

## PSYC1102 EXAM NOTES

### Chapter 2 - Studying Behaviour Scientifically

#### SCIENTIFIC PRINCIPLES IN PSYCHOLOGY

- **Ways of Learning**
  1. Critical thinking
  2. Reason
  3. Intuition
  4. Common sense
  5. Religion
  6. Spirituality
  7. The arts
  8. Teachings of friends, family and others.

#### Scientific Attitudes

- **Driving forces behind scientific enquiry:**
  1. Curiosity (inquiring)
  2. Scepticism
  3. Open-mindedness
- **Kitty Genovese Case (1994)**
  - **Bystander Apathy** = Possible explanation for Kitty Genovese case. She was attacked in her house and neighbours heard, but non intervened and she died.
  - **Apathy** = *lack of interest, enthusiasm, or concern.*
  - But Darley & Latane argued that not everyone could have been apathetic. They proposed that the presence of multiple bystanders produced a **diffusion of responsibility** - A psychological state where each person feels decreased personal responsibility for intervening.

#### Gathering evidence: steps in the scientific process

1. **Identify** a **question** of interest
2. Gather information and **Hypothesise**
  - Examine whether any studies, theories & other info already exist that might help answer the question.
  - **Hypothesis**
    - Often an 'if-then' statement
    - A specific prediction about some phenomenon
3. **Test** the hypothesis by conducting research
4. **Analyse** data, draw tentative conclusions and report findings
5. **Build** a body of knowledge.
  - Ask further questions and do more research
  - As evidence mounts, scientists may build theories:  
**Theory** = *A set of formal statements that explains how and why certain events are related to one another.*
    - Eg. Latane combined principle of diffusion of responsibility with other principles of group behaviour to develop a broader **theory of social impact**.

#### Two approaches to understanding behaviour

1. **Hindsight**
  - Problem: Past events usually can be explained in many ways, there's no sure way to know which - if any- of the explanations is correct.
2. **Understanding through prediction, control and theory building**
  - A **Good Theory** characteristics
    1. **Incorporates existing knowledge**
    2. **Testable**
    3. **Predictions made by theory supported by findings**
    4. Conforms with **Law of Parsimony**: *If 2 theories can explain & predict the same phenomenon equally well, the simpler theory is the preferred one.*

#### Defining and measuring variables

- **Variable** = *any characteristic or factor that can vary*

- Scientists must define variables operationally.  
**Operational Definition** = *Defines a variable in terms of the specific procedures used to produce or measure it. Operational definitions translate abstract concepts into something observable and measurable.*
- **Measuring variables can be done from 3 perspectives:**
  1. Biological
  2. Psychological
  3. Environmental and Social
- **Important scientific tools for psychologists to measure behaviour**
  1. **Self-reports and reports by others**
    - **Self-report measures** = *ask people to report on their own knowledge, attitudes, feelings, experiences or behaviour.*
    - Can be distorted by **social desirability bias** = *The tendency to respond in a socially acceptable manner rather than according to how one truly feels or behaves.*
  2. **Measures of Overt Behaviour**
    - **Overt** = *directly observable behaviour*
    - Coding system might be developed
    - **Unobtrusive measures** = *recording behaviour in a way that keeps participants unaware that certain responses are being measured.*
    - **Archival Measures** = *using records or documents that already exist*
  3. **Psychological tests**
    - **Personality tests** (a type of specialised self-report) = *Assess personality traits*
    - **Performance tasks** = *eg. intelligence test*
    - **Neuropsychological tests** = *help diagnose normal and abnormal brain functioning by measuring how well people perform mental and physical tasks, such as recalling lists of words, or manipulating objects.*
  4. **Physiological measures**

## ETHICAL PRINCIPLES IN RESEARCH

National Health and Medical Research Council (NHMRC) guidelines for human participants (NHMRC, 2007) and for animals (NHMRC, 2004)

**Primary purpose** = To safeguard the rights of participants

### Fundamental principles include:

1. **Merit** - *potential benefit/contributes to knowledge*
2. **Integrity** - *done honestly/open to public scrutiny*
3. **Justice** - *participants treated fairly*
4. **Beneficence** - *Benefits to individual/wider community outweigh any risks of harm/discomfort to participants*
5. **Respect** - *Maintain subject's privacy, welfare, beliefs, and capacity to give informed consent.*

### Ethical standards in human research

- **Informed consent:**
  - Who is undertaking the research
  - Research's purpose & procedures
  - Participation is voluntary, can withdraw at any time
  - Research's risks and benefits
  - Information kept confidential
  - Identity remain anonymous
  - Any financial benefit to the researcher of potential conflict of interest
  - Research has been approved by ethics committee
- **Risk/benefit analysis:** *study's potential risks must be identified and weighed against potential benefits*

- Children or mentally disturbed patients who cannot give true informed consent, consent must be obtained from parents or guardians.
- **Deception**
  - Only permitted when no feasible alternative available to obtain natural, spontaneous results.
  - When benefits clearly outweigh ethical costs.
  - True purpose of study MUST be explained to participants after it's over.

### Ethical standards in animal research

- **Purpose**
  1. To discover principles that shed light on human behaviour
  2. Learn about other species
- 7-8% of psychological studies involve animals (APA's Committee on Animal Research and Ethics (CARE), 2005)

## METHODS OF RESEARCH

### 1. Descriptive research: recording events

- **Descriptive research** in psychology = *identify how humans and other animals behave, particularly in natural settings. They provide information about:*
  - 1) *information about the diversity of behaviour*
  - 2) *yield clues about potential cause-effect relations that are later tested experimentally.*

#### 1. Case studies

- An in-depth analysis of an individual, group or event
- Eg. Hmong Sudden Death Syndrome, AIDS
- Drawback of case studies = generalisability of the findings.
- **Generalisability** = *will the principles uncovered in the case study hold true for other people or in other situations?*
- **Advantages:**
  1. Can be a source of new ideas
  2. A unique situation can be studied closely
  3. It may challenge the validity of a theory.

#### 2. Naturalistic observation

- Researcher observes behaviour as it occurs in a natural setting and attempts to avoid influencing that behaviour
- Eg. Jane Goodall watching chimpanzees, bullies in the schoolyard.
- **Habituation** = *researchers may delay their data collection until participants have habituated to the observer's presence.*
- **Disadvantages:**
  1. May be bias in interpretation
  2. Observers may inadvertently influence participants

#### 3. Survey research

- **Survey research** = *information about a topic is obtained by administering questionnaires or interview to many people*
- **Population** = *consists of all individuals who we are interested in drawing a conclusion about*
- **Sample** = *a subset of individuals drawn from a larger population*
- **Representative sample** = *One that reflects the important characteristics of a population*
- **Random Sampling** = *every member of the population has an equal probability of being chosen to participate in the survey.*
- **Stratified Random Sampling** = *divide the populations into subgroups based on characteristics such as gender or ethnicity and then select individuals from those subgroups.*
- **Surveys:**
  - **Positives**
    - Efficient for collecting large amount of information
  - **Negatives**