

## **Critically evaluate the impact behaviourism has had on psychology**

For hundreds of years philosophers speculated about “the mind” and in around the 1880’s the popular method of psychology dealt only with the conscious mind. The experiments carried out at this time were criticised for their lack of objectivity and by the 1920’s a new brand of psychology emerged in the form of behaviourism.

Psychology became a recognised discipline in around 1897 when Wilhelm Wundt started the first psychology lab in Germany. Wundt, along with others, attempted to investigate the mind through introspection, and observed their own conscious mental processes. While analysing their thoughts, images and feelings, they recorded and measured their results under controlled conditions and aimed to sort conscious thought into its basic elements as a chemist would with a chemical compound. This theory was known as structuralism.

A particular critic of this method, in the early 1920’s was John Broadus Watson (1878-1958), who felt that introspection was subjective and therefore erroneous. He also felt the only way forward was by using methods that could be observed by more than just one person and this could be achieved by studying behaviour. He wrote that “*Behaviourism claims that ‘consciousness’ is neither a definable nor a usable concept; that it is merely another word for the ‘soul’ of more ancient times.*” (Watson 1924)

Behaviourist theories of learning are often called “stimulus-response” (S-R), and though only classical conditioning fits the S-R model, the other major form, operant conditioning, is often included under the same heading, though it is significantly different. Classical conditioning is triggered involuntarily by a particular environmental stimulus. This means that a stimulus that does not normally produce a particular response can be paired with another stimulus that does, eventually resulting in both stimuli inducing the same effect, even when used separately.

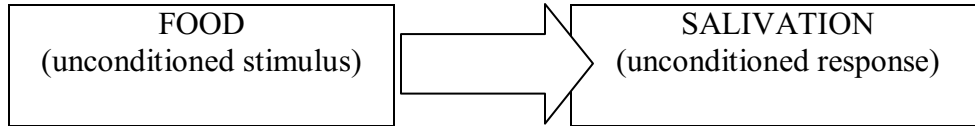
A good example of this was shown in the first experiments by Ivan Petrovich Pavlov (1849-1936) in the early 20<sup>th</sup> Century. During other research work he noticed that dogs often salivated before they were given any food, and even when they looked at food. This sometimes went as far as the dog salivating when he heard the approaching footsteps of the laboratory assistant bringing the food. Pavlov’s observations used food as an unconditional stimulus and the salivating was an unconditioned response, an automatic reflex response. During the experiment a bell was paired with the food and referred to as a conditioned stimulus. It was neutral to begin with and got no response from the dog except for a passing interest. After the bell and food had been paired for some time the dog began to salivate at the sound of the bell and before the food was shown. The salivation was then a conditioned response as it was produced by the bell (conditioned stimulus).

In 1920 Watson took this work further when he attempted a similar study on an 11-month old boy called Albert. He used a rat as the original stimulus, and Albert showed no fear of it. He paired the rat with an unconditioned stimulus, which in this case was a hammer hitting a four-foot steel bar close to Albert’s head, which frightened the child and made him cry. After about 50 pairings Albert was afraid of the rat which had by this time become the conditioned stimulus. The conditioned response (fear) spontaneously transferred to other items which included a white rabbit, a sealskin coat, cotton wool,

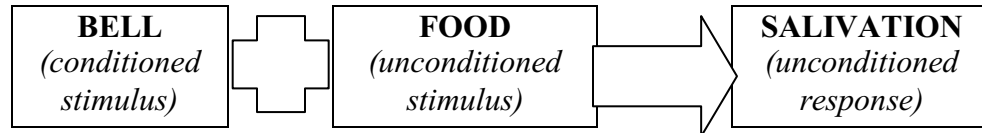
Watsons hair and a Santa mask. Though it was less severe, the conditioning persisted even after a month and Albert's mother removed him from the hospital.

**The basic procedures used by Pavlov in classical conditioning**

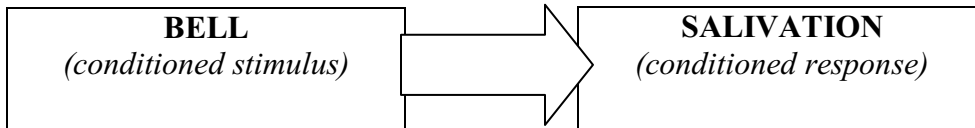
**STAGE 1** (*before learning*)



**STAGE 2** (*during learning*)

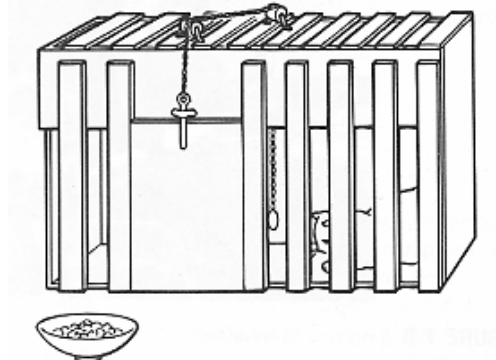


**STAGE 3** (*after learning*)



Unlike classical conditioning, operant conditioning is not induced by a specific stimulus; it is more a voluntary action.

Edward Lee Thorndike (1874-1949) first became aware of this and constructed a puzzle box designed for cats. The task for the cat was to operate a latch which released them from the cage and allowed them to get to a piece of fish on the outside. Each time, after eating the fish, they were immediately placed back inside the box and another piece of fish made visible outside. The first escapes from the box seemed to be accidental with the first escape taking five minutes. After 20 trials the cat could escape in 5 seconds.



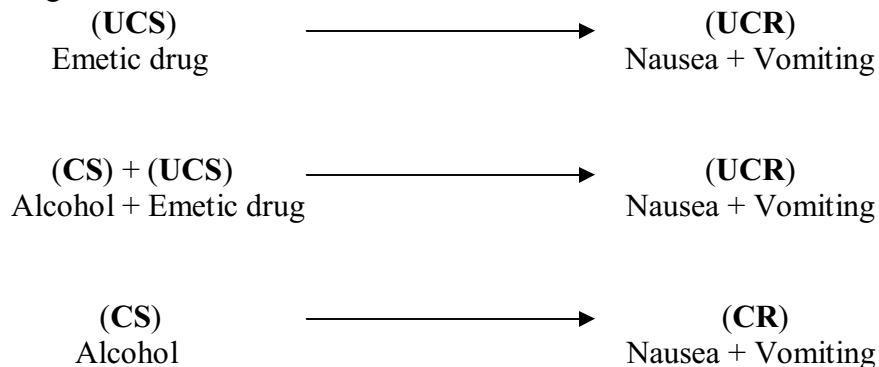
**Thorndike's puzzle box.**

Thorndike accounted for this by stating that the escapes were random or trial and error. There was no sudden insight into how escape was made but more a gradual reduction in errors made so, therefore, a shorter escape time. He said there was “*a connection between the situation and a certain impulse to act*”, namely between the stimulus and the response. He further stated that the stimulus – response connection is “*stamped in when pleasure results from the act, and stamped out when it doesn’t*”. (1898) This is known as Thorndike’s famous *law of effect*. The law of effect was a crucial way of distinguishing between classical and operant conditioning as Skinner was to do 40 years later. Thorndike pointed out that what happens *because* of behaviour will influence future behaviour, unlike classical conditioning where, what happens before behaviour determines future behaviour.

Burrhus Fredric Skinner (1904-1990) adapted this experiment to make his own puzzle box, now known as a “skinner box”. It was designed for a rat or pigeon and contained a lever that, when pressed, issued food into the box. This positive reinforcer strengthened the behaviour so the animals continued to press the lever for food. Skinner said “Behaviour is shaped and maintained by its consequences”, which was his interpretation of Thorndike’s law of effect.

Behaviourism has many strengths and has exerted a strong influence on psychology, and has triggered scientific experiments and the use of statistical procedures and data. Since learning is a form of behaviour change, the behaviour modification procedures developed by behaviourists have proven useful to many teachers and has turned the attention of psychologists to solving behaviour-related problems. Despite some of the experiments being quite “low-level” learning, focusing largely on reflexes, the behaviouristic theories have been generalised to many higher level functions as well. Emotional problems are considered the result of faulty acquired behaviour patterns or the failure to learn effective responses. The aim of behaviour therapy, also known as behaviour modification, is to change behaviour patterns. Aversion therapy is a good example of this and is used mainly for addictions and unwanted behaviour, and this could be used as a treatment for alcoholism.

The patient would be given warm saline solution containing emetic and immediately before they begin to vomit they are given a large glass of spirit alcohol e.g. Whiskey. They would be asked to smell the whiskey and swill it around their mouth before swallowing it. If vomiting does not occur another straight whiskey is given and, to prolong the nausea, the patient is given a glass of beer containing emetic. More treatments involve large doses of injected emetic, increases in the length of treatment or a larger range of alcohol.



It has been found that about half the alcoholic patients that are treated in this way abstain for at least a year.

Critics say that behaviourism over simplifies human behaviour and that it sees the human as a robot instead of a creature with free will and purpose. It shows no clear boundaries for what is behaviour and what is merely the body functioning in the way it should and does not explain or even acknowledge the internal processes that cause our reactions to different stimuli. The behaviourist approach also dictates what knowledge the “student” will learn, in what order they will learn it and how they will learn it, and ensures that the “student” concentrates on key points rather than information as a whole. It also deals only with the problem and fails to search out the root cause, which often means the problem, without continuous treatment, can reoccur. Behaviourism has also been seen as a form of “brain washing” and makes no allowances for differences in intelligence.

Though behaviourism has its critics it was undoubtedly a turning point in history for psychology.