

## Syllabus Area

“The range of methods, techniques and strategies involved in sociological research:

Surveys, experiments, ethnography, case-studies, content-analysis. Multiple methods. The use of secondary data. The role of values. Ethical issues”.

## Learning Objectives

## What?

The keywords in this unit are:

- **The Research Process**
- **Methodology**
- **The Hypothetico-Deductive Model of Scientific Research**
- **Common sense and sociological knowledge**
- **Operationalising Concepts**

## Why?

You will be able to define:

- **The concept of methodology.**
- **The difference between common sense and sociological knowledge.**
- **The various steps involved in the Hypothetico-Deductive Model.**

## How?

You will be able to apply your knowledge to:

- **An understanding of the various steps in the research process and how they can be applied to your A-level project.**

## Decision

You will be able to evaluate:

- **The basic reasons why sociological knowledge can be considered superior to common sense knowledge.**

## The Research Process

In the previous Unit we looked at a number of basic ideas relating to sources of data and sampling and in the following Units we are going to develop some of these ideas when we look more closely at methods of research. In preparation for this, therefore, this Unit looks generally at the idea of sociological **research** as a **process**.

What?

The key ideas in this part of the course are:

- **Common sense and sociological knowledge**
- **Methodology**
- **The Hypothetico-Deductive Model of Scientific Research**
- **Operationalising Concepts**

Why?

It is important that we view social research as something more than simply asking people a few questions, getting their opinions and then trying to make some sort of sense out of the whole process. In this unit we are going to begin by looking at the idea that social research is **planned and organised** to reflect the idea that it involves such things as:

- Putting forward ideas that can be **tested**.
- Collecting data to test these ideas in a **systematic** way.
- **Analysing** the collected data.
- Drawing **conclusions** based on sociological **evidence**.

This Unit, therefore, is mainly concerned with what are usually called questions of **methodology**.

This idea, in basic terms, relates to the **principles** we use as a means of providing a **framework** for our research (in short a “**research process**”).

We will look at the concept of **methodology** in more detail in a moment, but we can begin to understand the idea of a research process by thinking about the **difference** between **common sense** and **sociological knowledge** and, by extension, why this distinction should be important.

We can start, therefore, by noting that the **objective** of all research is to produce **knowledge** and the point of “doing research” is to produce knowledge that is **true**.

Sociologically we usually express this as “**not false**”. We’ll see why this distinction is important later

The **key question**, therefore, is **why** do we need to “do research” in order to “produce knowledge”?

The basic answer to this question is that we don’t. People, in their daily lives, produce and consume knowledge all the time without ever “doing research” (sociological or otherwise). This **everyday knowledge** (or **common sense**) has, however, at least **one crucial difference** from **sociological knowledge**; it is, by and large, “**taken for granted**” (if common sense knowledge is “what everyone knows”, then it follows that it goes **unquestioned**).

This is not to say that sociological knowledge is never “taken for granted” - it would, after all, be impossible to live in any society without taking some things for granted.

Rather, it is to say that sociological knowledge has been **tested** in some way. It is, in short, knowledge that is **not** simply **assumed** to be true.

This is not to say that common sense knowledge is always wrong, nor that sociological knowledge is always right (the relationship is much more complex than this).

Additionally, sociological knowledge is **not** always **opposed** to common sense knowledge - sociologists, like any other **social** or **natural scientists** may, after all, actively contribute to the store of human knowledge that appears “**self-evidently true**” (until, of course, someone else comes along and shows it to be false...).

However, without overstating the case, the distinction I’ve made between common sense (**untested**) and sociological (**tested**) knowledge is a **device** that helps us to think generally about the way knowledge can be produced and, specifically, about how **sociological knowledge** can be produced. It does, in short, lead us towards a consideration of **sociological methodology** or, if you prefer, the **process** of **sociological research**.

Before we look at this question of methodology, there are two further points we can note arising from the distinction between **common sense** and sociological knowledge:

- Firstly, it suggests there are **at least two ways** of interpreting “**social reality**”, since if it is possible for common sense and sociological knowledge say **different** things about the **same** phenomenon, it follows that they cannot both be right.
- Secondly, it suggests that sociological knowledge is superior to common sense knowledge because it is based on **evidence** that comes from the **systematic testing** of ideas through research.

If, as I’ve suggested, this difference is true (or **valid**), it points us towards the need to develop a set of **guidelines** that tell sociologists how to go about the task of testing ideas about the social world. This, in short, involves the development of a **systematic process of research** and leads us into a classic and widely-accepted **model** of **research methodology** proposed by **Karl Popper**.

Examples of “taken for granted” sociological knowledge from our society might include the idea that the powerful exploit the weak, that we live in a class-based society and that gender inequalities exist between men and women.

In addition, one of the main assumptions that sociologists take for granted is that the social world is characterised by certain patterns of behaviour (regularities) that must have a social cause.

Just as social scientists (**Sociologists, Psychologists** etc.) study the social world, natural scientists (**Physicists, Chemists, Biologists**, etc.) study the natural world.

## Karl Popper: The Hypothetico-Deductive Model

"**Hypothetico**" means "**based on hypotheses**" (see below for a more-detailed explanation of an hypothesis). For **Popper**, the research process revolves around the ability to **develop** and **clearly state hypotheses** that can be **tested** in some way through social research.

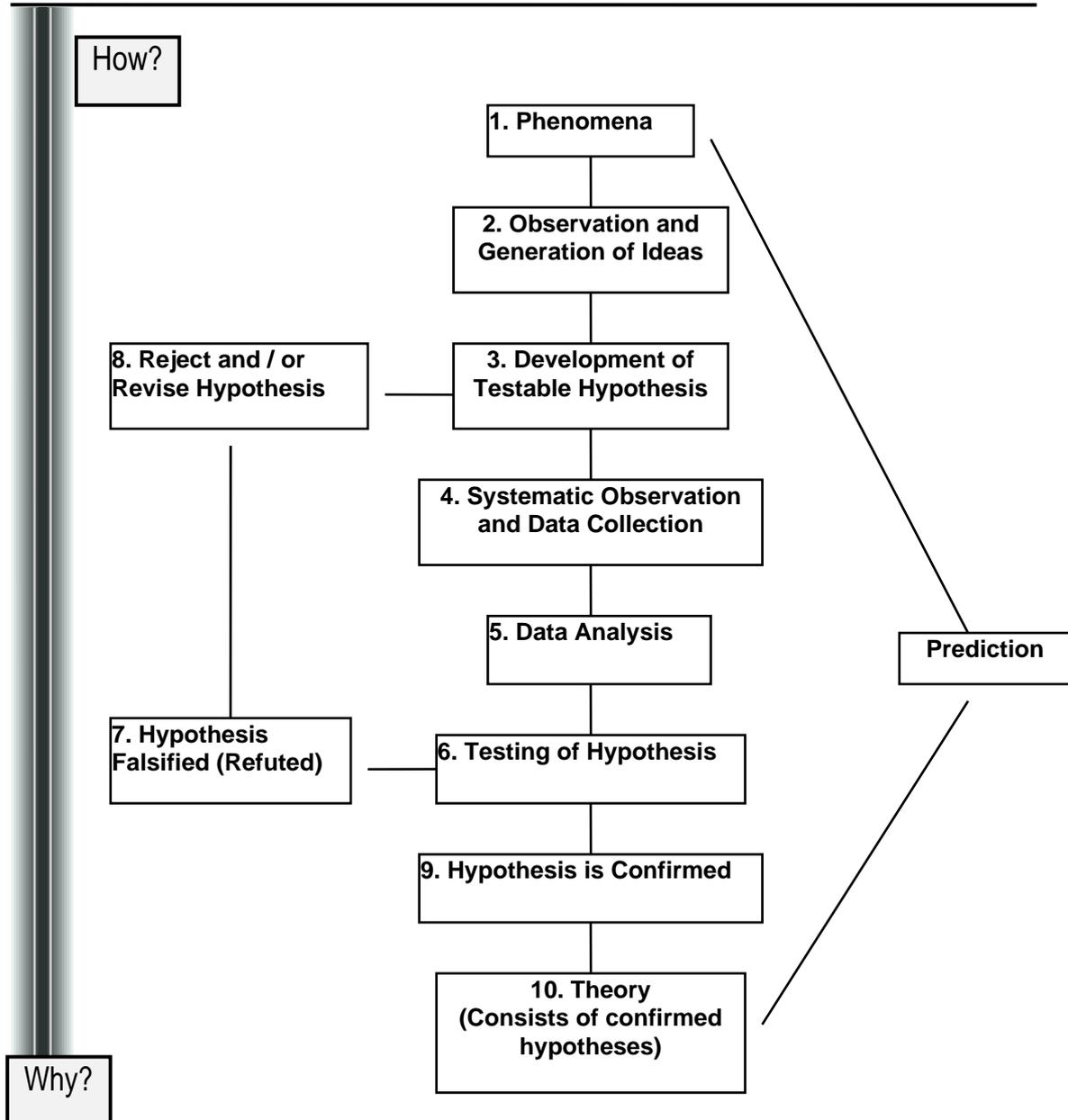
**Deduction** (or to give it its proper name, **deductive logic**) is a way of making **authoritative statements (proofs)** about what is **not known** by a thorough analysis of what **is known**. The ability to make **deductive statements** is a very powerful tool since it is the basis for drawing **logical conclusions** about **specific** events from **general** events.

In sociological terms, a model is a **small-scale representation** of something (such as, in this instance, a research process) that helps us to clarify the **relationship** between the things involved by **describing** the relationship between them in simplified terms. In this case, **Popper's model** suggests the various **steps** that we need to follow in order to "do research" and, as such, helps us to **organise** the **research process**.

To put this in simpler terms, you will probably be familiar with fictional **detectives** such as Sherlock Holmes. He solved a crime by **systematically investigating** a case, **collecting** and **analysing facts** and, on the basis of these facts, naming the person who committed the crime. This is an example of **deduction** because Holmes was able to **authoritatively state** (or **prove**) something **specific** (the identity of a murderer, for example) that was **not initially known** on the basis of his **general observations** about things that **were initially known** (the **facts** surrounding the case).

### Exercise 1

1. Explain the difference between common sense and sociological knowledge.



We can interpret each step in the above model in the following way.

### 1. Phenomena

This refers to anything in the world that catches our attention and which we want to describe, analyse and / or explain. It is the starting-point for all social research and, at its most basic, this idea simply refers to the fact that we are going to choose something to research. This first stage of the research process, therefore, is its most **general** and in order to actually do social research we have to narrow this down into something more specific.

A desire to research the area of “crime”, “family life” or “education” might be examples here.

## 2. Observation and the generation of ideas

This refers to this process of narrowing our research topic into something more specific and manageable. For example, as we take a closer interest in the topic of “crime” we start to look at things that do and don’t interest us in this area. As we consider these things we start to generate possible ideas that we might like to investigate further. These can take the form of a “**research question or problem**”.

Although more specific than the first stage we need, according to Popper, to be more specific still. This leads to the development of an **hypothesis**.

For example, Why do people steal? Does the availability of divorce lead to family breakdown? etc.

## 3. Development of Testable Hypothesis

An **hypothesis** can be defined as a **general question or statement** that suggests a **possible** (and therefore **testable**) **relationship** between **two or more things**.

For example, if we think about a research question such as

**“Why do people steal?”**

a major problem we have is **how** to answer such a question. It is **too general** for research purposes because it doesn’t specify a **relationship** between “**people**” and “**stealing**” that can be **tested**. What we need to do, therefore, is to create an **hypothesis** (or series of related hypotheses) that turn our research problem into something we can **test** (by **collecting** and **analysing evidence**). Thus, we could create a testable hypothesis along the following lines:

**“Poverty makes people steal”.**

Although this is a very **simple** (and probably not very useful) hypothesis, it does serve to illustrate the idea of the need to specify a **testable relationship** between **two or more things**.

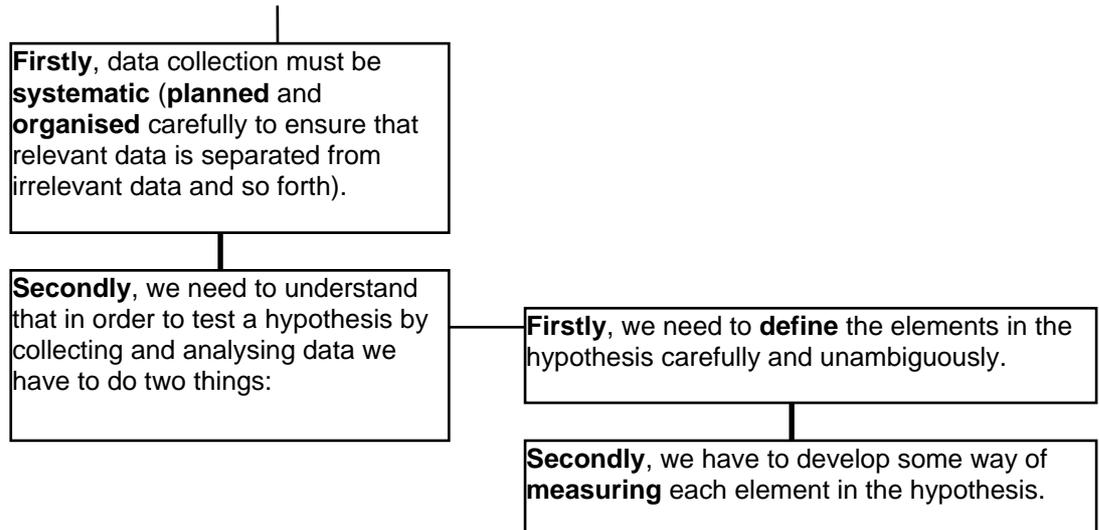
**Thing 1** = Poverty  
**Thing 2** = People who steal.  
**Relationship** is a casual one (that is, poverty somehow makes people steal). “People who are poor will steal to feed their family”.

From the above, it should be clear that the idea of developing a **testable hypothesis** is a useful step in the research process, mainly because an hypothesis provides both a **focus** for research and a clearly-defined **objective** for the data collection step (the researcher is going to collect data that will test the hypothesis).

Once a hypothesis has been developed, the researcher can move onto the next step in the process - the collection of data to **test** the hypothesis.

#### 4. Systematic Observation and Data Collection.

The next step in the research process, therefore, is the collection of data that allows the researcher to **test** their hypothesis. This is the stage at which various **methods of research** are introduced and since there are a wide variety of methods available we will need look at these separately - and in some detail - in further Units in this Module. However, two points can usefully be noted here:



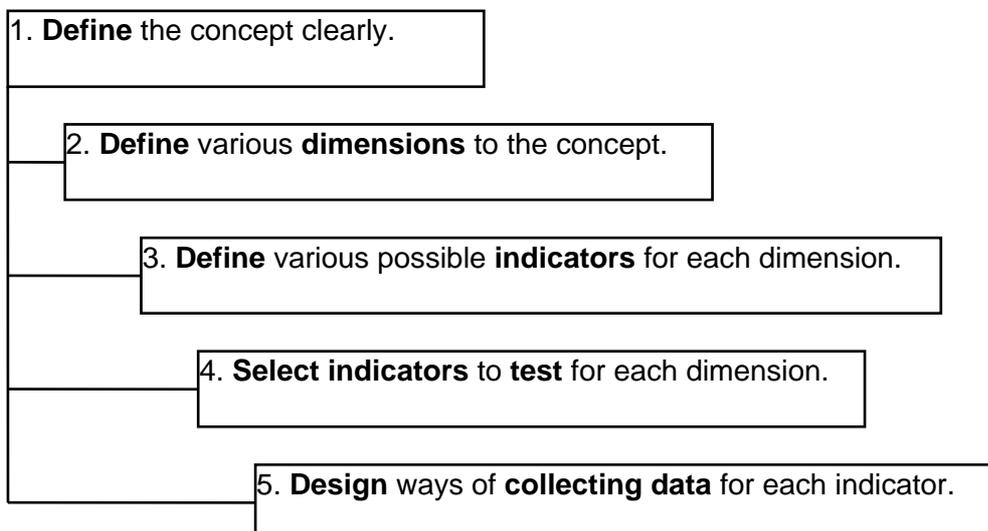
In research terms this is called the **operationalisation of a concept**.

In basic terms, we operationalise a concept by developing **indicators** that we can **measure**.

The idea of **operationalizing** a concept means the ability to transform a general, abstract, idea into something that can be defined and, most importantly, measured.

In sociology, many of the **relationships** you research involve **concepts** (ideas like "society", "norms" and "anomie") that **can't** be easily **defined** and **measured** because they don't physically exist. We need, therefore, to develop indicators of their existence that can be physically measured.

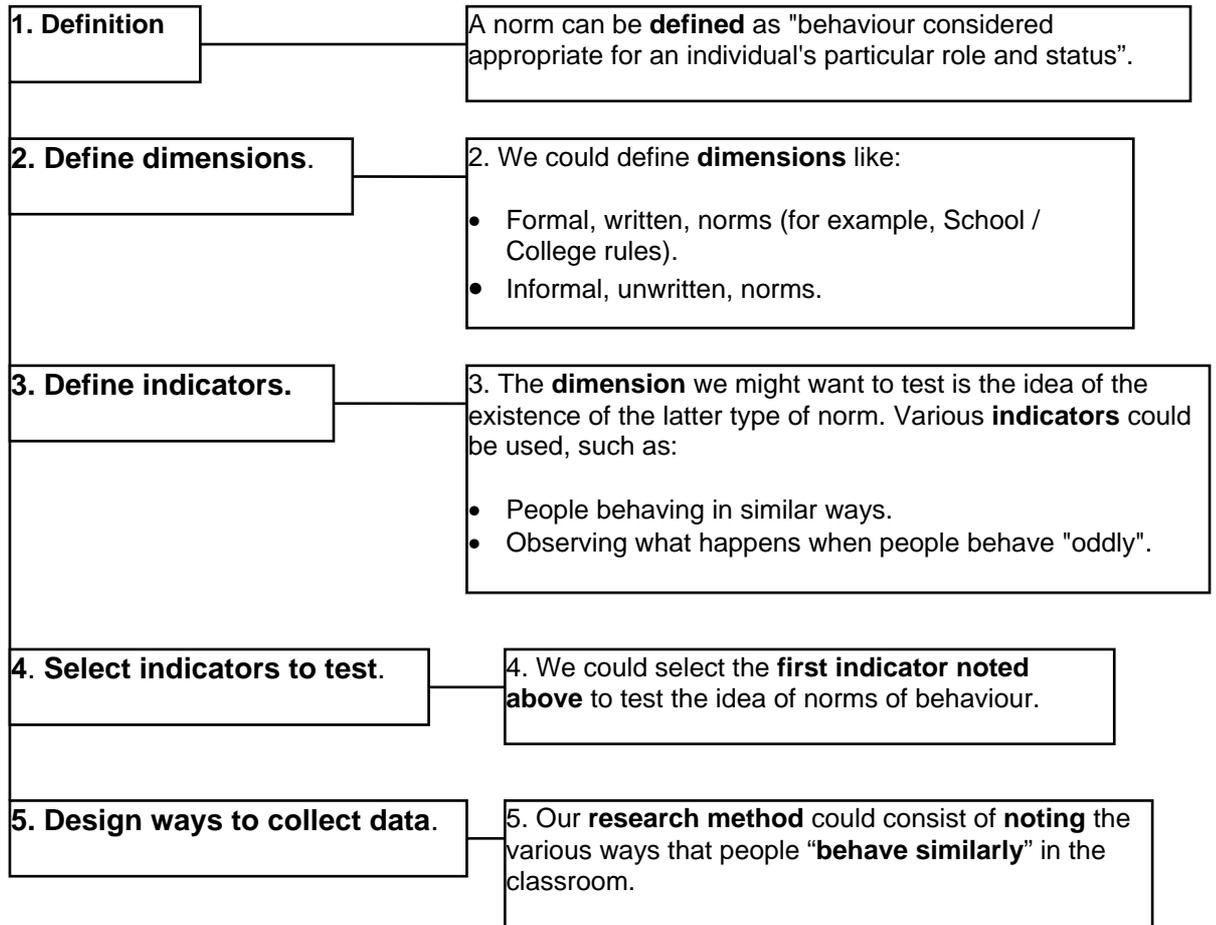
We can identify a number of **basic steps** involved in the **operationalisation** of any concept:



## How?

To make this a little more understandable, we can use the following example:

- Suppose we wanted to understand the way "norms of behaviour" are used by people to guide their behaviour in this classroom.
- The concept of "norms" is the general, abstract, idea we need to **operationalise** and we might proceed in the following way (using the steps I've just outlined above).



As the basis for the following exercises to test your understanding so far, you might like to think back to the idea of the "poverty" hypothesis noted earlier. In order to test this hypothesis we have to **operationalise** the concept of **poverty**. In this respect, **before** we can collect data about poverty (and then use it to test our hypothesis) we need to:

- **1. Define poverty.**
- **2. Develop indicators of poverty that can be used to test the hypothesis.**

This may not be as easy as it sounds...

## Exercise 2.

Use your recommended **textbook** (**Sociology In Focus** (pages 171 - 173) or **Themes and Perspectives** (page 124)) to **identify two different definitions of poverty**. **Briefly describe the main characteristics of each definition.**

## Exercise 3.

For **each** of the two definitions of poverty you've identified, complete the following:

**Definition 1: "Using this definition, people are considered to be poor when...**

”

**Definition 2: "Using this definition, people are considered to be poor when...**

”

In the above exercise you will have identified a number of possible **indicators** of poverty that could be **operationalised** (measured) in order to identify people who are poor.

For example, in both definitions it is likely that "not having enough food each day to sustain human life" would be a clear indication of poverty

You could go through the same process with the concept of "theft" and, once you have operationalised these concepts it will be possible to collect data to **test** the overall **hypothesis**.

For example, you may have decided to operationalise the concept of poverty in simple economic terms. For example, any individual who earns less than £10 per day in our society is considered to be poor.

In your **data collection**, therefore, you will need to find people who **match** your **definition** of poverty and then find some way of **measuring** whether or not they are involved in crime.

If you need further help understanding these ideas, do the following exercise.

#### Exercise 4.

**How could you operationalise the concept of education?**

Hint: You cannot "see" education (it's not a thing with physical substance), but you know it is happening because you are sitting in a classroom experiencing it. What "indicators of education" can you identify?

For example: If you decide that one indicator of education is that people learn things, what indicator of learning could you use to measure this idea?

## 5. Data Analysis.

Once data has been collected it has to be **analysed (interpreted)** in relation to the original hypothesis. This will involve things like:

- Checking to ensure that sufficient data has been collected.
- Checking that the sample used has remained representative.
- Making decisions about whether or not to include or discard data that appears irrelevant.

The outcome of this process is the next step.

## 6. Testing the Hypothesis.

Once the data has been analysed a decision can then be made about whether or not the tested hypothesis has either been:

1. Shown to be untrue (**falsified**) or
2. Shown to be true (**confirmed**).

If the evidence collected suggests that the hypothesis is false (**stage 7**), a decision has to be made (**stage 8**) about whether it should be totally rejected or whether it can be revised and re-tested in a slightly different form (a return to **stage 3**).

If, on the other hand (**stage 9**), the hypothesis is not shown to be false (for example, if all of the poor who were sampled and researched we involved in theft), hypothesis can be considered as confirmed and contributes to the final stage in the research process.

## 10. Theory Development.

In **everyday usage**, a **theory** is normally taken to mean something that has **not** been tested. In sociological terms, however, this is considered to be **incorrect** because it confuses the concepts of **hypothesis** and **theory**.

A theory consists of an hypothesis (or, more usually, many related hypotheses) that has already been tested against the evidence and shown to be confirmed.

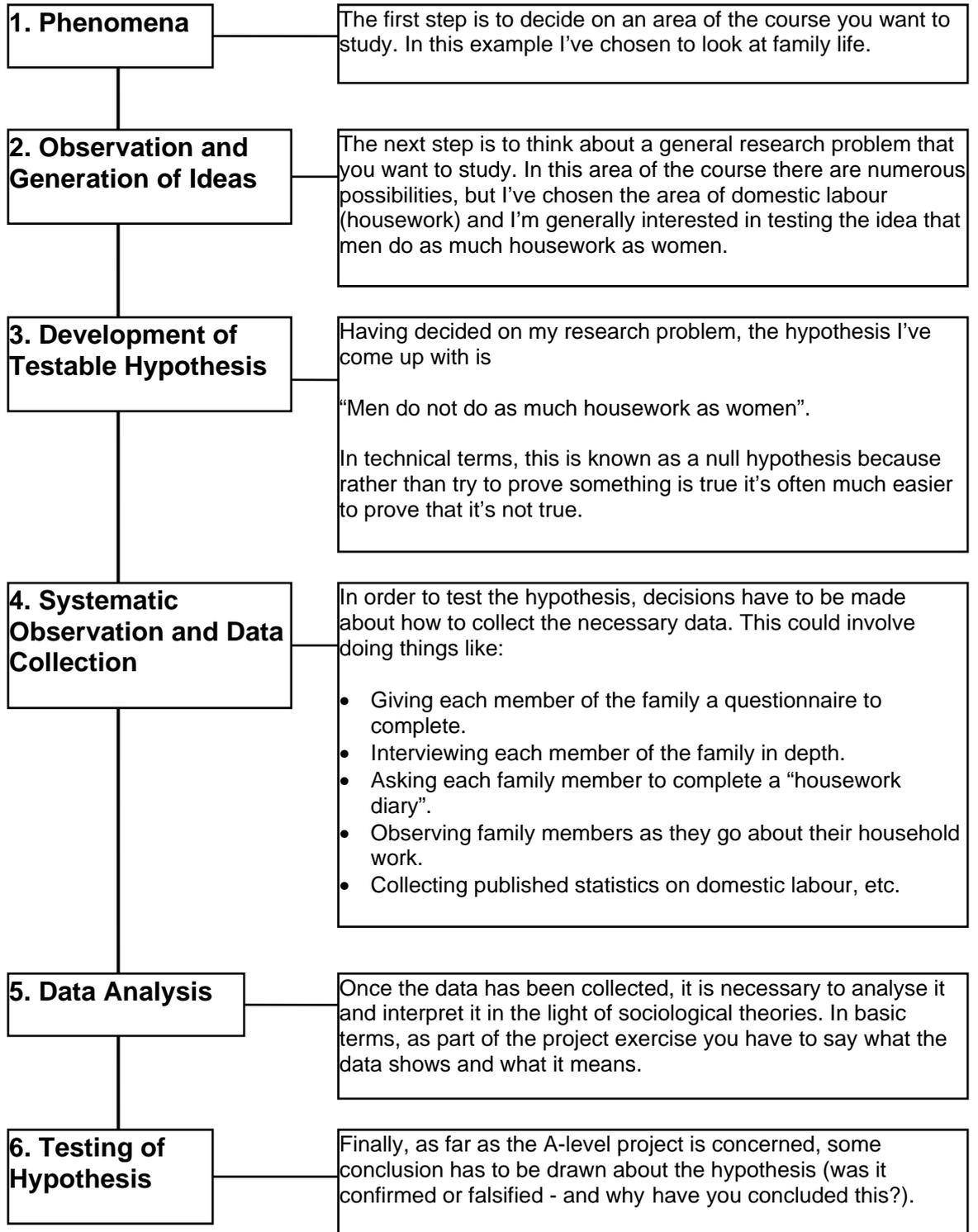
An hypothesis is the idea that will be tested.

In **scientific** terms, therefore, a **theory** consists of **tested** and **confirmed hypotheses** that can then be used to **predict** the behaviour that was **originally observed (step 1)**.

How?

## Applying The Hypothetico-Deductive Model of Research.

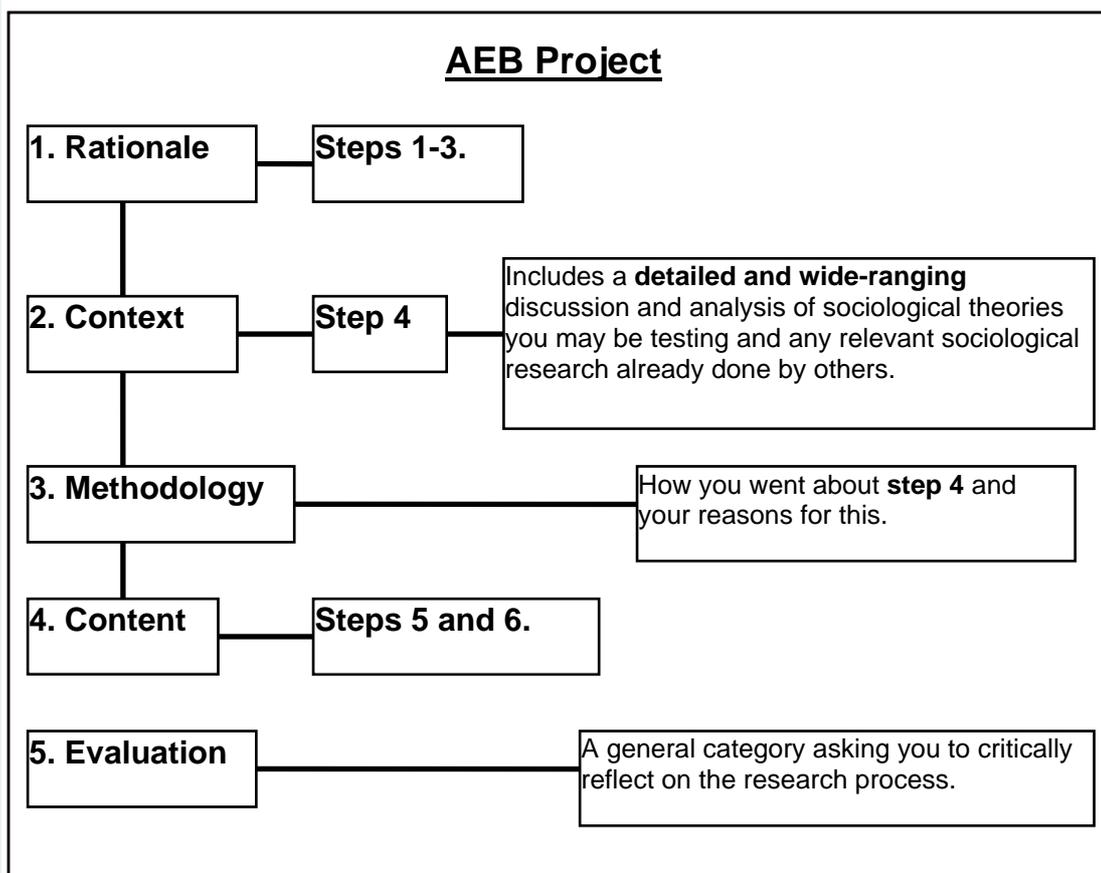
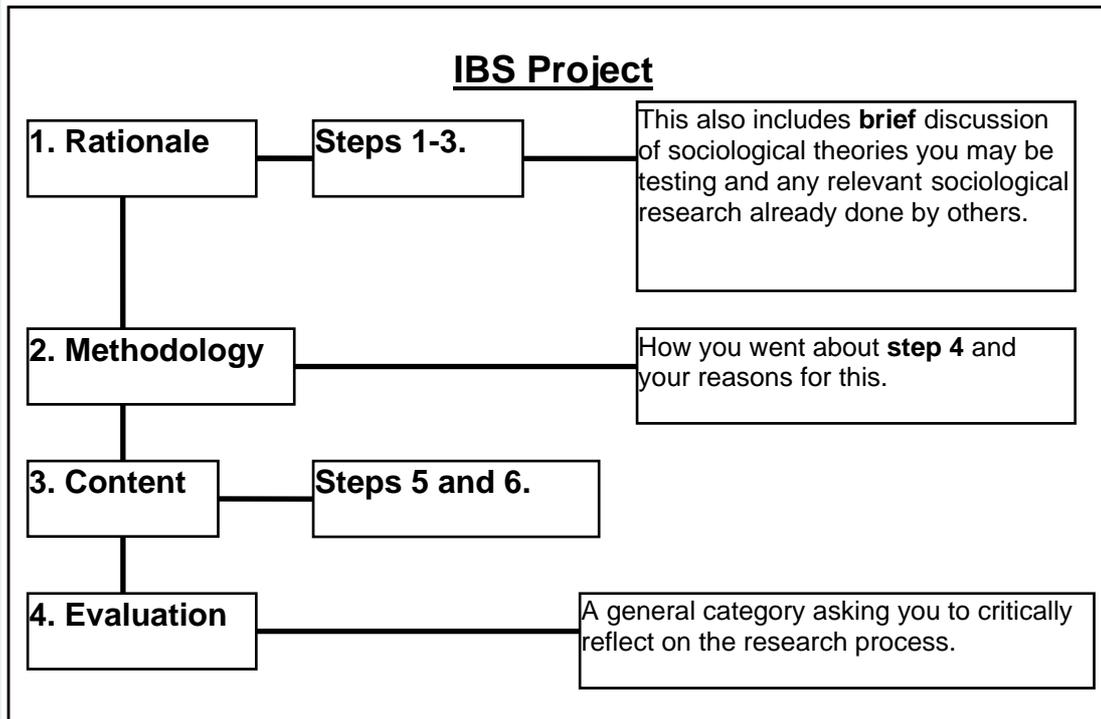
This model of research is a standard research **methodology** that can be used to guide you in the **research project** you will construct as part of your A-level course. This being the case, we can look briefly at an **example** of how this research methodology can be **applied**.



Steps 7 - 10 in the research methodology are not really applicable in a project of the kind demanded at A-level.

**Note:**

The **InterBoard (IBS)** and **Associated Examining Board (AEB)** demand different types of project and the following outlines their differing requirements:



So far we've looked at a particular set of **guidelines** for **doing social research (Popper's Hypothetico-Deductive Model)** and outlined a number of steps in this process.

Once a researcher has decided on a particular **area** of society to **study (step 1)**, a particular **research question** or problem (**step 2**) and a **hypothesis** / hypotheses (**step 3**), the next step is to think about the process of **data collection (step 4)**.

What we will need to do next, therefore, is to consider in more detail the process of data collection.

In particular, we need to consider two main things:

Firstly, the **range of methods** of research (**quantitative** and **qualitative, primary** and **secondary**) available to the sociologist.

Secondly, the reasons (both **theoretical** and **practical**) for choosing or not choosing to use a particular method.

These ideas are the theme of the next Unit, **Sociological Methodologies**.

**Theoretical reasons** relate to the basic way that the researcher **sees** the nature of the social world (the thing they are studying).

This is a significant point that needs to be dealt with in some depth in the next Unit.

**Practical reasons** refers to the various research considerations (**time, money** and the like) that can affect our choice of methods.

These will be considered in some detail in a later Unit.