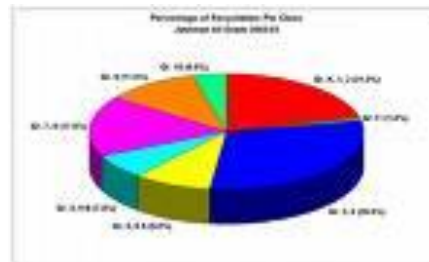


# Is sociology a science?



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# Aim

- To consider whether sociology can be called a science
- To consider whether We want to call sociology a science
- To consider the role of different perspectives in whether we accept it as a science

# Objectives

- Students should be able to state where the 2 main methodological perspectives (positivists Verses interactionists) lie on this issue
- Students should be able to consider the issues surrounding even positivists considering sociology a science
- Students should be able to plan a useful essay and use it to write a high quality discussion on this complex issue

# Sources of Knowledge

Wallace's four.

1. Authoritarian – from position of parent, bishop or King
2. Mystical source – linked to a religious experience
3. Logical - rational – based on logic for example mathematics
4. Scientific method – Having a hypotheses and testing it rigorously

# Scientific method

Philosophy and mathematics may be true knowledge but not necessarily linked to the real world. e.g. time, space and dimensions can have different properties. Science, others can repeat the method, replicate the experiment and so, Wallace claims, it gives the method a claim to superiority.

# Positivists

Believe that science can explain the universe .They use hypo- deductive reasoning to test their beliefs. (This is when scientists have a theory and invite others to prove them wrong. It is based on the concept that nothing can be proven 100% true but theories can be proven false. Eg I would never be able to prove that I am going to live forever but others could quite easily prove I won't by killing me. It is reasoned that if many fail to prove a theory wrong it has an increased **likelihood** of being correct/true but we will never be 100% sure.) According to positivists for theories to be scientific they must be testable/falsifiable. Positivists believe that a scientifically backed theory is far more valid than one that is not backed up with quality evidence. Positivists see the world as being full of concrete testable realities. Positivists use quantitative methods to support their theories.

# Interpretivists

Are very skeptical with regard to the positivists 'scientific' claims. They see the world as mainly a socially constructed place. By this they mean that reality as we understand it only exists because of agreed shared concepts knowledge itself is whatever we agree it to be. For example most people would recognize a chair as something useful to sit on, but if you took it to a tribe who had been isolated from the rest of the world and were a very aggressive group they may view it as a shield with spikes on it. Context is therefore a hugely important aspect of knowledge itself, and so context is really important when we are trying to understand/interpret a situation. Interpretivists don't think that scientific methodology is useful to the study of human interactions or sociology. They see it as not valid because it often removes the context or interferes in some way with the subject matter.

Interpretivists use qualitative research techniques such as ethnographic techniques for example observations and unstructured interviews.



**Which one do you suppose thinks Sociology should be a science?**



# Positivism

- But even amongst positivists there is no agreement as to whether a theoretical subject such as sociology should be considered to be truly scientific.
- First we must consider what constitutes a science

# What is science?

In your groups write down the things that you think are necessary for a subject to be considered a science

# Criteria of what science is: -

- Have testable concepts
- Accurate gathering of information to get reliable measurable data
- Be able to make generalizations based on the research conducted to establish common / general laws
- Should be objective (unbiased)
- Based on practical investigations – Empirical evidence

# What is science?

- Empirical
- Theoretical
- Objective
- Testable
- Cumulative

# Empirical

Know through the senses – tested physically

# Testable

- Can be verified or refuted.
- Falsification is the most important characteristic as far as Karl Popper is concerned.
- It is not INDUCTION, used by Durkheim, which is collecting information and formulating a theory but rather formulating a theory and using data to test it. ( but theories can't be constructed in a vacuum.)

# Testable

- Sociology cannot use laboratory experiments to test theories.
- It can not isolate the variables.
- But this is true of cosmology, meteorology, vulcanology and animal behaviour which are also open sytsems. This does not stop theories being tested by observation.
- **Sociologists claim that comparative methods allows testing of a result.**

# Theoretical

- Sociology can predict how **groups** of people will react .
- The proposal of patterns is something that can be tested.



# Cumulative

Both the evolution of theories and collection of data is cumulative in sociology.

# Popper

- Says that for a subject to be scientific it must be testable using hypo deductive reasoning ( i.e. it must have testable concepts that using scientific methodology could be proven wrong - FALSIFICATION)
- E.g. SWANS – You can never say that all swans are white only that you have yet to find a non-white swan. Scientists should always be trying to falsify their theories and not simply more evidence in support of them.
- You must therefore be able to isolate an independent variable and establish causal links

# Kuhn and paradigms

- Kuhn uses the concept of ideological paradigms to explain why scientists are in now way infallible
- He points out that all science operates under an ideological paradigm
- This is a fixed belief or set of beliefs that most of the community accept to be true, and therefore interpret all scientific findings from that viewpoint
- Currently a useful paradigm is the theory of evolution
- It is a useful practice and it is hard to imagine how a system would work without such agreement
- But it is arrogant and foolish to forget that the initial premise is a theory and may be wrong as historically it has been many times

# Kuhn

But Kuhn also says for a subject to really be considered a science it should at least have a prevailing paradigm, an overriding belief system that most of the practitioners accept.

## Paradigm

An umbrella of beliefs and attitudes that affects our behaviour



If I believe  $x$  then I understand  $Y$  and  $Z$

**You should already be able  
to see that much  
Sociological research would  
struggle to meet all of this  
criteria**



# Positivists in sociology

- Sociological positivists feel that it is valid to use scientific methods despite the fact that the independent variable can rarely be fully isolated.
- They think that the methodology itself is still useful and is the most reliable tool in searching for Knowledge.
- Knowledge itself as far as they are concerned is a concrete reality that can be measured and tested.
- They feel that there is such a thing as a social fact.

# Science and the modern world.

- By claiming a monopoly on explanation scientists have replaced priests as the sources of truth. **The post modernist criticism.**
- There are many questions that are not asked and cannot be answered by science.
- What is life for? What is justice? Are we responsible for other people?
- By posing as having an answer for everything science is cheapening life.

# Interactionists

- Do not agree that there is such a thing as a social fact in the same sense that positivists view it
- They do not think knowledge itself is concrete or testable just a shared reality
- Consequently it is fairly immaterial whether sociology meets the criteria of science
- They question the validity of science and feel that the experimental process itself often contaminates what it is meant to be learning about



# **Sociology can't and shouldn't be a science.**

## **The idea of Schutz, Billig and Bauman**

Durkheim thought society was like a building with hidden structure that could be uncovered.

But if we are actors who continually construct society by the meanings we give to actions and explanations of behaviour then the detached approach of the scientist is both inappropriate and impossible. This is the view of Schutz.

# Why does it matter if Sociology is a Science?

- To ensure prestige so the subject can gain funding for teaching and research at Universities.
- To give weight to its findings so that they have the authority by being backed by scientific method.
- To give protection. Sociology has been threatened in different countries from the Prussian civil servants to Robert Mugabe and Margaret Thatcher as a source of subjective political criticism.

# Summary

- Sociology wanted to be seen as a science for status.
- Scientist have pointed to aspects of sociology and said that it can't meet all the criteria
- Positivists believe by research design with sampling and triangulation there can be social science
- Science itself does not meet all the criteria of being scientific
- Interactionists and others think the debate itself is stuck in an age of outdated notions that there is a fixed knowable world out there to be discovered
- There are many means of discovery of which science is only one
- It is the politicians that like the so called hard facts and they hold the purse strings