“A” Level Sociology

A Resource-Based Learning Approach

Module One:
Theory and Methods

Unit M3: Sociology and Science

Syllabus Area

The nature of sociological thought:

Positivism, Interpretivism, Realism and Feminist methodology.

Learning Objectives

What?

The key ideas in this Unit are:

- **Ontology (What do you believe exists?)**
- **Epistemology (What proof will you accept of valid knowledge?)**
- **Methodology (How can you produce reliable and valid knowledge?)**
- **Reliability**
- **Validity**
- **Research Methods (How can you collect reliable and valid information?)**
- **Positivist science**
- **Interpretivist science**
- **Realist science**
- **Feminist science**

Why?

You will be able to define:

- **The concept of science**
- **The concepts of reliability and validity**
- **The difference between methodology and methods of research**

How?

You will be able to apply your knowledge to:

- **An understanding of the relationship between methods of research and sociological methodologies**

Decision

You will be able to evaluate:

- **The difference between reliability and validity**
- **The strengths and weaknesses of different versions of science.**

Sociology and Science

What?

In the previous Unit we examined the distinction between two basic types of knowledge about the world in which we live (namely, **common sense** and **sociological knowledge)**. The implication of this distinction is that the latter is a superior form of knowledge because it involves subjecting our ideas to some form of **systematic testing**, rather than simply **assuming** they are true. In addition, we've also looked at **one** way of **organising** social research around the idea of **proposing** and then **testing hypotheses**, namely the **Hypothetico-Deductive Model**.

In terms of your **A-level research project**, for example, this model could represent an important set of **methodological guidelines** that you might want to consider adopting as a framework for your research project.

Why?

What these ideas suggest is that we can distinguish between knowledge that is **scientific (tested** in some way and **not disproved**) and knowledge that is **not scientific** (untested or simply assumed to be true). In this respect, it is generally true that all sociologists subscribe to the belief that the knowledge they produce is scientific - that it is superior, in some way, to non-scientific forms of knowledge.

Although sociologists may broadly agree that, through social research, they are engaged in the production of scientific knowledge, this is not to say that there is anything like a general agreement about what the concept of scientific knowledge either means or involves.

This leads us into the general debate about **sociology and science** that is the focus of this Unit. In particular, we are going to examine some **competing definitions** of science in relation to sociological research and relate these different definitions to the question of how different sociologists go about the task of selecting and using methods of research.

This type of belief is often referred to as a "domain assumption". In simple terms, a belief that is considered fundamental in a particular subject area

Note: Students following the Associated Examining Board (**AEB**) syllabus are required to cover the area of sociology and science in much greater detail than students following the InterBoard syllabus (**IBS**). A number of **additional Units** in this Module, therefore, have been provided for such students (see the **Syllabus Guide Unit** for further details).

In order to organise this we are going to look at examples of four different **versions of science** that develop out of the answers we choose to give to **four questions**. As we will see, the different answers given to these questions determine a researcher's **choice** of **sociological methodology** and, by extension, the **methods** they use to collect data.

That is, how it can be **defined** (what the concept of science **means**) or how scientific knowledge can be **produced** (what the concept of science **involves**).

"**Science**" in this respect, is **not** a **body of knowledge** (such as chemistry or physics) but rather it is **a way of producing knowledge**. To be "scientific", therefore, is to produce knowledge in a way that conforms to certain **rules of evidence** (see below).

The key words in this section, therefore, are:

What?

- **Ontology**
- **Epistemology**
- **Methodology**
- **Reliability**
- **Validity**
- **Research Methods**

One of the most important things you learn from doing a course in Sociology is that people see the social world differently. Examples to illustrate this idea are not difficult to find.

What?

- Where one person sees a mad terrorist bomber, another person sees a freedom fighter;
- Where one person sees hunting as an honourable and humane way of controlling the fox population, another person sees it as an excuse for blood-thirsty individuals to satisfy their hypocritical lust for excitement.
- Where one person sees a single-parent struggling to raise their children as a social problem that can be resolved by punishment, another person sees the same single-parent as a victim of social circumstances that can only be resolved by trying to help the parent overcome their disadvantages.

The question here is not so much who is **right** and who is **wrong** (since this kind of **judgement** is going to depend ultimately on the **values** you bring to the debate). Rather, these examples serve to illustrate the idea that there is invariably always more than one way of "seeing reality". This is not simply because "people are different", but rather it's something that reflects the fundamental nature of being. What counts as **social reality** is a matter of **interpretation**. That is, whatever we call **reality** is the product of many things, both **individual** (my values, assumptions, interests, prejudices and so forth) and **social** (the values, assumptions, interests, prejudices and so forth that appear solidly ingrained into the **cultural life** of the society in which we live).

Exercise 1

Identify some examples of the way people may look at the same behaviour but interpret it differently.

If this is true for people generally, it is also true for sociologists. On a general, perhaps fundamental, level whatever you believe about the nature of the social world is going to affect such things as:

- **How** you believe it is possible / desirable to **study** social life (for example, the **methods** you decide to use in order to study it).
- The type of **knowledge** you believe it is **possible** / **desirable** to produce from your research (for example, whether or not you believe it is possible to **predict** people's behaviour).

Thus, although the **Hypothetico-Deductive Model** shows us **one way** of organising the research process, how you actually go about the task of using what you consider to be appropriate methods to collect data is going to be based upon exactly the type of questions I've just noted. Keeping this in mind, therefore, we need to examine the idea of **sociological methodology** in more detail before we can consider the range of methods open to a researcher. In order to do this, we can start by discussing the **four questions** I've suggested determine both a researcher's choice of sociological methodology and the methods they use to collect data.

Four Methodological Questions

The **first** question we need to ask is:

What do we believe exists?

In technical terms, this is called a question of **ontology**. This refers to the fundamental beliefs we hold, as individuals or as a society, about the nature of something]

Why?

This question relates to the **nature of the beliefs** we have that support our belief that something is **true**. We can use the following examples to illustrate this idea.

General types of **ontological belief**.	**Ontological beliefs** relating to **sociological research**
Do I believe: • The earth is flat or round? • In the existence of God? • Sheffield Wednesday are the greatest football team the world has ever seen?	**Do I believe**: • It is possible to predict social behaviour in the same way it is possible to predict the behaviour of the natural (non-social) world? • Society is a real, living, thing? • The study of social structures is less important than the study of individual social actors

As sociologists, the answers we give to these (and many other) **ontological research questions** are important because they will shape the way we believe it is possible / desirable to study the social world. This leads us to the **second** question,

"**What proof do we need in order to accept that something is true?**".

In technical terms, this is termed a question of **epistemology**.

There are many **types and levels** of **proof** that people will accept about whether or not they believe something to be true. You might like to consider the following examples:

How?

A simple example here is to return to the distinction between **common sense** and **sociological knowledge**.

- **Common sense** ("what everyone knows to be true") requires only a **simple level of proof** for it to be accepted. If "everyone knows something to be true" then we may be inclined to **trust** - or have **faith** - that it is true.
- **Sociological knowledge**, on the other hand, **may** require a **higher level of proof** before it becomes accepted as true. If, for example, a sociologist claims that "what everyone knows to be true" is, in fact, false then they will need to provide evidence (logical or factual perhaps) to support their argument.

The **type** and **level** of proof we are willing to accept is important because it relates directly to what we believe we need to do, as sociologists, in order to believe something. The following are different examples of "proof".

Trust
When someone we trust tells us something we may be inclined to believe what they say because we believe they would not lie to us.

Faith
There may be some things we are willing to believe simply as a matter of faith. A belief in a God or gods, for example, may be proved for us on the basis of our faith that a God or gods exist.

Personal Experience
We frequently refuse to accept something is true until we have "**seen it with our own eyes**". Once we have witnessed something we may be inclined to accept it is true, rather than take it on trust. For example, we may refuse to believe in the existence of aliens from another world until we see one personally.

Logic
It is possible for us to prove something logically. This is true, for example, of **mathematical proofs** (a simple example being 2 + 2 = 4). We accept this as true (or not as the case may be) on the basis of logic rather than having to be shown it is true. Another example might be the argument that if there are an infinite number of planets then it is logically true that somewhere there must be a planet that, just like our own, is inhabited.

Empirical Evidence
In this instance we require **evidence** that we should believe something is true - usually evidence that is something **more** than simple personal experience. The "aliens" example illustrates this idea.

Even if we personally "see an alien spaceship" we may not accept this as proof of the existence of people from another world since we might be inclined to put it down to "a trick of the light" or whatever. However, if enough people "saw the spaceship" we might be more-inclined to accept that it existed because our personal observations have been **confirmed** by others (this does not, of course, mean it has to be true - everyone might have interpreted a stray weather balloon as a spaceship - but it perhaps makes it **more likely** to be true). Thus, in this instance we have decided that empirical evidence is the only **type of proof** we will accept, but the **level** of that proof will also be important.

Empirical means "through the evidence of the senses" but, for our purposes we can consider it to mean factual evidence. In particular, factual evidence we have collected by direct and systematic observation.
That is, evidence that has been shown to be true because it has been tested in some way.

What? This idea, therefore, leads us to consider the **third** of our four questions,

"**How can we produce plausible knowledge about the social world?**".

Why? This question is one of **methodology** and it relates to **beliefs** about what we have to do (the **methods** we can use and so forth) to demonstrate that that the knowledge we produce through research is more **plausible** (more likely to be true) than any other type of knowledge.

I have deliberately tried to avoid using the word **true** in this context since it is impossible to say with any degree of certainty that anything is ever "true for all time" (we cannot, for example, know what might happen in the **future** to prove us wrong). Rather, I've used the term **plausible** because it suggests that some forms of proof may be more-acceptable to us than others. In addition, by using the question of **plausibility** it allows us to look at two important methodological concepts we can use as a means of **assessing** the **plausibility** or otherwise of social research.

Plausibility, in basic terms, involves the idea that we are prepared to accept that something is true only until someone else comes along and shows that it isn't true.

How?

Plausibility :The concept of Reliable and Valid Knowledge

As I've suggested, one of the main characteristics of sociological knowledge is that it's based on **evidence** of some description. This being the case, it follows that there must exist certain **rules** that tell us what does and does not represent acceptable forms of evidence. In basic terms therefore, when we carry out any form of research we need to be sure that the data we produce is both **accurate** and **true to life.**

That is, we need to be sure that what our research findings tell us about people's behaviour accurately reflects the **reality** of that behaviour and the two concepts we use to help us in this respect are those of **reliability** and **validity** - two **methodological concepts** we need to consider in more detail.

1. Reliability.

McNeil ("**Research Methods**") defines data reliability in the following terms.

"If a method of collecting evidence is reliable it means that anybody using this method, or the same person using it at another time, would come up with the same results. The work could be repeated and the same results gained".

This is similar to the idea that if something is **reliable** it will always behave in the same way. Conversely, if something is **unreliable** you cannot trust it to behave in the same way.

Data reliability, therefore, is concerned with ideas such as:

• The consistency of the data collected.

For example, will the same question asked of the same person in similar circumstances, produce the same answer?

• The precision with which it is collected.

For example, this may relate to things like the representativeness of a sample, the level of response you receive from respondents and so forth.

For example, in a previous Unit we looked at the idea of a self-selected sample. This would be an obvious example of the way a biased sample would produce unreliable data

• The ability to **replicate** a piece of research.

Exercise 2

Why are conclusions drawn about education in Britain on the basis of data collected from an interview conducted in a pub with whoever happened to be present, likely to be an unreliable guide about what is happening in education?

The ability to **repeat** a piece of research (**replication**) is potentially a very powerful aspect of data **reliability**. If the same results are gained time after time, no matter how many times you conduct a piece of research, this suggests that the data collected is reliable (that, for example, any relationships you establish through your data are not the result of chance or accident)

To paraphrase **McNeil**, data can be considered broadly **reliable** if the **same results** (or ones' that are broadly similar) can be gained by a **different researcher** asking the **same questions** to the same (or statistically similar) groups / individuals.

- The reliability of the data we collect must, of course, be an important consideration, since if the **data** we use is **not reliable**, then the **conclusions** we draw on the basis of such data are going to be fairly **useless**.

In general terms, **data reliability** will be affected by such things as:

- The opportunities available for the researcher (consciously or unconsciously) to introduce **bias** into the data collection process.
- The level of **standardisation** the researcher is able to introduce into their data collection.

An example here might be **unemployment statistics** collected by the British government. The **reliability** of such things as monthly unemployment totals can be **tested** by asking such questions as:

- How are the statistics collected (and by whom)?
- Is it possible to bias the collection of such statistics?
- Do the statistical totals depend upon the interpretation of the researcher as to what constitutes "unemployment"?

- Where data collection depends on such things as the **interpretation**, by a researcher, of people's behaviour, the **inability** to **record** that behaviour **accurately** and so forth, then the **less reliable** the data is likely to be...

2. Validity.

Data is only useful if it actually **measures what it is supposed to be measuring**. The concept of validity, therefore, refers to the extent to which the data we collect gives a **true measurement** / description of "**social reality**".

If we think about the example of **unemployment statistics**, while we can be reasonably certain that such statistics are collected **reliably**, month-on-month, we also need to know how accurate a picture of unemployment in our society they represent. In short, we need to think about their **validity**.

That is, they are always collected in the same way - the number of people "unemployed" in any one month is recorded by a government department.

For example, if we wanted to **compare** levels of unemployment in our society today and twenty years ago, it is unlikely that we could we use government statistics (uncritically) for this purpose.

There are two points we could note here as examples:

Firstly, **definitions** of what constitutes "unemployment" have changed over time - and, in this respect, since the definition has changed about 25 times over the past fifteen years, it follows that such statistics are **not valid** for purposes of comparison (we are not, in technical terms, "**comparing like with like**").

Secondly, since such statistics do **not** use a definition of "unemployment" that involves counting **everyone** who wants to find a job, but can't, it's **unlikely** that they represent a true or **valid** picture of unemployment in Britain...

In research terms, the concepts of **reliability and validity** go hand-in-hand:

- If data is **reliable** but **not valid**, then it may have limited use.

We can make general statements about the social world, on the basis of such data, but such statements may not actually apply to any one social group (such as the "unemployed").

- If data is **valid**, but **not reliable**, we may not be able to make general statements about the social world.

We may be able to understand something about one group of unemployed people, but this doesn't necessarily apply to all the unemployed.

Finally, therefore, a **general rule** to follow whenever you are presented with data to analyse / interpret (from whatever source), is that you should always seek to **apply** the concepts of **reliability** and **validity** to the data you collect.

However, to return to the question, **methodological questions** involve considering which **methods** are likely to produce data that is as reliable and valid as possible. The answer you come up with, therefore, will depend to a great extent on your answers to the previous two questions.

In simple terms. we need to know if our data is actually reflecting / measuring what is "really happening" in society).

Exercise 3

Briefly explain why your perception of reliable and valid methods will depend on what you believe exists / the level of proof you will accept.

What? This, therefore, leads to the fourth and final question,

"How can we collect data that is both reliable and valid?"

Why? This is a question that relates directly to the **methods of research** used by different sociologists. If what I've noted above is **valid**, therefore, it follows that a sociologist will have **preferred** methods of research that, at least in part, reflect their beliefs about the nature of the social world (**ontology**), the level of proof required in their research (**epistemology**) and beliefs about what constitutes reliable and valid data (**methodology**). All four questions are, in short, related and to see how this might create different ideas about how it is possible to study the social world scientifically, we can look at four (**idealised**) examples of sociological science.

They are idealised in the sense that each variety of science described probably only really exists in the pages of academic textbooks. As we will see, the reality of sociological research tends to be very different to this idealised version. For this reason it is important that you do not see the following as "hard-and-fast" categories into which sociologists can be conveniently pigeon-holed.

Varieties of Science.

What? The keywords in this section are:

- **Positivist** science
- **Interpretivist** science **consciousness**
- **Realist** science
- **Feminist** science

Why? In the previous section, I've suggested that the answers given to the four basic questions will determine how any researcher goes about the task of researching the social world. In terms of these ideas, therefore, it is not particularly surprising that there exists a variety of different ways of "doing science" (that is, producing knowledge that is both **reliable** and **valid**). To illustrate this idea, therefore, we can look briefly at four historical examples of scientific methodologies and the various ways that each relates to sociological research.

- Before we consider these examples, it is important to keep in mind the fact that they are idealised representations of different scientific approaches to the study of the social world. That is, the following outlines the basic principles that make each approach slightly different and you should avoid the temptation to assume that sociological researchers always subscribe to one of these approaches while rejecting the others. There are many possible ideologies of science and the following are simply illustrations of some of these ideologies…

Note: Either before or after you look at the following accounts, it will be useful to read at least one of the textbook accounts of sociological methodology contained in **Sociology In Focus** (pages 636-644) or **Themes and Perspectives** (pages 14 - 16 and 860 - 861).

Example 1. Positivist Science.

In the **early development** of sociology as an academic discipline (the late 18th century / early 19th century), sociologists such as Auguste **Comte** ("**The Positive Philosophy**") and, to a lesser extent, Emil **Durkheim** ("**The Rules of Sociological Method**") based their ideas about the "scientific study of society" on a research model that prevailed in the **natural sciences** ("**positivism**"). This model was based on a number of key ideas which can be summarised as follows:

- **Firstly**, the behaviour of objects in the natural world seemed to be based on **laws of behaviour** - the most famous and important of these being the law of "**cause and effect**"; that is, the idea that the behaviour of one object (**the effect**) was based on the operation of something else (**the cause**). Not only was it possible to show that the action of one thing **caused** something else to happen but, more importantly, it was possible to show that the same action **always** caused the same effect.
  This was an important (and potentially very powerful) **scientific principle** precisely because it suggested the existence of laws that governed all behaviour in the natural world.

A simple example here might be the **law of gravity**. Once discovered, the principles of this law could be applied in a variety of ways. For example, the existence of this law helped to explain why people could not fly and, indirectly, led to the ways of (temporarily) overcoming the effects of gravity through the development of powered flight. This is an important idea since when you fly in a plane the law of gravity still exists; all that has happened is that a **scientific means** of neutralising the effect of gravity has been **discovered**.

- **Secondly**, if the above was true, it followed that the task of science was to develop ways of **discovering** the various laws that governed behaviour in the natural world. If such laws were discovered and their principles understood people could then use this knowledge to their advantage and **progress** could be made.

- **Thirdly**, if the **natural world** was based on **laws of behaviour** that existed **independently** of human beings (the law of gravity, for example, exists whether we believe in it or not) the scientist had to develop reliable and valid ways of discovering such laws. This, it was argued, could only be done through **systematic observation**, **rigorous experimentation** and **repeated testing**, since the scientist had to be sure that any law they claimed to have discovered really was a law. This could only be done by objective observation, measurement and testing.

Although this is a rather (over)simplified account, it does show us two things:

- Firstly, the idea that behaviour (at least in the natural world) is governed by laws that exist whether we know about them or believe in them.

- Secondly, by discovering such laws we can understand how and why things behave as they do.

In terms of early sociological ideas, therefore, this conception of science had two main attractions:

- 1. If it was possible to demonstrate that the natural world was governed by laws, it was a small step from this fact to argue that the social world was also governed by laws.

- 2. If systematic observation, experimentation and repeated testing allowed natural scientists to discover the laws governing the behaviour of inanimate objects (rocks, planets, etc.), there was a distinct possibility that the adoption of such research practices would allow sociologists to discover the laws governing the behaviour of animate objects (people, for example).

How? **The basic principles of positivist science, therefore, can be summarised in terms of the "four questions" we've previously outlined.**

a. Positivist Ontology.

We can note two major elements of positivist belief in this section:

- 1. The social world is similar to the natural world in terms of the idea that both are governed by particular **laws**.
- 2. Laws governing human behaviour exist **independently** of the hopes, fears, aspirations, etc. of human beings. Whether we like it or not, our behaviour is governed by the action of **social laws**, just as our behaviour is governed by the action of natural laws.

In this sense, it is as pointless to study individual psychologies as it would be for the natural scientist to study individual apples that have fallen to the ground in the hope that this will tell them something about gravity.

A basic assumption here is that **patterns of behaviour** exist in the **social world** just as they do in the **natural world**. The argument here is that these patterns must have **causes** and, therefore, if we identify these causes we can identify the **reasons** for these patterns (that is, we can explain why people behave in certain ways).

Positivist science, therefore, takes its **inspiration** from **natural sciences** such as **physics** and **chemistry**. Although clearly different, the social and natural worlds have some basic similarities. Just as natural scientists can establish **cause and effect** relationships, the same is also true, it is argued, of social scientists when studying social behaviour.

We can easily identify **broad patterns** of behaviour everywhere in the social world (this is hardly surprising since social life would not be possible without them). For example, think about the **patterns of behaviour** that characterise family life, education, government, religion, work and so forth.

One of the main differences between the social and natural worlds is that the **subject matter** of sociology (people or animate objects) is very different to the subject matter of the natural world (inanimate objects such as rocks or plants). In basic terms, people have **consciousness**; they are aware of themselves and their surroundings in a way that rocks, for example, are not.

This potential problem is resolved, in positivist science, by arguing that the **self-consciousness** of human beings is not a significant factor in our ability to understand social behaviour since people's behaviour is always a **reaction** to some form of **stimulation**, whether this be their socialisation (the values and norms they have learnt), something more direct like the need to earn a living or whatever. If this is the case, then we have to study the **cause** of a **reaction** (the stimuli) rather than the action itself.

b. Positivist Epistemology

The assumption that **social laws** exist and, by extension, can be revealed to us (**discovered**) means that proof of **valid knowledge** has to be based on **objective** principles. That is, any proof must be based on evidence that can be **tested** and **measured** in some way. In basic terms, therefore, the only valid form of proof is that which is based on **empirical** principles.

The scientist, does **not** accept that something is true or false on the basis of **faith**, **trust**, **personal prejudice** or whatever. For something to be considered true it has to be **repeatedly shown** to be true.

Empirical means through the evidence of our senses. The main objective of positivism is to discover causal relationships between observable phenomena. Anything that is not **directly observable** cannot be considered as either valid knowledge or part of a valid explanation of social phenomena. The task of science is to demonstrate (prove) causal relationships. That is, to quantify the nature of patterns / regularities that exist in human behaviour.

c. Positivist Methodology

Reliable and valid knowledge can only be produced by developing **hypotheses** that can be **tested** against **empirical observations**. In this respect, Popper's **Hypothetico-Deductive Model** of science would be acceptable (in its entirety) as the basis for scientific research.

Thus, it's considered **possible** (and **desirable**) to **measure** and **quantify** human behaviour **objectively** and **statistically** so that **cause and effect** relationships can be demonstrated. Although the social world is a large and complex system involving many different relationships, the scientist can gradually build-up knowledge and, by extension, reveal the laws governing social behaviour, by the careful study of various aspects of social life.

It is possible to argue that there are some aspects of human behaviour that resemble laws. For example, no human society can exist without norms and values; all human societies inevitably involve a process of socialisation and the development of various cultural forms (ways of life). However, outside of these very basic necessities it becomes increasingly difficult to identify any possible forms of behaviour common to all human beings.

d. Positivist Methods

For this version of science, the collection of empirical data is the primary objective. Any method, therefore, that can be shown to be reliable (not influenced by the values and interpretations of the researcher) can be used.

Decision

To come to a conclusion about whether or not this version of science can be applied to the social world, we need to note the following criticisms:

Firstly, this version of science is based on two main **assumptions**, namely the idea that there are laws governing human behaviour and that these laws exist independently of human beings (they are waiting to be discovered).

While it is possible to demonstrate the existence of such laws in the natural world, it is by no means clear that it is possible to do the same for the social world.

Secondly, this form of science was originally developed to explain relationships in the natural world and it is by no means certain that it can be equally applied to relationships in the social world. As we will see, some sociologists argue that relationships in the natural world are **qualitatively different** to those in the social world because people, unlike inanimate objects, have the ability to **think** and act (they are **conscious** of their surroundings in a way that a rock or a flower is not). This quality makes it **inappropriate** to use methods of research designed to study non-human relationships for the study of human relationships.

Finally, positivist science is both **absolutist** and **judgmental** in terms of its perception of knowledge. While these qualities may be applicable to the natural world, it is by no means as certain that they can be applied to people's behaviour in the social world.

Absolutist in the sense that there can only, ultimately, be one version of truth. For example, in the natural sciences, the explanation of gravity is an absolute one since, once it's workings have been discovered there can be no other explanation.

Judgmental in the sense that some ideas are clearly going to be correct whereas other ideas are going to be considered incorrect. The moon, for example, is not made of green cheese.

For example, consider whether or not children should be raised in a two-parent or a one-parent family. There may be advantages and disadvantages (both for individuals and society as a whole) to these different social arrangements, but it is not possible to judge absolutely which family type is "better" or "worse" than the other…

Exercise 4

Suggest two reasons why the methods appropriate for the study of the natural world may not be appropriate for the study of the social world.

Example 2: Interpretivist Science.

This version of science developed, in both **psychology** and **sociology**, throughout the 20th century. It is a version of science that is characteristic of the work of **Interactionist** writers such as **Mead**, **Husserl** and **Garfinkel** and, while it is sometimes seen as a **reaction** to positivist conceptions of science, it is probably better to see it as an attempt to develop a way of "doing science" that is considered **more appropriate** to the study of human behaviour.

A defining feature of this version of science is the idea that the **consciousness** of human beings makes them very different to **non-conscious things** and, consequently, sociologists who want to study and explain human behaviour have to develop methods of research that take account of this fact.

Central to this version of science, therefore, are two ideas:

This is very **different** to the reality of the **natural world** where **interaction** is **not meaningful**. When you apply a source of heat to water, for example, the water has **no choice** but to react in a particular way (it will eventually boil - turn from a liquid into a gas). Compare this with human behaviour. If you apply a source of heat to a human being, for example, this person will have a **range** of possible reactions, based on things like their **immediate social setting**, their r**elationship** to the person attempting to set them alight and so forth. Thus, while it may be generally possible to predict how this person will behave (will they shout, swear, cry, laugh, hit-out etc.?), there is no guarantee that they will behave in the same way each time the heat source is applied (since, of course, one aspect of human behaviour is that we **learn from experiences** and **modify** our behaviour accordingly. In this example, a person who knows you are going to apply a heat source to their buttocks will probably try to take avoiding action - presupposing, of course, they're not paying you to do this to them because they like it...).

Firstly, the social world is **produced and reproduced** on a daily basis by people going about their lives. Thus, things that hold true for now (this minute, today, next week...) in our society may not hold true in the future or in another society. In simple terms, therefore, the behaviour we may wish to study and explain is the product of human **social interaction** - a dynamic, constantly-changing and evolving process that involves people acting and reacting to the world and relationships around them.

In this respect, "social reality" is the product of **meaningful social interaction** (that is, the idea that when people form and develop relationships they do so for a purpose).

Secondly, we have to understand people as living, thinking, **reflective**, individuals who try, as best they can, to **make sense** of the world in which they live. As sociologists, therefore, science involves trying to understand the **meanings** people give to their **actions**. Science, in this respect, involves getting **as close as possible** to the people and situations we want to explain - to experience, in short, what they are experiencing.

By this is meant the idea that people have both **self** and **other awareness**. As **Clarke** and **Layder** ("**Let's Get Real**" 1994) put it:

"People have "thoughts, feelings, meanings, intentions and an awareness of being… They define situations and give meaning to their actions and those of others".

From the above we can see the fact that people actively (if not always consciously or deliberately) create their world means any attempt to establish "cause and effect" relationships / laws is theoretically misguided. If people's behaviour is conditioned by the way they personally **interpret** their world (and no two interpretations can ever be exactly the same), it follows that "simple" causal relationships will be impossible to establish empirically - mainly because the conditions under which a relationship is created will have changed by the time that we have established such a relationship...

The social world, therefore, is understood ("interpreted") by different people in different situations in different ways. Thus, everything in the social world is seen to be **relative** to everything else; logically, nothing can ever be wholly true and nothing can ever be wholly false. The theories we create to explain the relationships we observe are, on this basis, simply one more **elaborate fiction** that we construct in an attempt to understand our world.

Something you interpret as a "problem", for example, may not be seen as a problem by me…

The best a scientist can do to understand social behaviour, therefore, is to understand how people (individually and collectively) **experience and interpret** their world (the **meanings** individuals give to things, the beliefs they hold and so forth). Thus, the methods that can be employed in this task (**observation and interpretation**) have to reflect the fact that people consciously and unconsciously construct their own sense of "social reality".

For example, it may be possible to show that in a particular classroom whenever the teacher says “listen to me” every student stops whatever they are doing and listens. While this behaviour may be “always true” **in this context** there is no guarantee that the same behaviour would be found in another class.

On the basis of the above, therefore, the basic principles of Interpretivist science can be summarised in terms of the “four questions” we’ve previously outlined.

a. Interpretivist Ontology

The first point to note is that the social world is considered to be very **different** to the natural world and, consequently, cannot be studied in the same way. Methods of research that are reliable and valid in the natural world are not necessarily so in the social world.

Secondly, the fact of **human consciousness** is both significant and crucial to any understanding and explanation of their behaviour. In this respect, people **act** consciously in order to create and recreate their social existence. The social world, therefore, can only be **experienced subjectively** and has no objective existence independent of people's everyday behaviour.

The ultimate expression of this idea is the fact that a society cannot exist without people. It is only human beings, acting purposefully in their daily lives, who create a “sense of society”. This is a **crucial idea** because “**social reality**”, from this perspective, **can only be what people believe it to be.**

For example, when people in the Middle Ages believed the world was flat then, effectively it was flat because people behaved as if it was. Similarly, if people believe in a God then, to all intents and purposes “God” exists because this idea has meaning for them and consequently affects how they behave.

If knowledge about the social world is created by people (reality is whatever people, at any particular time, believe it to be) then it follows that the social world does **not** exist outside people’s beliefs; it is not possible to discover “laws of behaviour”, for example, since such laws cannot, logically, exist.

- Similarly, if this is the case, it is **not possible** to make cause and effect statements about the social world that are "always true”, but it is possible to make such statements in a tentative and very limited fashion.

b. Interpretivist Epistemology

If **social reality** is whatever people **believe** it to be, the task of (social) science is to **describe people's perception of reality**. This being the case, valid knowledge involves the researcher being able to accurately and plausibly **document** people's **experiences**, **beliefs**, **meanings** and so forth. Proof of valid knowledge, therefore, is based upon a researcher's ability to experience the world as others experience it and is usually - but not exclusively - gained by a researcher experiencing the world form the **viewpoint** of the people being researched.

The German sociologist Max Weber, for example, used the term **verstehen** to describe the idea that one role of the sociologist was that of trying to understand the viewpoint of those they were studying.

In this interpretation, the task of science is **not** to establish causal relationships or laws that supposedly govern people's behaviour; rather, it is to **understand** how and why people **interpret** the social world in various ways. This is a very different form of science to that advanced by positivists.

c. Interpretivist Methodology

According to this version of science, **valid data** about people's behaviour can only be produced by a researcher **understanding** how people see and interpret the world in which they live and behave. This involves the researcher's **deep involvement** with the people / interaction process they are studying. Since the objective of research is to reveal, understand and explain behaviour from the **viewpoint of those involved**, it follows that the best way to do this is to actually **become a participant** in the behaviour the researcher is studying; in effect, to **become** if possible **the people being researched**.

- Valid data, in this respect, will usually be **qualitative data** of some description since **quantitative data** is unlikely to provide the **depth of meaning** needed to "really understand" what is going on in any social situation (such as a classroom, a factory, a football crowd and so forth).

Data reliability is much more difficult to achieve and is mainly dependent on the researcher having the **skills**, knowledge and ability to get at "what people really think and believe". Observed behaviour, for example, has to be recorded systematically, methodically and accurately if it is to be considered reliable.

d. Interpretivist Methods

Any method used by a researcher must attempt to understand a social situation from the **point of view of the social actors** (participants) involved and this always involves an attempt to capture the quality of people's experiences, meanings and interpretations. In this respect, methods of research will be largely **qualitative** (although quantitative data such as official statistics may be used, since these represent one version of social reality).

These might include methods such as:

Questionnaires.
Structured Interviews.
Experiments.
Non-participant Observation.
Content Analysis.

However, the most common methods employed by researchers adopting this version of science will be things like **unstructured interviews** and **participant observation** (both **overt** and **covert**).

Decision

In order to come to a conclusion about whether or not this particular version of science can be applied to the social world, we need to note the following criticisms:

Firstly, whereas **positivist** versions of science can be criticised for emphasising the **objective features** of societies to the **exclusion** of **subjective features** (human **consciousness**), **interpretivist** versions can be criticised for doing the opposite - emphasising the **subjective** nature of society to the **exclusion** of any **objective** social features.

In basic terms, this version of science argues that human societies consist only of **meanings** to be uncovered and understood (the task of science). "**Society"** exists only as an **elaborate fiction** people create in the attempt to impose a **sense** of **order and predictability** on things and events that are not orderly and not predictable in anything but the most general sense.

However, it could be argued that societies do have objective features or social structures (although probably not in the way that these are conceived by positivist science) that are more or less permanent features of society.

For example, all known societies have developed some form of religious beliefs and institutions (churches, for example), just as all known societies appear to be **patriarchal** (male-dominated). Similarly, all human societies develop family systems, usually based around natural parents and children. These ideas would seem to indicate that human social organisation is more-complex than interpretivist science allows). In addition, many Conflict Theorists have argued that interpretivist science ignores or cannot plausibly explain concepts like power - why, for example, are some groups in society more powerful than others and how are they able to impose their version of social reality onto society?

Secondly, interpretivist science can be criticised on the basis of the fact that it tends to produce descriptive accounts of social behaviour that simply reflect the various ways that people account for their lives and behaviour. That is, there is little or no attempt to produce theories that explain why people behaviour in particular ways.

Finally, interpretivist methods of research (for example**, participant observation**) have been criticised for their **lack of reliability**. In basic terms, the kinds of studies produced are, by their very nature "one-off" accounts that **cannot** be checked or repeated by other researchers. As sociologists, for example, we simply have to take on trust that what a researcher claims to have witnessed, experienced and recorded actually happened in the way it is described. This is, arguably, not an acceptable basis for the generation of sociological knowledge.

Exercise 5

Identify and explain three ways that an interpretivist version of science differs from a positivist version of science.

Having looked at both positivist and interpretivist versions of science, we can now consider a third example of science, namely Realism.

Example 3: Realist Science.

The third version of science we are going to consider is one originally developed by Karl **Marx** in the 19th century and subsequently adopted and refined by various writers (for example, **Keat and Urry** "Social Theory As Science"), in the late 20th century.

In many ways, a realist version of science shares some of the features of the ideologies we have already considered. **Like positivism**, for example, it accepts the idea that the social world does have certain **objective features** (or **structures** to use a realist term) that can be **studied scientifically** in terms of things like cause and effect. Conversely, **like interpretivism**, this form of science argues we **cannot ignore** the fact that human beings have **consciousness**; people are aware of their relationships with others and are not simply pushed around by forces outside their control.

Like positivism, realist science accepts that social **structures** have some form of **independent existence** which is **experienced** as "**external**" to us as individuals. These structures act upon us - pressurising and constraining our behaviour - and, for this reason, the study of social **structures** is considered to be of primary importance for realist science.

On the other hand, **like Interpretivism**, realism accepts that what we **believe to be real** will have important consequences for our behaviour.

As the Interactionist sociologist W. I. **Thomas** has famously stated, for example, **those things we believe to be real are experienced by us as real.**

If, for example, I **believe** myself to be middle class (my **subjective** belief), whilst every indicator we can use to define social class holds that I am working class (my objective class position), then this will have important consequences for my personal behaviour.

Unlike positivism, however, realist science argues that social **structures** are themselves the **product** of specific **social relationships**; they are created not just by people, but by **powerful groups** (such as those based around **class**, **gender**, **age** and **ethnicity**) pursuing their own particular interests at the expense of less powerful social groups.

Unlike Interpretivism, social structures have an objective existence over and above the people who create them - and these **structures cannot be easily changed**. When we enter into a relationship with someone, for example, that fact changes not only the way we relate to them; it also changes our relationship with others.

When I marry someone, for example, my relationship to my ex-girlfriend is not only changed, it also changes my relationship to all other women...

We should note, at this point, that for realist versions of science, social structures are "real" only in their **effects** - they are not permanent and unchanging (although, as I've noted, they are very difficult to change). We can, therefore, only study them in terms of particular sets of social **relationships** that exist at a **particular time** and in a **particular place**. Social structures, in this respect, are simply the product of **underlying** - or **hidden** - **relationships**; things we cannot see, but which nevertheless have some form of existence.

As Richard Kilminster ("Developments in Sociology" edited by Michael Haralambos) notes,

"The basic drift of realism is that the social and natural realms are real, exist independently of us and have a structure of their own, which sciences attempt to describe and explain. Unlike the positivists...the realists claim that what we directly observe in both nature and in society is generated by hidden mechanisms which we cannot observe, but which scientists infer from observations and theoretical work. This view is opposed to forms of Interpretivism which state that scientific theories are simply constructions or fictions".

Although people (because of their ability to be aware of a **social context** to their behaviour) ultimately create social structures ("frameworks of social relationships that have a meaning to people"), we have to be aware that the structures we create reflect back upon our behaviour; the **social context** of our behaviour clearly affects the **range and choice** of behaviour we adopt.

Realism, therefore, argues that the task of science is to **deconstruct** social structures and, by so doing, to expose their **underlying** (**hidden or non-empirical**) basis. This involves the idea that **all knowledge** about the world is considered by realist scientists to be **ideological** and, if we accept this idea, the task of science is to demonstrate the way we can construct a form of human society based on **moral** (**ideological**) **principles** that is the fairest, most egalitarian way of organising our social existence.

For example, a child's relationship with their parents involves the recognition of a "special" kind of bond, one that is different to the bond between brother and sister. We cannot "see" or directly observe this bond empirically, but we know that it exists from observing the way people behave.

As human beings, we have the ability to think; we are conscious of both ourselves and our relationship to others. However, the meaning of any relationship (parent - child, employer - employee, husband - wife and so forth) depends upon the social context within which it exists and by which it is supported. A relationship cannot have a social meaning without this supporting structure or framework of ideas.

Marxist's, for example, view **Communism** as the highest possible form of human social organisation.

Exercise 6

1. **Define the concept of "a social structure" and**
2. **Give two examples of "social structures" in our society**.

Decision **The basic principles of realist science can be summarised in terms of the "four questions" we've previously outlined.**

a. Realist Ontology

In basic terms, realism is characterised by the belief that the social and natural worlds are clearly different, but it is possible that the **basic principles** involved in the study of each are **similar**. Just like in the natural world, there are certain basic features of human societies that can be considered to be **real** and permanent (**work**, **family**, **culture** and so forth). Causal relationships can be established in relation to human behaviour, but such causality tends to be **limited** in time and space (that is, we have to recognise that what is true in one context may not necessarily be true in another context).

> Additionally, the social world is seen to have an **objective existence** over and above individual consciousness (we **experience** it as something real), but **social change** is possible when people decide to act collectively. This is because individual behaviour is seen to be conditioned by the nature of structural relationships in society. Only collective social action can alter the structure of these relationships.

b. Realist Epistemology

As the above suggests, **empirical evidence** (things that can be **directly observed**, for example) is desirable, but not in itself sufficient. Scientific knowledge can be produced by understanding the (non-empirical) relationships that underpin the observable social world. The task of science, therefore, is to uncover the **non-observable mechanisms** ("**hidden social processes**") that govern the ways in which people behave.

In this respect, the main objective of realism is to go beyond the simple description of causal relationships to discover how such relationships are initially **created**. The social world "as we see and experience it" is governed by the operation of **social processes** which we need to understand if we are to explain the observable world. This is true for both the social and natural sciences.

c. Realist Methodology

For realists, the social world has to understood in its **totality**. Studying "events" such as crime, while possible, is not particularly useful since all aspects of the social world are connected to and affected by all other parts.

Similarly, while it is possible to quantify human behaviour, this is not necessarily desirable, nor an end in itself. The main objective is to examine **underlying social mechanisms** that produce observable social phenomena.

For example, Marxist Conflict theorists use the concept of a "**mode of production**") the basic way work is organised in any society) as an **underlying mechanism** in relation to social class creation. Thus, in Marxist terms, an individual's social class is defined by their "relationship to the means of production" - in simple terms, people who own and control the means of production (employers for example) are a different class to those who do not own or control the means of production (employees for example). We cannot **directly observe** things like "means of production" or social class, but their existence can be **theorised** in terms of the effects they create. The same, for example, is true in the natural world. Gravity cannot be directly observed, but its effect on things can be observed.

d. Realist Methods

Realist science uses a wide range of methods of research, but there is a tendency to lean towards methods that can be shown to produce **reliable data**. Primary sources such as **questionnaires and interviews** and secondary sources such as official statistics are used to collect empirical data. However, the collection of such data is not an end in itself but is used as evidence of the **effect** of an underlying, non-observable, causality.

- For example, the documentation of incidents of sexual harassment in a school or workplace can be done empirically using methods such as questionnaires, interviews, observation, experiments and so forth. However, in order to explain why sexual harassment exists in the first place realists argue that we have to widen the scope of our research to include ideas about how a society generally values men and women, what the dominant ideologies concerning sexual relationships and the like may be and so forth. Such things may not be directly observable (they are underlying mechanisms) but their study may well explain why sexual harassment is seen as normal and acceptable in one society but deviant and unacceptable in another.

Exercise 7

In Nazi Germany during the second world war it is possible to demonstrate empirically that Homosexuals, Jews, Gypsies and the like were murdered in huge numbers by the State. What "underlying mechanisms" could you identify that might explain why the German government was able to carry-out such acts?

Hint: Think about the ideas of propaganda and ideology.

In order to come to a conclusion about whether or not this particular version of science can be applied to the social world, we need to note the following criticisms:

Firstly, because social structures and mechanisms are not **directly observable**, it is often difficult for the sociologist to say with any degree of validity what their effects on behaviour actually are.

- **Marxists**, for example, argue that the concept of class struggle (the conflict between different social classes) is an "underlying mechanism" that can be used to explain the basic nature of Capitalist societies.

- **Non-Marxists**, on the other hand, dispute this interpretation and we have little or no way of evaluating which interpretation has the greater validity.

Secondly, and related to the above, the reliance on the existence of "hidden mechanisms" means that almost any theory that is proposed can be **justified** on the basis of such ideas. In basic terms, any theory that is proposed to explain some aspect of human behaviour can never really be **disproved**.

Finally, realist theories cannot, by their very nature, be **tested** since they are not, in the positivist sense of the idea, **testable**.

For example, the Marxist theory that Communism will eventually replace Capitalism can only be proved when (and if) it ever happens.

Example 4: Feminist Science.

Note: If you are not familiar with feminist perspectives / meta-narratives it will be useful to read one of the following before you commence this section:
Sociology In Focus: pages **118 -120** or
Themes and Perspectives: pages **595 - 600**

This is a slightly different version of science than we have hitherto examined in the sense that it is a version of science that argues, directly and forcibly, for a central examination of issues and ideas that are relevant to the needs of **women**. This follows because **mainstream sociology** is seen to have been dominated not simply by men (in the sense of male researchers) but, more importantly, by the **interests and assumptions** of male writers. That is, sociology has been seen as a social science that concentrates on "**male experiences**" of the world - the things that are of interest to both male researchers and a male audience.

Marxist feminists, for example, link female oppression to **Capitalism** and **class** whereas **radical feminists** link female oppression to the concept of **patriarchy**.

You should, therefore, note that there are many different **varieties** of feminism and that different types (such as **Liberal, Radical** and **Marxist feminism**) may have little in common outside of a focus on women and the issues surrounding their lives. For this reason, any attempt to define an all-encompassing "feminist science" is probably not possible.

This is sometimes referred-to disparagingly as "**malestream**" sociology in a similar way to "history" being referred-to as "**His story**" - descriptions and accounts of male experiences)

- Feminist science, therefore, argues that researchers (especially female researchers) should change the focus of science to reflect the **needs, experiences** and **preoccupation's** of **women**. Whether or not you believe this is necessary or desirable will depend on the **values** you bring to the argument, but to some extent it is probably true that this version of science is quite different to the examples we've looked at in previous sections of this Unit.

In **ontological** terms (what you believe society to be like), it's clear that to be "a **feminist**" involves a **fundamental belief** that **women** as a social **group** are generally **exploited and oppressed** in various ways by men. Different feminist perspectives, however, attribute this exploitation and oppression to different causes.

The main characteristics of feminist science relate to methodology and methods of research and, in this respect, we can identify two basic themes in feminist science, what **Pawson** ("**Feminist Methodology**",**1992**) has termed:

- The **weak feminist thesis** and
- The **strong feminist thesis**.

a. The Weak Feminist Thesis.

Feminist writers such as **Eichler** ("**Non-Sexist Research Methods**", 1988) argue that feminist researchers can use the basic methods of research available to any sociologist (male or female), whether they be primary methods such as questionnaires, interviews or observational studies or secondary methods such as historical documents, official statistics and so forth. However, she argues that any researcher needs to be aware of **sexist attitudes** and **beliefs** that may run through any data that is collected.

While feminist writers such as Eichler basically argue that **care** should be taken to exclude sexist attitudes and assumptions from sociological research, other feminists have argued that a more-radical approach to research methodology and methods needs to be adopted by feminists (the **strong feminist thesis**).

b. The Strong Feminist Thesis.

Mary Maynard ("**Current Trends in Feminist Theory**", 1987) argues that:

> "Mainstream sociological theory is unable to provide a useful framework for considering women's overall position. This is because all such theories are gender-blind. In other words, they do not take account of the differences between men and women and are unable to consider issues relating specifically to women…theory and research must actively promote the views and interests of women. Feminist theory is concerned not only with the analysis of women's disadvantaged position in society but with women's oppression".

Characteristic of this approach is the work of **Miles** ("**Towards a Methodology for Feminist Research**", 1993) when she argues that feminist research must have the following features:

- 1. Female researchers should consciously attempt to **empathise** with their (female) subjects. This "conscious partiality" contrasts with the concept of value-freedom that we will look at in more detail in a later Unit.

Empathy involves trying to see the world from the point-of-view of the person you are studying.

- 2. The researcher should **actively participate** in the behaviour they are researching, rather than attempt to maintain a detached and dispassionate distance from the people being studied. This idea is similar to the **interpretivist** argument that valid data can only be gained from the active participation of the researcher in the behaviour being studied (although Interpretivists tend to argue that the researcher should not become so involved that they cease to observe and simply participate).

- 3. Feminist research should be focused on changing the world rather than simply describing its characteristics. This idea is clearly related to the above in that it encourages the researcher to **actively identify** with and participate in the behaviour being studied.

- 4. A major task of the researcher is to provide their subjects with the means to understand their position and oppression. In a sense, research becomes a "**consciousness-raising**" process, whereby the researcher and the researched actively contribute to the raising of each other's knowledge, awareness and understanding.

For example, when using **primary methods** the researcher needs to examine their methodology for **sexist** assumptions (such as the use of the male personal pronoun "he", to the exclusion of the female personal pronoun "she").

When using other people's research (secondary data), the researcher needs to be clear that research findings that deal only with men and male experiences - but present their findings as though they apply equally to men and women - will be of dubious **validity** in terms of women's lives and experiences.

Similarly, when using **historical documents** the researcher must be careful not to assume that accounts written by one sex (usually men) apply equally to both sexes. In our society, for example, much of the recorded written historical accounts that are available to sociologists will have been written by men (usually, but not exclusively, powerful, upper class, men).

In terms of the above, therefore, **reliable and valid** knowledge about the lives of women can only be produced by the **active co-operation** of **researcher and researched** - the distinction between the two must, effectively, breakdown if reliable and valid knowledge is to be produced.

Whatever the merits of this type of argument it is evident that it represents a slightly different approach to the study of the social world (although it is evident that many Marxist sociologists would argue similar things in relation to social class, racism and the like) and, for this alone needs to be considered and evaluated.

In order to come to a conclusion about whether or not this particular version of science can be applied to the social world, we need to note the following criticisms:

- **Firstly**, in terms of the **strong thesis** outlined above, if a researcher becomes **too involved** with the people they are supposedly researching there is the real possibility that they will cease to be a researcher and simply become a member of the group they are studying. In this respect, it is questionable as to whether or not this would represent "research" in the usual sense of the word.

- **Secondly**, while **Radical feminism** is based on the assumption that women represent an "oppressed and exploited class", other forms of feminism (such as **Marxist** and **Liberal feminism**) dispute this idea. In this respect the idea that the feminist researcher should "identify with" the people they are researching may be extremely difficult to achieve.

- **Finally**, if feminist science is largely concerned with research into the lives and experiences of women, there is a possibility that significant areas of social life are neglected. Would, for example, research into male-dominated groups and institutions be possible using the type of strong thesis outlined above?

You have now completed this Unit.

The next Unit in the series deals with primary methods of research.