

SOURCES OF HYPOTHESIS

⇒ Four important sources of hypothesis in social research :

01. General Culture in which a science develops.

02. Scientific Theory

03. Analogies

04. Consequences of Personal, Idiosyncratic Experiences as the sources of hypothesis.

+ Idiosyncrasy: A behaviour or way of thinking that is characteristic of a person.

: A language or behaviour that is particular to an individual or group

01. General Culture in which a science develops :

⇒ A cultural pattern influences the thinking process of the people and the hypothesis may be formulated to test one or more of these ideas. Cultural values serve to direct research interests.

⇒ The function of culture has been responsible for developing today's science to a great dimension. In the words of Goode and Hatt, "to say that the hypothesis are the product of the cultural values doesn't make them scientifically less important than others, but it does at least indicate that attention has been called to them by the culture itself."

⇒ For example in the western society race is thought to be an important determinant of human behaviour. Such a proposition can be used to formulate a hypothesis.

→ We may also cite metaphysical bias and metaphysical bias ideas

of Indian culture to have been responsible for the formulation of certain types of hypothesis.

⇒ It implies that cultural elements of common cultural pattern may form a source of the formulation of hypothesis.

02. Scientific Theory :

⇒ A major source of hypothesis is theory. A theory binds a large body of facts by positing a consistent and lawful relationship among a set of general concepts representing those facts.

⇒ Further generalizations are formed on the basis of the knowledge of the theory. Corollaries are drawn from the theories.

⇒ These generalizations or corollaries constitute a part of hypothesis. Since theories deal with abstractions which cannot be directly observed and can only remain in the thought process, a scientific hypothesis which is concerned with observable facts and observable relationship between facts can only be used for the purpose of selecting some of the facts as concrete instances of the concepts and for making a tentative statement about the existence of a relation among the selected facts with the purpose of subjecting the relation to an empirical test.

⇒ A hypothesis emerges as a deduction from theory. Hence, hypothesis become "working instruments of theory". Every worthwhile theory provides for the formulation of additional hypothesis.

⇒ "The hypothesis is the backbone of all scientific theory construction; without it, confirmation or rejection of theories would be

- impossible."
- ⇒ The hypothesis when tested are "either proved or disproved and in turn constitute further tests of the original theory."
 - ⇒ Thus the hypothetical type of verbal proposition forms the link between the empirical propositions or facts and the theories.
 - ⇒ The validity of a theory can be examined only by means of scientific predictions or experimental hypothesis.

03. Analogies

- ⇒ Observation of a similarity between two phenomena may be a source of formation of a hypothesis aimed at testing similarity in any other respect.
- ⇒ Julian Huxley has pointed out that "casual observation in nature or in the framework of another science may be a fertile source of hypothesis. The success of a system in one discipline can be used in other discipline also."
- ⇒ The theory of ecology is based on the observation of certain plants in certain geographical conditions. As such, it remains in the domain of botany. On the basis of that the hypothesis of human ecology could be conceived.
- ⇒ Hypothesis of social physics is also based on analogy. "when the hypothesis was born out by social observation, the same term was taken into sociology. It has become an important idea in sociological theory".
- ⇒ Although analogy is not always considered, at the time of formulation of hypothesis; it is generally satisfactory when it has some structural analogies to other well established theories. For the systematic simplicity of our knowledge,

the analogy of a hypothesis becomes inversely helpful.
⇒ Formulation of an analogous hypothesis is construed as an achievement because by doing so its interpretation is made easy.

04. Consequences of Personal, Idiosyncratic Experience as the Sources of HYPOTHESIS:

⇒ Not only culture, scientific theory and analogies provide the sources of hypothesis, but also the way in which the individual reacts to each of these is also a factor in the statement of hypothesis. Certain facts are present, but every one of us ~~is~~ is not able to observe them and formulate a hypothesis.

⇒ Referring to Fleming's discovery of penicillin, Backrach has maintained that such discovery is possible only when the scientist is prepared to be impressed by the 'unusual'. An unusual event struck Fleming when he noted that the dish containing bacteria had a green mould and the bacteria were dead. Usually he would have washed the dish and have attempted once again to culture the bacteria.

⇒ But he was moved to bring the live bacteria in close contact with the green mould, resulting in the discovery of penicillin.

⇒ The example of Sir Issac Newton, the discoverer of the theory of Gravitation, is another glaring example of this type of 'personal experience'. Although prior to Newton's observation, several persons had witnessed the falling of the apple, he was

the right man to formulate the theory of gravitation on the basis of this phenomenon.

⇒ Thus emergence of a hypothesis is a creative manner. To quote Mc Guigan, "to formulate a useful and valuable hypothesis, a scientist needs first sufficient experience in that area, and second the quality of the genius."

⇒ In the field of Social sciences, an illustration of individual perspective may be visualized in Veblen's work. Thorstein Veblen's own community background was replete with negative experiences concerning the functioning of economy and he was a 'marginal man', capable of looking at the capitalist system objectively.

⇒ Thus he could be able to attack the fundamental concepts and postulates of classical economics and in real terms Veblen could experience differently to bear upon the economic world, resulting in the making of a penetrating analysis of our society. Such an excellent contribution of Veblen, has, no doubt, influenced social science since those days.