

Test Yourself Questions

1. How might a scientist's perception affect the type of theory he or she formulates?

A scientist formulates a theory by asking questions, and the type of questions he or she asks depends to a great extent on his or her perception of the world. In asking these questions, and in finding ways to answer them, the scientist also makes assumptions about the world. These assumptions are derived from the scientist's perceptions of the world as well. Additionally, the scientist must select methodologies to test his or her theories. Which technique the scientist selects and the definitions of each critical element under study are affected by the way he or she perceives each method and each element.

2. Why is it said that the scientific method is limited?

For one thing, the scientific method is difficult to apply to all the phenomena we may want to examine (e.g., inner experience), and this means that it becomes very difficult to determine causality. The methods used in science are not as well suited to psychology as they are to other sciences because of the complexity of human behaviour (isolating one factor is difficult) and because of the awareness of the person being studied (demand characteristics) and the experimenter (reactivity).

Also, scientifically derived evidence is more useful for discarding an incorrect theory than for determining what is a correct theory. Indeed, statistical theory tells us that observations cannot directly prove a theory to be true. In addition, it has been argued that demonstrating a 'good fit' between the evidence and a theory is too limiting as a means of evaluation. That is, just because a theory can explain the evidence does not mean that this is the only, the best, or the right explanation.

3. How does systems theory relate to psychology?

Systems theory is an alternative paradigm to the linear deterministic models of psychology. A system exists whenever there are multiple elements which interact, and where the properties of the system are different from those of the parts. In this sense, an individual could be considered a system (with the functioning of the various parts of the nervous system being elements, for example). Similarly, social groups could be considered a system, with the individuals as elements. Systems theory suggests that complex behaviour may be difficult to predict. By their nature, models based on systems theory are relational rather than linear. Causality is often indeterminate, both because of the way elements interact, and because feedback processes affect the system as a whole, rather than just one element. Without knowing all of the elements of the system (which becomes difficult in complex systems), predicting the outcome may be impossible. Thus, applying systems theory within psychology may require new methods of testing theories.

4. Why is it important to study the role of culture in psychology?

Culture influences both the theories that are generated and the way observations are interpreted. Also, culture clearly affects the way individuals behave, and no understanding of individual behaviour can be complete without recognizing that. Finally, recognizing cultural differences is also increasingly important in terms of professional ethics.