1.2: Methods of Knowing

Learning Objectives

1. Describe the 5 methods of acquiring knowledge
2. Understand the benefits and problems with each.

Intuition

The first method of knowing is intuition. When we use our intuition, we are relying on our guts, our emotions, and/or our instincts to guide us. Rather than examining facts or using rational thought, intuition involves believing what feels true. The problem with relying on intuition is that our intuitions can be wrong because they are driven by cognitive and motivational biases rather than logical reasoning or scientific evidence. While the strange behavior of your friend may lead you to think s/he is lying to you it may just be that s/he is holding in a bit of gas or is preoccupied with some other issue that is irrelevant to you. However, weighing alternatives and thinking of all the different possibilities can be paralyzing for some people and sometimes decisions based on intuition are actually superior to those based on analysis (people interested in this idea should read Malcolm Gladwell’s book Blink)\(^1\).

Authority

Perhaps one of the most common methods of acquiring knowledge is through authority. This method involves accepting new ideas because some authority figure states that they are true. These authorities include parents, the media, doctors, Priests and other religious authorities, the government, and professors. While in an ideal world we should be able to trust authority figures, history has taught us otherwise and many instances of atrocities against humanity are a
consequence of people unquestioningly following authority (e.g., Salem Witch Trials, Nazi War Crimes). On a more benign level, while your parents may have told you that you should make your bed in the morning, making your bed provides the warm damp environment in which mites thrive. Keeping the sheets open provides a less hospitable environment for mites. These examples illustrate that the problem with using authority to obtain knowledge is that they may be wrong, they may just be using their intuition to arrive at their conclusions, and they may have their own reasons to mislead you. Nevertheless, much of the information we acquire is through authority because we don’t have time to question and independently research every piece of knowledge we learn through authority. But we can learn to evaluate the credentials of authority figures, to evaluate the methods they used to arrive at their conclusions, and evaluate whether they have any reasons to mislead us.

Rationalism

Rationalism involves using logic and reasoning to acquire new knowledge. Using this method premises are stated and logical rules are followed to arrive at sound conclusions. For instance, if I am given the premise that all swans are white and the premise that this is a swan then I can come to the rational conclusion that this swan is white without actually seeing the swan. The problem with this method is that if the premises are wrong or there is an error in logic then the conclusion will not be valid. For instance, the premise that all swans are white is incorrect; there are black swans in Australia. Also, unless formally trained in the rules of logic it is easy to make an error. Nevertheless, if the premises are correct and logical rules are followed appropriately then this is sound means of acquiring knowledge.

Empiricism

Empiricism involves acquiring knowledge through observation and experience. Once again many of you may have believed that all swans are white because you have only ever seen white swans. For centuries people believed the world is flat because it appears to be flat. These examples and the many visual illusions that trick our senses illustrate the problems with relying on empiricism alone to derive knowledge. We are limited in what we can experience and observe and our senses can deceive us. Moreover, our prior experiences can alter the way we perceive events. Nevertheless, empiricism is at the heart of the scientific method. Science relies on observations. But not just any observations, science relies on structured observations which is known as systematic empiricism.

The Scientific Method

The scientific method is a process of systematically collecting and evaluating evidence to test ideas and answer questions. While scientists may use intuition, authority, rationalism, and empiricism to generate new ideas they don’t stop there. Scientists go a step further by using systematic empiricism to make careful observations under various controlled conditions in order to test their ideas and they use rationalism to arrive at valid conclusions. While the scientific method is the most likely of all of the methods to produce valid knowledge, like all methods of acquiring knowledge it also has its drawbacks. One major problem is that it is not always feasible to use the scientific method; this method can require considerable time and resources. Another problem with the scientific method is that it cannot be used to answer all questions. As described in the following section, the scientific method can only be used to address empirical questions. This book and your research methods course are designed to provide you with an in-depth examination of how psychologists use the scientific method to advance our understanding of human behavior and the
mind.

References