DEDUCTIVE ESSAY

Abstract

Inductive and deductive reasoning are approaches which are quite important in understanding intelligence analysis. The two types of reasoning are antagonistic and make distinct assumption in their approach in reasoning. This essay examines the differences that exist between inductive and deductive approaches in reasoning.

Key words: approach, observation, reasoning

INDUCTIVE AND DEDUCTIVE REASONING

Introduction

Deductive and inductive reasoning are two examples of approaches that can be employed to evaluate inferences in intelligence analysis. Deductive reasoning is an approach in which one begins with a general statement or theory then narrows it down to a specific conclusion. On the other hand, inductive reasoning is an approach that takes into consideration a series of specific observations and consequently expands the observations into a more general statement. This essay outlines the differences between inductive and deductive reasoning.

Deductive reasoning is also known as “top-down” approach since an individual from an information that is more general to one that is more specific or rather from a broad spectrum and works towards drawing a conclusion. Inductive reasoning is arguably the opposite of deductive reasoning with regards to its manner of operation. It is also referred to as “bottom-up” approach since it moves from more specific observations and tends towards generalizations and theories. In this Approach, an individual first makes observations followed by detection of patterns that are similar to the first observation. The individual then

formulates tentative hypothesis which it explores and derive general conclusions.

An example of deductive reasoning is: all metals expand on heating. Therefore, if A is a metal, then it expands on heating. Deductive statements as exemplified above may be viewed as perfect logical statements. However, they often do not rely on the initial statements being correct. On the other hand, a similar example for inductive reasoning would be: metal A expands on heating just a metals B and C expand on heating; therefore all metals expand on heating. As can be deduced from the above example, inductive reasoning which is often used in different fields including science is not always valid. This is due to the fact that assumption that general principle is correct is not usually accurate.

In conclusion, despite the differences between the two approaches, it is possible to employ both of them to explore logical problems. In addition, the human brain is good at using both inductive and deductive reasoning to an extent that an individual may not realize such developments.