

Sociology

CHAPTER -2

- a. Science, scientific method and critique

Syllabus

2. Sociology as Science:

Science, scientific method and critique

Major theoretical strands of research methodology.

Positivism and its critique.

Fact value and objectivity

Non- positivist methodologies

Science, Scientific Method and **Critique**

Sociology as a Science

Emerged due to challenges posed before modernity.

Initial sociologists wanted to develop Sociology on bases of natural science-

Saint Simon (social physics)

August Comte (statistics and dynamics)

Herbert Spencer (organismic analogy)

Durkheim (moral density, moral volume)

But it was found sociology could not stand all parameter of natural science

So debate started whether **'sociology is a science'**

What is Science

Science has four preconditions

Theoretical orientation

Objectivity in research

Quantifiability of the phenomenon

Intersubjective reliability

ARGUMENTS in FAVOR (why Socio is a Science)

Theoretical Orientation

Sociology has made theories but valid in specific socio cultural context

Durkheim theory of religion and Parsons theory of social system claimed to be universal theory

Objectivity

absolute not possible but training can help

Durkheim and Weber used scientific methods to ensure it

Quantifiability

Social phenomenon can be observed albeit directly/indirectly

Durkheim social facts

Weber- Ideal types

Intersubjective Reliability

Class, Caste, Family, etc.

ARGUMENT AGAINST (why Socio can't be seen as a Science)

Limitations w.r.t natural science (empiricism, testability , universal theories and absolute objectivity)

But if seen as method of enquiry, sociology fulfils all conditions

Even in Natural Science

Astronomy is considered a science but experimentation not possible

MAX WEBER

Difference in subject matter (human beings have consciousness)

So sociology is a *science in itself*

ARGUMENT AGAINST (why Socio can't be seen as a Science)

Natural sciences go for statement of facts while social sciences go for statements of value

Wilhelm Windelband and Heinrich Rickert

Neo Kantians

Introduced concepts of

Nomothetic

(based on facts/empiricism/ tendency to generalize/ **suited to natural sciences**)

Idiographic

(based on tendency to specify/ subjective interpretations/ **suited to humanities**)

So methodology, approach towards knowledge and theorizing is different for social science

Erving Goffman and GH Mead used different approach to understand social phenomenon.

Science can, thus, be seen as

Methodology

(positivism/ non positivism)

Spirit

(critical)

Purpose

(to know the truth)

Consequences

(curiosity and solving the problem)

Conception of science has changed

Enlightenment ideologies consider it as a body of knowledge (empirical (observed)/testable (verified)/uniform laws) based on natural science

Karl Popper

Only positivism is not science because it overlooks aberration and kills the critical spirit of science

Gradually science came to be understood as **method of enquiry** or approach based on evidence and reason

Karl Popper says that science is not a body of knowledge *but a method of approaching and studying phenomenon*

Scientific Method

Method/ procedure followed while conducting a research

Stage 1) **identification of problem of research**

2) **review of literature**

3) **construction of hypothesis**

4) **collection of data**

5) **checking reliability and validity**

6) **testing hypothesis with facts**

7) **develop general laws and theories**

8) **presentation of data**

(needs to be objective and no place for prejudice and emotions)

Criticism to Scientific Method

Method is **just** means to an end

Scientific method is **just one method** among many

Glorification of one method is **bad** for growth of knowledge

Scientific method is based on induction and

it does not promote refutability

Science makes **relative prediction** (meteorology, space)

Difference between science and pseudo science
(where prediction starts eg Sigmund Freud theory)

Thomas Kuhn (Book 'scientific revolution')

Scientific revolution is a continuous, collective method

Even with non scientific methods, many disciplines have grown and matured - eg history, philosophy

A researcher in scientific method also makes certain assumptions so don't glorify

**Today science is colonised by state or capitalist
Science should be given freedom**

Theodor Adorno

17-18th century

Science attempted to **study** nature

19th century

Science attempted to **exploit** nature

20th century

Warhead, destructive power of science

21st century

colonised by state and capitalists
(technology curtails choices and freedom)

So we should **not celebrate science**

Carl Jung

(Swiss psychiatrist and psychotherapist)

Subjective things like happiness, beauty, knowledge, pleasure etc **cannot be measured** with scientific methods

So methodology should be discipline specific

Paul Feyerabend

Scientific method is form of 'Epistemology Anarchism'

Science has spread anarchy

that any discipline not following scientific method
should not be taken seriously

Science can't deal with human problems

Behavioural sciences researcher should be given
freedom