There are many ways by which we can choose to investigate a phenomena (or hypothesis). Each method has its merits and demerits and there are often 'payoffs' between one method of investigation and another.

As scientists, we assume that an empirical approach to investigating behaviour is the most reliable, fair, valid and systematic. We disregard laypeople's 'inductive reasoning' in favour of 'deductive' reasoning.

Research Methods

Experimental Method

Francis Bacon developed the experimental method to allow scientists to impute causality. The causality is between the independent variable and the dependent variable.

Examples of this in practice are **field experiments** (e.g. submitting a covering letter on job applications explaining previous criminal records (Cohen & Nisbett, 1966) and **laboratory experiments** (e.g. insulting members of southern and northern US and measuring anger on a self report and by handshake and saliva cortisol)**.**

This is good for imputing causality and controlling for extraneous variable, but can be low in ecological validity. It is the scientists endeavour to ensure **construct validity** (making sure the IV and DVs measure the desired theoretical constructs under investigation). This can be thwarted by the **social desirability bias** (Rosenberg) and demand characteristics more generally.

It is also fundamental to ensure that the IV caused the DV, and this endeavour is known as **internal validity**. This can be threatened by confounding variables that systematically affect the results of the experiment. The most basic ways to avoid this include high experimental control, random assignment to variables and accurate measuring equipment.

Just as there are problems with the experiment, there can be problems with participants (often referred to as confounding variables). To overcome these, we need to control for individual differences (age, ethnicity, gender etc.) (if searching for normative theories), measure individual differences (if searching for idiographic conclusions) and draw large enough samples in order to reduce 'error' and establish means etc.

Correlational Studies

This **describes** the systematic relationship between two variables.

This can be measured through **surveys (self-reports) and interviews** as well as more controlled experimental measurements.

The strengths is that it's often ethical as there is a lack of control. It is quick, cheap and easy to conduct and allows for future prediction (partially fulfilling aims of science). However, it is non-causal and so lacks explanatory power. It is just a descriptive measure.

Descriptions/Observations

This describes behaviour in its 'natural state', outside of artificial, experimental manipulations

Examples include **ethnography, case studies, archival studies, naturalistic observations** (diaries, suicide notes, magazines, websites). These are all approaches used by **Cohen & Nisbett (1996)** when attempting to describe the **'culture of honour'** in southern, white north American males. However, they also adopted an experimental technique using insults and measures of aggression.

Though these allow for 'naturalistic' observations of people and so are ethical and reasonably high in ecological validity, causality cannot be imputed and so it is difficult to explain behaviour (which is a goal of science and psychology).