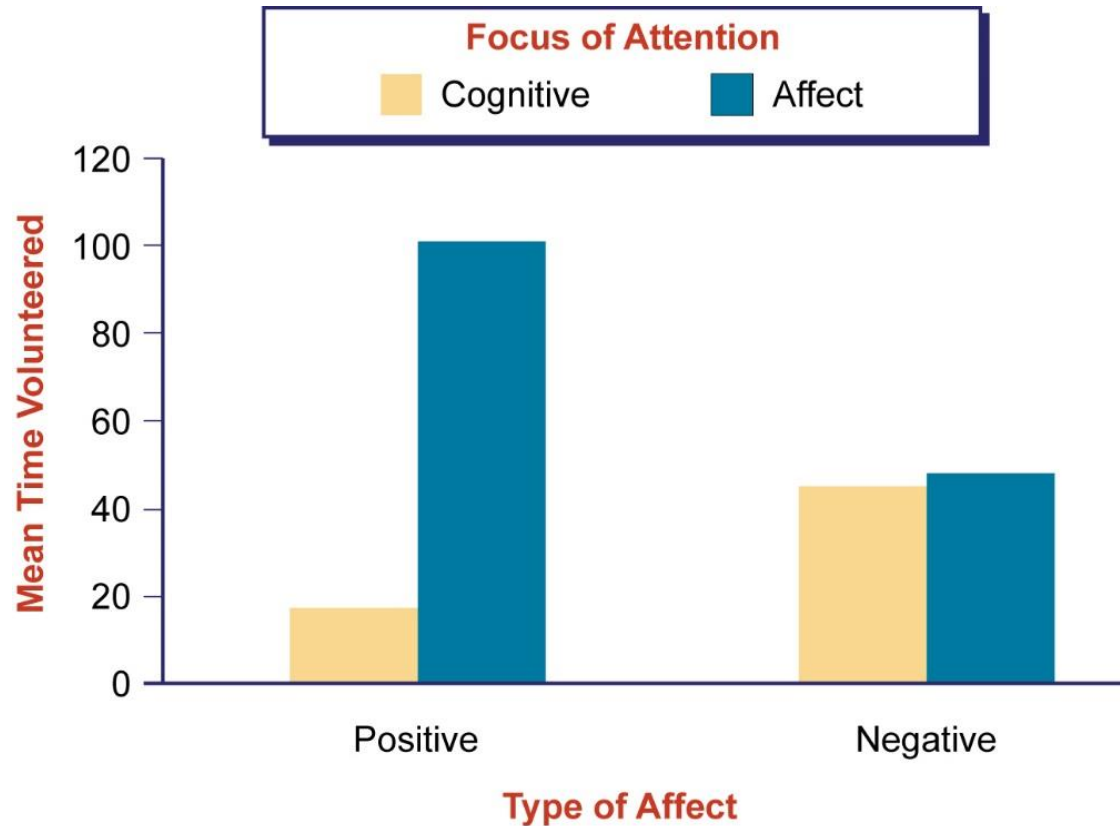
An expanded model of social behavior. How we act in a given situation depends on input from the situation and individual characteristics that are mediated by the processes of social cognition and perception and the formation of an intention to behave in a certain way.





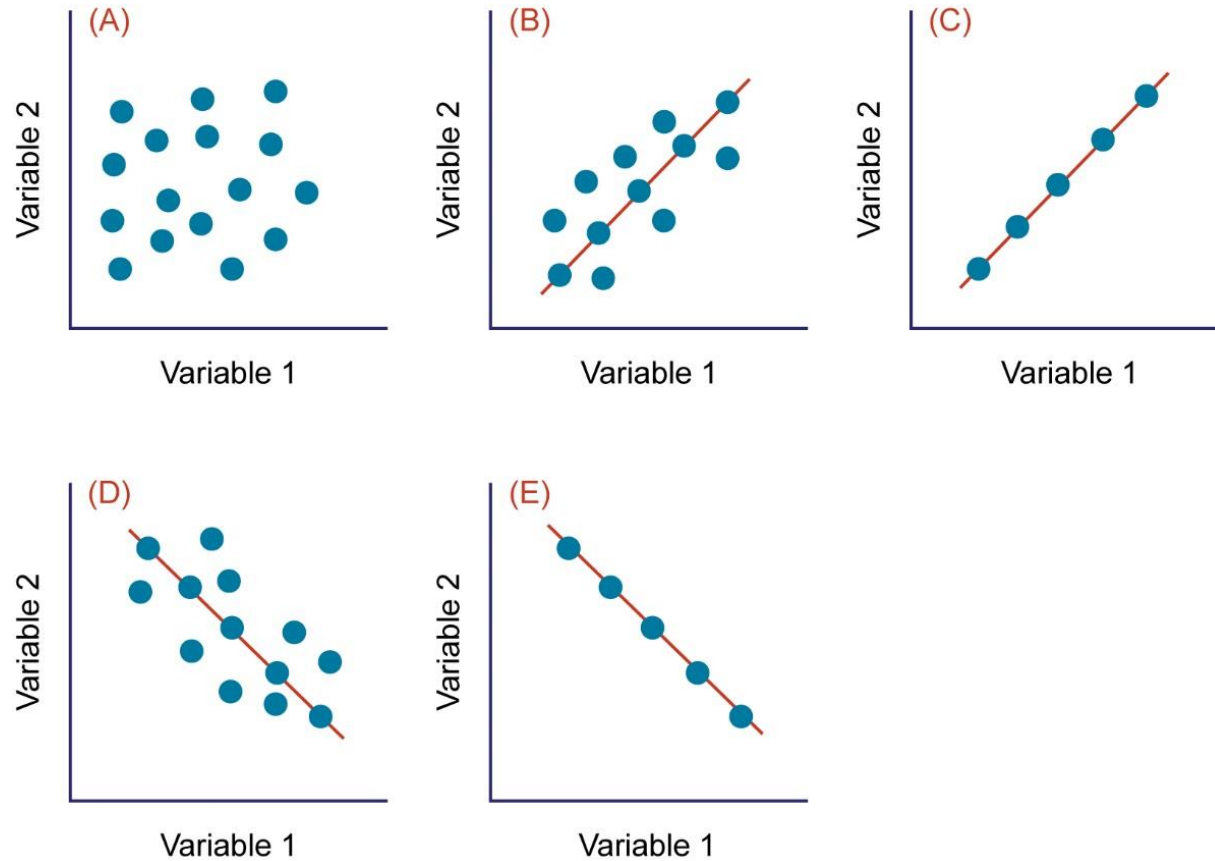
**Figure 1.2**

The scientific method used in social psychology begins with the identification of a problem to study and then moves to the formation of testable hypotheses. Next, a research study is designed and carried out.



**Figure 1.3**

The interaction between type of affect and focus of attention. Based on data from Oswald (2002).



**Figure 1.4**

Scatterplots showing correlations of different directions and strength: (a) correlation of 0 indicated by dots randomly arrayed; (b) strong positive correlation; (c) perfect positive correlation (+1) indicated by the dots lined up perfectly, sloping from bottom left to upper right; (d) strong negative correlation; (e) perfect negative correlation indicated by the dots lined up perfectly, sloping from upper left to lower right.

**TABLE 1.1** Results from a Hypothetical Study of Helping Behavior

Participant Number	No Bystanders	Three Bystanders
1	No help	No help
2	No help	No help
3	Help	No help
4	Help	Help
5	No help	Help
6	Help	No help
7	Help	No help
8	Help	No help
9	Help	No help
10	Help	No help



**TABLE 1.2** Summary of the 2002 APA Ethical Principles That Apply to Human Research Participants

1. Research proposals submitted to Institutional Review Boards shall contain accurate information. Upon approval researchers shall conduct their research within the approved protocol.
2. When informed consent is required, informed consent shall include: (1) the purpose of the research, expected duration, and procedures; (2) their right to decline to participate and to withdraw from the research once participation has begun; (3) the foreseeable consequences of declining or withdrawing; (4) reasonably foreseeable factors that may be expected to influence their willingness to participate such as potential risks, discomfort, or adverse effects; (5) any prospective research benefits; (6) limits of confidentiality; (7) incentives for participation; and (8) whom to contact for questions about the research and research participants' rights. They provide opportunity for the prospective participants to ask questions and receive answers.
3. When intervention research is conducted that includes experimental treatments, participants shall be informed at the outset of the research of (1) the experimental nature of the treatment; (2) the services that will or will not be available to the control group(s) if appropriate; (3) the means by which assignment to treatment and control groups will be made; (4) available treatment alternatives if an individual does not wish to participate in the research or wishes to withdraw once a study has begun; and (5) compensation for or monetary costs of participating including, if appropriate, whether reimbursement from the participant or a third-party payer will be sought.
4. Informed consent shall be obtained when voices or images are recorded as data unless (1) the research consists solely of naturalistic observations in public places, and it is not anticipated that the recording will be used in a manner that could cause personal identification or harm, or (2) the research design includes deception, and consent for the use of the recording is obtained during debriefing.
5. When psychologists conduct research with clients/patients, students, or subordinates as participants, psychologists take steps to protect the prospective participants from adverse consequences of declining or withdrawing from participation. When research participation is a course requirement or an opportunity for extra credit, the prospective participant is given the choice of equitable alternative activities.
6. Informed consent may be dispensed with only (1) where research would not reasonably be assumed to create distress or harm and involves (a) the study of normal educational practices, curricula, or classroom management methods conducted in educational settings; (b) only anonymous questionnaires, naturalistic observations, or archival research for which disclosure of responses would not place participants at risk of criminal or civil liability or damage their financial standing, employability, or reputation, and confidentiality is protected; or (c) the study of factors related to job or organization effectiveness conducted in organizational settings for which there is no risk to participants' employability, and confidentiality is protected or (2) where otherwise permitted by law or federal or institutional regulations.
7. Psychologists make reasonable efforts to avoid offering excessive or inappropriate financial or other inducements for research participation when such inducements are likely to coerce participation. When offering professional services as an inducement for research participation, psychologists clarify the nature of the services, as well as the risks, obligations, and limitations.
8. Deception in research shall be used only if they have determined that the use of deceptive techniques is justified by the study's significant prospective scientific, educational, or applied value and that effective nondeceptive alternative procedures are not feasible. Deception is not used if the research is reasonably expected to cause physical pain or severe emotional distress. Psychologists explain any deception that is an integral feature of the design and conduct of an experiment to participants as early as is feasible, preferably at the conclusion of their participation, but no later than at the conclusion of the data collection, and permit participants to withdraw their data.
9. Participants shall be offered a prompt opportunity to obtain appropriate information about the nature, results, and conclusions of the research, and they take reasonable steps to correct any misconceptions that participants may have of which the psychologists are aware. If scientific or humane values justify delaying or withholding this information, psychologists take reasonable measures to reduce the risk of harm. When psychologists become aware that research procedures have harmed a participant, they take reasonable steps to minimize the harm.