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**Coursework Title**

That which is accepted as knowledge today is sometimes discarded tomorrow. Consider knowledge issues raised by this statement in two areas of knowledge.

**Word Count**

1555

**Supervisor Comments**

**Candidate Declaration**

I confirm that this work is my own work and is the final version. I have acknowledged each use of the words or ideas of another person, whether written, oral or visual.

**Teacher Declaration**

I confirm that, to the best of my knowledge, the material submitted is the authentic work of the candidate and the word count is accurate.

**“That which is accepted as knowledge today is sometimes discarded tomorrow”. Consider knowledge issues raised by this statement in two areas of knowledge.**

Over the past years, knowledge has been passed down from different people like our grandparents, teachers, storytelling, and scientific experiments among others. But the question raised is, has there been any case where a significant detail has been omitted over the past years? Or things that were considered true in the past are not true in this present age? This essay will explore how the knowledge of today is sometimes discarded tomorrow as well as certain knowledge which looks likely to never be discarded using the natural sciences and history as the two areas of knowledge.

In order to fully grasp the understanding of the question, one must know what it means. Therefore, it is important that we look at the subject matter topic at hand and try to understand what it entails. From the question, “that which is accepted as knowledge” is referred to as a knowledge claim. “A knowledge claim is anything presented as a fact”.<sup>1</sup> Another knowledge claim worthy of noting in the topic is “that which is accepted as knowledge today is sometimes discarded tomorrow”. And these knowledge claims raise certain knowledge issues which will be elaborated upon in the next paragraphs. “Knowledge is an on-going process”.<sup>2</sup> My understanding of this definition is that knowledge is very dynamic; it keeps on changing as new technologies evolve and as human understandings of the world also increase. Hence knowledge is not stable and this is supported by Aristotle’s definition of knowledge,

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<sup>1</sup> Theory of Knowledge Guide, “Knowledge Issues, knowers and knowing” pg. 9, 21<sup>st</sup> December, 2013

<sup>2</sup> Raised by Alex Bird in his lecture, “What is Knowledge”, 26<sup>th</sup> November, 2013

which states, “that knowledge is a systematic process which is constantly updated”.<sup>3</sup> It is also key that we realise the significance of the word “sometimes” in the question, and this brings the underlying sense that some knowledge claims are timeless. In addition to this, it is also imperative to know that the acceptance of knowledge is by conventional thought and hence depending on the society we live in we are subjected to various ways of thinking. The word “sometimes” found in the question presents the ambivalence of the question: as this gives one the opportunity to elaborate on the opposite sides of the knowledge.

The Natural Sciences use the Scientific Method as the means to acquire knowledge, prove or disprove a hypothesis. “The purpose of the Scientific Method is to construct an accurate, reliable, self-consistent representation of the world”.<sup>4</sup> Knowledge in the scientific world becomes accepted as a fact after going through this method by means of observation and afterwards, experimentation which essentially is proving the hypothesis correct. This concept of proving a hypothesis has been falsified with Karl Popper bringing in Falsification, which basically is disproving the hypothesis, in other words, challenge the theory of induction used in the Scientific method. Popper’s falsification principle states that “scientific theories are only correct until they are proven wrong”<sup>5</sup> and hence the next paragraph will expatiate on how the concept of falsification has influenced the evolution of the disease AIDS.

“HIV AIDS has evolved over the past few years after it was known to be just among homosexuals.”<sup>6</sup> “In 1981, Dr. Curran of Centre for Disease Control in 1981 in Atlanta reported, “There was no apparent danger to non-homosexuals from this contagion and was referred to as Gay-related Immune Deficiency (GRID) acquired Immune

<sup>3</sup>Stanford Encyclopaedia of Philosophy, “Aristotle’s Ethics”, <http://plato.stanford.edu/entries/aristotle-ethics/>, 3<sup>rd</sup> January 2014

<sup>4</sup> The Scientific Method, <http://www.physics.smu.edu/scalise/P3333sp08/SciMeth/>, 18<sup>th</sup> January, 2014

<sup>5</sup> TokTalk.net, “What is Falsification”, <http://www.toktalk.net/2007/12/24/what-is-falsification/>, 18<sup>th</sup> January, 2014

<sup>6</sup> Avert, “History of Aids up to 1986”, <http://www.avert.org/history-aids-1986.htm>, 20<sup>th</sup> December 2013

Deficiency (AID) or gay cancer”.<sup>7</sup> But as time went on it was seen to affect other populations of people, children, and women amongst others in 1983 and hence the term GRID was then changed to Acquired Immune Deficiency Syndrome (AIDS) and consequently several researches has been done to investigate the cause of this disease and virus associated with it. With this example, it is evident that knowledge about this disease has evolved over the time through new discoveries; the concept of AIDS being a disease common to only homosexuals (gay men) was proven wrong naturally when women and children also started contracting the same disease. Hence although it affected homosexuals, heterosexuals could also be affected as well as children. And here, we can see that knowledge was not discarded, rather modified and evolved.

This also raises a knowledge issue concerning the shifting of different forms of knowledge known as Paradigm Shifts proposed by Thomas Kuhn. “A paradigm is a model of thinking or a universal idea”<sup>8</sup> and a “Paradigm Shift is a change from one way of thinking to another”.<sup>9</sup> Stomach ulcers were “believed to have been caused by stress and dietary factors”<sup>10</sup> for so many years in the twentieth century until an Australian medical doctor, Barry Marshall proved it wrong. From his experiment on himself, it was found out that the bacteria *Helicobacter pylori* were responsible for causing ulcers and stomach cancers.<sup>11</sup> Here the knowledge of stomach ulcers being caused by stress was discarded completely when the knowledge of *Helicobacter pylori* causing stomach ulcers proved valid.

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<sup>7</sup>Avert, “History of Aids up to 1986”, <http://www.avert.org/history-aids-1986.htm>, 20<sup>th</sup> December 2013

<sup>8</sup>TOK class with Alex Bird, “The Structure of Scientific Revolutions, Paradigm Shifts”, 14<sup>th</sup> October, 2013

<sup>9</sup><http://www.taketheleap.com/define.html>, 18<sup>th</sup> January, 2014

<sup>10</sup><http://www.cdc.gov/ulcer/history.htm>, 4<sup>th</sup> January 2014

<sup>11</sup><http://discovermagazine.com/2010/mar/07-dr-drunk-broth-gave-ulcer-solved-medical-mystery>, 18<sup>th</sup> January 2014



There have also been several discoveries in the Natural Sciences which still hold valid, examples of which are the laws of relativity and motion in Physics as well as the fact that Uranium is a naturally radioactive element on Earth and the most commonly used in the nuclear power industry.<sup>12</sup> In Physics, Newton's laws of motion still exist, the first law of motion which says, "Every object in a state of uniform motion tends to remain in that state of motion until an external force is applied to it".<sup>13</sup> And this has been scientifically proven and it's still taught in schools today. This law will forever exist and will never change unless disproven with facts and evidence. This is one aspect of knowledge in the natural sciences which has never changed up till date and this supports the timelessness of some knowledge.

In History, there are several ways by which knowledge has been lost over time. James M McPherson quoted, "Interpretations of the past are subject to change in response to new evidence, new questions asked of the evidence and new perspectives gained by the passage of time".<sup>14</sup> "With revisionism, revisionist historians reinterpret traditional views, causes and effects, decisions and evidence".<sup>15</sup> Just as the natural sciences, these historians try to prove wrong what has already been written by finding new evidence. This is because of the fact that history is always incomplete and has always been subjected to changes and modifications. Revisionism is often negatively associated and this is because of the lack of evidence to support their claims. The neo-Stalinist Party of the Russian Federation still argues Stalin was a good man and promotes positive views about him.<sup>16</sup> With this claim supported with good evidence, Stalin's image in History books

<sup>12</sup> Jefferson Lab, "The Element Uranium", <http://education.jlab.org/itselemental/ele092.html>, 2<sup>nd</sup> January 2014

<sup>13</sup> Newton's Three Laws of Motion, "Newton's First Law of Motion", <http://csep10.phys.utk.edu/astr161/lect/history/newton3laws.html>, 2<sup>nd</sup> January 2014

<sup>14</sup> American Historical Association, "Perspectives on History, Revisionist *Historians*", <http://www.historians.org/publications-and-directories/perspectives-on-history/september-2003/revisionist-historians>, 5<sup>th</sup> January, 2014

<sup>15</sup> Rational Wiki, "Historical Revisionism", [http://rationalwiki.org/wiki/Historical\\_revisionism](http://rationalwiki.org/wiki/Historical_revisionism), 6<sup>th</sup> January, 2014

<sup>16</sup> Wikipedia, "Neo Stalinism", <http://en.wikipedia.org/wiki/Neo-Stalinism>, 7<sup>th</sup> January 2014

will change completely. Betty Brown's model of History can be seen as a recollection of things happened in the past. Hence, misinterpretation or an error in the method of the collection of data can result in loss of information<sup>17</sup> A typical example of this is the "denial of rape of the inhabitants of Nanjing by the Japanese between December 1937 and March 1938".<sup>18</sup> It is estimated by historians and charity organizations from the city at the time that about 250-300 000 people were killed of whom were women and children, but this assertion was opposed with complete denial from the Japanese government about the scale of massacre. Since it is not accepted that not that many people were killed, it will not be written in the history books and within a few years time, there would be no knowledge of such event"<sup>19</sup> as records would report otherwise. Referring to an old adage which says that, "history is written by the victors"<sup>20</sup> by Winston Churchill, this makes us challenge ourselves as to what would have history become if it was written by the losers? Notwithstanding this fact, there have been several cases where information known yesterday is still available today and still in use. "The fact that the First World War began in 1914 cannot be disputed and would still remain in the history books of the World".<sup>21</sup>

As a child of 6, I used to ask my parents where I came from. And I vividly remember my mom telling me that children are gifts in boxes God gives to every married couple. And as I grew older, I saw women with big tummies which confirmed that they were pregnant and learning about reproduction at a later stage, I got to

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<sup>17</sup> Theory of knowledge class, "Betty Brown's Model of History", UWC Atlantic College 4<sup>th</sup> November 2013

<sup>18</sup> BBC News, "Scarred by History: The rape of Nanjing, <http://news.bbc.co.uk/1/hi/223038.stm>, 7<sup>th</sup> January, 2014

<sup>19</sup> BBC News, "Scarred by History: The rape of Nanjing , <http://news.bbc.co.uk/1/hi/223038.stm>, 7<sup>th</sup> January, 2014

<sup>20</sup> <http://www.goodreads.com/quotes/97949-history-is-written-by-the-victors>

<sup>21</sup> First World War.com, "A multimedia history on world war one", <http://www.firstworldwar.com/timeline/1914.htm>, 30<sup>th</sup> December,

understand the concept of birth and what I knew at age 6 didn't hold valid to me anymore.

Knowledge is an on-going process which means that it is subjected to change. With Popper's falsification principle and the concept of paradigm shifts by Kuhn, it can be inferred that whatever an individual knows today can be proven wrong at any time with good experimented evidence. The concept of revisionist history is often quite debatable: as to whether or not it is based on evidence or the fact that those historians want to change what has already happened into what it isn't. However, also present is the timelessness aspect of knowledge, which holds true forever such as when one was born, the fact that World War one started in 1914, amongst others. This brings us to the core of this essay, with the conclusion being that although knowledge is subjected to change, change has to happen with means of strong, focused research supported with well thought out evidence. Therefore knowledge is not discarded, but rather stays and is modified as time goes on with proof.

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