

What is Psychology?

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Psychology is often defined as the 'science of mental processes and behaviour'. It is the scientific study of how people (and sometimes animals) behave, and how their minds work. The subject matter of psychology is extremely wide-ranging, covering everything from why chewing gum might improve your exam results to why pilots crash planes. Psychology is a complicated field that adopts a variety of approaches to explaining behaviour. It also develops theories to explain behaviour and tests these theories using a range of scientific methods.



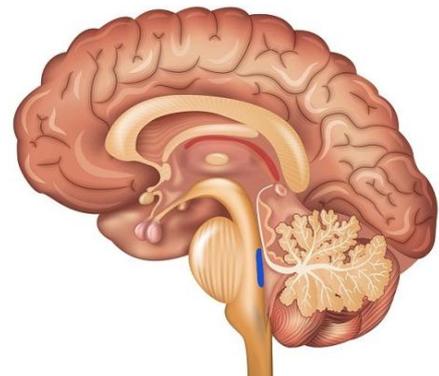
Approaches to Psychology

There are five core approaches to psychology. These are the biological approach, the learning/behaviourist approach, the cognitive approach, the psychodynamic approach, and the humanistic approach.

The idea of an 'approach' is that psychologists tend to have a general view of what causes behaviour. Some of them think that the way we behave is largely inherited, others believe it is largely learned through your life experience. For example - think about football. What is it that makes someone interested in football or good at it? Did they inherit some kind of football gene from their parents or did they learn to love it perhaps because their family enjoyed kicking a ball around? Psychologists call this nature (what you are born with) or nurture (your life experiences). There are other key differences in the main approaches.

The Biological Approach

The biological approach is concerned with the relationship between biological processes and psychological functions. The biological approach explains behaviour in terms of physical causes in our brains and bodies, and this includes our genes. The most likely biological source of causes of behaviour is the brain, which produces chemicals called neurotransmitters (such as serotonin, which plays an important role in regulating our moods). The endocrine system is also significant because it produces hormones (for example adrenaline) that have a big impact on our behaviour.

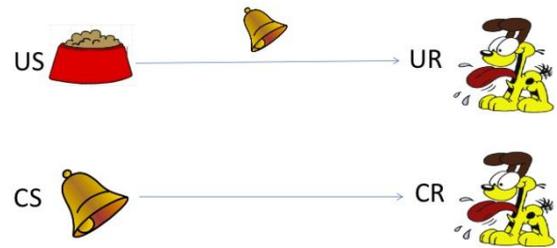


The methods used by this approach to investigate behaviour are physical too. Brain scans can show us the structure and functioning of the brain. Researchers then try to relate these to normal as well as abnormal behaviours. In the last 20 years the development of brain scanning techniques has led to a massive increase in understanding how the brain relates to behaviour. Research on animals can be helpful too, because we can't deliberately make changes to the human brain to observe the effect on behaviour (no really, we can't, not for research purposes).

This approach to understanding behaviour is largely 'nature' — though many aspects of the brain and body and even your genes (surprisingly) can be changed by nurture.

Learning/Behaviourist approach

The central concept of this approach is the influence of experience on our behaviour, and how we learn behaviours. Basically we are born as 'blank slates' and what we become is shaped by experience (sometimes termed 'the environment').



The behaviourist approach proposes that there are two main processes through which we learn - we either learn through association (classical conditioning) or reinforcement (operant conditioning). If you have cats you will know that they come running as soon as they hear a cupboard door being opened. They have learned to associate that noise with food. You probably also know the usefulness of treats with animals - a small reward reinforces a behaviour and makes it more likely to happen in the future. These are examples of classical and operant conditioning. Whatever characteristics we might be born with, these take second place to the crucial roles of our experience and the environment.

Because this approach is most closely associated with scientific psychology, it's no surprise that behaviourists are cheerleaders for the experimental method in psychology because it involves precise and objective measurement of behaviour in controlled conditions. The approach also uses research with animals, because it sees no significant qualitative differences between human and animal behaviour.

There is also social learning theory, an extension of the behaviourist approach that incorporates indirect learning. In social learning, we observe models and learn by imitating their behaviour.

The Cognitive Approach

This approach focuses on thinking - our feelings, beliefs, attitudes and expectations and the effects they have on our behaviour. The approach employs the 'computer metaphor' to explain how our minds work; like computers we process information.

The approach has been used to explain many things including mental disorders such as depression. According to the cognitive approach depression occurs because people think negatively - they put the worst possible interpretation on events and play down the good things that happen to them. They think it will never get better. According to the cognitive approach the depression lies in the way they are thinking rather than in reality.



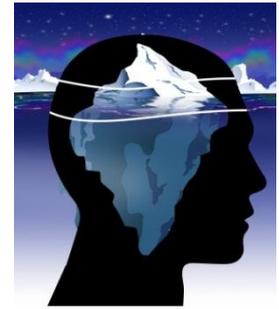
Like behaviourist psychologists, cognitive psychologists use laboratory experiments as a key research method. But a big difference is that while behaviourists have no interest in what goes on inside the mind, cognitive psychologists are the opposite. The processes inside the mind are precisely what they are interested in and have an important link to the behaviours we observe.

The Psychodynamic Approach

This is the approach that originated with Sigmund Freud, possibly the most well-known psychologist ever. He believed that the causes of behaviour lie within the **unconscious mind**, the part of the mind

that is normally closed off to us but is extremely active. The iceberg metaphor has been used to represent this 'invisible' unconscious mind that has powerful effects.

There is constant dynamic conflict between parts of the unconscious and the conscious mind. We can get a brief glimpse of this conflict when we dream, which is why Freud advocated the use of dream interpretation to help us understand what's in the unconscious and why it affects us. The approach also emphasises the importance of childhood experiences, which have a major impact on our personality development and our behaviour as adults.



The psychodynamic approach adopts a less scientific approach to studying human behaviour, as the uncovering of unconscious causes requires in-depth analysis of individuals and the interpretation of symbolic elements of behaviour. This approach therefore uses case studies, clinical interviews and the interpretation of symbols as its main research methods. However, there have been attempts to validate aspects of the theory using experiments.

Humanistic approach

The humanistic approach is firmly based on the concept of the **self**. This concerns issues to do with your **self-concept** (how you see yourself), and your **self-esteem** (how you feel about yourself).

The humanistic approach also emphasises the importance of being able to make our own rational choices. All of the other approaches suggest that our behaviour is, to a large extent, directed by other forces not always under our control - genes, the environment, our thought patterns, or our unconscious mind – all forms of determinism. In contrast, Humanistic psychologists assume that people have free will, and are more interested in reasons for behaviour rather than causes. Humanistic psychologists believe the goal of psychology is not prediction or control but to understand the whole person and to help the person to live a fulfilled, meaningful life.



The Humanistic Approach rejects the scientific study of human behaviour as misguided, arguing that people have the power to respond to causal influences on our behaviour in different ways. Humanistic psychologists validate their ideas through therapeutic practice and clinical interviews.

An Eclectic Approach – What Works Best?

Some psychologists work very much within a framework of one particular approach. Thus, biological psychologists may think very much in biological terms and bring research into a range of biological factors that affect behaviour to bear on a range of problems. The distance from the biological approach to the humanistic perspective represents the huge range that is psychology. Although researchers working in these two approaches may call themselves psychologists, they have very little in common in terms of their assumptions about behaviour, their preferred explanations, their philosophical viewpoints, the methods they use to investigate behaviour, or even the research questions they are interested in answering. That's how broad a subject psychology is - and that's one reason why it's so exciting.

These different approaches also reflect the undoubted truth that human behaviour is complex and is probably not going to be fully understood from just one approach. Other psychologists draw freely on a range of approaches. For these reasons, in recent years, there has been a growth of the eclectic

approach. This is preferred by psychologists who aren't committed to any one particular approach. The eclectic approach uses the assumptions, explanations and methods from many different approaches. Their slogan could well be: 'Whatever works best'.

Theories and Studies

We have said already that psychology is a science. Science involves theories and studies. It is important to be clear about the difference between the two ideas.

What is a theory?

A theory is an explanation for a psychological phenomenon. For example, we have theories of how memory works, how mothers and babies form attachments and why people obey orders. There is often more than one theory to explain something. Our job as psychologists is to look at the evidence for each theory and decide how credible it is. It is, however, not necessary to choose a single correct theory and discard the others. Often, different theories are concerned with different aspects of the same broad area. For example, in the individual differences unit we look at several explanations for mental disorder. In fact, all these approaches are useful for explaining some cases of mental disorder. However, none of them gives us a complete explanation for all cases.

What is a study?

A study is any exercise where data (information) is gathered and analysed. This is quite a different idea from a theory. There are a huge number of studies in psychology, and you will encounter more studies than anything else as you learn about psychology. Some studies aim to test a theory. Others just gather information about a psychological phenomenon. A classic example of a study is Hofling et al.'s investigation of nurses' obedience to doctors. This involved gathering two types of data from nurses. First, they were asked how they thought they would behave if ordered by a doctor to do something that would harm a patient. Second, they were actually put in that position and their behaviour recorded. Studies should tell us something useful. For example, Hofling et al.'s study showed how nurses tended to follow doctors' orders unquestioningly and that this obedience could sometimes pose a danger to patients.

Thinking like a psychologist

Psychology is not just a set of theories and studies to learn and reproduce in your exams. To succeed in psychology at A level - and even more so if you go on to study the subject at university - you need to learn to think like a psychologist. In fact one of the key aims of Psychology A Level is to push you to think in more advanced ways and prevent you getting high grades just by rote learning. Don't be put off by this. If you learn to think more like a psychologist, the subject will be all the more interesting for you and you will actually have less to learn for your exams.

So how does a psychologist think? Psychologists are scientists, and remember that the lifeblood of science is research and theory. Psychologists need to be able to put together their own theories and design and carry out studies. As scientists, they also need to be able to think critically about their own and other people's studies and theories. Psychologists also need to be able to make their work relevant to people's lives. Leading educational psychologist Robert Sternberg has crystallised these points into three types of advanced thinking needed to learn psychology:

- **critical thinking:** looking for strengths and weaknesses, particularly in studies and theories

- **creative thinking:** designing studies and coming up with your own explanations for psychological phenomena
- **practical thinking:** applying psychological ideas to explain real-life phenomena.

Mastering these three ways of thinking should benefit you in two main ways. First, you will be able to do everything you are required to do for your exams, and you won't have to rote-learn a huge amount of material. You will also find that, having thought deeply about the things you are studying, you will tend to remember them well, and of course that won't do you any harm in exams! Second, thinking ahead to your future, you will have a set of skills that should be useful in a huge range of situations. Obviously, thinking like a psychologist will help if you go on to study psychology at university, but even if you never study psychology again you can benefit from advanced thinking. Once you have studied psychology you will probably never accept a 'fact' at face value again. You will respond quite differently to news stories for example.

Key Questions for Critical Thinking

To start you off thinking like a psychologist, we can offer you these critical thinking toolkits. One is for theories and one for studies. You will be asked to evaluate theories and studies in your exams. By using these key questions as thinking tools you will think more deeply about the material, making it easier to learn, and it will save you having to memorise evaluation points for every theory and every study you look at.

For theories

- What sort of **evidence** is this theory based on? If a theory is derived from a few unrepresentative cases, it might not apply well to everybody. If it is based on laboratory studies, then it may not explain people's behaviour in real-life situations.
- Is this theory **testable**? If it is difficult to test, then this is a weakness.
- Is there **supporting evidence**? Have you found studies that could be used to support the theory or does it seem to be based just on speculation?
- Is there **conflicting evidence**? Are there studies that suggest that the theory is incorrect, or at least limited in what it can explain?
- Is the theory useful? By that we mean, does it have applications in understanding or intervening in a real-life situation?
- Is the theory **socially sensitive**? By this we mean, is the theory likely to offend people, perhaps because it places blame on someone for a psychological phenomenon, or because it identifies something undesirable about human nature?
- Is there something important that this theory cannot explain? A common limitation of theories is the inability to explain all aspects of the phenomenon, for example why people vary so much individually.
- Is the theory culturally biased? **Ethnocentrism** refers to the tendency to regard other cultures (and the people and institutions that make up those cultures) solely from the perspective of one's own culture. It's a form of prejudice. Like egocentrism, where an individual is unable to appreciate another's point of view, ethnocentrism is a failure to appreciate another culture's viewpoint (or worldview, to use a phrase favoured by social anthropologists). An ethnocentric worldview is often accompanied by the belief that the customs and products of one's own culture are superior to those of other cultures. In psychology ethnocentrism is especially relevant when discussing cross-cultural research. As with reductionism, it's generally seen as a negative characteristic of evidence.
- Is the theory reductionist? **Reductionism** refers to the way psychologists sometimes try to explain complex concepts (the list is endless, but some examples are thinking, aggression, interpersonal attraction) in simplified terms, without recognising their complexity. A typical reductionist ploy is to

try and explain a complex concept by focussing only on the characteristics of its constituent parts. For example, trying to explain the brain's (complex) capacity for thinking in terms of nothing more than series of biological processes. Although biology is involved in thinking, alone it doesn't do justice to the complexity of how we figure things out. A fuller, more rounded explanation of thinking could include a discussion of developmental, cognitive and cultural factors as well as biological ones. Critics of reductionism argue that complex concepts need to be understood holistically, recognising the influence of a variety factors. The motto of this approach is 'the whole is greater than the sum of its individual parts'.

For studies

- Has this study been conducted ethically – does it raise any **ethical issues**? By that we mean, have participants been put at risk, taken advantage of, had their privacy invaded or in some other way had their rights violated? At stake here are the safety and dignity of participants. It's up to the researcher to make sure both of these are preserved. Several ethical questions are posed by psychological research. Are participants protected from physical and emotional harm? Do they have the opportunity to withdraw midway through a study? Do they give informed consent to be studied? Are they protected from deception? Do they receive a thorough debriefing after the research? Plenty of researchers are prepared to answer "not really" to some of these questions in the interests of finding out more about human (and non-human) behaviour. Consequently this is a particularly fruitful criterion for evaluation.
- Are the findings **socially sensitive**? Do the findings of the study risk giving offence to people because they place blame on particular people or justify discrimination against a vulnerable group?
- Has the study involved a **representative group** of people? If, as is often the case, the researcher used their own students as participants, how representative of the general population are students? Have both men and women, and people of a good range of ages, participated? Ideally samples should be representative. This means they should represent all the social groups that the results of the study are meant to apply to. So if a study is about aggression in humans, yet it has an all-female sample, we can say it's unrepresentative. Representing all societies' groups (twins, eccentrics, geniuses etc.) in psychological research is an unrealistic aim, but researchers who cast their nets wide do produce more effective data. As well as representativeness, researchers should also go for size. A study that has a large sample will produce results that can be generalised to the rest of society with more confidence.
- Has it been carried out in an artificial or a natural environment? If the study was carried out in a laboratory, can we be sure that participants behaved as they would in their own surroundings? **Ecological validity** refers to how true to life a study is. Where researchers put participants in unusual settings and ask them to perform unusual (to them) behaviours research is said to lack ecological validity. This is a criticism often levelled at studies that takes place in laboratory settings. True, laboratory research allows researchers to have a lot of control over the variables they're studying but the downside is that their participants are more likely to behave unnaturally. This is a problem since it doesn't tell us anything about their everyday behaviour. Critics of laboratory research prefer to carry out ecologically valid studies that take place in real life (naturalistic is the technical term) settings - streets, cafeterias, trains etc. This way they can observe naturally occurring behaviour.
- Are the tasks given to participants like those they would encounter in real life? A common limitation of research is to put participants in situations or give them things to do that bear little resemblance to their real lives.
- How good are the measures used to record the results? For example, if the study used a questionnaire, was it a standard one widely accepted by psychologists or did the researchers make it up for the study? If it is a standard measure, this is a strength of the study.

- Do the findings of this study conflict with those of other studies? If so, think about how the findings are different, and try to explain why they differ. You might be able to suggest which study was better designed and which results we should accord more importance to.
- Are the findings of this study useful? Results might have an important application to real life. Alternatively, they might be important to psychologists because they help us evaluate a theory or idea. Can the research help us understand any real life situations, issues or incidents? Can they help educators, childminders, pharmacists, athletes, police, pianists and politicians (and so forth) in their work? As well as a way of evaluating evidence it's increasingly common for exam questions, to ask you to apply the findings of studies and theories. So it's worth getting into the habit of thinking and writing about what use evidence can be put to. It's also refreshing to know that (a lot of) psychologists are providing society with a service.
- Can the study be repeated to check the findings, and if so, were the findings similar? **Replicability** refers to whether or not a study can be repeated to produce similar findings. Two things are at stake here. First, whether a study can be repeated at all. Second, whether similar results emerge if it is repeated. Some studies can't be repeated at all because they're conducted in unique situations that are hard to replicate - earthquakes, eclipses, coronations etc. Psychologists refer to this type of 'one-off', unrepeatable study as opportunistic research. Other studies are repeated but they produce different findings. Psychologists refer this as unreliable research. Studies that are opportunistic or unreliable can both be said to lack replicability. They might have interesting results but if no-one can go out and replicate or verify them they're flawed.
- Could other variables have affected the results of the study? Researchers should control **extraneous variables** in their studies. If a researcher is investigating the influence of Variable A on Variable B s/he'll try and control or hold constant the effect of any other (extraneous) variable that might have an influence on B. The problem of achieving this degree of control is a problem of design. A good ploy for controlling extraneous variables is to divide participants into 'matched' conditions. For instance, if you're studying how background noise (Variable A) affects participants' problem solving abilities (Variable B) you might want to ensure that an extraneous variable such as intelligence is held constant across the two conditions (high noise and low noise). To do this you could design your study so that participants with high and low intelligence levels are allocated equally between the high and low noise conditions. This helps you to isolate the proposed link between A and B.

