

“We know with confidence only when we know little; with knowledge doubt increases” (adapted from JW von Goethe). Discuss this statement with reference to two areas of knowledge

Knowledge is a piece of information acquired by someone such as an idea, name, or theory and modules. It can be simple or complex in nature, appealing to one or multiple senses or perspectives. Understanding that such an information exists, one acquires, or know of this knowledge. Then, similar or related knowledge will get connected and combined. A successful connection will result in confidence of a piece of information; confidence is the state of believing or accepting a certain knowledge partially or fully. Failure to establish a connection between one piece of knowledge and another will result in doubt of a piece of information; Doubt refers to the state of having questions and uncertainty regarding a piece of knowledge. Looking at the knowledge question, one can conclude that doubt and confidence are also interdependent: without knowledge it is hard to begin questioning, as any answer could be added to one’s knowledge. Similarly, knowledge also requires verification by answering doubt, for we can’t be certain of the accuracy or truthfulness of the knowledge we possess. For example, a person will not question their mirror image being them until they find the image repeating enough of their actions. After enough information has been acquired, doubt eventually arises. However, this is not always the situation: sometimes knowledge is accepted as truth without question and still works out. Example of this would be colours. People see one colour and they assume it to be the colour of the object observed. In reality, the colour we see is the colour of the light reflected off the object. The object itself is of the colour that was absorbed from red light. Therefore, the question comes: “to what

extent does knowledge need to be proven?" This question will be answered in the following essay with reference to examples from the AoK's of natural science and human science.

In human science, examples of where knowledge does not need to be proven could be found. This idea, if something cannot be proven incorrect, then one should not say it does not exist. Due to the limitations of human understanding, we always reserve our opinions when saying "no". For example, one famous philosophical figure, Socrates discussed how souls might last forever (Kagan). He used the following allegory: numbers cannot be broken down (Kagan). The idea of a number such as "nine" cannot get broken down into a broken "nine" or half of the number "nine" (Kagan). Cutting the number nine in half gives two meaningless parts if it is divisible at all (Kagan). Therefore, it is indestructible. Similarly, Harmony is also indestructible as it either exists or does not exist. Socrates therefore claims indivisible objects are indestructible, and because souls are non-physical concepts making them indivisible, they should also be indestructible and last forever (Kagan). Contrarily, many also try countering the idea such as professor Shelly Kagan questions this by establishing a theory that invisible does not equal to indestructible (Kagan). While these two ideas unravel each other, they cannot be disproven or verified with solid evidence, therefore they are both true to certain groups of people while not being proven. Regardless of which theory is more reliable, this situation shows that doubt increases with knowledge when it does not require to be proven. In terms of knowledge, increase in doubt provides more opportunities for the development of new ideas, and verification of existing ones. The confidence in knowledge produced from a deductive system is likely due to the confidence in the knowledge itself: for a deductive system, the theory is established first, and

sometimes might appear to be not well supported. Examples such as “pressing the big red button will bring terrible consequences” and “the earth is round” also brings doubt possibly due to similar reasons. Another common characteristic of this kind of knowledge is that they are set to be deductive reasoning (whether souls exist is still in doubt, People normally do not say the consequences for pressing the red button, and people who believe in the Earth being flat often want to see for themselves as they only know the theory that the earth was spherical) If this was true, then one should see the opposite where knowledge acquired by an inductive system brings confidence as knowledge increases.

In the AoK of natural science, inductive reasoning is used across multiple disciplines. The scientific method uses rigorous setup to ensure experiments are carried out with minimal error so that certain processes can be repeated to provide evidence for a theory. By nature this should provide a situation where more knowledge leads to less doubt. One of the most successful use of the scientific method is selective breeding. It originated with the observation that stronger individuals will produce better offspring's. The process is repeated by using the strongest individuals of the generation produced from the previous cycle. As each generation gets stronger, the selective breeding process is established and the idea was proven. The application of this process in my aquarium helped me breed stronger and more beautiful fish, which further covered my fish food cost when I sold some to my neighbor. This would seem as if inductive reasoning results in more confidence as knowledge increased. However, suddenly one day all half of my fish died off. After some investigation, it seems that an illness was introduced when I added new fish to the aquarium. This twist of events shows that for a proven

knowledge, knowledge can also bring doubt. To avoid this accident from happening again, I went to ask the pet shop owner of where they got their fish from. Apparently, the fish that I bought originated from another country. The knowledge of the diseases was completely alien to me. If I were to answer the question “will selective breeding generate better offspring,” my answer would confirm the idea that knowledge also brings doubt. However, if excluding the event where the foreign disease stroke, it would seem that the with knowledge so those confidence in the knowledge increase. I verified so by having the same species of fish put into a second aquarium where I did not put extra care using knowledge I gained from breeding my fish. The offspring’s in the second aquarium were smaller (heating water to higher temperature at certain stages of growth boosts the size of the adult) and also less in number (eaten by the parent). Some of the offspring’s also had less interesting patterns on their tails and fins. This shows that with more knowledge from selective breeding, there will be less doubt in if I will get a good offspring. Similar situations also happened in the development of physics. The classic model was getting completed as it was experimented and completed in the past, except it failed to explain quantum physics. Therefore, a new model was created. It would appear unbalanced for people to claim that because this one turn, doubt increases with knowledge. However, it does seem proven knowledge produces information more discoveries from the boost in scientific discoveries in the past centuries. The knowledge question would appear true in both inductive reasoning and deductive reasoning situation if disregarding the scope of the situation. Yet, both situations lack a holistic view.

The measurement of happiness is a complex matter. People normally measures it through two different ways: survey and test of chemicals related to

happiness. Since happiness is very subjective in nature, and the standards might vary by person, the result of a survey could be seen as the result of a deductive reasoning, as it assumes everyone has similar standards for happiness, while in reality different culture might affect how this question is interpreted. The measurement of chemicals in blood could be seen as the result of inductive reasoning where the values for happiness is based on the levels of taking into consideration of multiple people. A combination of both does seem to be able to eliminate doubts as knowledge is acquired. Surveying and taking blood test are both ways of collecting data and proving theories of why might someone be happy and create survey questions.

From the examples above, it appears there are no clear answers to whether knowledge needs to be proven. Examples of both sides stand. However, It does seem proven knowledge develop faster with the help of verification and testing. As for doubt, if assuming knowledge existed with the purpose to solve problems for people, then we can see that there is no direct relationship between doubt and knowledge. What people need is some way to fulfil their need. Confidence comes when all needs are satisfied. In other words, If the needs of a person are satisfied, there will be no doubt. If my fish did not die, I wouldn't have needed to doubt how I keep my fish. Doubt comes when knowledge is insufficient. Knowledge needs to be proven when it is insufficient to solve a problem. The statement given in the title could also be rephrased as "we know with confidence when we have enough knowledge; with need doubt increases."

Some factors that will limit my understanding of the topic include the scope of the examples, as to be able to analyse them a certain time frame is used. Happiness surveys might be influenced by culture values. The fish I keep might be different from

other's fish. Otherwise countless events that followed the incident will need to be considered, and it will be impossible to conclude. There could also be biases as I personally disagree with the statement and might affect my evaluation of the statement.

(Word count: 1592)

Works Cited

Kagan, Shelly. *Si Wang Zhe Xue: Ye Lu Da Xue Di Yi Gong Kai Ke [Death]*. Translated by Bei Xiaorong et al., Beijing United Publishing Co. Ltd, 2016.