

Thinking Critically

The scientific study of behaviour and mental processes

- Scientific approach
- Behaviour
- Mental processes

Roots and Early History

- Plato
- Aristotle
- Rene Descartes

Roots of psychology: physiology

- There is not a separate mind and separate body; they are part of the same body

Psychology: a discipline is founded

- Trying to distinguish psychology from philosophy
- Wundt was the first to use scientific methods and textbook and others

New schools develop: behaviourism

- There were new skills that developed
- Had to do with the behaviour that we could observe

New schools develop: humanistic psychology:

- There is humanistic psychology to understand self will

Nature vs nurture

- There are certain consequences/issues that we face with this question
- Gender differences are innate/not innate?
- Is language skill inherent?
- Differences in personality and intelligence

- Up until fairly recently, there are still people that believe that we are born with a blank slate. However there are others that say that we are born with some other things
- After the second world war, there was the belief that there are people that are born "lower/inferior"

Psychology's current perspectives:

- Neuroscience
- Evolutionary
- Behaviour genetics
- Psycho-dynamic
- Cognitive
- Social-cultural

The scientific attitude and critical thinking

- Psychology is a science; so how do we find out?

- Starts with examining assumptions
- Discerns hidden values
- Evaluates evidence

The scientific method testing our anecdotes about human behaviour

- Start off with a theory, then hypothesis, research and observations

Methods

- Case study, survey, naturalistic observation
- Case study
- Survey
- Nature

Correlational methods

- Show how factors are related
- How 2 different variables are correlated
- If you have a relationship, you cannot say why; you cannot explain it
- Doesn't talk about cause and effect

Psychological research: experimentation

- Experimentation: the method to see cause and effect relationship
- Random assignment

Psychological research

- Large numbers of people, and then make generalized assumptions
- However, we cannot make any real cause and effect. We cannot control exactly, so we have no definite answers
- Naturalistic observation

Psychological research

- Comparing research methods
- Cost and ethics are always an issue
- Research does take a long time, especially when it has ethical problems

Statistical methods

- Statistics
- Descriptive statistics
- Inferential statistics

Descriptive statistics

- Frequency distribution
- Histogram graph
- Frequency polygon

Descriptive statistics: measure of central tendency

- Mode
- Median

- Mean

Descriptive statistics: measure of central tendency

- Must look at the data properly before choosing the central tendency
- The mean can misrepresent the true central tendency of the distribution
- Depending on which one you choose, you can say that there is one that is “better” than the other. This can help you make your argument stronger

Descriptive statistics

- Variability
- Sometimes the averages are coupled around the centre

Descriptive statistics – correlation: the relationship between 2 variables

- Positive
- Negative
- You want to see a correlation/relationship between them

Making inferences about causes of behaviour

1. Watching violent programs causes aggression
2. Aggressive behaviour causes children to watch violent programs
3. Some other variable cause both...

Correlation and causality

- There is a correlation in the aggression and watching the violent programs
- However, there is another variable: the lack of adult supervision

Inferential statistics

- Make inferences from the sample to the rest of the population
- There are mistakes

Inferential statistics: we have a hypothesis, and we’re making a judgment about whether or not it’s likely to be correct

- Type 1 error: not enough people
- Type 2 error: report properly/truthfully

Inferential statistics: generalizing from samples and paying attention to methodology

- Cross sectional
- Longitudinal

Groups

- We randomly assign people into the groups to make sure that the populations are similar
- Double blind procedure

Example

- How effective are therapies on depression?
- You end up with the average score with variability