

Psychological Theory: Science or Just Speculation?

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Psychoanalysis has great explanatory power and understanding of behavior, but it has been accused of only explaining behavior after the event, not predicting what will happen in advance and of being unfalsifiable. Some have argued that psychoanalysis has approached the status more of a religion than a science, but it is not alone in being accused of unfalsifiable (evolutionary theory has too - why is anything the way it is? Because it has evolved that way!) and like theories that are difficult to refute - the possibility exists that it is actually right. Kline (1984) argues that psychoanalytic theory can be broken down into testable hypotheses and tested scientifically. For example, Scodel (1957) postulated that orally dependent men would prefer larger breasts (a positive correlation), but in fact found the opposite (a negative correlation). Although Freudian theory could be used to explain this finding (through reaction formation - the subject showing exactly the opposite of their unconscious impulses!), Kline has nevertheless pointed out that theory would have been refuted by no significant correlation.

Behaviorism has parsimonious (i.e. economical / cost cutting) theories of learning, using a few simple principles (reinforcement, behavior shaping, generalisation, etc.) to explain a vast variety of behavior from language acquisition to moral development. It advanced bold, precise and refutable hypotheses (such as Thorndike's law of effect) and possessed a hard core of central assumptions such as determinism from the environment (it was only when this assumption faced overwhelming criticism by the cognitive and ethological theorists that the behaviorist paradigm / model was overthrown). Behaviorists firmly believed in the scientific principles of determinism and orderliness, and thus came up with fairly consistent predictions about when an animal was likely to respond (although they admitted that perfect prediction for any individual was impossible). The behaviorists used their predictions to control the behavior of both animals (pigeons trained to detect life jackets) and humans (behavioral therapies) and indeed Skinner, in his book *Walden Two* (1948), described a society controlled according to behaviorist principles.

Cognitive psychology - adopts a scientific approach to unobservable mental processes by advancing precise models and conducting experiments upon behavior to confirm or refute them.

Full understanding, prediction and control in psychology is probably unobtainable due to the huge complexity of environmental, mental and biological influences upon even the simplest behavior (i.e. all extraneous variables cannot be controlled).

You will see therefore, that there is no easy answer to the question 'is psychology a science?'. But many approaches of psychology do meet the accepted requirements of the scientific method, whilst others appear to be more doubtful in this respect.