Intuition is important yet unnecessary in developing modern essay

Aristotelian, contrary to the modern scientific method, suggested that knowledge acquirement began with repeated sense experience, memory hence intuition (Lindbergh 20). The omission of the “ intuition” step and emphasis on observable evidence led to a great leap forward from the medieval to modern science. The following essay will focus on explaining why Intuition Is not necessary, though still Important, In practicing the modern science. Undeniably, Intuition takes an essential role when developing science.

Poinciana argued that the subliminal ego, which generated the sudden illumination, could select and divine facts and reach to meaningful combinations. Hence, it is important especially in mathematical discovery (Poinciana 174-175), which is one of the foundations of the modern science. In another words, intuition is a turning point of searching for fruitful combinations from the sea of encumbering and useless facts. Though important, it has a great limitation – the process is solely internal and unconscious.

No one can guarantee its happening precisely. If it took a key role in scientific discovery, then everyone had to be a genius or a spiritual Christian who always received toothbrushes from God (English Standard Version, 2 Timothy 3: 1 6) in order to be a scientist. Obviously this Is impossible. Even Mendel, a famous scientist who discovered genes, failed twice In exams and was never promoted above the rank of substitute teacher (Watson 102).

Intuition also does not fit framework of modern science.

It Is unreliable In a sense that its source, the perception and memory, is too abstract and fluctuating to guide to the “ external reality or “ provide reason for belief and ground knowledge” (Ass, 634). That is, the nature of intuition cannot give causal relations that objects and events in he physical world can (Ass, 644). Popper criticized it severely as a “ myth” in stead of a fact in the psychological or ordinary life, hence it could not be counted as one of the steps in a scientific procedure (Popper 53).

In Plat’s view, the sense experience triggered the souls’ recollection of memories, as known as intuition, and would finally lead to the knowledge of the “ essential reality” (Lindbergh 14-15).

Nevertheless, the early modern scientists, such as Galilee, F. Bacon, Descartes and others, made a clear distinction between mind and body – the former existed In the Platonic province of he soul and the latter existed In the physical world which stressed on observation and experiments. Therefore, intuition is not particularly related and useful in further developed without intuition.

Aristotle cosmology stated that the heaven, which existence was commonly perceived to be in the celestial region of the universe, was composed of the incorruptible tether (Lindbergh 26-29), resulting to the perfectibility of the heavens. Galilee, who prone to go against unsubstantiated statement, derived a new hypothesis – the terrestrial objects and the celestial objects re probably made of the same substance; hence, he deduced that the Sun and the Moon should also be composed by the same elements as that of the Earth.

Then he conducted an experiment by observing the Sun and the Moon through his newly improved telescope and discovered some visually apparent sunspots and lunar mountains. Plato suggested that one could only observe the material realm by five senses (Plato 5-10). According to this logic and the experiment results, when one could see the Sun and the Moon, they were made of materials in the material realm which was imperfect. The conclusion turned out to echo with his initial hypothesis. Experiment, which conducted through observation in Gillie's discovery, was a must in verifying his deduction.

It could sort out " interpretable facts from an unyielding Nature" and elicit " a decisive No – or with can inaudible Yes" (Well xx). Science is an accumulation of knowledge. " Discovery is inspired by Justification" (Gallivant 121). The latter theories are developed either by Justifying, criticizing and refuting the existing empirical studies through observations (Popper 128).

Without gaining any intuition but reviewing the prior studies, the conclusion could still be reached. It showed that intuition is not the most fundamental key to understand the nature.

Observation prior to the discovery of science does not only lies on the previous studies, but also the nature. It, no matter is done before coming up with a hypothesis or during the experiment, is necessary in developing modern science.

The previous example of Gillie's discovery indicated that in no way could the deduction be proved without the experiment. The paramount importance of

observation in being the heuristic point of scientific development can be well supported by Darning’s derivation of Natural Selection.

Before publishing the book On the Origin of Species, he had spent 15 months since October 1838 on his systematic enquiry. During this prolonged period, he did a constant observation on habits of plants and animals, collected specimens and assembled reports of other naturalists (Darwin 120). Apart from Darwin, Mender’s discovery of genes was started from careful observation and study of the pea plants he grew in his own garden.

Base on this, he generated a hypothesis that biological experiments could be quantified and deduced the significance of the ratios of red to white progeny.

Followed up by a quantitative experiment by counting the ratios of green and yellow peas, Mendel finally discovered that there are some factors inheriting from the older generation, which was called “ genes” afterwards (Watson 102-104). Life is full of infinite facts. Scientists are those who observe the widely separated domains, discover the interesting recurring facts and a set of shared attributes (Lindbergh 19), hence form fruitful combinations (Poinciana 162-170). Without detailed observation and try to figure out the underneath patterns, a hypothesis cannot be derived when simply relaxing in a cafe.

Deduction is also necessary.

Aristotle defined deduction as the “ speech in which, certain things having been supposed, something different from those supposed results of necessity because of correct inference from a premise to a conclusion. Base

on the hypothesis that the gravitational attraction was inversely proportional to the square of distance, Newton did excellent calculation and applied the three laws of motion to the body of moving around the Sun and other excellent calculation. Finally, he reached to the conclusion that the planets' orbits were ellipses and " brought this demonstration to perfection" (Cohen 51-62).

In no way could Newton link the latter observation to the conclusion without the finite number of logical steps in the deduction process. Even the falling apple on Newton's head might provide intuition, it would be absurd to argue that Newton's proof of the law of gravity could be develop solely by this without deduction. Deduction provides rigorous description for the quantitative laws and eventually decides whether the conclusion is to be falsified or not.

Moreover, deduction is especially necessary in the mathematician's of hypotheses about Nature.

There are limitations of experiments, as the result may be affected by the inevitable constraints in the reality, for example, the concept of " forever". Galilee failed to frame the law of inertia as he simply focused on the physical experiments. In contrary, Newton, base on Gillie's experiments, considered problems in a reasonable deductive way through mathematics. The abstract and purely mathematic way endowed Newtonian mechanics with great power of testable prediction and the break-through of the physical boundaries of " circularity' and infinite universe.