SOCIAL PSYCHOLOGY

Introduction to Social Psychology

Definitions & Methods

1. What do Social psychologists study?
    a. Social phenomena: Deception, Attraction, Tactics of Manipulation, Aggression, Stereotypes and prejudice
    b. Social events : 9/11, riots, elevator behavior
2. What is social psychology?
    a. Allport, 1935: "The scientific investigation of how the thoughts, feelings, and behaviors of individuals are influenced by the actual or implied presence of others.."
        i. Use of scientific methods
        ii. Not just feelings, not just thoughts; all of them combined
        iii. Implied presence: surveillance, online
    b. Links ordinary people's affective states (feelings and emotions), behavior (the way they act), and their cognition (their thought processes), to their social world
    c. Allport's definition emphasizes social influence
    d. Social perception
        i. Impression formation, attraction, stereotyping
    e. Social interaction
        i. Aggression, conflict, helping, prejudice, communication
3. Why study social psychology?
    a. "We are only as strong as we are united, as weak as we are divided."
    b. Social isolation leads to psychology problems
        i. Prisoners in solitary confinement = brainwashing
        ii. Eroded of passage of time and aspects of reality
        iii. Vulnerable to be imposed and fill the vacuum
    c. Social isolation leads to health problems
        i. Leads to obesity, smoking, high-blood pressure
    d. Schachter (1959) studied social isolation
        i. Isolated five volunteers in a windowless room for as long as they could endure
    e. Common sense?
        i. "merely discerning the obvious or confirming the commonplace"
        ii. Not explaining something that already exists; it predicts when and why ad how events occur
4. Studying social behavior
    a. Social behavior is goal oriented
    b. Represents a continual interaction between the person and the situation.
    c. Person: features or characteristics that individuals carry into social situations
    d. People & situations influence each other in a number of ways
        i. Different people respond differently to the same situation
        ii. Situations choose the person
        iii. People choose the situation
        iv. Different situations bring out different parts of the person
        v. People change the situation
        vi. Situations change the person

5. Research Methods

	Description Methods (Non-experimental)	**Experimental Methods**
Definition	Measure/record thoughts, feelings, behaviors in their natural state	A research method in which a researcher sets out to systematically manipulate one source of influence while holding others constant
Methods	**Naturalistic observation**: Involves observing behavior as it unfolds in its natural setting - Barner-Barry (1986): observed how young children interact with a bully - People wearing black perceived as bad? - White dog: vicious but people patted it over the black dog, which was not vicious	**Field Experiments/Field Studies**: manipulation of variables using unknowing participants in natural settings - Milgram, Bickman, & Berkowitz (1969): examined influence of a crowd – would passers-by copy a crowd of 1, 2, 3, 5, 10, or 15 people? - Found only 4% copied a single person; 40% coped 15 - Problem: can't control everything in the real world; distractions, can't eliminate other causal factors
	Archival research: Examine archives or public records of social behavior - Gordon, Musher-Eizenman, Holub, & Dalrymple (2004): examined what children are thankful for pre- and post 9/11; found children were more grateful for US values & rescue workers after 9/11 - Sports results of various players (black jerseys got penalized more often, even same teams)	**Laboratory Experiments**: direct manipulation of variables and the observation of their effects on the behavior of other variables
	Surveys: Asking people questions about their beliefs, thoughts, feelings, behaviors - Faulkner, Williams, Sherman, & Williams (1997): surveyed how often people give & receive the silent treatment; found 67% admitted to using it, 75% indicated they have received it - What do you associate with black? People responded evil	
Purpose	Useful in determining **correlation** (extent to which two or more variables are associated with one another) - Positive: up, down together - Negative: one goes up, one down	Determines causality

Social Influence: Social Facilitation

What is social influence?

- Process whereby people directly or indirectly influence thoughts, behaviors
- Laugh along at something not funny, bought something unwanted, performed a dare, asked for fashion advice

1. **Social Facilitation**: stronger responses on simple or well-learned tasks in the presence of others
    a. Light turns green: a driver takes about 15% less time to travel first 100 yards when another car is beside them
    b. Tougher tasks: perform LESS well when observers are working on the same tasks
        i. Arousal theory
        ii. Arousal triggered by a crowding amplifies reactions

2. Triplett (1898): Conducted first empirical social psychology experiments
    a. Observation: cyclists recorded faster times when racing against others than when they were cycling by themselves
    b. Presence of others improves performance
    c. Seven theories
        i. Suction theory: create a a vacuum
        ii. Shelter theory: a lot of wind; competitor shelters
        iii. Encouragement theory: motivation to move faster
        iv. Brain worry theory: left by yourself, mind will start to wonder, takes away energy from muscle
        v. Hypnotic suggestion theory: look over at the wheel, it will hypnotize you and your mind will go into a zen state, which helps your muscles
        vi. Automatic theory: someone else is there, don't need to think about the track and finish line
        vii. Dynamogenic factor theory: presence of another person is a stimulus to arousing the competitive instinct
            1. Releases or frees nervous energy that is not released when the person is alone
            2. Sight of movement in the other person is also an inspiration to greater effort
            3. Adrenaline
    d. Test out dynamogenic factor theory
        i. Children wound fishing reels either a) alone or b) in the presence of other children and performed six trials (alternating between winding the line alone or competitively)
    e. Better in competition than alone, got faster each trial = supported theory
        i. Renamed as social facilitation theory
3. Two types of social facilitation theory
    a. Co-action effects: observe behavior when individuals are all simultaneously engaged in the same activity in full view of each other
    b. Audience effect: observation of behavior when it occurs in the presence of passive spectators
4. Social facilitation in animal kingdom
    a. Bayer (1929) looked at eating behavior of chickens
        i. Gives a lot of food to one chicken, gets full
        ii. Puts another chicken when it's full, rushes over when the other chicken starts eating; full chicken ate 2/3 again as much grain as it had already eaten
    b. Chen (1937): Is social facilitation also evident in ants?
        i. Ant digs 232 mg alone

ii. Ant digs with another ant in another tank adjacent; 765 mg
iii. Put two ants: 728 mg = Finite amount; number doesn't matter
iv. Ant digs alone again: 182 mg = Fatigue?

c. Presence of others facilitates performance, in both humans & animals

5. Contradictory findings
   a. Pessin (1933): Asked participants to learn lists of nonsense syllables either alone or in front of an audience
      i. Alone: took 9.85 trials to learn 7 syllables; Audience: took 11.27 trials to learn a list of 7 syllables
      ii. Contradicts findings of Triplett and Chen
   b. **Social interference/social inhibition**: presence of other people hinders performance (e.g. presentations, someone watching you type)
6. Zajonc (1965): mere presence theory of social facilitation
   a. Theory that explains both sets of findings
   b. Presence of other people, as spectators or co-actors, leads to **arousal** (activation or drive)
   c. Arousal has different effects on performance (helps or harms performance)
      i. If task/behavior easy/well-learned: arousal HELPS performance
      ii. If task/behavior hard/not well-learned: arousal HINDERS performance
   d. "arousal facilitates performance of the **dominant response**"
   e. Mere presence of others: increases our arousal
      i. Ready to react no matter what happens
      ii. Increase performance for well learned vs. Harm performance for poorly learned
   f. Evidence: If mere presence effect exists, it should be evident in animals
      i. Zajonc, Heingartner, & Herman (1969): built cockroach mazes (Alone vs. Audience, simple vs. complex), dominant response in cockroaches: cockroaches run in a straight line when light switches on
      ii. Findings
         1. Cockroaches in mere presence/audience condition performed maze faster than those in the alone condition = arousal facilitates performance of dominant response
         2. Cockroaches in mere presence/audience condition slower to perform complex maze than those in the alone condition = arousal inhibits performance of non-dominant response
   g. Michaels et al (1982): People's pool play behavior
   h. How can you make the mere presence theory work for you?
   i. Students should study alone, take a test in the presence of other

DEVELOPMENTAL PSYCHOLOGY

Introduction to Developmental Psychology

1. Background
   a. Developmental psychology: discipline that seeks to identify & explain **changes** in behavior that individuals undergo from moment of conception to death
   b. Areas studied: physical growth & motor skills, mental/reasoning ability, emotional expression, patterns of social behavior, personality
   c. Questions: What does the world look like to a newborn? How does perception change w/ age? Why are some people friendly while others are shy?
2. Interpreting children's behavior
   a. Where does behavior originate? How do we know it's normal?
   b. Delayed gratification example: marshmallow test
      i. What is the task measuring and is it a good measure? Why are there such big differences b/w children of the same age? What determines these differences & what is the source of behavior?
   c. Sources of behavior: Biological/maturation (nature) vs Experience (nurture)
3. Developmental research - methodological consideration
   a. Design issues
      i. Sampling bias (representative sample)
      ii. Observer effects (mother/teacher/researcher)
      iii. Selective attrition (problem in longitudinal studies)
      iv. Practice effects (repeated measures - influence performance)
      v. Validity/reliability of tests (tests of children - modified adult tests)
   b. Research designs

Research Method	Pros	Cons
Cross-sectional approach: uses participants of different ages to compare how certain variables may change over the life span	- Data can be collected over a wide age range in a short time	- Yields no information about past determinants of age-relate changes - Problem of **cohort variation**: each age group born in a different year and there fore has experienced different environmental influences - Does not yield any information about individual development
Longitudinal approach: examines one group of participants over time	- Provides extensive information about how individuals develop	- Time and cost - Subject loss (**selective attrition**) - Cross-generational change (how relevant is our early data?) - Inflexibility (stuck with the same sample and measures)
Longitudinal Sequential design (cross-sectional/short-term longitudinal design): composed of a sequence of samples of different ages, each of which is followed longitudinally for a period of time	- More efficient than the longitudinal design - Reveals cultural/historical effects by employing **time lagged comparison** (compare samples born in different years with one another at the same age)	

NEUROSCIENCE

Exploring the Brain

1. What is the medical model of psychopathology?

Neuroscience assumes that the cause of psychological phenomena is the stuff that generates it: Mental illness is an illness of the CNS

- Measuring CNS biology might be a good way to measure mental states
- Manipulating CNS biology should manipulate mental states
- Importance of diagnosis

2. State how each of these techniques can tell us about the link between psychology and biology? Also state their major limitations.

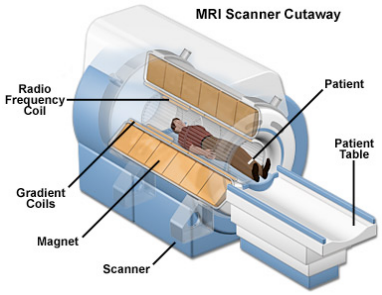
Cerebral damage and experimental lesions

- **Lesion**: removal/destruction of part of the brain
- Frontal lobotomy: used to control mentally ill patients b/c lesioning part of frontal lobe helped relieve serious symptoms and calm patients
- Case studies help infer brain function by measuring changes in behavior of patients before/after lesion but cannot draw conclusions and cannot be replicated easily

MRI, fMRI, PET, EEG, MEG

	Functions	Limitations
Magnetic Resonance Imaging (MRI)	- Uses magnetic fields & radio waves to produce high quality images of brain structures - Does not use ionizing radiation (X-rays) or radioactive tracers = no exposure to radiation - Excellent resolution	- Only gives info about structure, not function
fMRI	- Measures the real-time response of oxygen in the blood stream in response to stimuli/ tasks, then superimposes hat info onto an MRI - Requires control task, takes 20-30 sec - Shows structure AND function	- Poor spatial & temporal resolution - Poor choice of control tasks lead to poor conclusions - Too little statistical power means that chance results are accepted too readily
Positron Emission Tomography (PET)	- Measures emissions from radioactively labeled chemicals injected into bloodstream - Different compounds show different things (glucose metabolism) = Shows chemical activity	- Tasks must be short because of decay - Poor spatial & temporal (doesn't tell when the activity occurred precisely)
EEG	- Measures electrical activity of the brain = greater temporal resolution	- Poor spatial resolution (only have a rough idea of which part of the brain generates measured activity.
Magnetoence phaolography (MEG)	- Measures magnetic fields produced by electrical activity in the brain - Good temporal resolution - Skull does not impede measurement (unlike EEG)	

Key Terms	Definition	Reflection
	How do neuroscientists study the brain's connections to behavior and mind?	
lesion	tissue destruction	Today's technology enables the destruction of normal or defective cells without destroying the surrounding tissue.
electroencephalogram (EEG)	an amplified recording of waves of electrical activity	
position emission tomography (PET) scan	visual display of brain activity that detects where a radioactive form of glucose goes while brain performs a given task	
magnetic resonance imaging (MRI)	a technique that uses magnetic fields and radio waves to produce computer-generated images of soft tissue (brain anatomy)	
functional MRI (fMRI)	a technique for revealing blood flow and brain activity by comparing MRI scans (brain functions)	



Summary:

Clinical observations revealed some brain-mind connections through change in physical abilities as a result of damage in particular areas. Today, the brain-mapping process has greatly evolved to a point where selectively lesioning clusters of defective brain cells without affecting surrounding tissue is possible. Some techniques include recording the brain's electrical activity through an electroencephalogram's read-out of brain waves. Other techniques include PET scans that depict brain activity and MRi scans that show brain anatomy, and fMRI scans that show brain function.