

“That which is accepted as knowledge today is sometimes discarded tomorrow.”

Consider knowledge issues raised by this statement in two areas of knowledge.

My traditional Hindu family often taught my father that one should never take loans unless in dire need. It was considered undignified to be indebted to someone and that loans were a form of begging, which he readily accepted as knowledge. As times were changing, and he emigrated from India to Singapore, the take on loans were much different. He felt that the option of taking a loan would not be humiliating at all. He discarded his previously accepted knowledge, and was much more open to the possibility of taking a loan. Knowledge thus fluctuates depending on new discoveries, advancements in technology, and several societal trends. So to what extent can we rely on knowledge that we now accept to be true? And, is knowledge ever discarded or is it merely reformed? By explaining how knowledge has been treated or dealt with in Natural Science and Human Science, I argue that postulated knowledge should be relied on until evidence proves otherwise.

In both sciences, theories have been proven false and ‘discarded’, and some have remained accepted as no contradictory evidence verifies otherwise. Hence, we can say that what we accept as knowledge is something that has withstood the test of time. Supporting this, in Natural Science, is the cell theory in Biology. The concept of the cell being the basic unit of a living organism, which in turn is made of many cells, was developed in 1839 (*Mallery, 19/01/2014*). To this day, even in my IB Bio course, we study this concept. Advancements in the microscope have further proven these properties, showing that knowledge sometimes endures the test of time, and is not necessarily discarded in the Natural Science.

Conversely, the theory of Maternal Impression is the belief that strong emotions produce impressions on children in the womb. If a woman experiences great sadness during pregnancy, for example, her child is likely to show depressive tendencies. This was accepted as knowledge until mid-19th century, but later discarded due to development of the genetic theory, which states that trait hereditary is inherited from parent to offspring through genes (*Stokes, 359-380*). Hence, in the field of Biology, we can see that what we accept as knowledge today can sometimes be discarded tomorrow.

A more fluid Area of Knowledge to consider would be the Human Sciences (The Natural Science's basic laws do not usually change over time or context, making it a more static AOK, but rather it is our knowledge of them, which changes. The latter is similar to Human Science. However, humans do change over time or differ in context. Arguably laws of human behavior change over time however laws of atoms do not). Looking at one of the first units we study in IB Economics, the basic Supply and Demand theory states that, for example, if demand increases and supply remains unchanged, a shortage occurs, increasing equilibrium price. This theory has remained true, and not been disproven yet (*Investopedia, 19/01/2014*). Hence, not relying on this knowledge would be extremely foolish. Yet we can safely assume that exceptions will arise since human behavior is more fluid, and we know that luxury goods, as an example, do not obey the laws of demand and supply (*Investopedia, 19/01/2014*).

Switching to Psychology, until 1980 transgenderism was part of the Diagnostic Statistical Manual of Mental Disorders (DSM), meaning that those claiming to be

transgendered would be considered mentally unstable. In DSM III, transgenderism was removed and now transgenders are not forced to take part in psychoanalytic drug therapy or put in mental asylums (*Beredjick, 19/01/2014*). Hence, Human Sciences, like the Natural Sciences, have cases where that which is accepted as is sometimes discarded tomorrow.

Having established that some knowledge is discarded, but not all, we can now ask: Should we rely on our current knowledge? It is difficult to be sure, since we can only rely on what we know not what we don't know, and hence might have no choice. In sciences, we acquire knowledge by building a hypothesis, assuming it is true, testing it, and then deciding whether to accept it, based on results found. Without initially assuming that the postulated theory is true, we cannot conclude whether it classifies as knowledge. Hence, we wholeheartedly rely on current knowledge, knowing that later in the future it might be proven false. The other alternative would be relying on knowledge but being absolutely certain that we are right, as fundamentalists and dogmatists do. Since that would be completely absurd, we should always be open to the possibility that we are wrong.

Human and Natural Science both follow the scientific method, but what differs is the subject of study, i.e. humans instead of the rest of the natural world, rather than the approach. Looking at what our current knowledge, both have laws with different scopes and limitations. Human and Natural Science are not very different in the sense that the scope of laws is limited in both, but the degree of limitation is different. For example, characteristics of water (surface tension, boiling point etc.) cannot be applied to ethanol but we would hope to be able to expand the law to include other

fluids and say that we had improved the law. Hence, the same way, when looking at a law about human behavior it is true that it does not always apply and exceptions exist, but rather than irrationally saying that Human Sciences are largely different, we can again attempt to increase the scope of the laws to include exceptions in the same way as the Natural Sciences. Perhaps one day, separate treatments of Post Traumatic Stress Disorder and Depression can be brought under the same general law (*Serani, 19/01/2014*). The Natural and Human Sciences are thus both limited in their scope but the extent of the limitation varies. With Human Science being more limited, only time will tell if we can overcome the limitations. Consequently, this tells us that the extent of the limitation should help us decide how much we rely on the knowledge we presently have in each of the sciences.

Above I have said that some knowledge is definitely discarded. However, looking deeper we can ask ourselves if knowledge is ever truly discarded, or is it merely reformed? Exploring the two sciences: Natural and Human, I will argue that knowledge is both ‘discarded’ and developed, depending on your definition of ‘discarded’.

Although transgenderism was ‘discarded’ from the DSM, it cannot be said that this was *entirely* discarded as transgenderism was replaced in the DSM with Gender Identity Disorder (GID), in 1980 (*Beredjick, 19/01/2014*). While transgenderism has a more derogatory connotation, by replacing it with GID the stereotype was discarded. This reformation happened due to changes in society’s view on this disorder. Possibly, human behavior changes according to context. If true, then what we discard today can perhaps be proven true ‘tomorrow’. Hence rather than discarding

knowledge, all we are doing is reforming knowledge to fit into our current paradigm, so evidence proves it to be true.

As mentioned earlier, this cannot hold true in Natural Science, as context does not affect basic laws. Rather, in Natural Science, the incorrect facts are discarded but the knowledge gained from discarding the facts are used to develop new theories. If looking at the model of the atom, the plum pudding model was discarded in 1909. However, the Bohr model would only have arisen if the plum pudding model was proposed and then rejected (*Harrison, 19/01/2014*). Here, Bohr built upon the plum pudding model and although it is now rejected, it was developed into an accurate model. So, was the plum pudding model ever discarded, or was it merely ‘developed’?

I have shown that if theories are proven incorrect due to evidence, there is no choice but to discard them. However, if there are elements of truth in our beliefs, then only the problematic part may be reformed. So, as we have seen, if an idea has no evidence against it, we rely on it. Yet, we do not always explicitly discard knowledge but instead retain the question we are trying to answer, and adapt our knowledge around it.

It is important not to draw definite conclusions about which of the two sciences are more reliable or growing. As argued, Natural Sciences generally change less over time when compared to Human Sciences (though it cannot be definitively said that Natural Sciences are a static field, and Human Sciences a fluid one).

In retrospect, this essay leads us to question the true meaning of ‘discarding’ which can be misleading. Is ‘discarding’ total rejection? Or, is ‘discarding’ keeping certain knowledge aside to improve upon? Going back to my father’s case; he relied on the knowledge he was given, but instead of taking it literally (and never taking loans), he instead took the values of freedom from debt that were imparted to him. In the same way, maybe all knowledge is actually developed on, and nothing is whole-heartedly discarded.

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