

“A” Level Sociology

A Resource-Based Learning Approach

Module One: Theory and Methods

Unit M11: Is Sociology A Science?

These Notes have been designed to provide you with a knowledge and understanding of the following syllabus area:

”Examine the nature of ‘science’ and consider the extent to which sociology may be regarded as scientific”.

The Aims of this Study Pack are to allow you understand:

1. The theoretical basis of competing methodologies in sociology.
2. The historical development of sociological methodology.

The Objectives of this Study Pack are to allow you understand:

1. The theoretical basis of sociological methodologies such as Positivism and Interpretivism.
2. The difference between inductive and deductive positivism.
3. The Hypothetico-Deductive model of scientific methodology.
4. The Realist critique of positivism.
5. The relationship between sociology and science.
6. The difference between methodologies such as Positivism, Realism and Interpretivism.
7. The correspondence between various sociological and Natural scientific methodologies.

Introduction

In this set of Notes I want to build on some of the basic ideas we encountered in the previous set of Notes ("**Defining Science**") in order to establish the extent to which **sociology**, as an academic discipline, can be considered to be "**scientific**".

As we have seen, "**science**" is **not a body of knowledge**, as such, but a **set of principles** (a **methodology**) that **tells us how to go about the task of producing valid knowledge**. In this respect, **science** is both an **ideology** and a **methodology** - or, to be more precise, it is an **ideology** built upon a particular (**dominant**) form of **methodology**.

Once we understand and accept this, two things start to become apparent:

- **Firstly**, if that **ideology** which we call "**science**" is a **dominant** form of **methodology**, then, by definition, other forms of methodology must exist.

Equally, **within** the general **ideology of science** there may be any number of **competing methodologies**.

- **Secondly**, science is, as I've noted above, an ideology **similar** to any other ideology we may employ to discover / produce knowledge. This idea tends to initially prove confusing because **commonsense perceptions** tend to associate "**science**" with **objective, factual**, information, whilst "**ideology**" tends to be seen as being associated with **subjective opinions**. For example:

a. It is a **fact** that men are, on average, taller and stronger than women in our society.

b. It is an **opinion** that men are socially superior to women.

We need to remember, however, that in **sociological terms** an **ideology** can refer **equally** to something that is "**true**" as it can to something that is **false**. Both of the above statements are (albeit in slightly different ways) **aspects of an ideology** - a way of **interpreting / making sense** of the world.

- **Science**, however, is a **particular form of ideology** insofar as it is based around a very **clear guiding principle**, namely that **valid knowledge** is based on **strict rules of evidence** that are themselves both **reliable and valid**.

Given the above, the question "**Is sociology scientific?**" is somewhat **meaningless**, since it is **too imprecise** to be of much use.

Considered in terms of a set of **principles** that enable us to produce **valid knowledge**, "**science**" could equally encompass **mathematics, religion, physics, psychology, sociology** or whatever...

To give the question a more **precise meaning**, therefore, we need to examine the possible **relationship** between **sociology** and a particular (**dominant**) form of **scientific methodology**, namely that employed in the **Natural Sciences** (which includes areas such as physics, chemistry, biology and so forth). In this way we can, in the following, examine two basic ideas:

1. Is sociology scientific in the way that this idea can be **applied** to the Natural sciences?
2. Is it **possible** for **sociology** to be **scientific** (in terms of the methodological principles and methods of data collection it employs) **without** adopting the methodology and methods of the Natural sciences?

In particular, we can investigate the idea that the **different nature of the subject matter** of the **Social and Natural sciences** makes the **adoption** of a **Natural scientific methodology inappropriate** for a Social Science such as sociology.

We can start to explore some of the questions raised above by looking at the various forms of **methodology** (in particular, **Positivism**, **Realism** and **Interpretivism**) employed by **sociologists** in their work. Once we've done this, we can then examine the **relationship** between **sociological** and **Natural scientific methodologies**.

Is Sociology Scientific?

The question as to whether or not sociology (or indeed, **any** social science) can be considered "**scientific**" is an **important** one, mainly because of the **status** that is attached to the idea of "**scientific knowledge**" in our society.

In simple terms, **scientific knowledge** presents us with a picture of the **world "as it is"**, rather than with a picture of the world as **we might hope or desire it to be**. In this respect, the idea of **scientific knowledge** holds out the **prospect** of **truly understanding** the nature of the (social and natural) world, rather than being dependent upon simple opinions.

- This idea, as you might expect, is as attractive to sociologists as it is to physicists or biologists, since it involves the idea that **scientific knowledge** has a **special status** - it represents **knowledge** that is **rational, logical** and **objective**; knowledge that, however palatable or unpalatable it may be, is **not** based upon **superstition, unproven assertion, faith** or **opinion**.

We can begin, therefore, by looking at the **earliest developments** in **sociological methodology** and just as the origin of the word "sociology" derives from the work of **Auguste Comte**, so too derives one of our earliest conceptions of the nature of the sociological enterprise - **Sociology as the Science of Society**.

In order to understand the nature of the question as to whether or not sociology can be considered "scientific", it would be useful - as an initial starting point - to briefly **outline** some of **Comte's** ideas concerning the nature of sociology.

Auguste Comte: Sociology as the Science of Society.

Comte's writings date from the **beginning / middle of the 19th century** and reflect a general preoccupation, at this time, with the **methodology of scientific thought**.

- Just as **natural scientists** (physicists, chemists and the like - scientists who study is the natural [inanimate] world) had started to **theorise** (and **discover**) the nature of the **Laws** that **determined** the **behaviour of matter in the physical world**, Comte argued that it was **possible** to **discover** the **Laws governing the behaviour of people in the social world**.
- The way in which this could be made possible, he argued, (in "The Positive Philosophy", 1853), was through the development of a "**positive**" (or **scientific**) **philosophy** of human social development.

In essence, Comte was arguing that the **methodology** and **insights** of the **natural sciences** could be **used**, by **social scientists**, as the **model** for the development of what he termed "**social physics**" or "**sociology**". He expressed the basis of this idea ("**positivism**") in the following way:

"In the...positive state, the mind has given over the vain search after Absolute notions, the origin and destination of the universe, and the causes of phenomena, and applies itself to the study of their laws...their invariable relations of succession and resemblance. Reasoning and observation, duly combined, are the means to this knowledge. What we now understand when we speak of an explanation of facts is simply the establishment of a connection between single phenomena and some general facts, the number of which diminishes with the progress of science."

A number of points, in the above, require **further explanation**...

1. For **Comte**, the **task of science** was **not** the explanation of **why things originally came into being** (the **causes of phenomena**). Physicists, for example, could no more explain **why a rock was a rock**, a flower a flower or a cloud a cloud than they could explain the origin of matter.
2. The **task of science**, therefore, had to be the **explanation** of **how things related to one another**, in terms of **invariable and universal laws**.

For **example**, the **empirical observation** that "night always follows day" can be **explained** by the **scientific law** that determines this **coexistence** and / or **succession** (the fact that the earth rotates). Thus, for as long as the earth rotates and the sun exists then night will invariably follow day.

3. As **Keat and Urry** ("Social Theory As Science", 1975) note:

"Positive science is concerned only with observable phenomena and it consists of the establishment of law-like relations between them through the careful accumulation of factual knowledge. This occurs by means of observation, experimentation, comparison and prediction."

4. Finally, as **more and more Laws are discovered**, it will be possible, in turn, for these **Laws** to be **explained** in terms of their **relationship** to one another. In this sense, **Comte** argues, **science** consists of the **progressive discovery of Laws** and their **inter-relationships** such that, **ultimately** perhaps, science will arrive at a **general Law** from which **all other Laws derive**...

Comtean Positivism.

The initial basis for a **positivist sociology** (at least according to **Comte**) was the **assumption** that the **social world** had **similar forms of regular, objective, features** to those found in the **natural world**. Since the **latter** was clearly **governed** by the **operation of natural laws**, so too, it was **assumed**, was the **social world governed** by the **operation of social laws**.

- If the **task of natural scientists** was to **discover** the **laws** governing the natural world, the **task of social scientists (sociologists** in particular) was that of **discovering** and **elaborating** the **laws governing the social world**.

Given the **assumption** there was a **correspondence** between the **natural** and the **social** world, it's not surprising **Comte** argued the way to **discover laws governing the social world** was to **adopt the methodology of the natural sciences**.

As **Keat and Urry** ("Social Theory As Science", 1975) argue, the **social background** to the development of **Comte's** work also helps us to understand the **reasons** for such an **assumption**:

"Comte...advocated the development of a new positive outlook...founded upon the certainties of science. The old traditions and values no-longer moved people, [French] society was in a state of chaos and anarchy, and the 18th century Enlightenment had not stemmed but had contributed to the decline. What therefore was needed was a new basis of intellectual, moral and social life. This would be provided by the methods, findings and instrumental utility [that is, the tangible benefits] of science; sociology would be the crowning pinnacle in this new order. The problems of the emergent industrial society (of competition, social conflict, ideas of free enterprise) were seen as scientifically calculable. Social and political beliefs could be matched to the scientifically possible. The discovery of the laws of social physics [sociology] would ensure that people accept the inevitable and would only change that which could be changed."

For **Comte**, therefore, the **main task of sociology** was one of **discovering** the **general laws of social development** and, in this respect, he categorised these general laws thus:

1. Laws of coexistence (or "social static's"):

These were the **laws** that **governed** the **relationship** between **different parts of society**. They involved, therefore, an examination of the **functions** and **inter-relationships** between those various parts.

2. Laws of succession (or "social dynamics"):

These were **laws governing social change** and they involved an examination of the way the **nature** and **function** of **social institutions changed** over time.

Question:

In previous Notes ("Defining Science"), I used the example of the Natural Law Party as an illustration of the way "scientific principles" could be adopted by religious sects to justify their faith. Can you identify any similarities (both political and methodological) between Comte's version of positivism and the basic principles of "Natural Law"?

For example: Both assume that laws governing the social world can be discovered.

- Having briefly outlined **Comte's version of positivism** (as we shall see, there are a number of **other variants**), it is now necessary to **outline** the basic **logic of scientific enquiry** (that is, its **underlying methodology**) involved in **Comtean positivism**.

As we have seen, **Comte** adopted the **methodology of 19th century Natural science** in order to **apply** the **principles** therein to the study of human **social development**. In so doing, he made a number of **assumptions** and observations (in line with 19th century science) about social development:

1. The **first basic assumption** is that **societies** go through a **process of evolution** - they pass through **stages of development**, from the **simple** to the increasingly **complex**.

In this respect, as **societies** become more **complex**, they also become increasingly **specialised** (that is, **institutionally differentiated**). All this basically means is that there is an increasing number of social institutions - **education** systems, **mass media** and so forth - that evolve to perform **specific functions**

2. If **increasing differentiation** takes place, what stops societies "falling apart"?

The answer is that there must exist some **mechanism governing social integration** and this mechanism must involve some form of mutual dependence.

3. If **evolution is a fact** - that is, it is natural and demonstrable - then it follows that it **must be governed by Laws of Development**.

4. The **task of sociology**, therefore, was to **discover** those **laws**, by:

- a. **Systematic observation**
- b. The **collection of data** ("facts")
- c. The development of **theories** that **explained** the **facts**.

5. As **Mary Maynard** (Sociological Theory", 1989), notes, **Comte's positivism** had **four main elements**:

- a. A commitment to a **unitary scientific**

That is, the idea that the basic principles that underpinned how to "do science" and produce reliable and valid knowledge could be applied to both the natural and social worlds. Even though the two worlds were qualitatively different, they were both, Comte assumed, governed by laws of development.

- b. The **observation** and **classification** of all **known facts**.
- c. An acceptance of an **evolutionary model of social development**.
- d. The **establishment of universal laws**.

The **logic** of this form of science is one that is known as "**inductivism**" (**inductive logic**) and we need to look at this idea in a bit more detail in order to understand the **problems** involved in using this form of logic as part of a scientific methodology.

Inductive Positivism.

The basis of inductive positivism is:

1. The idea that our **knowledge** about the (social) world **begins** with the **collection** of "**facts**".
2. These **facts** could then be **classified**, in an **objective** fashion, and **statistical relationships (tentatively) established**.
3. Once **classification** has been **completed**, it is then possible to look for **correlations** (the observation that two or more things seem to occur at the same time) between different (social) facts.
4. If a **positive correlation** can be found (that is, the idea that two or more things always seem to occur at the same time), it might then be **possible** to **establish** that one thing **causes** another to happen.
5. Once we have managed to reach this stage, it is possible to **develop theories** that **explain the relationship between different facts**.
6. Once a **theory** has been **tested** against the **empirical observation** of **all known occurrences** of a particular relationship, it would then be possible to **suggest** that a **scientific law** has been established / **discovered**. In the above respect:
 - a. The **laws of human development exist outside of human consciousness** (that is, beyond our ability to change them).
 - b. We can **discover these laws** only through **systematic observation** and careful **documentation** of social phenomena (a **scientific methodology**).
 - c. **Theories** are developed **after** the **collection and classification** of **pre-existing facts**, since in order to theorise about a relationship we have to observe that relationship in operation.
 - d. **Scientific statements** about the world are those that can be **checked, tested** and possibly **refuted**, since **science** involves **not merely** the **discovery of isolated facts**, but their **systematic organisation into laws**.

Whilst the above may, at first sight, appear quite a **complicated formulation**, it is possible to express such ideas in a more-straightforward, less complicated, way:

1. The social world is **assumed** to obey certain laws of development.
2. We cannot know, with any degree of certainty, what these laws are without developing some way of **systematically identifying them**.
3. Whilst we cannot, as yet, know what these laws actually are, it will be possible to **infer** (that is, suggest) their existence by observing the social world.
4. **Careful, systematic, observation** will **reveal** to us the way in which **laws** operate, because, by definition, the operation of these laws will produce **regularities** in human behaviour.

5. Once we have **identified these regularities**, we can move on to the next step of **explaining these regular features** of the social world and to do this, we need to develop **theories** that **explain** the basis of the **regularity**.
6. Once a **theory is developed**, it can then be **tested** by further, **systematic observation** and, if **nothing** occurs to **disprove the theory** then it is possible (although by no means certain) that we have discovered the operation of a law.
7. Once a **law** has been **identified**, human **behaviour can be orientated towards that law**.

In **Comte's** terms, we can begin to develop a "**scientific politics**" that puts **human behaviour in tune with the laws of development** - the idea that **political behaviour** can be **rationally organised** along the lines of the "social laws" of human evolution.

In the above, we can see something of the **essence** of **19th century positivism** and, whilst there are clear **variations** in the work of theorists such as **John Stuart Mill** ("A System of Logic", 1898) and **Herbert Spencer** ("The Study of Sociology", 1874), these tended to be **differences of emphasis** rather than a fundamental disagreement with the logic of positivism or positivist methodology.

What we need to do next, however, is to look at both a number of **problems** involved with **inductive positivism** and to see how **positivism**, as a methodology, **developed in the 20th century**.

Question:

Briefly explain the basis of Comte's idea that "social laws" can be discovered in the same way that "natural laws" can be discovered.

Criticisms.

1. Assumptions about human development:

- **Firstly**, Comte makes the **convenient assumption** that the **social world** is **governed by laws of development**. Whilst he attempts to rationalise this assumption by arguing that it is not the business of science to answer the question of why these laws exist, this simply avoids the argument, since if we do not share this assumption then, by definition, it is a pointless exercise trying to identify such "laws".
- **Secondly**, Comte implicitly argues that human social development is **evolutionary** (as opposed to revolutionary) without offering any evidence to support such an assumption.
- Thirdly, a further implication is that the **social world** is based upon a fundamentally **rational order** that exists **over and above** the ability of **human consciousness** to change it.

In this respect, there is seen to exist an "**ideal**" (or **natural**) state of human social organisation that can be revealed to people by the application of a scientific methodology. In this sense, the universe must have some form of "natural order" that is waiting to be discovered...

Question:

Positivism is frequently linked with the Structural-Functionalist ("Consensus Sociology") perspective in sociology. On the basis of the above and other evidence, can you suggest reasons why Functionalists might be attracted to such a methodology?

2. Logical forms of methodological error:

- **Inductive positivism** starts with the **assumption** that we can identify "**facts**" about the social world, but the problem here is that "**facts**" are **not self-evident things**. What may appear to me as a "fact" may be interpreted differently by someone else. This form of positivism gives the social scientist **no indication** of how a "fact" can be **identified** in the first place. On what basis, therefore, can social scientists reach any agreement about what does, or does not, constitute a "fact"?
- If **facts** are **problematic** (that is, they have to **interpreted as facts rather** than simply **discovered to be facts**), it follows that in order to identify them we have to make a **subjective judgement** - and this, clearly, is not the province of an "**objective science**".

This idea is one that has, in recent times, been picked-up by **post-modernist** writers in their **critique** of "**meta-narratives**" ("big stories" about the nature of the natural and social worlds) when they argue that **questions of "truth"** and "**falsity**" are **moral judgements** based on the **values** we hold concerning what constitutes these things.

- If **facts** are the **bed-rock of theories** (theories are developed to explain the relationship between facts), it follows that, as scientists, we have **no logical basis** for **distinguishing between "good" or "bad" theories** - that is, theories that may be considered true or false.

This follows because the **theory** we develop is entirely **dependent** on the **facts** that we collect - if the **identification of facts is dependent** on **subjective judgements** about what constitutes "a **fact**", then it is clear that we have **no way of judging** if the theory is **valid**.

To illustrate this idea, think back to the work that you have done on **crime and deviance** in Britain and consider whether or not it is a "fact" that most crime is committed by young, working-class, males?

- On what **evidence** do you base your judgement that this is, or is not, the case?
- Can such a "fact" be **explained** in another way and, if so, how?
- Suggest how we can we **distinguish** between **different interpretations** of "the facts"?

On the basis of what you have just done:

- If a sociologist **does** believe it is a fact that most crime is committed by young, working class, males, what kinds of theory might he / she develop to explain the relationship between crime and class?
- If a sociologist **does not** believe it is a fact that most crime is committed by young, working class, males, what kinds of theory might he / she develop to explain the relationship between crime and class?
- How can we **demonstrate** that the kinds of theory you identified in (a) have a greater or lesser **validity** than those you identified in (b)?

More Positivism?

A significant figure in the development of sociological methodology is that of Emile **Durkheim** ("The Rules of Sociological Method" / "Suicide: A Study In Sociology", 1897) and, whilst I intend to discuss **Durkheim's methodology** in greater detail when we look at sociological explanations of **suicide**, a few points can usefully be made in relation to the development of **positivist methodology**.

Durkheim, like **Comte**, elaborated a **form of positivism** that was essentially **inductive** in its approach to the study of the social world. In "**Suicide**", for example, he argued that we could explain **suicides** in **social**, as opposed to **psychological**, terms. In order to do this, the sociologist had:

- **Firstly**, to **collect "facts"** about the concept of **suicide**. In this case, Durkheim used **Official Statistics** concerning rates of suicide in different countries.
- From these **facts**, Durkheim argued that it was possible to **identify regularities** in the data, over time. This was significant because, if suicide was simply explicable in psychological terms, such regularities should not exist:

If suicide is simply a **personal decision** that is **unaffected** by **external, social, factors** then one would, **logically**, expect that **rates of suicide** would **not** exhibit any kind of **pattern** - suicides would, for example, be randomly distributed throughout the year.

- Having **identified** these **regularities**, Durkheim then sought to **explain** them and to do this he had to **identify** the **social factors** that **correlated** with (and ultimately, perhaps, **caused**) suicide. That is, he had to **devise a theory** that "**explained**" the **facts** he had **discovered**.

In this respect, **Durkheim** lies within the **basic positivist methodological tradition**. However, in a very important respect **Durkheim's methodology differed markedly** from that of a theorist such as **Comte** (and also many **20th century positivists**).

The **difference** lies in the **theoretical explanation** of the **social causes of suicide** (which, in turn, implies a **methodological difference**) and we can **illustrate** this difference in the following way...

A Realist Methodology?

Durkheim's theoretical **break** with **Comtean positivism** is to be found in the way he sought to explain suicide as a social phenomenon. For the **true positivist**, the "**explanation**" of suicide would be found in a **positive correlation** between, for **example, religious affiliations / beliefs and rates of suicide**.

Thus, Durkheim found, for example, that Catholics were less likely to commit suicide than Protestants, that rates of suicide declined in times of war and that they increased in times of economic crisis (such as, in contemporary times, the Wall Street Crash in America in 1929).

If Durkheim's methodology was **simply** positivist, he could logically go no further in the explanation of suicide, since he would have been restricted to an identification of **observable, empirical, relationships** (such as that between religion and suicide rates).

In **positivist terms**, the differences in rates of suicide, in relation to religious affiliations, would have to be explained in terms of, for example, the concept of **social isolation** (that is, a concept that can be empirically measured in some way). Thus:

- Protestant communities were located predominantly in urban areas.
- The urban way of life was more transitory and impersonal.
- This left increasing numbers of people socially isolated.
- This made them more vulnerable to suicide...

In the above respect, we have a **positive correlation** between **two observable and measurable phenomena** (social isolation and suicide). **However, Durkheim** wanted to go further than the above form of positivist explanation would allow, and in this respect he developed a form of what is termed a "**Realist methodology**":

That is, a form of **methodology** that looks at the **underlying, non-observable, factors** that **underpin** social **relationships** and social **behaviour**.

In this respect, **Durkheim** argued that the **causes of suicide** were to be found in the idea of "**invisible**" **moral forces** that constrained the behaviour of individuals; forces that acted upon and conditioned social behaviour.

As **Taylor** ("Suicide", 1988) notes:

"Durkheim argued that the regularity of suicide rates was a social fact; that is, it can only be explained in terms of the differing forms of social life of various social groups. Durkheim held that in modern society there were two principle causes of high (and rising) suicide rates: (egotistic) suicide was higher where individuals were not well integrated into collective social life; and (anomic) suicide was higher when society's norms and values were too weak to regulate individual desires and drives...The relationship between levels of social integration and regulation and suicide rates demonstrated that society exerted an independent influence over the individual. In Durkheim's terms, society was external to the individual, so much so that even such a supremely individual act as suicide had its roots in society."

In the above respect, Durkheim located the **underlying causes** of suicide in a combination of:

1. The social circumstances of an individual's life.
2. The psychological state of mind that these circumstances produced.

Thus, given the "right" social conditions it was possible to conclude that certain social groups and / or individuals were more-likely than others to consider suicide as an option...

On the basis of the above, it is possible to conclude that **Durkheim's methodology** was **not fully realist** (in the way that the sociology of **Marx**, for example, certainly was), insofar as whilst it was firmly **rooted in positivism** it contained **theoretical elements** that went much further than "simple" positivism.

Modern Positivism.

As we have seen, one of the main theoretical **problems** with the methodology of **inductive positivism** was the way theories were developed to explain observed facts. As I have noted, the problem here was that social scientists had no logical way of deciding whether or not a theory was valid.

If the "**facts**" that a scientist collected were **not valid observations**, the "**theory**" that was developed to explain such facts could **not be valid**. However, the only way a theory could be validated was in terms of the facts that had been collected...

For **example**, in relation to **Durkheim** and his study of suicide, the "facts" that he tried to explain theoretically were the apparent non-random distribution of suicides in a given population. He "observed" suicides by collecting statistical data and then developed a theory to explain the relationships he observed in the data.

The **methodological problem** here is what happens if Durkheim's observations were not valid? What if the events he took to be suicides were in fact accidental deaths? His "theory" would not then be explaining "suicide" but something quite different...

The response to this dilemma was **not** to discard positivism as a methodology, but to **change** the way social scientists went about the task of constructing explanations. In this respect, **rather** than use an **inductive form of logic**, the **solution** was held to be the use of a **deductive form of logic**. In this respect, we can begin to talk about the "**Hypothetico-Deductive**" form of **positivist methodology**.

Mary Maynard ("Sociological Theory", 1989) explains this idea thus:

"Deductivism involves the formulation of sets of hypotheses about the world in a way which makes testable statements deducible from them. On the basis of the test general laws and theories may be constructed."

One of the central figures in the development of **deductive positivism** was **Sir Karl Popper** ("The Logic of Scientific Discovery", 1934) who argued that one of the **failings** of the **inductive approach** was, as we have seen, that once data was collected and theories created there was **no way of telling** whether or not further observations would produce information capable of **disproving a theory**. In this respect, **Popper** identified the problems of **verification** and **testability**:

Using **inductive logic**, a theory could not, by definition, be tested (or verified) since the very act of producing a theory to explain observed facts became, in effect, **its own proof**. This meant that, effectively, there was no scientific way of demonstrating the **superiority** of one theory over another - the only way we could do this would be to introduce **moral or ethical judgements** and this, argued **Popper**, was **not** the way in which science could proceed...

As **Popper** notes:

"Science is not a body of knowledge but a method of approaching and studying phenomena. It involves identifying a problem to study, collecting information about it and eventually offering an explanation for it. All this is done as systematically as possible."

In this sense, the emphasis is **not** upon the **collection of "facts"** in an ad hoc fashion and then trying to theorise the relationship between such "facts". Rather, the **emphasis** is placed upon:

1. **Observing the social world,**
2. Creating **hypotheses** about your **observations,**
3. **Testing** these **hypotheses** against **further observations.**

Positivist Sociology.

In the preceding pages, I have attempted to outline the development of what might loosely be termed "**positivist methodology**", from its **origins** in the **18th / 19th century** to the present day. As I have tried to indicate, "**positivism**", as both a philosophy / ideology and a methodology, has **changed dramatically** over this period and it is this distinction that I want to elaborate now.

Mary Maynard ("Sociological Theory", 1989) perceptively outlines these changes when she notes:

"Originally positivism meant an inductive approach to knowledge. From the 1930's it became identified with deductive analysis, which is the inverse of its original form. But in recent years sociologists have tended to confuse the debate over positivism. Firstly, they have implied that inductivism and deductivism entail the same kinds of approaches, which they do not. Secondly, they have made positivism into an all-encompassing stereotyped term which covers anything which smacks of science, objectivity, quantification and a belief in measurement. Yet few sociologists today actually embrace these aspects of positivism in a simplistic way even when they are practically involved in research activity which does involve quantification and hypothesis testing."

We have, in the above respect, seen how positivist methodology has changed over the years and we can perhaps usefully **summarise** such changes as follows...

If we consider **Comte's** formulation of **inductive positivism**, it is evident that it is infused (or directed) by a basic **ideology** about the nature of both "**science**" and the "**social world**". This ideology can be summarised in the **belief** that the social world, like the natural world, is governed by a set of basic laws and that it is the task of a social science to uncover and elaborate these laws. **Guided** by such an **ideology**, the **methodological implications** for sociology are clear:

- The social world can, indeed must, be **quantified**.
- The **methods** we use must allow us to produce **quantitative statements** about the world.
- **Individual consciousness** or "states of mind" (whilst possibly interesting to some social scientists), are **not the proper concern of sociology**. This follows because it is **impossible to empirically observe or quantify** "states of mind".

If we now consider the **Hypothetico-Deductive** model of scientific methodology, it should be immediately apparent that the **ideology** that underpins its use is quite **different** to **Comte's** formulation. What this model shows us, as sociologists, is how to go about the **scientific study of society** - it does not tell us what we should be looking for, nor what does (or does not) constitute a permissible area of study. To be sure, it has an **ideological dimension** (insofar as it has been formulated by people), but this ideological aspect is, as I have noted, entirely different to that of, for example, Comtean positivism:

- Using **inductive logic**, the scientist has to decide, in advance, what does or does not constitute "evidence" or "facts".
- Using **deductive logic**, however, the scientist does not have to decide in advance what does or does not constitute "evidence" or "facts".

This idea is very important in relation to the question of whether or not **sociology** can be considered **scientific** (in terms of the basic ideology of the "Natural sciences"):

1. In the first place, it is evident that there is nothing particularly inherent in the "sociological enterprise" that prevents **sociologists** using a **Hypothetico-Deductive** model of analysis.
2. Secondly, in terms of a "**scientific ethos**", it is evident that sociologists can as happily conform to such an ethos as natural scientists.
3. Thirdly, all sociologists, whatever the perspective within which they work, share a basic assumption about the nature of the social world, namely, that social relationships, by definition, display **regularities** that can be both observed and studied in some way, shape or form.

Before we move-on to consider an **alternative sociological methodology** (**Interpretivism**), it might be useful to note a number of basic **criticisms** of "**positivist methodology**" as elaborated by the **Frankfurt School** (a group of Marxist sociologists writing in the middle of the 20th century).

The Frankfurt School and the Critique of Positivism.

1. Positivism focuses on specific social issues rather than the complex totality of society.

Is it possible to "separate out" parts of a social system (education, deviance, media, etc. in order to study those parts in **isolation** from one another?

2. Positivism implies that **problems** can be **solved** by **reforming parts of society**, rather than seeing these "social problems" as being created by the way **society as a whole** is **structured**.

This is a fairly standard "Marxist" criticism of non-Marxist theorising (the idea that society is some form of integrated whole that can only be studied in its entirety).

Note the influence of the assumption that the task of political science / sociology is not to describe society but to change it...

3. Positivism focuses only on things that can be observed and are therefore "on the surface", rather than things which are hidden or the underlying links between them.

The main idea here is that positivism attempts to discover "facts" about the social world and the criticism relates to idea that "facts" are themselves social constructions. In addition, something that we may experience as a "fact" may itself be the product of underlying causes (Marxist Realist methodology).

4. Positivism's defence of **scientific objectivity and value-neutrality** is itself a **value-commitment** (one which **supports the status quo**).

The idea here is that the "**objective social world**" is the **product of social conflicts**. In order to understand "society" we need to study the basis of such conflicts rather than their "surface" manifestations ("objective social reality").

5. Positivism is unable to be critical of society.

This is an objection to the "**disinterested**" stance of **positivist methodology** (**value-neutrality** - positivists claim to study the world **as it is** rather than **how we might like it to be**). The Frankfurt School object to idea that role of sociologist is to describe the world...

6. Positivism is unable to conceive of "the possibility of things being otherwise than they are".

Positivism seeks to make **objective statements** about the way of the world. To adopt a "political stance" would, in the eyes of positivists, be to leave the world of sociology and enter the world of politics. Again, note the (Marxist) assumptions about the role of sociology / sociologists.

In relation to the idea that social systems display certain more or less regular features in their basic organisation, we can now move-on to discuss the basic methodological (and ideological) differences between "**positivist**" sociologists and what most sociology text-books insist (**incorrectly**) in calling "**anti-positivist**" sociologists - namely, those sociologists working within a general Interactionist perspective and utilizing an "**Interpretivist**" methodology.
Interpretivist Sociology.

As I have just noted, most sociology **textbooks** make a **distinction** between **Structuralist sociologists** and **Interactionist sociologists**. In addition, they tend to draw a distinction between a **supposedly positivist methodology utilised** by the **former** and an **Interpretivist methodology** utilised by the **latter**.

However, by creating a **dichotomy** between "**positivist**" and "**anti-positivist**" sociology, they tend to create a **false impression** about the nature of **Interactionist sociology**. The formulation goes something like:

- The natural sciences represent a model of scientific methodology.
- Positivist sociology aims to utilize the methodology of the natural sciences; therefore, it is scientific.
- Interactionist sociology is non-positivist and rejects positivist forms of theorizing.
- Therefore, Interactionist sociology is non-scientific.

That this kind of formulation is false can be relatively easily **demonstrated** in the following way:

1. **Firstly**, as Interactionist sociologists such as:

- Peter **Berger** and Thomas **Luckmann** ("The Social Construction of Reality", 1967),
- Erving **Goffman** ("The Presentation of Self in Everyday Life", 1959) and
- George Herbert **Mead** ("Mind, Self and Society", 1934),

have noted, the **subject matter of sociology** (people) is **qualitatively different** to the **subject matter** of the **natural sciences** (inanimate objects). In this respect:

- **Inanimate matter** does **not** have **consciousness** (it cannot think), whilst human beings clearly do.
- A physicist, for example, can happily study the cosmos, the movement of planets, comets, stars and so forth, safe in the knowledge that the "behaviour" of such things is conditioned by their reaction to external stimuli.

For **example**, the behaviour of the moon is conditioned by the gravitational pull of the earth. If we calculate such things as how fast the earth is moving through space, its mass and so forth, we can predict the behaviour of the moon. In this respect, the behaviour of the moon is caused by the behaviour of the earth (amongst other things) and it cannot, for example, choose not to follow the earth in its orbit around the sun.

- A **human being**, on the other hand, does have a choice:
- If, for **example**, I choose to follow someone around, it is by no means certain that I do so because I am simply reacting to their behaviour. I may believe myself to be in love with them and am attempting to express my love by following them everywhere. While I am following them, my behaviour, over time, may be reasonably predictable (along the lines of if you see the person I am following, you might reasonably expect to see me also). However, at any given moment, I may choose not to follow my loved one - because they told me to go away, because I no-longer love them, because its time for my dinner, because...the list is endless.

This rather silly example does, however, have a point, namely that human beings, as **Haralambos** ("Themes and Perspectives", 1990) notes:

"See, interpret and experience the world in terms of meanings; they actively construct their own social reality. Meanings do not have an independent existence, a reality of their own which is somehow separate from social actors. They are not imposed by an external society which constrains members to act in certain ways. Instead, they are constructed and reconstructed by actors in the course of social interaction."

2. **Secondly**, if this is indeed the case, then it follows that the **methodology** (and, by extension, **methods** of research) that is entirely **appropriate** to the **subject matter of one branch of science** (the **natural sciences**), is **not necessarily appropriate** to the **subject matter of another branch** (the **social sciences**).

Question:

Think about this idea in the following terms:

If matter was not inanimate, but animate (like human beings), would the methodology of the natural sciences have to change to account for this fact and, if so, in what ways?

3. Thirdly, **Interpretivist sociology** does **not reject** the idea of a **scientific methodology** per se.

That is, **Interactionists, Social Action theorists** (whatever you want to call them...), do **not** argue that it is **impossible** to utilise "**scientific principles**" (such as **logical consistency, rules of evidence, hypothesis development** and **testing** and the like) in the study of human behaviour. What they **do argue**, however, is that the **basic methodological model** proposed by **positivist sociologists** (based upon the natural scientific model) is **inadequate** as a **methodological model** for the **study of conscious human beings**.

- Thus, it is **not science itself that is rejected**, but simply **one model of a scientific methodology**.

Max Weber ("The Theory of Social and Economic Organisation", 1922) neatly sums-up the Social Action / Interactionist position thus:

"Sociology (in the sense in which this highly ambiguous word is used here) is a science which attempts the interpretive understanding of social action in order thereby to arrive at a causal explanation of its course and effects. In 'action' is included all human behaviour when and in so far as the acting individual attaches a subjective meaning to it. Action in this sense may be either overt or purely inward or subjective; it may consist of positive intervention in a situation, or of deliberately refraining from such intervention or passively acquiescing in the situation. Action is social in so far as, by virtue of the subjective meaning attached to it by the acting individual (or individuals) it takes account of the behaviour of others and is thereby oriented in its course."

Finally, it is perhaps worth noting (given that we will be examining its significance in the next set of Notes), Ray **Pawson's** observations ("Methodology" in "Developments In Sociology", Vol.5, 1989) about the **relationship** between **positivism**, **Interpretivism** and a **scientific methodology**:

"Both the proponents and opponents of the idea of objective social data have been fooled into assuming that scientific enquiry is equated with positivism. Real science, it has now become quite clear, has nothing to do with such a doctrine and is constructed along quite different lines. Thus, if I am asked to name the most exiting development in sociological methodology in the eighties, then it is the attempt to reconstruct strategies for social science research according to what are often called post-empiricist or realist principles."

In this respect, a **Realist social** science does indeed follow the **basic principles** of a **scientific methodology**, insofar as what it attempts to do is to suggest that the **test** of any **theory** is not the extent to which it helps us to discover some "fundamental truth" or "law" about the "real world". Rather, the best we can ever hope to achieve is that a theory we develop will help us to explain the nature of the world, as we experience it, only until it is **superseded** by some **other theory** that helps explains the world (or some aspect of it) in a **better way**.

Thus, in this respect, social science should **not** seek to uncover such things as "scientific laws governing human development". Rather, what it **should** seek to do is to explain human society, human relationships and so forth in the most plausible way possible.

Positivism and Interpretivism: A Summary.

It is evident that there are clear **theoretical differences** between the **methodology** of **positivism** and the methodology of **Interpretivism**.

In this respect, most **sociology textbooks** tend to draw a relatively hard-and-fast **distinction** between "**positivism**" and "**Interpretivism**" (associating the **former** with **Structuralist sociology** [and **Structural Functionalism** in particular] and the **latter** with **Interactionist** sociology).

What I have tried to emphasize in relation to positivism and Interpretivism, however, are the following ideas:

1. Positivism represents one form of scientific methodology.

Interpretivism, although clearly different to positivism, should **not** necessarily be simply equated with a "**non-scientific**" methodology.

2. Interpretive sociology aims to make **scientific statements** about the **social world**, but in a way that recognises that the **subject matter of sociology** (human beings) is **different** to the **subject matter** of the **natural sciences**. On this basis, therefore, to **study human societies** may involve a **different form of scientific methodology** to that practised within the natural sciences.

3. There are many different forms of positivist methodology, just as there are **different forms** of **Interpretivist methodology**.

4. There is nothing inherent in a **Hypothetico-Deductive** form of logic that says it cannot be used by Interpretivist sociologists. The social world displays many **regular features** that are amenable to observation, the creation of hypotheses and the production of deductive theories:

A major **difference** between "**Structuralist**" and "**Interactionist**" sociologists is that whilst the **former** aim to make **general statements** about the nature of the **social world**, the **latter** tend to restrict themselves to making **statements** about the social world that apply **only to particular forms of social interaction at particular times** in the development of human social groups.

5. Sociology is, on the theoretical level, split into two main camps (Structuralism [Positivism] / Interactionism [Interpretivism]) - but it **does not follow** that:

- All Structuralist sociologists utilise a positivist methodology.
- Interactionist sociologists never utilise any aspect of a positivist sociology.
- Structuralists' never make reference to subjective features of human interaction.

The **reality** of **sociological research** tends to be that **different sociologists** cannot be easily pigeon-holed into such **simplistic categories** - and different sociologists tend to use the methodology that appears most appropriate in any given situation.

Summary.

1. "Science" is an ideology. It is not a body of knowledge, but rather it is a means of producing knowledge.
2. There is no single "scientific methodology", but a number of competing methodologies - one of which is dominant at any particular point in the historical development of science.
3. The basis of modern Natural scientific methodology is the deductive-deductive model.
4. The methodology of the Natural sciences was the earliest influence on the development of methodology in sociology.
5. The methodology of early sociology (inductive positivism) has now been superseded by a deductive form of logic.
6. The general tendency to see "positivist" methodology as being opposed by "anti-positivist" methodology is largely a convenient invention of textbook authors. Sociologists nowadays tend to adopt a general "realist" methodology based upon deductive-deductive principles.
7. Interpretivist methodology stresses the idea that "subjective states of mind" need to be understood and taken into account when studying the social world.

Examination Questions.

1. "In response to the argument that sociology is unscientific, sociologists have noted the lack of an agreed definition of science". Explain and discuss (25 marks).
2. "The logic and methods of the natural sciences are inappropriate for sociology". Discuss (25 marks).
3. "Whether we consider sociology to be scientific or not depends on which definition of science we choose". Explain and discuss (25 marks).
4. Explain and discuss the statement that "there is no one scientific methodology, good for all times and places." (8 marks).
5. Sociologists have often distinguished between positivist and non-positivist methods. Why might positivists favour structured questionnaires and non-positivists favour diaries as forms of data? (6 marks).
6. Assess the extent to which it is possible for sociology to be a science (10 marks).