

PSYB45: Behaviour Modification

Chapter 1

What is Applied Behaviour Analysis?

Prologue Joel conducted an experiment on Karen where she was asked to sit down and faced away from Joel. Karen was then asked to recite all words that popped into her head. Every time Karen said a **plural noun** such as books or chairs, Joel made a **reassuring** sound “mmm-hmm”. This prompted Karen to recite plural nouns **more often** as long as Joel kept saying, “mmm-hmm”. Was Joel’s “mmm-hmm” linked to Karens increased usage of proper nouns?

What Does Behaviour Mean?

The term **behaviour** refers to anything a person does, typically because of internal or external events. Answering a question is a verbal response to an external event: a verbal question. Eating when you are hungry is a response to an internal event: feeling hungry.

EXTERNAL & INTERNAL BEHAVIOURS

- **Overt Behaviours** are external behaviours that is open to view or observation.
 - **Verbal Behaviours** are actions that involve the use of language. e.g. answering a question
 - **Motor Behaviours** are actions that involve body movement, without requiring the use of language. e.g. getting dressed, walking, jumping
 - Some activities, require both verbal and motor components. e.g. filling out a crossword puzzle
- **Covert Behaviours** are internal behaviours / private events that are not viewable or openly shown.
 - e.g. You see a TV commercial of your favourite sports team. You think about a game you went too, this is a response but it is not measurable. Feeling happy / sad can cause physiological changes such as increased heart rate.
- Since covert behaviours can only be felt internally by an individual it is hard to measure, thus overt behaviours are what we will study.

WHAT IS NOT BEHAVIOUR?

- We tend to focus on **traits** or characteristics because it is convenient and passes along a lot of information
 - This may be inconsistent, for example describing someone as *smart* may only apply to math. Their *language* skills maybe average. The information is also too vague / general.
- **Diagnosis** is similar to traits, they are too general. Describing a child as autistic does not help the therapist change their behaviour. Which of the many autistic behaviours does the child have and needs to change?
- **Outcomes of Behaviours** are the results of a series of behaviours. Getting good grades is an outcome, studying more often, attending all classes are behaviours that change to achieve that outcome.
 - Focusing on behaviours rather than their outcome is more successful.

HOW BEHAVIOUR DEVELOPS

- Babies come into the world with a limited number of inborn behaviours called **reflexes**.
 - They are a form of survival techniques and are inherited
 - e.g. *rooting reflex* is moving your head towards the object that touches your cheek and *sucking reflex* is when the baby sucks on the object in contact with their lips
- All other behaviours are developed through **heredity** and **experiences**
- Heredity affects behaviours in two ways:
 - **Maturation** or physical growth. We develop our head and upper body faster than we do our legs and arms. e.g. 3 year olds can put on a sweater easily, but have trouble tying shoe laces.
 - Heredity also influences the likelihood of acquiring certain behaviours (some more than others). e.g. alcoholism, stuttering, severe anxieties.

How We Acquire and Change Behaviour

Learning is a durable change in behavioural potential as a result of experience. When we see a change in someone's behaviour we assume they have learnt something. e.g. I learnt to ride a bike last week, or I learnt to like Indian food when I visited India. It's hard to define learning because it is internal, and sometimes people do not display what they have learnt.

RESPONDENT CONDITIONING

- **Respondent Conditioning** is a learning process in which a stimulus (the eventual *CS*) gains the ability to elicit a response through repeated association with a stimulus (the *US*) that already produces a response.
 - e.g. We salivate when chocolate is placed in our mouth. When we eat chocolate, we usually talk and think about the word **chocolate**. We know salivate when we hear or think about the word **chocolate**.
- **Unconditioned Stimulus** (*US*) is an event that elicits a response *automatically*. e.g. chocolate in mouth
- **Unconditioned Response** (*UR*) is an *automatic* response to the *US*. e.g. salivating
- **Conditioned Stimulus** (*CS*) is an event that elicits a *learned* response. e.g. hearing or thinking of **chocolate**
 - This stimulus is *neutral* at first and does not elicit a response before it is *learnt*.
- **Conditioned Response** (*CR*) is an *automatic* response to the *CS*. Usually the same response as *UR*.

OPERANT CONDITIONING

- **Operant Conditioning** is the learning process by which behaviours change because of its *consequences*.
 - Our behaviour **operates** on the environment and this produces consequences.
 - e.g. Joel's study: Karen saying plural nouns produced the consequence of Joel saying, "mmm-hmm" and as a result her behaviour changed to continue saying plural nouns.
- **Consequences of Operant Conditioning**
 - **Reinforcement** a consequence following a behaviour that *strengthens* and causes it to increase.
 - These are usually rewards such as money, a praise, or candy.
 - e.g. Joel's study: "mm-hmm" consequence caused an **increase** in plural nouns.
 - **Punishment** is a consequence following a behaviour that *weakens* and causes it to decrease.
 - These are usually consequences people do not want or find unpleasant like spanking, reprimands
 - e.g. Joel's study: "uhh-huh" consequence caused a **decrease** in plural nouns.
- **Antecedents of Operant Conditioning** precede and set the occasion for your behaviour.
 - e.g. turning on the light before entering a room increases reinforcement of being able to see and decreases the punishment of bumping into an object.
- **A→B→C Antecedents** set an occasion for possible **Behaviours** and **Consequences** are always the result of the behaviour.

RELATING RESPONDENT AND OPERANT CONDITIONING

- These are not separate entities. In real life, they usually work together.
- e.g. **US** of the bottle touching a baby's lips elicited the sucking behaviour. Potential **CS** is the sight of the bottle (Respondent Conditioning). Furthermore, the sucking behaviour produced a **reinforcement**, milk (Operant Conditioning).

MODELLING

- The process of **modelling** is learning a behaviour by watching someone else perform it.
 - It requires an *observer* and a *model*. e.g. We learn to open drawers or cook scrambled eggs.
- Existing operant behaviours are influenced by observations.
 - e.g. increase / decrease alcoholic intake if others take in more / less respectively
- Aggression is an operant behaviour that involves both motor and verbal behaviour. e.g. Bobo doll experiment
 - Children who watch more violence on TV increase their aggressive behaviour.
- People also learn respondent behaviours (i.e. fear) through modelling as well.
 - e.g. Kids are shown a video where a child screams at a Mickey Mouse doll, but is calm with a Donald Duck doll. Kids are later asked to play with both dolls and show an avoidance for MM. Reactions to MM and DD figures, show modelling affects both internal and external behaviours, even if they are only temporary. (fear was gone a few days later)

ARE COGNITIVE PROCESSES INVOLVED

- **Cognitive** refers to covert behaviours, particularly thinking and reasoning.
 - Thinking involves mental representations of our knowledge (images or language).

- Reasoning involves thinking in a logical manner (planning or solving problems).
- e.g. Someone tells you how to fix an mp3, you remember the steps and apply motor behaviours in the future.
- e.g. Remember to you promised to call a friend, consequence is you call them.
- e.g. People talk about ghosts in a scary way, you respond with fear of ghosts.
- Sometimes the main behaviour needed to be changed is cognitive (incorrect thoughts lead to depression)
 - We can change most overt behaviours without addressing covert ones.

Defining Applied Behaviour Analysis

Professionals choose one of two techniques to modify behaviours, behavioural and cognitive methods (and sometimes a both). **Behavioural methods** involve operant, respondent and modelling to modify overt behaviours. **Cognitive methods** involve changing people thought process to modify covert and overt behaviours.

RELATED TERMS AND FIELDS

- **Behaviour Modification:** Behavioural and cognitive methods are applied by professionals in a variety of applied settings, including institutions, schools and industry, to improve almost any type of behaviour.
- **Behaviour Therapy:** Behavioural and cognitive methods are carried out mostly by professionals in a therapeutic setting to correct seriously maladaptive behaviour, often involving emotional problems.
- **Self-management:** Behavioural and cognitive methods are self-administered, or carried out mainly by the person whose behaviour is being changed, often under the supervision of a professional.

CHARACTERISTICS OF APPLIED BEHAVIOUR ANALYSIS

- Focus on behaviour is gives a strong emphasis to the following:
 - Defining people's current status and progress in terms of behaviour rather than traits.
 - Being able to measure the behaviour in some way.
 - Whenever possible, assessing covert behaviours in terms of overt ones.
- The behaviour we want to change are called **target behaviours**. We may want to increase or decrease them.
 - Behaviours we do not do enough of and want to increase refers to **behaviour deficit**. e.g. exercising
 - Behaviours we do too much of and want to decrease refers to **behaviour excess**. e.g. drinking
- **Importance of Learning and the Environment**
 - Behaviours of *learned* and therefore thought of as malleable and can be modified by applying appropriate experiences over time. Usually altering a persons *environment* will suffice in changing particular behaviours. e.g. arranging the seating plan and giving rewards to students. Behaviours can also be modified using medication (brain seizures). We usually try to eliminate medication over time.

How Behaviour Analysis Developed

BEHAVIOURISM: THE ORIGIN OF BEHAVIOUR ANALYSIS

- Sigmund Freud's **Psychoanalytic Theory** *views* a person's behaviour as an expression of their personality and its component forces, such as drives and conflicts. Each person's personality develops during stages in their life. Changing someones behaviour requires deep therapy.
- **Behaviourism** is the theoretical orientation that emphasizes the study of observable and measurable behaviour and proposes that nearly all behaviour is the product of experience. i.e. we can use conditioning
- Philosophy and Psychology become separate disciplines after many years.