

Research in Social Psychology

Social psychology

- A field of *scientific* study of the nature and causes of individual behaviour and thought in social situations
- Science is a manner of obtaining knowledge through observation, and requires skepticism and an assumption that all theories are tentative

Social psychology versus common sense

- “Common sense is merely the deposit of prejudice laid down in the human mind before the age of 18” - Albert Einstein
- Common sense (such as adages or sayings) is often contradictory, and we just apply whichever one fits best in a given circumstance
- Common sense is often just plain wrong
 - We are not aware of all the errors in thinking that we make, and only have access to this information through objective study

What about obvious findings?

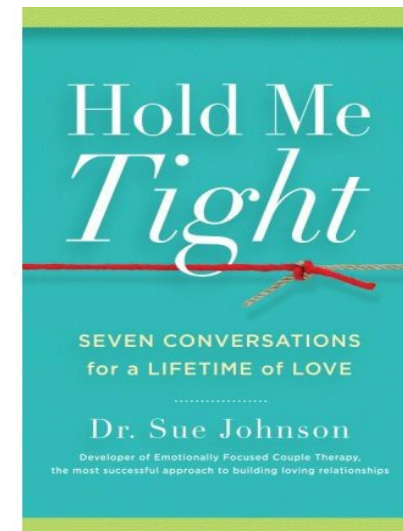
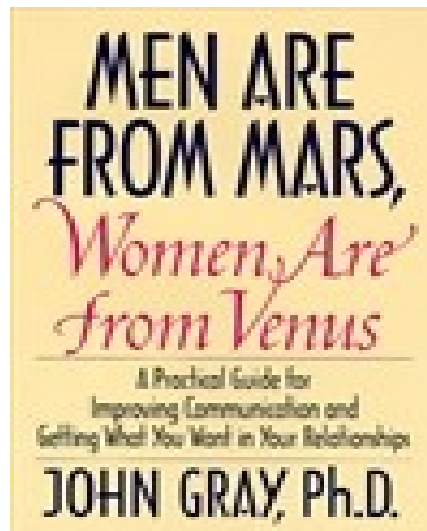
- “We observed the beer drinking behavior of 308 university students in several bar and party settings. The following relationships were found: males drinking beer in bars consumed 0.92 oz per min; females drank less beer than males, and stayed in a bar for a longer time period; patrons drank significantly more beer when drinking in groups and when purchasing beer in pitchers versus cups or bottles.” Geller et al (1986). *Journal of Applied Behavioural Analysis*, 19, 391-396.

What about obvious findings?

- Research can explain *why* and *how* a certain phenomena occurs

What about obvious findings?

- Research into obvious phenomena show that some beliefs based on common sense are true, but others are not
- As scientists, we *need to be able to differentiate* beliefs based on common sense that are true from those that are not true
- Common sense: Science:



What about obvious findings?

- Obviousness is more evident in hindsight
 - Science allows us to make informed predictions about future behaviour
 - Common sense explanations work best for passed events
- Research has shown that naïve individuals find obvious findings to be more important than counter-intuitive finding (Richard et al, 2001)

Focus of social psychology

- Mostly focused on the commonalities of behaviour among individuals
- Group processes are a very important area within social psychology, but we are mostly concerned with how the *individual* acts when they are part of the group
 - Sociology is more concerned with the actions of the society as a whole
 - Personality psychology is more concerned about the determinants of *individual differences* among people

Types of explanations

- Characteristics and behaviour of other people
- Cognitive processes (conscious and non-conscious)
- Cultural and environmental context
- Biological and evolutionary

Evolutionary social psychology

- An approach that helps to answer the fundamental question of why certain phenomena exist
 - Within the population there exists variation in numerous traits (behaviours, thoughts, tendencies, etc)
 - Not all individuals will have the same opportunity to survive and reproduce
 - A trait that help our early ancestors breed successfully would have more chance of being passed to future generations than a trait that was not helpful
 - Over time, the expression of a trait in the population can change

Evolutionary social psychology

- An evolved tendency to behaviour a certain way does not mean that we are “hard-wired” to act only that way in any circumstance
- Biology is not destiny, just one important determinant of our behaviour

Current trends in social psychology

- Cross-cultural research
- Social cognition
- Implicit and non-conscious processes
- Social neuroscience

Cross-cultural research

- It is important to study social psychological phenomena across cultures
- Most research in (social) psychology is conducted on people who are from WEIRD countries (Henrich, Heine, & Norenzayan, 2010)
 - Western, Educated, Industrialized, Rich, Democratic
- Many or most of the findings are generalizable to the rest of the world, but not all

Social cognition

- The old distinction between social psychologists focused on behaviour and those focused on cognition is mostly gone
- Basic knowledge about memory, reasoning, decision-making etc informs our understanding of social behaviour

Non-conscious processes

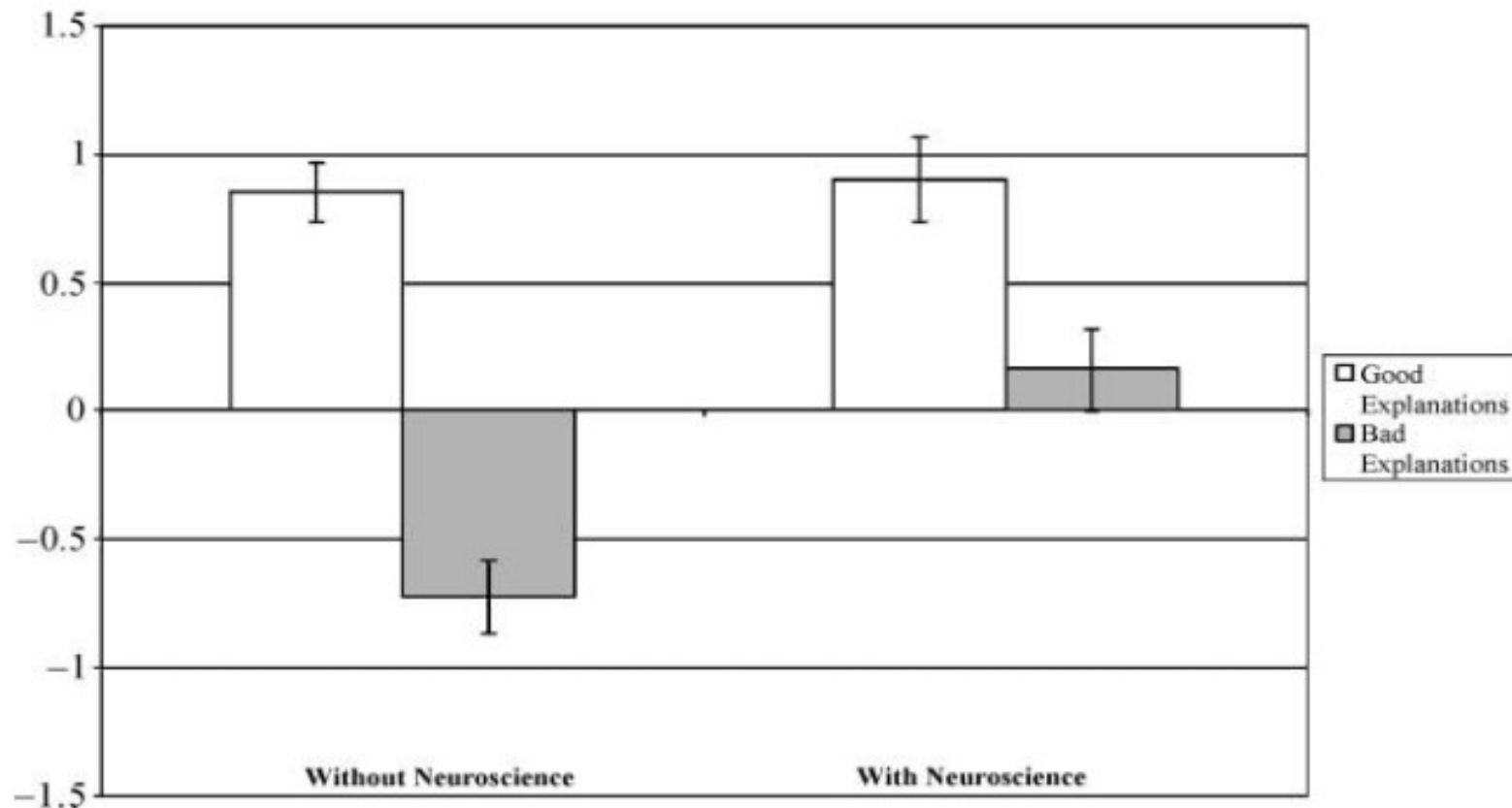
- Most of us are very good at explaining our decisions and our behaviour
- But we are not very good at explaining our decisions and behaviour *correctly*
 - For example, characteristics of potential partners (Eastwick et al, 2011)
- Non-conscious processes shape our behaviour to a much greater extent than we realize
- Implicit Association Test, Go/No-Go Association test, priming, etc

Social neuroscience

- Using brain imaging (ERP, PET, fMRI) and other techniques to study social processes
- Better understand the relationship between neural events and psychological ones (thoughts, feelings, behaviour)
- Border between social cognition and non-social cognition, precise identification of cognitive processes involved, knowledge about timing of cognitive processes
- Areas involved are highly demanding metabolically

Social neuroscience

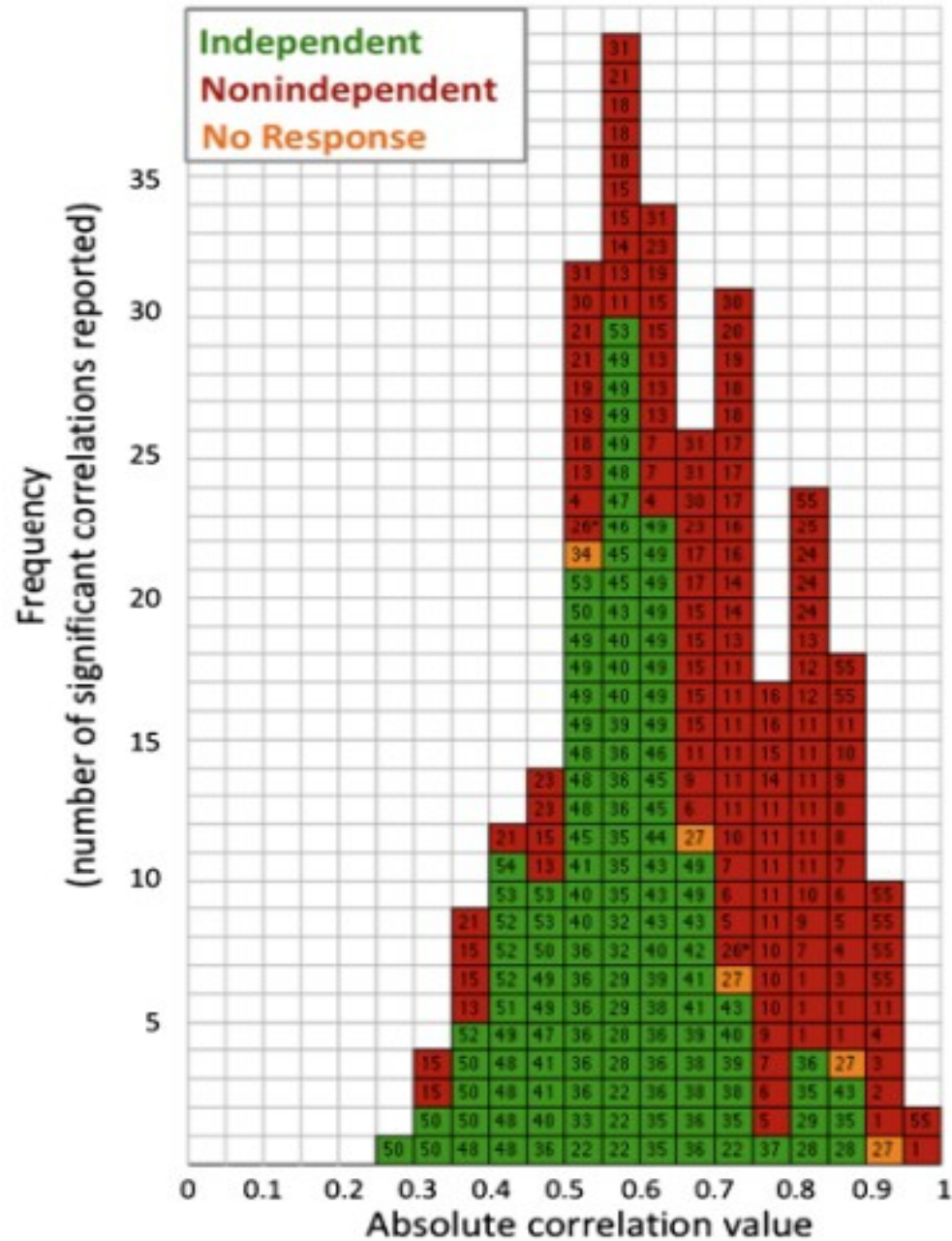
- Beware the “Seductive Allure of Neuroscience Explanations” (Weisberg et al, 2008)



Recent controversy

- “Puzzlingly High Correlations in fMRI Studies of Emotion, Personality, and Social Cognition” (Vul et al, 2008)
- Article argues that many social neuroscience studies use improper statistics that greatly inflate the apparent relationship between brain activity and cognitive processes
 - Non-independence of choice of dependent variables and results

Recent controversy



Research in social psychology

- Read any news website and you will see numerous stories about the findings of some new scientific article
 - For example, last month an article claimed that hiking makes people more creative by getting them away from electronics
- You need to be an informed consumer of knowledge, with the ability to distinguish good conclusions from bad conclusions

Observation, survey, correlational, experiment

Low constraint <----->High constraint

Systematic observation

- Observation with careful data collection
 - Decide ahead of time what will be measured, precise definitions of each behaviour (this is way harder than it sounds)
- Can be conducted in the laboratory or in the real world (naturalistic observation)
- Do not try to change the behaviour in any way
- Limited ability for participants to provide informed consent, since telling them about the study would probably affect their behaviour

Surveys and questionnaires

- Ask participants to respond to questions about their attitudes, thoughts, behaviours, etc
- Writing items for surveys is also much more complex than simply asking for the desired information
 - Self-presentation bias
 - Non-conscious processes
 - Understanding of questions
 - Misleading questions

Correlational research

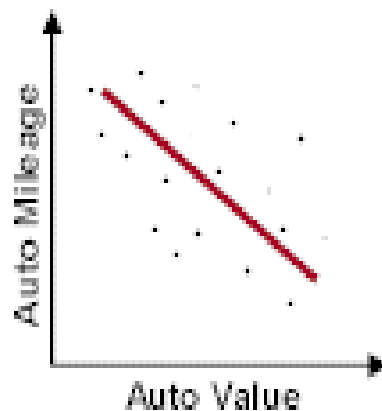
- Useful for investigating relationships between variables
- As the level of one variable changes, what happens to the other variable?
- Allows for prediction of one variable on the basis of the other
 - Accuracy of predictions is related to strength of relationship between variables

Correlational research

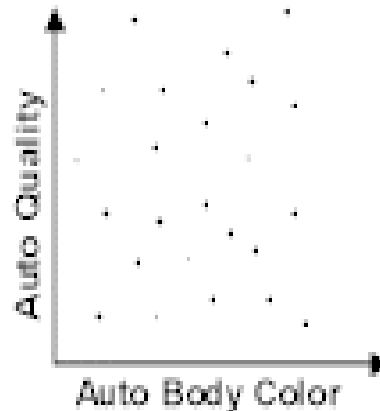
Correlation

Relationship Between Two Quantities
Such That When One Changes, the Other Does

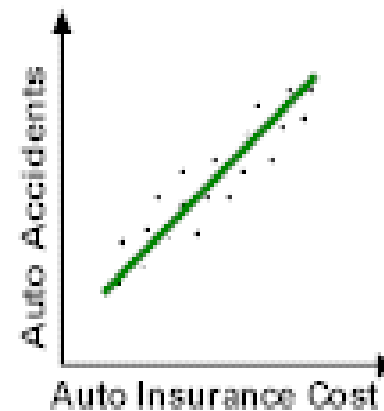
Negative



Zero



Positive



Correlational research

- As you probably know, correlation does not guarantee causation
- Say that physical attractiveness is correlated with more views on online dating profiles (Eastwick et al, 2011)
- This could mean that:
 - Being more attractive causes a profile to be viewed more often
 - Being viewed more often leads people to post more attractive pictures
 - Some other trait (money, age, etc) causes both greater attractiveness and more profile hits
- Although one of these possibilities is much more likely than the others, we can't say for sure based on the data

Experiments

- Research design in which one variable is manipulated *by the experimenter* in order to determine its effect on another variable
- **Independent variable** is systematically manipulated by experimenter
- **Dependent variable** is measured to determine the effect (if any) of the independent variable

Experiments

- The only difference between participants in two different groups is the IV
- Allows researchers to establish causal relationship between variables (if all potential confounding variables are controlled)
- Possible to have more than one IV (factorial experiments)
- Some research questions are just not practical to run as experiments
 - Do egalitarian and non-egalitarian households share chores differently?
 - It is impossible (and probably unethical!) to study this as an experiment

Experiments

- If you control all other factors too well, you run the risk of decreasing the *external validity* of the study
- Mundane realism – how similar the experimental situation is to real life
- Experimental realism – how real the experiment is to the participants

Meta-analysis

- A method of statistically combining the findings of numerous studies into a single analysis
- Meta-analyses are very powerful and can detect small effects that single studies might overlook, but also introduce sources of bias
 - Publication bias
 - Different methodologies across studies
 - Choice of which studies to include
 - Data in the meta-analysis is only as good as the data in the studies from which it is drawn

Theory

- Theory
 - Basic concepts and statements about how these concepts are related to one another, which explains current information and helps predict future events
- Scientific theories must be falsifiable
 - There must be some data that could, if discovered, prove the theory incorrect
- Theories make testable predictions called hypotheses, which are tested by research
- When results are consistent with the theory, it is supported
- Theories are always open to future fine-tuning

Inferential statistics

- To reach conclusions in social psychology, we often rely on hypothesis testing
- Determine the probability that an effect (correlation, difference between groups, etc) could have occurred due to chance alone
- If that probability is sufficiently low (say, less than 1 in 20 or 1 in 100) we can be reasonably sure that the effect is real
 - Probability of an effect being due to chance is *never* zero

Recent controversy

- Bem, D.J. (2011). Experimental Evidence for Anomalous Retroactive Influences on Cognition and Affect. *Journal of Personality and Social Psychology*, 100, 407-425
- Numerous researchers immediately criticized the methodology, statistical analysis, and interpretation of the results
- Many labs requested the materials in order to replicate the study, and found non-significant results

Recent controversy

- “We argue that in order to convince a skeptical audience of a controversial claim, one needs to... analyze the results with statistical tests that are conservative rather than liberal. We conclude that Bem’s p-values do not indicate evidence in favor of precognition; instead, they indicate that experimental psychologists need to change the way they conduct their experiments and analyze their data.”
(Wagenmakers et al, 2011)

Research ethics

- We know from experiments in social psychology that people change their behaviour when they are being observed (Hawthorne effect, demand effect, etc)
- It is therefore sometimes desirable to conduct studies without providing full informed content to participants (naturalistic observation, temporary deception)
- Could harm participants or could make participants angry that they were fooled by researchers
- Only acceptable when there is no other way to conduct the research, and when precautions are taken

Research ethics

- Manipulation check at the end of the study
 - Ask the participant what they thought the study was about, if they knew what was expected of them, if they were aware of other factors that affected their performance
- Debriefing
 - Provide full explanation of the study after the data has been collected
 - Provide an opportunity for the participant to opt out of having their data used