

Discuss the extent to which Psychology is a science.

The main argument that claims psychology is a science states that it uses scientific methodology as the preferred method of investigation used by psychologists all over the world. Most psychological experiments take place in a laboratory and this has become the most common method for investigation as it allows an experimenter to be in control and predict what will happen for example most behavioural research takes place in a laboratory, for example Pavlov's experiment with dogs which led to the accepted theory of classical conditioning.

In arguments against psychology as a science it is said to be determinist as behaviour is predictable because cause and effect relationships can be discovered and therefore can explain human behaviour. These determinist views raise difficulties for free will and moral responsibility which can lead psychologists to reject scientific approaches to research human behaviour. It is also said to be reductionist because psychologists need to be able to observe everything in an investigation and so everything cannot always be seen in an experiment such as fear and motivation so psychologists use different ways to observe these such as pupil dilation and this may not always be correct so it is being reduced to a way in which it can be understood simply to the observer.

In psychology objectivity is considered by some to be not possible and, since this is a fundamental requirement in science this means that any subjective influences, such as experimenter expectations, can interfere with the investigation or distort the results. An example of this is interviewer bias which takes place in case studies may affect the individual that is being interviewed as they may feel that they have to answer to please the interviewer by answering the way they want rather than what they really feel and also the interviewer can influence the interviewees answers by predicting what they may say next and asking questions designed to elicit particular replies.

Also it is said that psychology doesn't have a paradigm. This is a set of ideas upon which a science operates as its binding principles. This leads scientists to think in a specific way. People question whether psychology has a paradigm, for example Kuhn argues that psychology is in a state of pre-science as it has never developed a paradigm.

The problems with arguments for psychology as a science is that psychology has low validity of scientific methods as many experiments have been criticised for having a lack in internal validity because of demand characteristics such as Milgram's obedience study in 1963 and Asch's study of conformity in 1956. Demand characteristics are when the participants in the study behave differently to the way they usually do because they are being observed and so this can affect the results for example in Milgram's study the participants may have acted to be anxious and scared by shocking the accomplice but really they may just have known all along that it wasn't true (the shocks were not real) and just pretended.

Also psychology experiments have been criticised for a lack of external validity for

example in Asch's study he used lines to see how people conform and lines are artificial and don't come in everyday life so they can't be generalized to a real life situation.

Arguments for psychology as a science state that it has a paradigm but according to Kuhn psychology is a pre-science as it doesn't have a set of assumptions and shared scientific methodology. If psychology consists of different levels or kinds of explanations which are scientific then it can't claim to having a paradigm Rose in 1997 suggested that biologists need five types of explanations and none of them are correct as it depends on the explanation that is required and it also depends on the right explanation needed as using a wrong explanation may prevent the true understanding of a behaviour for example giving someone with depression an ant depression pill to treat there depression may not look at the bigger picture of what is causing the depression such as family problems or stress at work .

The problems with arguments against psychology as a science is that not all science is considered determinist - you can develop free will within a determinist framework and human behaviour is also considered to be relatively predictable, and therefore determinable. Physical science doesn't always subscribe to the determinist framework and so psychology is at the same level as other sciences in this instance.

Objectivity isn't possible in any science. For example in physics Heisenberg's uncertainty principle states that the simple act of measuring a sub-atomic particle changes the behaviour of that particle. Also Jones and Elcock in 2001 challenged that science is as much a social activity as a mechanical application of correct procedures. Scientist's everyday lives are influenced by social factors such as promotion and being liked by colleagues and also by the day to day concerns of human beings, this is known as the sociology of scientific knowledge.

In saying that there are no paradigms in psychology there are three counter arguments firstly psychology has mini paradigms such as cognitive, behaviourism or psychoanalysis, each of these have specific sets of assumptions and a specific set of methodology. Also psychology has had dominant paradigms through its history for example behaviourism was dominant in the first half of the 19th century and then was the cognitive approach and today it is the evolutionary approach that is dominant. Kuhn's idea of paradigms may be criticised as according to Lakatos (1970) science is a historically evolving body of knowledge that pursues thematic lines of enquiry.

Theories are linked by assumptions, and so are tested and revised because of new discoveries and so this tells us that science is a rational process. This description fits psychology as a science.

References

Pavlov (1927)
Milgram (1963)
Asch (1959)
Kuhn (1962)
Rose (1997)
Lakatos (1970)