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## **UNIT 3 LEARNING THEORY OF PERSONALITY (PAVLOV AND SKINNER)**

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### **3.0 INTRODUCTION**

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Learning theory of personality presents a model of personality that emphasises observable behaviour, the relationship between stimuli and responses, and the impact of learning. The behaviourist position is that personality is no more (or less) than a collection of learned behaviour patterns. They do not give importance to the internal causes of behaviour. Personality, like other learned behaviour, is acquired through classical and operant conditioning, observational learning, reinforcement, extinction, generalisation, and discrimination. Children can learn things like kindness, hostility, generosity, or destructiveness. In the present unit we will discuss two important learning theories of personality. First, we will focus our attention to Pavlov' theory of learning and then we will turn to explain the important features of Skinner theory of personality.

## 3.1 OBJECTIVES

After reading this unit, you will be able to:

- Define learning concepts underlying learning theories of personality;
- Explain the learning theories of personality;
- Deliberate the process of classical conditioning;
- Describe principles of classical conditioning;
- Explain how classical conditioning develops and maintains behaviours; and
- Explain the applications of classical conditioning in the modification of behaviour.

## 3.2 PAVLOV: LEARNING THEORY OF PERSONALITY

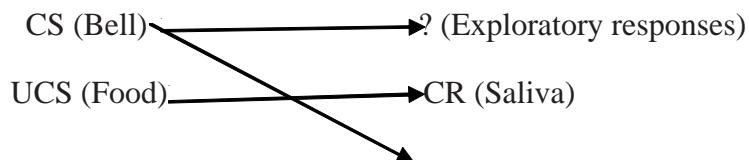
Ivan Petrovich Pavlov (1849-1936) was born in Ryazan, Russia, and attended the religious school and seminary there, where he studied natural science. He did not complete his studies, but entered St Petersburg University in 1870, where he continued to study natural science, and decided to make his career as a physiologist. After graduation in 1875, he went to the Military Medical Academy to pursue his research. He completed his doctorate there in 1883, and then went to Germany (1884-6), where he studied in Leipzig with Carl Ludwig, and in Breslau. In 1890 he was appointed professor in the department of pharmacology in the Military Medical Academy. In 1904 he received the Nobel Prize for his work on the physiology of digestion. From 1925 to 1936 he worked mainly in three laboratories: the Institute of Physiology of the Soviet Academy of Sciences (which is now named after him), the Institute of Experimental Medicine, and the biological laboratory at Koltushy (now Pavlov), near St Petersburg. Pavlov was a skillful ambidextrous surgeon; using dogs as experimental animals, he established fistulas from various parts of the digestive tract by which he obtained secretions of the salivary glands, pancreas, and liver without disturbing the nerve and blood supply.

Pavlov was a behaviourist. This means that his theories focused on observable behaviour, because behaviour can be measured and thought can not. Pavlov viewed individual differences in personality as the result of learning and different environmental experiences. Scientific evidence is the keyword in his theory. Pavlov studied reflexes, that is the automatic behaviours that are caused by a stimulus from the environment. Some reflexes, such as blinking our eyes when a puff of air comes in it, or the sucking of a baby when something is put in his/her mouth. This automatic behaviour can be manipulated. This is called conditioning.

Conditioning has been defined as a form of learning in which capacity of eliciting a response is transferred from one stimulus to another. In the conditioning process, an unconditioned stimulus is given to a person. This stimulus causes a reflex on its own. In order to explain Pavlov's learning theory of personality, first we will focus our attention on the process and principles of classical conditioning, and see how these processes and principles are found to be helpful in the development and change of personality.

### 3.2.1 Process of Classical Conditioning

In order to examine the process of classical conditioning in a systematic manner, Pavlov first performed a simple operation on his dog, in which a rubber tube was inserted into salivary gland so that the precise amount of saliva secreted during the experiment could be measured. After making these initial preparations a neutral stimulus (e.g., a bell) was presented for a brief period of time, followed quickly by a second stimulus known to elicit salivation response and called unconditioned stimulus (e.g., Meat Powder). Each pairing of conditioned stimulus (CS) and unconditioned stimulus (UCS) served as conditioning trials, and a number of such pairings were conducted in rapid succession. As a result of repeated pairing the CS (bell) acquired the ability to evoke the salivation. Because the salivation to the bell (CR) began to occur only after the conditioning, it was termed conditioned response (CR). On the other hand the salivation response to the meat powder which seems to occur automatically was termed unconditioned response (UCR).



Pavlov further stated that a conditioned stimulus can serve as the basis for further conditioning, which is demonstrated by Pavlov. In the experiment of *first-order conditioning*, food was removed from the situation, and a new stimulus (e.g., light) was paired with bell. This new stimulus (light) also acquired the property of eliciting the response. Rescorla (1973) suggested that under appropriate circumstances even *third order conditioning* can be established.

### 3.2.2 Principles of Classical Conditioning

Now we will focus on some of the important principles of classical conditioning which governs:

- i) Acquisition
- ii) Generalisation and Discrimination
- iii) Extinction and Spontaneous recovery

#### 3.2.2.1 Acquisition

There are two important factors which exert strong influence upon the ability of a conditioned stimulus to elicit a response.

- 1) First is the number of pairings between this stimulus and the unconditioned stimulus. As the number of pairings increases, the conditioned stimulus comes to evoke a conditioned response with increasing strength. The strength of the response is measured in terms of magnitude, latency and probability of occurrence of the conditioned response.
- 2) The second factor which exerts an important effect upon the process of classical conditioning is the interval, which elapses between the presentation of conditioned stimulus and unconditioned stimulus. For many different responses, conditioning appears to be maximal when this interval is 0.50 seconds. However, further researches suggest that in some cases, it can be much longer and still produce conditioning.

For example in an experiment of Garcia, McGowan, and Green, (1972), rats were given a sweet tasting liquid to drink, and were then injected with a drug which makes them sick in stomach. The rats were found to acquire an aversion to the taste even when the interval between drinking and nausea was more than an hour.

Martin Seligman (1972) noted that humans, too, learn strong aversion to the tastes of foods which makes them sick many hours after they have eaten. The acquisition of irrational fears or phobias, sexual hang-up (fetish), prejudice and hostile feelings has successfully been explained through the process of classical conditioning. In both cases, stimuli initially incapable of eliciting strong reaction acquire this ability through repeated pairing with the unconditional stimuli.

For example a child while playing a new pet suddenly hears the loud sound of a backfiring truck. In all probability the noise (which may be viewed as an unconditional stimulus) will frighten the child greatly (an unconditioned emotional response), so that the child burst into tears. If the child happens to live near a busy road and often plays with the pet, this situation may be repeated – quite by accident – on several other occasions. The child now no longer will play with the pet; instead he may recoil in terror and seek to escape from its presence.

Similarly sexual hang-up can also be explained through the process of classical conditioning. Assume that a person for whom an article of clothing (CS) is initially nothing to do with sexual arousal. Now imagine that the man sees the nude body of his lover (UCS) along with that clothing article, and it happens to take place repeatedly. Now what will happen? The sexual arousal which is a natural response to the nude body of the lover will be associated with that article of cloth. In the same way development of prejudice and hostility can also be accounted by the process of classical conditioning.

### 3.2.2.2 Generalisation and Discrimination

Once the organism is conditioned to one stimulus, it is often found that it will respond to other stimuli, similar in some dimensions to it. This phenomenon is known as stimulus generalisation. Stimulus generalisation plays a very important adaptive role. For example, the sounds made by angry bees, wasps, and hornets are highly similar, but certainly not identical. Because of stimulus generalisation, however an individual who has learned through painful experience to react with the fear and caution to one of the sound may also respond in a similar manner to others as well.

Opposite to this phenomenon is stimulus discrimination. Within the framework of classical conditioning, the ability to discriminate between two stimuli is developed when one of the two similar stimuli is consistently followed by an unconditioned stimulus while the other is not. Under such conditions, tendencies to respond to the first are strengthened, while the tendencies to respond to the second are weakened. Although the ability of human beings and other organisms to discriminate between various objects is quite impressive, but it has some limits. The disconcerting effects may result when these limits are exceeded is suggested by experiments dealing with the phenomenon of experimental neurosis. Let us what this experimental neurosis is.

In a famous experiment by Shenger-Krestovnika (1921) a circle was used as a conditional stimulus before feeding, and the dog was also trained to associate an ellipse with not being fed. By small steps the ellipse was then made more and more like a circle. When the ellipse was almost round, initially the dog could usually distinguish it from a circle. But after a few weeks the dog became neurotic: it ceased to be able to recognise obvious ellipses and a circle, became very excited, and was no longer calm during experiments. Pavlov termed the animal's abnormal condition as experimental neurosis and he attributed it to a disturbance of the balance between excitatory and inhibitory processes in the nervous system.

This explanation of experimental neurosis is grounded in Pavlov's theory of personality. He explained personality by variation in the excitation of the nervous system. He did not, however, attribute neurosis solely to external factors, such as contradictory stimuli. His experiments on experimental neuroses showed that dogs with different 'personalities' were differentially susceptible to the treatment: the same treatment on different dogs could produce quite different neuroses. Although the experiment was conducted on an animal, the results of such experiments however, suggest that while the ability of human beings to discriminate between stimuli is impressive, their ability to discriminate between highly similar stimuli has definite limits. When the environmental conditions require that these limits be exceeded, extreme stress may be induced.

### **3.2.2.3 Extinction and Spontaneous Recovery**

When a conditioned stimulus is repeatedly presented but is never followed by the unconditioned stimulus with which it was formerly associated, its ability to elicit conditioned response gradually decreases, and may fade completely. This phenomenon is known as extinction. But if the same extinguished stimulus is then presented again at a later time, its capacity to evoke the response is found to reappear. This phenomenon is termed spontaneous recovery.

Extinction of conditioned response is also very important for the development of normal personality. If we lack some mechanism for getting rid of useless reactions to stimuli which no longer serve as reliable cues for the occurrence of such events, we would become a walking bundle of useless conditioned responses.

### **3.2.3 Principles of Behaviour Modification**

The principles of classical conditioning are found to be very useful for the modification of behaviour. The principles of classical conditioning have also been applied in the treatment of neurosis and phobias. Rather than focusing on the root of the problem like a traditional psychopathologist, a behaviourist could focus on eliminating the symptom by bringing classical conditioning into play. By reinforcing the extinction of the symptom, the psychopathological illness of the patient could be eliminated (Schwartz & Lacy, 1982). For example, the therapeutic technique, known as flooding which is used to treat phobias relies on the principles of extinction. Systematic desensitisation is still another important technique successfully in dealing with a wide range of mal-adaptive behaviours, including examination anxiety, phobias, nightmares, stuttering, depression, obsession, impotence, and anorexia nervosa, based on the principles of extinction.

### **3.2.4 Process of Behaviour Modification**

The process of classical conditioning was also found useful for treating alcoholism and nicotine addiction. According to Pavlovian principles, addiction occurs

because of both the pleasurable physiological effects of nicotine and alcohol, unconditioned stimuli, and the taste of nicotine and alcohol, conditioned stimuli. When one stops ingesting the substance, as in traditional treatment procedures, it is extremely easy to become addicted again. After all, “simply not presenting a conditioned stimulus does not eliminate the relation between it and the unconditioned stimuli” (Schwartz & Lacy, 1982).

With just one use, the taste and unconditioned pleasurable effects become associated with each other again. However, if the taste of nicotine or alcohol, the conditioned response, is paired with a new unpleasant effect such as nausea and vomiting, the result will be a negative aversion to the substances in question. Such was the case when both an old alcoholic man and a young chain smoking adolescent were given apomorphine paired with alcohol and nicotine, respectively. The drug apomorphine induced severe feelings of nausea and vomiting which caused both of them to give up these addictive substances for life. This process is called counter-conditioning and has had remarkable success in curing addictions (Schwartz & Lacy, 1982), and the therapy based on the principles of counter-conditioning is termed as Aversion Therapy.

### 3.2.5 Evaluation

Pavlov started his career as a physiologist. He was interested in studying the process of digestion and at the time of studying the digestive system he discovered what has later been termed as classical conditioning. So, originally his theory was aimed to explain the leaning process. The principles of classical conditioning were found to be applicable for explaining the development of many psychopathologies. Although Pavlov’s theory is able to explain the development and change of a number of aspects of personality, but it is unable to explain the total personality of human beings. Moreover, since many of his principles are drawn from the experiments conducted on animals, it is also doubtful if these principles can also be applied to human beings.

#### Self Assessment Questions

- 1) Explain the important features of Pavlov’s theory.

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- 2) Discuss the process of classical conditioning.

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- 3) Describe the main principles of classical conditioning, and discuss their roles in the development of personality.

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- 4) The principles of classical conditioning have extensively been used in behaviour modification. Explain it.

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### **3.3 B. F. SKINNER: LEARNING THEORY OF PERSONALITY**

Burrhus Frederic Skinner was born on March 20, 1904, in a small Pennsylvania town of Susquehanna. His father was a lawyer, and his mother a strong and intelligent housewife. His upbringing was old-fashioned and hard-working. He received his BA in English from Hamilton College in upstate New York. He didn't fit in very well, not enjoying the fraternity parties or the football games. He wrote for school paper, including articles critical of the school and the faculty.

To top it off, he was an atheist — in a school that required daily chapel attendance. He wanted to be a writer and did try, sending off poetry and short stories. When he graduated, he built a study in his parents' attic to concentrate, but it just wasn't working for him. Ultimately, he resigned himself to writing newspaper articles on labour problems, and lived for a while in Greenwich Village in New York City as a "bohemian." After some traveling, he decided to go back to school, this time at Harvard. He got his masters in psychology in 1930 and his doctorate in 1931, and stayed there to do research until 1936. Also in that year, he moved to Minneapolis to teach at the University of Minnesota. There he met and soon married Yvonne Blue. They had two daughters, the second of which became famous as the first infant to be raised in one of Skinner's inventions, the air crib. In 1945, he became the chairman of the psychology department at Indiana University. On August 18, 1990, B. F. Skinner died of leukemia after becoming perhaps the most celebrated psychologist since Sigmund Freud.

Skinner's theory of personality, like other learning theories of personality did not grow out of the therapeutic situations, rather it emerged from the works carried out in laboratory settings. Skinner derived his principles of learning from the study of individual subjects in precisely controlled condition. He focused on the study of individual subjects instead of generalised group which reflected his belief that lawful control can be seen in individual behaviour.

While other personality theorists attempted to understand personality by studying groups, Skinner attempted to develop general laws by studying individual. Skinner, in his theory of personality, emphasised some particular aspects of human nature like determinism, elementalism, changeability, objectivity, reactivity and knowability, while rejected the other aspects like rationality-irrationality and homeostasis-hetrostasis completely because he did not consider the internal sources of human behaviour important for explaining behaviour.

According to Skinner study of personality can be done on the basis of systematic and precise evaluation of individual's genetic and idiosyncratic learning history. It means that for studying the personality one has to study and discover the relationship between the behaviour of the organism and its reinforcing consequences. Skinner's theory is based on the assumptions that behaviour is lawful, it can be predicted, and it can be controlled. Skinner's theory can be explained in the following headings:

- Operant behaviour
- Schedule of reinforcement
- Aversive Stimuli
- Secondary Reinforcement
- Successive approximation or Shaping
- Superstitious behaviour
- Abnormal Behaviour

Now let us discuss these aspects of Skinner's theory in some detail.

### 3.3.1 Operant Behaviour

According to skinner personality of an individual can be understand through the study of his behaviour. He further stated that behaviour can be distinguished in two types, viz., (i) respondent and (ii) operant. Respondent behaviours are those which are elicited by the stimuli of the environment that are well-known and can be identified easily. These behaviours are involuntary and automatic in the sense that if the stimuli is presented before the organism, the behaviour related to that stimuli will occur automatically. The organism has no control over it. Constrictions of pupil, salivation, sweating etc. are examples of such behaviours. These behaviours are usually not learned by the organism at simple level, but at complex level.

Operant behaviours, on the other hand, are those behaviours which are not caused by any specific stimuli of the environment. The stimuli of the operant behaviour are difficult to identify. These behaviours are performed by the individual voluntarily. Skinner was of the opinion that behaviours of human beings are predominantly operant in nature.

Operant behaviours or responses can be tied to a readily identifiable stimulus. These responses seem to be spontaneous and voluntary. Another property of this kind of behaviour is that its frequency of occurrence is changed according to the event that follows. More specifically, the strength of these responses increases when the response occurs and is followed by reinforcement.

The peculiarity of this class of response gives rise to Skinner's use of the term "operant". An operant is a response that operates in the environment and changes

it. The changes in the environment affect the subsequent occurrence of the response. In operant conditioning, therefore, the reinforcer is not associated with an eliciting stimulus. Instead it is associated with the response.

Skinner prepared a special cage (called “Skinner box”) that has a bar or lever on one wall that, when pressed, causes a little mechanism to release a food pellet into the cage. The rat is bouncing around the cage, doing whatever it is rats do, when he accidentally presses the lever. So in operant conditioning it is essential that the reinforcer be presented after the occurrence of the response. A reinforcer is defined as anything that strengthens a tendency to behave in a particular way (food satisfies hunger so you eat; money reinforces the likelihood that you will keep working; a child will behave well overtime because mum and dad approve him).

In other words a reinforcer is a stimulus event which if it occurs in the proper temporal relation with a response, tends to maintain or to increase the strength of a response. Reinforcer may either be positive or negative. The likelihood of the behaviour will be increased by the positive reinforcement (adding something pleasant) and also by the negative reinforcement (turning off/removing something unpleasant).

Skinner’s entire system is based on operant conditioning. Skinner’s process of operant conditioning is given below: A rat is moving around the cage doing what a rat does normally. Accidentally it presses the lever and a food pellet falls into the cage. The operant (pressing the lever) is the behaviour just prior to the reinforcer, which is the food pellet, of course. In no time at all, the rat is furiously peddling away at the lever, hoarding his pile of pellets in the corner of the cage. The behaviour followed by a reinforcing stimulus results in an increased probability of that behaviour occurring in the future. What if you do not give the rat any more pellets? Apparently, after a few futile attempts, he stops his lever-pressing behaviour. This is called *extinction* of the operant behaviour. A behaviour no longer followed by the reinforcing stimulus results in a decreased probability of that behaviour occurring in the future.

Now, if you were to turn the pellet machine back on, so that pressing the lever again provides the rat with pellets, the behaviour of lever-pressing will return right back into existence, much more quickly than it took for the rat to learn the behaviour the first time. This is called *spontaneous recovery*. This is because the return of the reinforcer takes place in the context of a reinforcement history that goes all the way back to the very first time the rat was reinforced for pressing on the lever.

### 3.3.2 Schedules of Reinforcement

Skinner decided to reduce the number of reinforcements he gave his rats for whatever behaviour he was trying to condition, and observed that the rats kept up their operant behaviours, and at a stable rate, no less. This is how Skinner discovered schedules of reinforcement. Following schedules of reinforcement were applied by Skinner:

- 1) ***Continuous reinforcement:*** In continuous reinforcement schedule, every time that the rat does the behaviour (such as pushing the lever), it gets the food.

- 2) **Intermittent Reinforcement Schedule:** In intermittent reinforcement schedule the rat does not get the reinforcement every time he presses the lever. It is further divided into two types: (a) The fixed ratio (b) The fixed interval
- a) The *fixed ratio schedule* was the first one Skinner discovered: If the rat presses the lever three times, say, he gets reinforcement. Or five times. Or twenty times. Or “x” times. There is a fixed ratio between behaviours and reinforcers.
  - b) The *fixed interval schedule* uses a timing device of some sort. If the rat presses the lever at least once during a particular stretch of time (say 20 seconds), then he gets reinforcement. If he fails to do so, he does not get it. Even if he presses the bar a hundred times during that 20 seconds, he still only gets one reinforcement. One strange thing that happens is that the rats tend to “pace” themselves: They slow down the rate of their behaviour right after the reinforcer, and speed up when the time for it gets close.

Skinner also looked at *variable ratios and variable schedules*.

Variable ratio means you change the “x” each time — first it takes 3 presses to get the food, then 10, then 1, then 7 and so on. Variable interval means you keep changing the time period — first 20 seconds, then 5, then 35, then 10 and so on.

With the variable interval schedule, they no longer “pace” themselves, because they can no longer establish a “rhythm” between behaviour and reward. Most importantly, these schedules are very resistant to extinction.

### 3.3.3 Aversive Stimuli

An aversive stimulus is the opposite of a reinforcing stimulus, something we might find unpleasant or painful. A behaviour followed by an aversive stimulus results in a decreased probability of the behaviour occurring in the future. This both defines an aversive stimulus and describes the form of conditioning known as punishment. If you shock a rat for making a response, the rat will stop to make that response. If you spank the baby for throwing his toys he will throw his toys less and less (maybe). On the other hand, if you remove an already active aversive stimulus after a rat or baby performs a certain behaviour, you are doing negative reinforcement. If you turn off the electricity when the rat stands on his hind legs, he will do a lot more standing.

Skinner (contrary to some stereotypes that have arisen about behaviourists) does not “approve” of the use of aversive stimuli. It is not because of ethics, but because they do not work well. That’s because whatever was reinforcing the bad behaviours has not been removed, as it would have been in the case of extinction. This hidden reinforcer has just been “covered up” with a conflicting aversive stimulus. All baby needs to do is wait till you are out of the room, or find a way to blame it on its brother, or in some way escape the consequences, and thus the baby is back to its old ways. In fact, because the baby now only gets to enjoy its reinforcer occasionally, the baby has gone into a variable schedule of reinforcement, and it will be even more resistant to extinction than ever.

### 3.3.4 Secondary Reinforcement

A neutral stimulus presented at the time of delivering the response also tends to acquire the reinforcing ability. For example in the Skinner box at the time of delivering reinforcement a sound of click is also produced repeatedly each time. It was found that this click of sound itself acquires the reinforcing characteristics being associated with the original reinforcer. The sound of click is now called secondary reinforcer.

Skinner believed that the conditioned or secondary reinforcers are of great importance in controlling human behaviour. It is obvious that our every action is not maintained by the presentation of unconditioned or primary reinforcers such as food, water, and sex. It is possible to reason that much of our behaviours relies on secondary reinforcement. The most common example of secondary reinforcer is money. It has no intrinsic value of its own, but being paired with a number of different unconditioned primary reinforcers, it has itself acquired the reinforcing quality. The notion of secondary reinforcement is important in Skinner's theory of personality, and he used it effectively to account for the maintenance of many responses that takes place as part of our social behaviour.

### 3.3.5 Successive Approximation or Shaping

A question Skinner had to deal with was how we get to more complex sorts of behaviours. He responded with the idea of *shaping*, or “the method of successive approximations.” Basically, it involves first reinforcing a behaviour only vaguely similar to the one desired. Once that is established, you look out for variations that comes a little closer to what you want, and so on, until you have the organism performing a behaviour that would never show up in ordinary life. Skinner and his students have been quite successful in teaching animals to do some quite extraordinary things.

### 3.3.6 Superstitious Behaviour

The type of conditioning, in which there is no causal relationship between the response and the reinforcer, is referred by Skinner as superstitious conditioning. When the reinforcement happens to occur purely due to chance factor at the time the individual made a particular response, the individual started to believe that the particular response made by him was the cause for getting the reinforcement, while there was no functional or causal relationship between the response he made and the reinforcement he got.

According to Skinner many of our superstitious beliefs are the result of this conditioning. The members of the primitive tribe, for example, may practice rain making by the performance of some ritualised dance. On some occasions rain does happen to follow the performance. Thus the rain-making dance is reinforced and tends to be repeated. The tribal people believe that a causal relationship exists between the dance and the rain. Similarly, take another example of a cat crossing your way: a superstition commonly found in Indian society. Suppose you were going for some important work, say, for example, to appear in your annual examination. When you were on the way, a cat happens to cross the way. If you could not do well in the examination due to one or other reasons, you started to attribute your failure to the cat crossing your way. While in reality there was no functional relationship between the cat crossing your way and the performance in the examination.

### 3.3.7 Abnormal Behaviour

The constructs like repressed wishes, an identity crisis, conflicts between ego and superego, etc. did not appeal to Skinner for explanation of the abnormal behaviours. He advocated that the framework on which his theory is based is sufficient to understand and explain the abnormal behaviour. Abnormal behaviour is assumed to be the same in its principles of development as normal behaviour.

In putting forward a programme for the treatment of abnormal behaviour, Skinner repeatedly asserted that the goal is simply to replace abnormal behaviour with normal behaviour. The undesirable behaviour can be modified by the manipulation of the environment in a manner determined by the techniques of operant and respondent conditioning.

Through these techniques, we can extinguish an undesirable behaviour (by removing the reinforcer) and replace it with a desirable behaviour by reinforcement. It has been used on all sorts of psychological problems such as addictions, neuroses, shyness, autism, even schizophrenia. It has been observed that this technique works particularly well with children.

The other technique used for behaviour modification is *token economy*. This technique is used primarily in institutions such as psychiatric hospitals, juvenile halls, and prisons. Certain rules are made explicit in the institution, and behaving appropriately is rewarded with tokens, including poker chips, tickets, funny money, recorded notes, etc. The tokens can be traded in for desirable things such as candy, cigarettes, games, movies, time out of the institution, etc.

### 3.3.8 Evaluation

Skinner's theory of personality like other theories of personality, also has certain strengths and also some weaknesses. Some of the strengths of the Skinner's learning perspectives on personality are as follows:

Skinner based his theory upon impressive experimental evidence. It is supported by a number of scientific and testable constructs supported by research findings.

Skinner, in his theory of personality, places great emphasis on the importance of the environment to explain the situational variations in behaviour.

The theory has useful therapeutic applications. Psychotherapists have used the principles of operant conditioning for treating a variety of behaviour problems successfully.

However, in spite of the above merits Skinner's theory has also been criticized on the following grounds:

Skinner's theory tends to explain specific behaviour and behaviour changes but not a comprehensive theory of personality. The word personality itself seems missing from the theory.

The role of biological factors has been ignored. Skinner overlooked the individual differences present from birth.

In-depth case studies are lacking, partly because comprehensive personality assessment tests have not been developed from the learning perspective.

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The role of biological factors has been ignored. Skinner overlooked the individual differences present from birth.

Skinner's theory is unable to cover the whole story of personality. For example language is certainly acquired to some degree via learning processes: i.e. operant conditioning, reinforcement and shaping all play a part. However, according to Noam Chomsky (1959) these concepts do not explain fully how a child learns to speak. How for example do children come up with sentences they have never heard before? Why the incredible similarity in language development across cultures?

Boulding (1984) questions Skinner's application of principles of animal behaviour to the much more complex human behaviour. In using animals as substitutes for humans in the exploration of human behaviour, Skinner is making the big assumption that general laws relating to the behaviour of animals can be applied to describe the complex relations in the human world.

If this assumption proves false, then the entire foundation upon which Skinner's theory rests will come crashing down. More experiments with human participants must be done to prove the validity of this.

### Self Assessment Questions

- 1) What are the main characteristics of learning theory of personality?

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- 2) Discuss the salient features of Skinner's theory of personality.

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- 3) Explain the procedures of operant conditioning.

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4) What do you mean by 'operant behaviour'?

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5) What do you mean by schedule of reinforcement?

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6) How does a superstitious behaviour acquired? Explain it in the light of Skinner's theory.

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7) How can the principles of operant conditioning be applied in the modification of undesirable behaviours?

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### 3.4 LET US SUM UP

Learning theory of personality presents a model of personality that emphasises observable behaviour, the relationship between stimuli and responses, and the impact of learning. The behaviourist position is that personality is no more (or less) than a collection of learned behaviour patterns. Personality, like other learned behaviour, is acquired through classical and operant conditioning, observational learning, reinforcement, extinction, generalisation, and discrimination. In the present unit we have discuss two important learning theories of personality. First, we focused on Pavlov' theory of learning and then we explained Skinner theory of personality.

Classical conditioning, called Pavlovian conditioning, explains how a previously neutral stimulus can come to have a learned effect on someone. This takes place by pairing (associating) an unconditioned stimulus (which already produces an unconditioned response) with a neutral stimulus (conditioned stimulus). In this way, the organism learns to respond to the conditioned stimulus with a conditioned response which is like the unconditioned response. The strength of a conditioned response depends on the number of pairings between the conditioned stimulus and the unconditioned stimulus and also on the interval, which elapses between

the presentation of conditioned stimulus and unconditioned stimulus. The acquisition of irrational fears or phobias, sexual hang-up (fetishism), prejudice and hostile feelings has successfully been explained through the process of classical conditioning. Once the organism is conditioned to one stimulus, it is often found that it will respond to other stimuli, similar in some dimension to it. This phenomenon is known as stimulus generalisation. Stimulus generalisation plays very important adaptive role. Opposite to this phenomenon is stimulus discrimination. Within the framework of classical conditioning the ability to discriminate between the two stimuli is developed when one of the two similar stimuli is consistently followed by an unconditioned stimulus while the other is not. This phenomenon is accounted for developing the experimental neurosis.

The principles of classical conditioning are found very us effective for the modification of behaviour. It has been applied in the treatment of neurosis, phobia, alcoholism and nicotine addiction Rather than focusing on the root of the problem like a traditional psychopathologist, a behaviourist could focus on eliminating the symptom by bringing classical conditioning into play. By reinforcing the extinction of the symptom, the psychopathological illness of the patient could be eliminated.

According to Skinner's theory, individual differences in behaviour are largely the result of different kinds of learning experiences encountered by different people. Some behaviour patterns may be learned through direct experience Skinner stated that the personality of an individual can be understood through the study of his behaviour. He further stated that behaviour can be distinguished in two types – respondent and operant. Operant behaviours are those behaviours which are not caused by any specific stimuli of the environment. Classical conditioning is labeled by Skinner as respondent conditioning, whereas his own conditioning procedure is termed by him as operant conditioning.

Skinner's entire system is based on operant conditioning. In operant conditioning the desired behaviour of the organism is strengthened by presenting the reinforcement. A reinforcer is defined as anything that strengthens a tendency to behave in a particular way. In other words a reinforcer is a stimulus event which if it occurs in the proper temporal relation with a response, tends to maintain or to increase the strength of a response. Reinforcer may either be positive or negative. The likelihood of the behaviour will be increased by the positive reinforcement (adding something pleasant) and also by the negative reinforcement (turning off/removing something unpleasant).

Skinner identified different schedules of reinforcement. In continuous reinforcement schedule, the organism gets reinforcement every time he does the behaviour. In the fixed ratio schedule the reinforcement is given to the organism if he made the response at certain number of times. For example if the rat presses the lever three times, say, he gets reinforcement, Or five times, Or twenty times, Or “x” times. In fixed interval schedule a timing device of some sort is used. If the rat presses the lever at least once during a particular stretch of time (say 20 seconds), then he gets reinforcement. If he fails to do so, he does not get it. Variable ratio means you change the “x” each time — first it takes 3 presses to get the food, then 10, then 1, then 7 and so on. Variable interval means you keep changing the time period — first 20 seconds, then 5, then 35, then 10 and so on. With the variable interval schedule, they no longer “pace” themselves, because they can no longer establish a “rhythm” between behaviour and reward. Most importantly, these schedules are very resistant to extinction.

An aversive stimulus is the opposite of a reinforcing stimulus, something we might find unpleasant or painful. A behaviour followed by an aversive stimulus results in a decreased probability of the behaviour occurring in the future. But Skinner doesn't "approve" of the use of aversive stimuli - not because of ethics, but because they don't work well. Instead of extinguishing the behaviour it only suppresses it. Skinner, on the other hand believed that conditioned or secondary reinforcers are of great importance in the control of human behaviour.

It is obvious that our every action is not maintained by the presentation of unconditioned or primary reinforcers. The most common example of secondary reinforcer is money. It has no intrinsic value of its own, but being paired with a number of different unconditioned or primary reinforcers, it has itself acquired the reinforcing quality. The notion of secondary reinforcement is important in Skinner's theory of personality, and he used it effectively to account for the maintenance of many responses that take place as part of our social behaviour. According to Skinner method of successive approximation or shaping helps us in learning of complex behaviours. It involves first reinforcing a behaviour only vaguely similar to the one desired. Once that is established, you look out for variations that come a little closer to what you want, and so on, until you have the animal performing a behaviour that would never show up in ordinary life.

Process of operant conditioning is found useful for the development and treatment of superstitious and abnormal behaviour. According to Skinner when the reinforcement happens to occur purely due to the chance factor at the time the individual made a particular response, the individual started to believe that the particular response made by him was the cause for getting the reinforcement, while there was no functional or causal relationship between the response he made and the reinforcement he got.

According to Skinner many of our superstitious beliefs are the result of this conditioning. The constructs like repressed wishes, an identity crisis, conflicts between ego and superego, etc. did not appeal Skinner for the explanation of the abnormal behaviour. He advocated that the framework on which his theory is based is sufficient to understand and explain the abnormal behaviour. Abnormal behaviour is assumed to be the same in its principles of development as normal behaviour. In putting forward a programme for the treatment of abnormal behaviour, Skinner repeatedly asserted that the goal is simply to replace abnormal behaviour with normal behaviour.

### **3.5 UNIT END QUESTIONS**

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- 1) How does the learning theory of personality differ from the psychoanalytic theory of personality?
- 2) What are the main features of Behaviouristic theory of personality?
- 3) Discuss the principles of classical conditioning..
- 4) Discuss the process of classical conditioning.
- 5) Describe the principles of classical conditioning, and discuss how it can be applied in explaining the development of personality.
- 6) What are the salient features of Skinner's theory of personality? Discuss it.
- 7) What is 'operant behaviour'? How does it differ from the 'respondent behaviour'?

- 8) What do you mean by schedule of reinforcement? Discuss its importance in the acquisition of behaviour.
  - 9) How does a superstitious behaviour acquired? Explain it in the light of Sinner's theory.
  - 10) How can the principles of operant conditioning be applied in the modification of undesirable behaviours?
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### 3.6 GLOSSARY

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<b>Classical conditioning</b>	: A form of learning in which stimuli initially incapable of eliciting certain responses acquire the ability to do so through repeated pairing with other stimuli that are able to elicit such responses.
<b>Conditioned response</b>	: A response evoked by a conditioned stimulus.
<b>Conditioned stimulus</b>	: A stimulus which acquires the capacity to evoke particular responses through repeated pairing with another stimulus capable of eliciting such reactions.
<b>Continuous reinforcement :</b>	Condition under which a particular form of behaviour is followed by reinforcement on every occasion it is emitted.
<b>Experimental neurosis</b>	: Disturbances in behaviour produced in the laboratory by requiring organisms to make discriminations of which they are incapable.
<b>Extinction</b>	: The process through which conditioned response is weakened and eventually eliminated.
<b>Fixed interval schedule of reinforcement</b>	: A schedule in which the first response following the passage of a fixed interval of time yields reinforcement.
<b>Fixed ratio schedule of reinforcement</b>	: A schedule in which the first response following the emission of a specific number of responses yields reinforcement.
<b>Generalisation</b>	: The process by which a learned response will occur in more situations than those in which was first learned; it will be also applied to similar situations.
<b>Higher-order conditioning :</b>	A process in which previously established stimuli serve as the basis for further conditioning.
<b>Operant</b>	: Responses freely emitted by organisms. The frequency with which such responses appear may be strongly affected by the application of various schedules of reinforcement.
<b>Operant conditioning</b>	: A form of learning in which responses that yield positive consequences or lead to escape from negative outcomes are strengthened.

- Schedules of reinforcement :** Rules governing the delivery of reinforcement. When a given schedule is in effect, reinforcement can be obtained only by meeting its requirements.
- Secondary reinforcer :** A stimulus which acquires reinforcing properties through association with a primary reinforcer such as food or water.
- Second-order conditioning:** Classical conditioning established on the basis of earlier conditioning. That is, previously conditioned stimuli are employed as the basis for the further conditioning.
- Successive approximation :** Small changes in the behaviour in the direction desired by a trainer. Such changes are reinforced during the process of shaping.
- Superstitious conditioning :** The type of conditioning, in which there is no causal relationship between the response and the reinforcer, is referred by Skinner as superstitious conditioning.
- Unconditioned response :** A response evoked by an unconditioned stimulus.
- Unconditioned stimulus :** A stimulus possessing the capacity to elicit reactions from the organisms in the absence of prior conditioning.

### **3.7 SUGGESTED READINGS AND REFERENCES**

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