

— STARTING PSYCHOLOGY —

— AS Psychology Summer Assignment —

Your assignment over the summer holiday for the QEGS Psychology A-level course is to read this handout and complete the worksheet at the back of it.

This handout is an introduction to Psychology. When you read it, you will get an overview of the subject as well as an outline of some of the most important theories in the discipline.

Please read the handout and complete the questions at the back of the booklet. I will collect the completed booklet from you in our **first lesson in September**. It is quite a substantial piece of work so I would advise you to begin it sooner rather than later.

Completing the worksheets is a course requirement.

Why are we asking you to do this?

Psychology is a new subject for you, and it is important that you make an informed choice about studying the subject.

Psychology is a fascinating but challenging A-level that adopts a scientific approach to investigating and explaining human behaviour. Only students who are prepared to work hard gain worthwhile grades, and the more effort you make the more you will benefit academically and personally.

Welcome to Psychology! You are reading this handout because you have elected to study A-level Psychology, and what a good choice! The course should give you some fundamental and lasting insights into human behaviour and help you to cope better with your own life and with the people around you. Besides learning about human behaviour, you should also learn how to express yourself coherently, how to challenge information, how to be confident about yourself, and to be a better friend, employee, and member of society! This handout is designed to introduce you to the

general issues that make psychology so fascinating.

1) What is Psychology?

Psychology is the science of mind, behaviour and experience.

The term "science" refers to the **objective** study of something. Psychologists use **reliable** methods of measuring, **control** extraneous variables and statistically analyse their results. Psychologists study **behaviour** that people (and other animals) do. "Mind" is mental behaviour including decision-making, memory, perception, problem-solving and attention. "Behaviour" includes being aggressive or kind, hearing and seeing, breathing and walking, shouting and eating, being a friend or a parent, and so on. These are all examples of "behaviour".

Psychology tries to produce valid [truthful] research so its theories can be applied to real life. This gives us a dilemma: we know thoughts are happening, can see neural activity on a PET scan, but cannot actually see what someone is thinking. So some psychologists believe that the actual, overt behaviour that a participant makes is the only valid form of evidence; others argue that merely recording that behaviour is unhelpful in trying to understand the motives behind it.

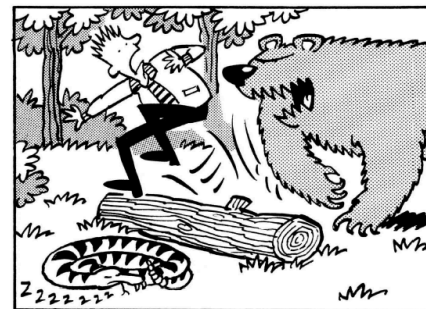
Psychologists are also interested in "experience". If we want to understand behaviour we also need to consider what the experience is like for the individual doing the behaviour. For example, if we want to study aggression, it matters what the person who is behaving aggressively *feels like* when they are aggressive.

Psychology is concerned with the study of all human and non-human animals. In this course, however, we will focus on the study of human behaviour.

2) Is Psych. Just Common Sense?

Many people say "Well, psychology is only common sense!" Everyone is an "armchair psychologist". We all have views about why people behave as they do and, in a sense, these are "theories of psychology". For example, your friend might say "Those football fans act like that because they're

hooligans". By saying "They're hooligans" your friend is offering an explanation for the fans' behaviour, such as "They have no care for the rules of society". But how do we *know* this explanation is correct? That's the starting point for psychological research.



Common sense can be contradictory: "Look before you leap" vs. "He who hesitates is lost".

Psychologists observe behaviour, put forward an explanation or theory to account for the behaviour, and then conduct research to see if their theory is correct. Consider the following example:

Several years ago, a young woman was stabbed to death in the middle of a street in a residential section of New York City. Although such murders are not entirely routine the incident received little public attention until several weeks later when the New York Times disclosed another side to the case: at least 38 witnesses had observed the attack and none had attempted to intervene. Although the attacker took more than half an hour to kill Kitty Genovese, not one of the 38 people who watched from the safety of their own apartments came out to assist her. Not one even lifted the telephone to call the police. (From A.M. Rosenthal, 1964, Thirty-eight witnesses New York: McGraw-Hill)

Two psychologists **John Darley and Bob Latané's (1968)** read this report. It made them wonder, "Why do bystanders in an emergency fail to offer assistance?" The *common-sense* answer, given by the *New York Times*, was that city dwellers were a callous and uncaring lot of people. Darley and Latané thought that perhaps the reason was related to the number of bystanders-in this case there were 38 "silent witnesses". Could it be that each individual witness assumed someone else was taking action to end the emergency situation and therefore they personally didn't need to do anything?

Up to this point you might say that Darley and Latané's thinking was not necessarily more than common sense (although it *was* an unusual explanation). But what they did next is what distinguishes psychology from common sense. They set up an experiment to test their opinions. They arranged for students to discuss personal problems with each other over an intercom. Except that there was only one actual student involved: the other participants were confederates of the experimenter pretending to be participants. During the conversation, one of the "students" appeared to have an epileptic fit. If the real student was under the impression that five people were listening to the conversation it took them three times longer before they offered help than if they thought there were only two people.

This study appears to demonstrate that it is the number of people present that affects how likely one is to offer help in an emergency situation. This is psychology, the attempt to explain why people behave in the way they do, and to support these explanations with objective evidence.

Hindsight Bias — You still may think "I knew it all along", but this is called hindsight bias, the tendency to be wise after the event. Two psychologists, **Fischhoff** and **Beyth**, conducted a study to demonstrate hindsight bias in action. **Fischhoff** and **Beyth (1975)** asked American students to estimate the probability of various possible outcomes on the eve of President Nixon's trips to China and Russia. After the trips were over, the students were asked to do the same task, but without taking into account their knowledge of what had actually happened. In spite of these instructions, participants did use the benefit of hindsight and couldn't remember how uncertain things had looked before the trips, thus demonstrating hindsight bias.

Hindsight bias seems to be very strong, and is hard to eliminate. In another study, **Fischhoff (1977)** told the participants about hindsight bias, and encouraged them to avoid it. However, this had little or no effect on the size of the hindsight bias. Hindsight bias poses a problem for teachers of psychology, because it produces students who are **unimpressed** by almost everything in psychology!

Research Methods — Darley and Latané's bystander study is an example of one kind of research study. It is a laboratory experiment. Psychologists use other methods of research besides the experiment, and we will look at them during the A-level course. Some of the methods are rather less "artificial" and more like real life. For example, in another study of bystander behaviour, that took place in 1969, Piliavin, Rodin, and Piliavin

(or Piliavin et al., 1969) arranged for someone to "collapse" on an underground train, in one instance appearing sober but carrying a black cane and in the other appearing to be drunk, and timed how long it took for people on the train to offer help.

If research is like "real life" we say it has greater external validity and therefore it will tell us more about "real" behaviour. The problem is that the more the research is like real life, the less easy it is to control other factors that might influence the particular behaviour we want to study (called the "target behaviour") - in our example the extent of helping behaviour.

Key Terms:

Research: the process of gaining knowledge and understanding via either theory or empirical data collection.

Hindsight bias: the tendency to be wise after the event, using the benefit of hindsight.

Experiment: a procedure undertaken to make a discovery about causal relationships. The experimenter manipulates one variable to see its effect on another variable.

External validity: the validity of an experiment outside the research situation itself; the extent to which the findings of a research study are applicable to other situations, especially "everyday" situations

"et al." - when there are more than two authors of a research paper, "et al.", which is Latin for "et alia" or "and others", to refer to second and subsequent researchers.

The case of Kitty Genovese was in fact real life, but just observing what happened did *not* allow us to know for sure why the witnesses didn't respond. We have to narrow down the possibilities to determine if the number of people was the cause. There may be other explanations as well, and to find them out we would need to conduct other research. In each research study, we have to control irrelevant factors to demonstrate the effect of the one we think is important.

3) The Branches of Psychology

If you don't quite understand what psychology is, then maybe another way to approach it is to ask, "What do psychologists do?" Some psychologists conduct research into different branches of psychology, such as the core areas of Cognitive, Biological, Social, and Behavioural [or Learning] and other areas such as Individual Differences, Clinical, Developmental and Comparative. Other psychologists apply this research in areas such as health, business, crime, and education, and other work as clinical psychologists helping people with mental disorders.

Cognitive Psychology — Cognitive psychologists look at topics such as memory, perception, thought, language, attention, and so on. In other words they are interested in mental processes and seek to explain behaviour in terms of these mental processes. There are many applications of cognitive psychology, ranging from suggestions about how to improve your memory (useful for examination candidates!) to how to improve performance in situations requiring close attention (such as air traffic control).

Biological Psychology — is interested in how to explain behaviour in terms of physiological processes. They look at topics such as twin and adoption studies to try to understand the effect of genetic inheritance and behaviour, how the nerves function, how hormones affect behaviour, and how the different areas of the brain are specialised and related to different behaviours.

Neurology and biochemistry underlie all behaviour. What happens when a person sees a sunset? The biological explanation would be that light reflected from the landscape forms an image on the retina, which is converted into a neural signal and transmitted to the brain, and so on. No one disputes that this is true, and the process is absolutely essential, but does it give a full and adequate explanation of what is going on? A psychological explanation would probably include the personal and social relevance of the experience, which many would argue is of equal value.

Social Psychology — is interested in the way people affect each other. They look at, for example, interpersonal relationships, group behaviour, leadership, majority and minority influence, obedience to those in authority, and the influence of the media. Social psychology differs from sociology in placing greater emphasis on the individual as a separate entity; sociologists are interested in the structure and functioning of groups, whereas social psychologists look

at how these processes influence the individual members of a social group.

Learning [Behavioural] Psychology

— is interested in how behaviour can be changed through experience. Behaviourists call learning ‘conditioning’ and look at conditioning due to associations, the effect of rewards and punishments and how we learn from imitating others. Also whether aggression, phobias and mental disorders like depression could be learnt and treated using re-conditioning.

Individual differences — is literally the study of the ways that people are unique in terms of their *psychological* characteristics, for example, intelligence, aggressiveness, willingness to conform, masculinity and femininity, and just about every behaviour you can think of. An important individual difference can be found in the degree to which a person is mentally healthy. This is specifically referred to as the study of abnormal behaviour and forms the basis of

Clinical Psychology [aka abnormal or atypical psychology], studies childhood and adult disorders such as schizophrenia and depression, and conditions such as dyslexia and autism. It seeks to find explanations and valid methods of treatment. Conversely, a relatively new area is **Happiness Psychology** which is interested in why some people appear to be more satisfied, optimistic, positive and, well, happy than others.

Developmental Psychology — study the changes occurring over a person's lifetime, starting from conception and infancy through adolescence, adulthood, and finally old age. This approach has also been called lifespan psychology. Developmental psychologists focus on how particular behaviours change as individuals grow older, for instance, they look at the changes in the way children think. They also look at attachment, how children acquire language; at moral, social, and gender development; and at changes such as coping with retirement or with memory loss.



Comparative psychologists study non-human animals and make comparisons between them and humans

Other branches of psychology — The four core areas just described, together with Clinical, Individual Differences and Development, form the basis of the Edexcel A-level course, but there are other areas of psychology as well. For example, **comparative psychology** is the study of non-human animals-comparisons are made between animals of different species to find out more about human behaviour. The study of animal behaviour is a field of study



in its own right and straddles psychology and biology. **Parapsychology** — is the study of unusual, logic-defying phenomena such as ghosts, extra-sensory perception and mind-control. Nope, we do not study this at A-level. But we do study **Freud's Psychodynamic Theory** in relation to aggression [see pg8].

KEY TERMS

Demand characteristics: features of an experiment that help participants to work out what is expected of them, and lead them to behave in certain predictable ways.

Interview: a verbal research method in which the participant answers a series of questions.

Experimenter bias: the effect that the experimenter's expectations have on the participants and therefore the results of the study.

Experiment: a procedure undertaken to make a discovery about causal relationships. The experimenter manipulates one variable to see its effect on another variable.

Individual differences: the characteristics that vary from one person to another.

Quantitative data: data in the form of scores or numbers (e.g. on a scale running from 1 to 7).

Qualitative data: non-numeric data, e.g. conversations, behaviour patterns, paintings, TV programmes, play activities, etc.

A theory is an organised collection of statements that attempt to explain

observed phenomena.

4) Psychology and Science

Studying psychology not only introduces you to what psychologists study and what they do, it also gives you a broader understanding of how science works. It is hoped that by studying psychology you will be able to explore the place and contribution of science in the wider world.

Like many other sciences, psychology developed from philosophy, and questions about human behaviour, morality, and thought are not new. The debate as to whether psychology is a science has also been around for some time and hopefully will get you thinking about what is involved in something being a science.

Does being a science depend on the theoretical underpinning of the research, the questions being asked, or the nature of the hypotheses that are tested? Does it depend on the methodology used and the way in which the information is presented and interpreted? Does it depend on where research is used? Does it depend on when the research is published or whether you can disprove your ideas? The following box is designed to get you thinking about what is involved in undertaking research into humans.

Research into humans

Say you read a magazine article that claimed: Blondes have more fun than brunettes.

How would you find out if there was any support for the statement? At first sight this might seem a simple area to research. Find some blondes, find some brunettes, and ask them who has more fun. But even a moment's thought about this question clearly raises problems.

Who will be our sample? Men? Women? Under tens? Over seventies?

Which culture? Swedish? Egyptian?

How will we define blonde/brunette? Will we only use natural blondes and brunettes or should we also look at people who change their hair colour? Would we make sure that everyone has the same hair style?

How will we define fun? Should the participant or the experimenter define "fun"?

What research method should we use? If we use a questionnaire, participants may realise the purpose of the questions and give biased answers (so called 'demand characteristics'). If we interview the participants, the experimenter may be biased and subconsciously get the answers

expected (experimenter bias).

How about running an experiment and getting someone to change their hair colour, so that in condition A their hair colour is brunette and in condition B their hair colour is blonde. But once again how do we define having fun? One person's idea of fun might differ from someone else's and so we need to take individual differences into account.

What data are we trying to collect and how would we present it? This is an important question. Are we looking to collect quantitative data (e.g. mark on a scale how much fun you think you have, with 1 being "very little" and 5 being "a great deal") or are we looking for qualitative data where people describe what type of fun they have, and how often.

Having collected the data we need to know what to do with them. Should we describe our findings using averages and graphs, or should we use inferential statistics to analyse the probability of these results occurring by chance?

Who would publish our research? Having undertaken the research we might need to explore who would publish it. It would need to be reviewed by our peers who might decide that the methodology was flawed or the data were biased.

Have we taken ethical considerations into account? Did we deceive any of the participants about the nature of our study? Might it encourage inappropriate stereotyping of blondes?

How might wider society use this information? Has the information gained been used inappropriately? For example, a hair dye company might decide to use these data to boost their sales.

What underlying theories might we use to explain our findings? Is the link between hair colour and genetics a possible basis for a theory? Could hair colour influence other people's perception of us and so influence how we act?

Does hair colour have any survival value? Does it have an evolutionary value, perhaps with regard to sexual selection? If so, why should this be?

Disproving scientific theories - According to Karl Popper all scientific theories should be able to be falsified. How would you go about falsifying a theory that suggests that the gene for blonde hair is intrinsically linked to having fun? Simply finding that blondes have more fun is consistent evidence. To disprove the theory we would have to find that blondes do not have more fun or that brunettes have more fun. Hopefully these questions will help you realise that a scientific approach may sometimes lead to more questions rather

than answers.

Explanations of Behaviour

In discussing the issue of what psychologists do, we have touched on the question of *how* they explain behaviour. For example, biological psychologists clearly explain behaviour in terms of bodily processes, and social psychologists explain behaviour in terms of the interactions between people. The ways that psychologists explain behaviour are explored in the different topics in the AS course.

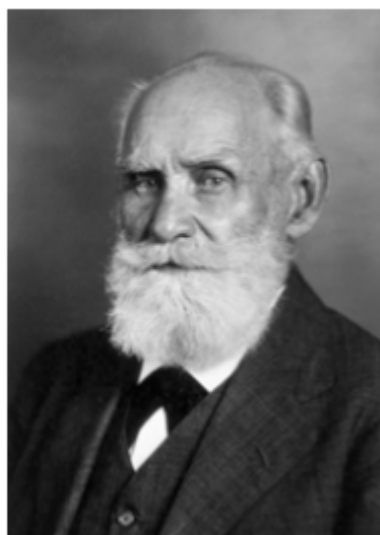
Some explanations are quite general and are applicable to lots of behaviours, such as learning theories, psychodynamic theory, cognitive and evolutionary theory:

5) Learning Theory

One way to explain behaviour is in terms of learning. This form of explanation is called learning theory and is based on the principles of conditioning. There are three separate theories that together comprise the learning approach: classical conditioning, operant conditioning and social learning theory.

5a) Classical Conditioning

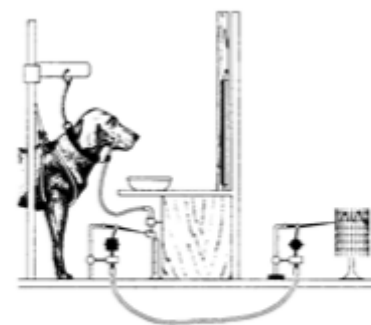
The origins of learning theory lie in **Ivan Pavlov's (1849-1936)** work as a physiologist. He was conducting research into the digestive system and accidentally discovered a new form of learning which occurs when an existing reflex is associated with a new stimulus.



Ivan Pavlov (1849-1936)

This is how it happened. When his experimental dogs were offered food, saliva production increased. But he also noticed something particularly interesting - salivation started to increase when he

pressed a buzzer [SPOILER: he never used a bell!] when the food was presented. The dogs had learned that the "buzzer sound" signalled "food coming soon". It was in their nature to salivate when they smelled food - a reflex response - but the dogs had now *learned* a link between "buzzer" and their reflex response (salivation). What Pavlov had demonstrated is classical conditioning, which is also known as learning-by-association. We tend to take this type of learning for granted but if you stop and think about it, it is very odd that a dog salivates when a buzzer is sounded. Classical conditioning predicts that any reflex response can be evoked by a novel stimulus if it is repeatedly paired with a stimuli which evokes that response. In



Pavlov's Experimental Set Up

Pavlov's dogs, he conditioned them to several stimuli including a metronome, vanilla scent and a light.

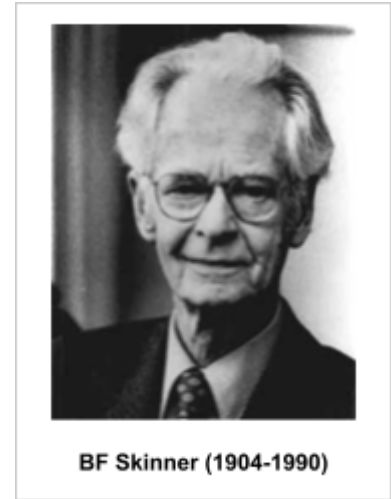
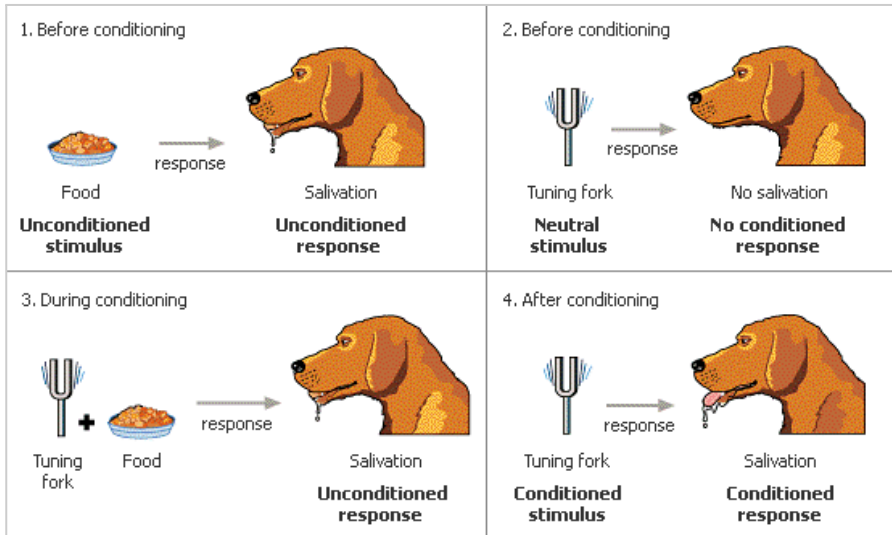
Just to make the basic idea clear, here is another example of classical conditioning. Imagine you have to go to the dentist. As you lie down on the reclining chair, you may feel anxious. Why should you be anxious *before* the dentist has caused you any pain? The sights and sounds of the dentist's surgery lead you to expect or predict that you are shortly going to be in pain. Thus, you have formed an *association* between the neutral stimuli of the surgery and the painful stimuli involved in drilling.

Pain is an unconditioned stimulus (UCS) and anxiety is an unconditioned response (UCR). No learning is required for this instinctive stimulus-response (S-R) link, which is why both stimulus and response are described as "unconditioned".

The sights and sounds of the dentist's surgery form a neutral stimulus (NS). There is no inborn reflex response to being in the surgery. If an NS and a US occur together repeatedly they become associated, until eventually the NS also causes the UR. Now the NS is called a conditioned stimulus (CS) and the UR becomes a conditioned response (CR) to this, the CS will produce the CR. A new S-R link has been learned, and you start to experience fear before the

dentist has set to work on you.

and could jump out and get the food. The



The essence of operant conditioning can be seen in Skinner's (1938) experiments with rats. A rat was placed in a cage with a lever sticking out on one side. If the lever was pressed, a pellet of food would be delivered. At first the rat accidentally pressed the lever but soon learned that there was a link between lever pressing and food appearing. Skinner stated that the rat **operated** on the environment. When there was a reward (food) this reinforced the likelihood of the behaviour occurring again. When an animal performs a behaviour (or operates on the environment) there are four possible consequences:

next time the cat was placed in the box, it went through the same sequence of somewhat random behaviours but took less time to escape. After a few more trials the cat had learned what to do and, each time it was imprisoned, would release the catch quickly. This led Thorndike to state his "Law of Effect":

- **Positive effects** (rewards) lead to the stamping in of a behaviour
- **Negative effects** (punishments) lead to the stamping out of a behaviour

Activity

Consider the following situations and. For each, try to identify the UCS, UCR, NS, CS and CR:

- 1) A puff of air is directed at your eye. Your reflex response is to blink. At the same time as the air is blown, a bell is sounded. In time, the bell produces a blink response.
- 2) As you walk into the examination room you are filled with a sense of dread. There is a smell of roses from outside the window. A few weeks later you smell the same scent of roses and are filled, inexplicably, with a sense of fear.

5b) Operant conditioning

Classical conditioning may be important, but it doesn't explain *all* learning. Another important form of learning was studied by **Edward Thorndike (1874-1949)**. He suggested that learning could take place through *trial and error*, rather than just by association as in classical conditioning. He demonstrated this by placing a hungry cat in a "puzzle box" with a fish hanging nearby. The cat scratched and clawed and meowed to try to get out of the box, and eventually, by accident, tripped the catch



A Thorndike Puzzle Box

KEY TERMS

Learning: a relatively permanent change in behaviour, which is not due to maturation.

Learning theory: the explanation of behaviour using the principles of classical and operant conditioning; the view that all behaviour is learned

Conditioning: simple forms of learning in which certain responses become more or less likely to occur in a given situation.

Classical conditioning: learning through association; a neutral stimulus becomes associated with an existing stimulus-reflex response.

S-R link: stimulus-response link, i.e. a particular stimulus causes a specific behaviour

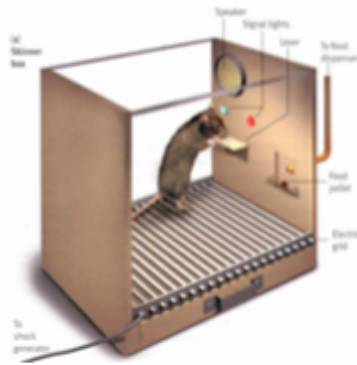
This theory was further developed by **B.F. Skinner (1904-1990)** into operant conditioning, which is learning that is controlled by its consequences (i.e. rewards or punishments). Thorndike's and Skinner's approaches were similar in that they concentrated on the consequences of behaviour, in contrast with Pavlov's focus on the behaviours themselves.

Positive reinforcement is pleasurable (e.g. receiving food) and therefore increases the likelihood of a behaviour occurring again.

Negative reinforcement refers to the avoidance of an unpleasant stimulus, but the result is that it is also pleasurable (like positive reinforcement) and thus increases the likelihood of a behaviour. For example, if the floor of the cage was electrified and pressing the lever stopped this, then the rat would be more likely to press the lever.

Positive punishment such as receiving an electric shock decreases the likelihood of a behaviour, e.g. if the rat received a shock every time it pressed the lever it would stop doing it.

Negative punishment such as removing a pleasant stimulus decreases the likelihood of a behaviour, e.g. a teenager being grounded for staying out late. The removal of a desirable option (going out) reduces the likelihood of staying out late.

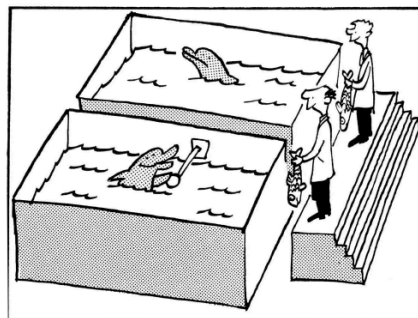


A Skinner Box

or the number of lever presses of a rat in 5 minutes.

We can perhaps see the appeal of behaviourism when we think of what came before it. Up until the end of the 19th century, psychology was still quite close to philosophy and most research relied on **introspection**, studying human behaviour by asking well-trained participants to report what was going on in their mind. Watson argued that this approach was vague and subjective. He and other behaviourists felt there was no need to explain what went on in the mind, or as they called it, the "black box"; it was sufficient to talk in terms of a stimulus and a response.

Evaluation of behaviourism — the greatest strength of the behaviourist approach was that it was a systematic attempt to turn psychology into a proper science via the careful observation and measurement of behaviour. All psychologists accept that the learning theory put forward by the behaviourists explains *some* aspects of behaviour, and so it is an important part of our toolkit. The evidence of Pavlov, Thorndike, Skinner, and others shows clearly that classical conditioning and operant conditioning both exist. However, no psychologists today claim that we can explain *all* behaviour in terms of learning theory. As you may have noticed, learning theory was originally developed through work with non-human animals such as dogs, cats, and rats. Many experts argue that learning theory is more relevant to the learning shown by these species than it is to human learning. We are more complex than other species, and possess language, and much of our learning seems to go beyond classical and operant conditioning.



"Well, I simply trained them to give me fish by pressing this over and over again."

There are ethical concerns about behaviourist explanations. A central aim of the behaviourists is the prediction and control of behaviour. Both Watson and Skinner wanted to use their principles of learning to produce a better society. Behaviourist approaches have been used in this way. For example, people in some prisons, schools, and psychiatric institutions are trained to behave in "desirable" ways. Some people regard this as a good thing,

but many others feel it may be unethical.

Assumptions of Behaviourism

Behaviourists think that behaviour is all that matters: the stimulus and the response.

It doesn't matter what goes on inside the mind, it can be treated as a "black box".

All behaviour is learned.

The same laws apply to all animal behaviour, including humans. Attempts have been made to justify this in terms of the theory of evolution, which shows that we have evolved from non-human animals. However, we are quite different from other species in having language.

KEY TERMS

Operant conditioning: learning through reinforcement; a behaviour becomes more likely because the outcome is reinforced.

Learning that is contingent on the response.

Reinforced: a behaviour is more likely to re-occur because the response was agreeable. Reinforcement means that the behaviour is more likely to occur in the future.



JB Watson (1878-1958)

John Watson (1915) was very impressed with the principles of conditioning and felt they offered psychology a way to become a more objective science. This led him to found **Behaviourism**, based on the principles of learning outlined by Pavlov and Thorndike. The behaviourists argued that a scientific approach to psychology involves focusing on things that can be *observed* and *measured*, especially behaviour. It is easy to measure the amount of salivation produced by a dog, the time taken by a cat to escape from a puzzle box,

What is "evaluation"?

At the start of this chapter, you found out that psychology would help you to learn how to challenge information. The skill of "evaluation" is the key to this. To evaluate means to determine the value of something.

Is it good? Positive criticism considers what is right with a theory. We might consider to what extent a theory has been useful. Or to what extent it has been supported by research studies.

As an example of positive criticism, there is the point that behaviourism changed psychology by making it more scientific and objective through its emphasis on observable behaviour.

Another example of positive criticism is the point that there is much research support for both classical and operant conditioning.

Is it bad? Negative criticism considers what is wrong with a theory. It might not be supported by all studies. It might apply only in some situations. It might lead to undesirable applications.

As an example of negative criticism, there is the point that the behaviourist approach is more relevant to non-human species than to the human species.

Another example of negative criticism is that the behaviourist approach raises some ethical issues concerning attempts to control human behaviour.

5c) Social Learning Theory

Albert Bandura was one of the first psychologists to propose an alternative to learning theory that incorporated mental processes. In social learning theory, Bandura suggested that behaviour is learned *but* not always through direct conditioning. We often learn by watching what other people do. If they appear to be rewarded for their actions then we are likely to imitate them. This is called vicarious conditioning.



Albert Bandura (1925-)

A key difference between *social* learning theory and operant conditioning is the introduction of mental states. In order to imitate someone's behaviour there must be an intervening cognitive state (i.e. we perceive and interpret their behaviour).

Whereas behaviourists rejected the concept of mind, saying there was no need for it, social learning theorists introduced a role for cognition (internal mental processes, aka thinking) as well as the influence of social factors.

The social learning of aggression, a classic study used to support Bandura's theory, deals with the social learning of aggression in children. According to Bandura's theory,

observational learning or modelling is of great importance in producing aggressive behaviour.

Observational learning is a form of learning in which the behaviour of others is copied. **Bandura, Ross, and Ross (1961)** carried out a study in which young children watched as an adult (the model) behaved aggressively towards a Bobo doll (an inflatable toy with a weighted bottom), punching the doll and hitting it with a hammer. After 10 minutes the children were moved to another room where there were some toys, including a hammer and a Bobo doll. They were watched through a one-way mirror and rated for their aggression. The children who had watched the model behaving aggressively were more violent and imitated exactly some of the behaviours they had observed, as compared with children who had either seen no model or watched a model behaving in a non-aggressive manner.

Bandura (1965) carried out another study of aggressive behaviour. One group of children saw a film of an adult model kicking and punching the Bobo doll. A second group saw the same behaviour performed but the model was rewarded by an adult for his aggressive behaviour by being given sweets and a drink. A third group saw the same aggressive behaviour, but the model was punished and warned not to be aggressive in future.

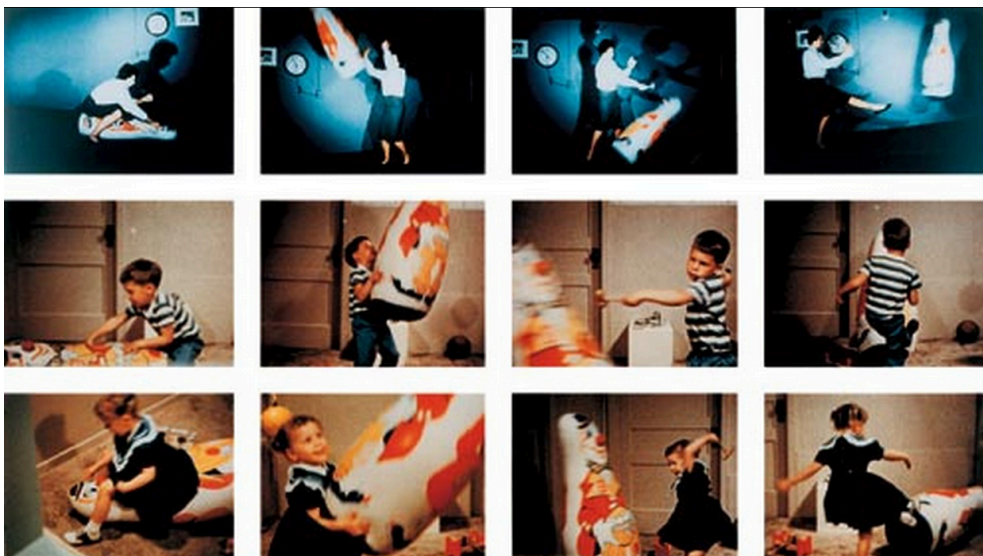
Those children who had seen the model rewarded, and those who had seen the model neither rewarded nor punished, behaved much more aggressively towards the Bobo doll than did those who had seen the model punished. The children in all these groups showed comparable levels of memory for the aggressive behaviour they had seen, and thus had the same amount of observational learning. However, those who had seen the model punished were least likely to apply this learning to their own behaviour.

There are reasons for arguing that Bandura exaggerated the meaning of his findings, as it is unlikely that those children would so readily imitate aggressive behaviour towards another child. Bandura consistently failed to distinguish between real aggression and play-fighting, and it is likely that much of the behaviour observed by Bandura was play-fighting (Durkin, 1995). Also, as a novelty item, the Bobo doll provided interest to young children. Cumberbatch (1990) reported that children unfamiliar with the doll were *five* times more likely to imitate aggressive behaviour against it than those children who had played with it before. Finally, it could be argued that the whole set-up of the experiment indicated to the children that they should behave aggressively towards the Bobo doll. In other words, the Bobo doll experiment provided cues that "invited" the children to behave in certain predictable ways.

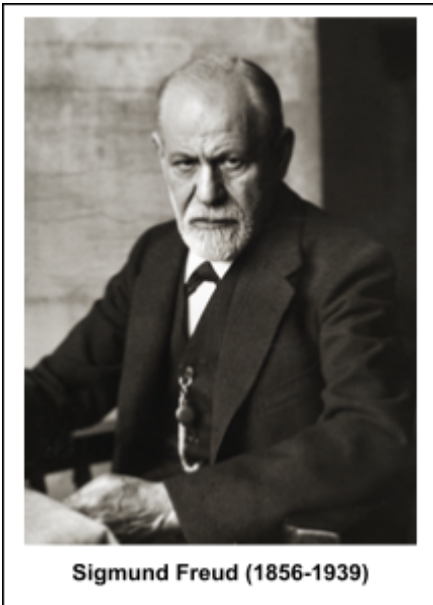
Evaluation of social learning theory — the social learning explanation is found throughout psychology and is an important one. It is a neo-behaviourist account because it still emphasises the role of learning as a way of explaining why people

behave as they do, but with the additional involvement of cognitive (mental) and social factors. Children learn many of their behaviours by observing others and modelling their own behaviour on what they have seen. Likely role models include parents, friends, TV characters, pop stars, footballers, and fashion models.

A limitation is that behaviour doesn't depend only on observational learning; people's internal emotional state, their interpretation of the current situation, and their personality are other important factors that need to be taken into account.



6) Psychodynamic Theory



Sigmund Freud (1856-1939)

In the 19th century another form of psychological explanation grew out of Sigmund Freud's (1856-1939) theory of personality development. Freud practised as a psychiatrist in Vienna and collected a lot of information from his patients about their feelings and experiences, especially those related to early childhood. He developed his ideas into a theory (psychodynamic theory) and a form of therapy (psychoanalysis).

Psychodynamic theory tries to explain human development in terms of an interaction between innate drives (such as the desire for pleasure) and early experience (the extent to which early desires were gratified). The idea is that individual personality differences can be traced back to early conflicts between desire and experience. For example, a child may want to behave badly (e.g. steal sweets) but be in conflict because of the guilt experienced afterwards. Some of these conflicts remain with the adult and are likely to influence his/her behaviour. In order to understand this we need to look briefly at Freud's description of development.

KEY TERMS

Psychodynamic theory: this is an approach to understanding human behaviour and development pioneered by Freud and then developed by others; it forms part of the basis for psychoanalysis and other forms of psychodynamic therapy.

Psychoanalysis: the form of therapy derived from psychoanalytic theory.

Innate: inborn, a product of genetic factors.

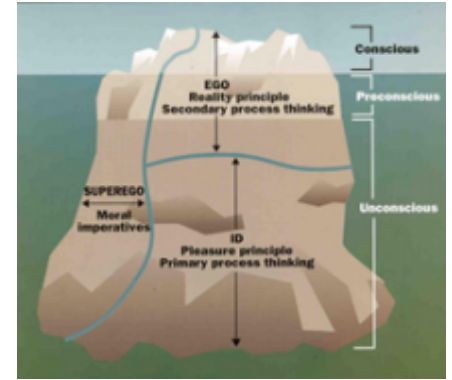
The Structure of the personality

You probably imagine that most (or even all) of the mind exists at the conscious level. The fact that you are generally consciously aware of why you have the emotions you do, and why you behave as you do, suggests that our conscious mind has full access to all relevant information about ourselves. However, Freud's views were very different. He argued that the conscious mind was like the tip of an iceberg, with most of the mind (like most of the iceberg) out of sight. More specifically, Freud assumed there were *three* levels of the mind:

- The conscious - those thoughts that are currently the focus of attention; in other words, what we are thinking about at any moment.
- The preconscious – information and ideas that can be retrieved easily from memory and brought into consciousness.
- The unconscious - this is the largest part of the mind, containing information that is almost impossible to bring into conscious awareness. Much of the information in the unconscious mind relates to very emotional experiences from our past (e.g. being bullied at school; being rejected by someone of great importance in our lives).

We have just seen that Freud assumed that the mind exists at three different levels. He also assumed that the mind is divided into *three* parts. In broad terms, Freud argued that the mind contains basic motivational forces (the id), the cognitive system used to perceive the world and for thinking and problem solving (the ego), and a conscience based on the values of family and of society generally (the superego). Let's now consider each of these parts of the mind in more detail.

1. *Id*. This contains basic motivational forces, especially innate sexual and aggressive instincts. The id follows the pleasure principle, with the emphasis being on *immediate* satisfaction. It is located in the unconscious mind. The sexual instinct is known as libido.
2. *Ego*. This is the conscious, rational mind, and it develops during the first two years of life. It works on the reality principle, taking account of what is going on in the environment.
3. *Superego*. This develops at about the age of 5 and embodies the child's conscience and sense of right and wrong. It is formed when the child adopts many of the values of the same-sexed parent (the process of identification).



Defence Mechanisms

An important part of Freud's theory was the notion that there are frequent *conflicts* among the id, ego, and superego, which cause the individual to experience anxiety. More specifically, what generally happens is that there are conflicts between the id (which wants immediate satisfaction) and the superego (which wants the person to behave in line with society's rules). These conflicts force the ego to devote much time to trying to resolve them. The ego protects itself by using a number of defence mechanisms (strategies designed to reduce anxiety), some of which are as follows:

1. *Repression*. Keeping threatening thoughts out of consciousness, e.g. not remembering a potentially painful dental appointment.
2. *Displacement*. Unconsciously moving impulses away from a threatening object and towards a less threatening object, e.g. someone who has been made angry by their teacher may shout at their brother.
3. *Projection*. An individual may attribute their undesirable characteristics to others, e.g. someone who is unfriendly may accuse other people of being unfriendly.
4. *Denial*. Refusing to accept the existence or reality of a threatening event, e.g. patients suffering from life-threatening diseases often deny that their lives are affected.
5. *Intellectualisation*. Thinking about threatening events in ways that remove the emotion from them, e.g. responding to a car ferry disaster by thinking about ways of improving the design of ferries.

Psychosexual Development

One of Freud's key assumptions was that adult personality depends very much on childhood experiences. In his theory of psychosexual development, Freud assumed that all children go through *five* stages:

1. *Oral stage* (occurs during the first 18 months of life). During this stage, the infant obtains satisfaction from eating, sucking,

and other activities using the mouth.

2. Anal stage (between about 18 and 36 months of age). Toilet training takes place during this stage, which helps to explain why the anal region becomes so important.

3. Phallic stage (between 3 and 6 years of age). The genitals become a key source of satisfaction during this stage. At about the age of 5, boys acquire the Oedipus complex, in which they have sexual desires for their mother and therefore want to get rid of their father, who is a rival. They then also fear their father, who might realise what they are thinking. This complex is resolved by identification with their father, involving adopting many of their father's attitudes and developing a superego.

So far as girls are concerned, Freud argued that girls come to recognise that they don't have a penis and blame their mother for this. The girl's father now becomes her love-object and she substitutes her "penis envy" with a wish to have a child. This leads to a kind of resolution and ultimate identification with her same-sex parent. If you think Freud's ideas of what goes on in the phallic stage are very fanciful, you're absolutely right!

4. Latency stage (from 6 years of age until the onset of puberty). During this stage, boys and girls spend very little time together.

5. Genital stage (from the onset of puberty and throughout adult life). During this stage, the main source of sexual pleasure is in the genitals.

Personality Theory

Freud coupled the theory of psychosexual development with a theory of personality. If a child experiences severe problems or excessive pleasure at any stage of development, this leads to fixation, in which basic energy or libido becomes attached to that stage for many years. Later in life, adults who experience very stressful conditions are likely to show regression, in which their behaviour becomes less mature, and more like that displayed during a psychosexual stage at which they fixated as children. According to Freud, these processes of fixation and regression play important roles in determining adult personality. Some personality types are shown in the box overleaf, along with descriptions and a link to the stage of psychosexual development at which fixation may have occurred.

Assumptions of the psychoanalytic approach

Development is the result of an interaction between innate drives and early experience.

Childhood experiences are of fundamental importance.

Early conflicts result in unconscious forces that drive many aspects of adult behaviour.

It is very hard to prove that early childhood experiences have actually determined adult personality many years later, and so the theory is hard to test properly.

Evaluation of psychodynamic theory

+ Freud and his psychodynamic theory have had an enormous impact on psychology. Indeed, he is the most influential psychologist of all time.

+ As Freud argued, adult personality depends in part on the experiences of early childhood.

+ There is increasing evidence that our conscious minds are less powerful than we like to think, and that Freud was right to emphasise the importance of the unconscious mind.

+ It is to Freud's credit that he put forward what was probably the first systematic theory of personality.

- Freud's method of investigation was to focus on the individual, observing particular "cases" in fine detail. Many people see this approach as a drawback, mainly because Freud's observations were largely based on a rather narrow sample of people: white, middle-class Victorian Viennese women.

- Freud over-emphasised sex because he developed his theory at a time of great sexual repression, which may have caused sex to be something that was repressed in many minds (Banyard & Hayes, 1994).

- Freud's stage-based theory suggests that personality development occurs in a neater and tidier way than is actually the case.

7) The Cognitive Approach

Cognitive psychology developed in the 1950s because of a growing dissatisfaction with the behaviourist approach. It is very hard to understand cognitive abilities, such as language or problem solving, from the behaviourist perspective, with its emphasis on observable behaviour. For example, what someone is thinking is generally not obvious from their behaviour. What is also needed is a focus on internal processes, and this is what cognitive psychologists tried to do.

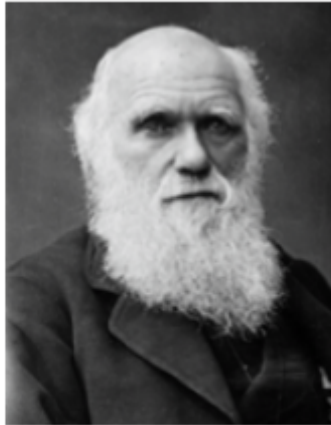


The arrival of the computer revolution provided an ideal analogy and a good basis for understanding human cognition, with cognitive psychologists explaining human cognition in terms of an information-processing system. There is input in the form of data or information to the brain and to the computer. This is followed by various kinds of information processing in the brain and the computer. Finally, there is some kind of output. Suppose you are given an input in the form of a problem in mathematics (e.g. $13 \times 12 = ?$). You engage in information processing, and then finally you output the answer by saying (hopefully!) 156. In similar fashion, computers can be programmed to work out the answer when given the same problem, printing it out or displaying it on the screen.

Evaluation of the cognitive theory — It has helped us understand the stages involved in complex behaviours like memory and perception. This has led to real-world applications such as helping people with severe memory deficits like amnesia or learn or Alzheimer's disease. And changing how police forces carry out witness interviews and how courts view eye-witness testimony.

Cognitive explanations tend to be as machine-like as behaviourist ones, often ignoring the role of emotion or the influence of other people—not surprising when they are based on the behaviour of a machine. Also, the research on which they are based is often rather artificial, lacking external validity, because most experiments are carried out under highly controlled laboratory conditions.

8) Evolutionary Theory



Charles Darwin (1809-1882)

Charles Darwin presented the most influential theory of evolution. Darwin composed a theory to account for the fact that animal species have evolved and continue to evolve (i.e. change their characteristics).

The essential principles of this theory are: **Environments are always changing**, or animals move to new environments.

Living things are constantly changing, partly because of sexual reproduction where two parents create a new individual by combining their genes, and also through chance mutations of the genes. In both cases new traits are produced.

Those individuals who possess traits best adapted to the environment are more likely to survive to reproduce (it is reproduction rather than survival that matters); or, to put it another way, those individuals who best "fit" their environment survive (survival of the fittest); or, to put it still another way, the *genes* of the individuals with these traits are naturally selected.

In order to understand the concept of natural selection consider this example. A farmer chooses which males and females have the best characteristics for milk production or for increased reproduction (giving birth to lots of twins), and mates these individuals. This is selective breeding

or artificial selection. In nature, no-one does the selecting, it is natural pressures that do it-it is called "natural selection".

The end result is that the genes carrying physical characteristics and behaviours that are adaptive, i.e. help the individual to better fit its environment, are the ones that survive to the next generation. Those traits that are non-adaptive tend to disappear. However, it should be emphasised it is not the individual but his/her genes that disappear.

Evaluation of evolutionary theory The theory of natural selection offers a good account of the facts. However, we can only point to fossil records and the evidence from a few species who have changed before our eyes, seemingly in response to environmental demands. A good example of this is the peppered moth, which is described in the Case study given below.

One criticism is that the theory of evolution offers mainly *post-hoc* (after the fact) explanations. It is hard to know whether a behaviour is actually beneficial, and that's why it remained, or whether it was simply neutral, and was never selected against.

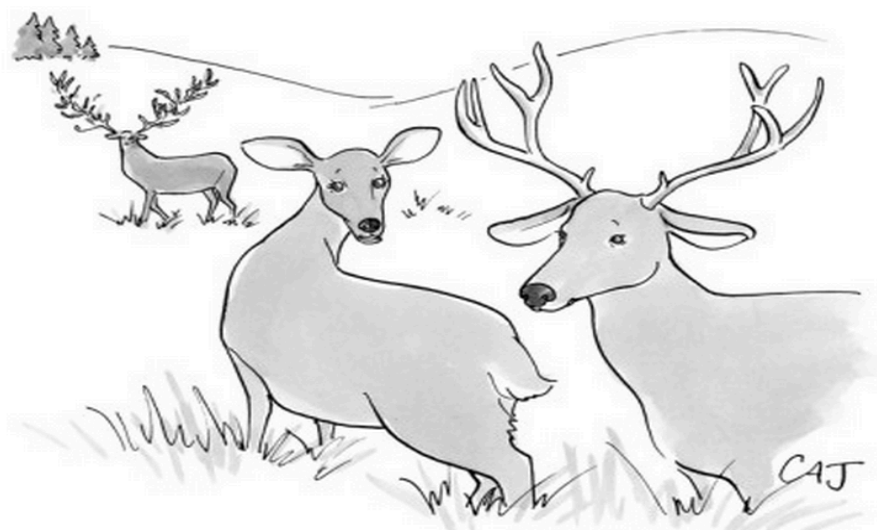
The adaptive role of genes

A classic example of the adaptive role of the genes can be seen in the tendency for parents to risk their lives to save their offspring. This is described as altruism. Darwin could not explain this behaviour because, according to his theory, it is only the individuals who survive that count. If a parent dies saving their offspring this would appear to be a non-adaptive behaviour. However, altruism is adaptive at the level of the genes. A parent who dies in order to save his or her offspring is ensuring that their genetic line survives. Therefore altruism can be seen to be adaptive behaviour.

CASE STUDY: THE PEPPERED MOTH

What has often been regarded as fairly direct support for some of the assumptions of Darwin's theory was obtained by **Kettlewell (1955)**. He studied two variants of the peppered moth, one of which was darker than the other. The difference in colour is inherited, with the offspring of the darker type being on average darker than those of the lighter type. Both types of peppered moth are eaten by birds such as robins and redstarts that rely on sight to detect them. Kettlewell observed the moths when they were on relatively light lichen-covered trees and when they were on dark, lichen-less trees in industrially polluted areas. The lighter-coloured moths survived better on the lighter trees and the darker-coloured moths survived better on the darker trees.

According to Darwin's theory, the number of darker moths should increase if there is an increase in the proportion of dark trees. Precisely this happened in England due to the industrial revolution, when pollution killed the lichen and coated the trees with sooty deposits. The proportion of peppered moths that were dark apparently went from almost nil to over half the resident population in a period of about 50 years. However, the baseline evidence that there were few dark peppered moths before the industrial revolution comes from moth collections. As Hailman (1992, p.126) pointed out, "Those collections were not scientific samples but were made by amateurs ... Perhaps they did not like ugly black moths."



"It's not you—it's natural selection." AllPoster

Worksheet for Starting Psychology

1] Outline the usual definition of Psychology and explain what this definition means.

2] Outline the case of Kitty Genovese and what happened to her

3] Outline the study conducted by Darley & Latané and what they found

4] Why is Piliavin et al's study more like real life than Darley & Latané's study?

5] What problems are caused if a study is more like real life?

6] How might a social psychologist explain why a professional footballer would bite an opponent?

12] What 'law' did Thorndike use to summarise the behaviour of the cat?

13] According to Skinner, what are the four possible consequences of an animal performing a behaviour (rewards & punishments)?

- 1.
- 2.
- 3.
- 4.

14] How would Skinner have explained a professional footballer biting an opponent?

15] What is the key idea of social learning theory and how does this differ from operant conditioning?

16] How would Bandura have explained a professional footballer biting an opponent?

17] What are the strengths of behaviourism?

18] What are the weaknesses of behaviourism?

19] What are the key ideas of the psychodynamic approach?

20] Outline what Freud meant by an ego defence mechanism and explain one example of such a mechanism

21] Describe 3 ways in which Freud might explain a professional football player biting an opposing player?

1

2

3

22] According to Cognitive Psychology, how is your mind like a computer?

23] In what ways does your mind differ from a computer?

24] How might a cognitive psychologist explain a professional footballer biting an opponent?

25] Outline the key assumptions of evolutionary theory.

26] How might an evolutionary psychologist explain a professional footballer biting an opponent?

27] Which area of psychology [biology, cognitive, social, behaviourism, social learning, evolutionary, Freud] do you feel best explains the professional footballer's biting behaviour?

28] Why do you want to study Psychology? Try to avoid the word "interesting".