

This Reflective Journal is from me, student Jin Cherng Chong (33170193). The field which I'm studying in and passionate about is the IT field! I'm currently double majoring in Business information and Network security. I'm a very driven individual in that I've taken steps to differentiate myself from other students in my field. For example, I have two casual jobs. The first is working at Kmart and the second, which I acquired recently, is working as a Coding Facilitator. The amount of scientific knowledge that I have is just the accumulation of the scientific knowledge gained in high school. In high school science, our focus was to accept the information for what it is and not question the authenticity and reliability of the information. My belief for this is that in high school the information taught is very basic material that could not be disproved, and also the average high schoolers do not have the knowledge and experience to challenge the information taught to them. I do hope this unit will provide me with a more of a solid understanding of determining the authenticity and reliability of the information provided. My expectations for BSC150 are quite low; I feel like I'm placed in a unit that is seemingly irrelevant to the IT fields. I do hope by the end of this journal article that my views of BSC150 will have changed and I will have gained some tools which are relevant to my future occupation.

For week one, we had a lecture on Epistemology, which looks at what to believe and what not to believe. This week's lecture topic delved into the methods of how individuals end up obtaining knowledge. These methods include- mysticism, theism, hermeneutics, rationalism, empiricism, and skepticism. This lecture was quite informative, and coming straight from high school, my means of gaining knowledge was to ask a teacher or find the answer on Google. However, this lecture taught me to really question the validity and the reliability of the sources, which is something I had never considered before in my academic life. And the lecture, to my surprise, does relate to my goal occupation in the future: working in the IT field. We live in a technological age; the discoveries and invention of new tools and software are being made daily. I believe that questioning sources of information will help me in providing the best IT support to my clients in the future. Another idea that was presented in the lecture was the idea of how the Bible could be interpreted in different ways. This made me understand why there some many different religions based on a single holy book; it is because people interpret the religious texts differently. In the future, I'm hoping to learn more about how to actually identify if an article or website is truthful or not.

Week two Q&A was the first Q&A and it answered the question of: Can science and religion just be friends? Several questions were asked and the panel answered them from different perspectives. Coming from a Christian household, this topic was very controversial and uncomfortable, as it made me question my own religion and the ideologies that I support. If a scientific theory (like the big bang theory) is brought forward and it somehow discredits the existence of a "god" I will often use the "god of the gaps" technique. It was reassuring to learn that this technique actually had a name and that many other religious people used it as a coping mechanism as well, which made me feel normal. However, as much as this Q&A made me feel uncomfortable, seeing perspectives from different angles was empowering. I tend to joke about the idea of "safe spaces" with my friends; I believe that blocking out conflicting or offense views in order to create an imaginary perfect world is ignorant and dangerous. Understanding and accepting that other people's views may be different from yours will motivate you to make a difference and change these views. I approached this Q&A with an open mind, which empowered me by proving to myself that I practice what I preach. This Q&A session helped push the importance of having an open mind and listening to different views, even if you are very uncomfortable.

The third week's lecture concerned the nature of science, consolidating and explaining the inner workings of science and what scientists have to deal with. The cold hard truth that was presented is that scientists are required to publish their discoveries first in order to get a job, promotion, grants, and status – this made me feel uneasy. It put into perspective that life is a competition, which rings true since most aspects of my life are competitive. For example, it's a competition to enter university and it's a competition to get a job. I think my parents instilled the importance of being the best at what you do in me. A popular idea that was challenged was the notion that science is all about collaboration. The major problems with openness were that the discoveries could be used for knowledge-enabled mass destructions. I value the freedom to speak and a sense of transparency, but the idea that knowledge could cause mass destruction challenged my values. I had to ask myself "should scientific discoveries be regulated?" The poll options about whether or not mutant bird flu should have been published were very difficult to answer and it was a very close poll which was not surprising. I decided to opt against showing the findings because of my lack of trust in people doing the right thing. This lack of trust I think was perpetuated by the media and their constant negative stories about people. Unfortunately, these negative stories are justified since the media will often express what has happened so that the public is informed. I remember when I was younger turning on the news and being bombarded with negative stories. However, the downside of not being transparent with results is that there will be fewer people involved in working on finding cures and solutions to the mutant bird flu. As a result, if an outbreak were to occur, we would be left less prepared.

In the fourth week, we had a workshop on scientific methods and different ways of forming a hypothesis based on methods by different philosophers. The four philosophers' approaches that were taught were from Bacon, Poppers, Lakatos, and Kuhn. All four approaches can be used in the scientific method. The workshop made me realise how complex a scientific method is. In high school, the scientific methods that we used were very rigid and structured. The structure of the scientific method was simple - ask a question, research the topic, construct a hypothesis, test with an experiment, analyse results, and draw a conclusion. However, the workshop made me realise that in real life the scientific method has to be flexible. So in IT, if a client required us to fix a computer issue, then the hypothesis constructed may be done in the middle of the scientific method, using Poppers' approach, done at the end using Kuhn's approach, or done at the start and the end too. Therefore, understanding that the scientific method may need to be flexible helps me to solve difficult IT problems in the future (if one approach doesn't work then another approach may work).

The sixth week entailed a lecture and a workshop that was to be done at home. The workshop required students to make connections between the Thomas Kuhn scientific method and the prion theory. Having ADHD, this was a nice change of pace, since when I do complete activities in class, information/instructions that are being told to me tend to not consolidate in my brain. As a result, having the extra time to look over the notes and to understand them was beneficial. The task required the students to use the information we learned (the Kuhn scientific method) and to make connections and to apply it. The concept of applying the information studied to scenarios is

fundamental in life and is difficult. A basic trivial example of this concept is manners. When I was younger, I got taught basic manners such as saying “thank you”. After many reminders to say “thank you” by my parents, it has finally become second nature and as a result, it has made me a nicer person. However, the important part of the example is that it took a long time for me to gain the knowledge and be able to apply it in different scenarios. This is why employers want their employees to have work experience. Just because a person has good knowledge on something doesn’t mean that they can apply it. For example, I have tons of book knowledge about golf, but when I actually play I can’t apply it, which makes the book-learned knowledge not as important. Therefore, by making us complete the activity, I feel that I have gained a better understanding of Thomas Kuhn’s scientific method. My biggest concern in the unit was the exam; generally the exams I have done test understanding, not the memorization of a concept, so this activity helped ease the nerves as it gave me a preview of the types of questions that would be asked in the exams.

The week 7 activity asked us to view a lecture on the Q&A question of confusion about diet, health, and exercise. When the size-acceptance campaign slide came up, it made me feel very conflicted. In high school, I was underweight and I would get skinny-shamed. Often, because I was skinny, I would get physically pushed around. I thus used it as a motivator to gain weight and become more muscular. Therefore, because I experienced skinny shaming and utilised it as a motivator, my knee-jerk reaction to the idea of advertising every body type (even scientifically unhealthy ones) as acceptable was that they shouldn’t be discriminated against. However, then I questioned whether not pushing fat acceptance but removing the discrimination against them would be possible. I came to the conclusion that not advocating fat acceptance and also at the same time removing discrimination for fat people is not possible because of statistics at the current time. At the moment, society doesn’t really adopt the fat acceptance attitude and statistics show that fat people do get discriminated against. Therefore, my attitude for fat acceptance slightly shifted. I’m still very conflicted because recently my uncle nearly died as of a result of being obese and I felt helpless because I believed that pressuring and pushing him to lose weight was considered rude. So, my biggest takeaway is that some views can’t be shifted, even after trying really hard to question and critically think about them. Nonetheless, it is important to respect others people’s opinion.

The Week 8 activity consisted of a workshop on osmosis. The lab required the use of the microscopes, which was fairly familiar since I used it often during my Human Biology classes. However, the notion that that scientists will try to disprove their theory was quite surprising. I was under the impression that one tries to prove their theory so you get more funding. Another idea that was brought up was how readily-accepted scientific theories are often revisited and attempted to be disproved. This reinforced my trust in the science community and reduced my concern about dangerous incorrect theories being accepted.

The workshop for week 10- science in the media- essentially explored the importance of skepticism, a means of obtaining knowledge (epistemology). The activity required students to select any type of multimedia, forming an issue and trying to criticise it and question the reliability of the selection. For my selection, I picked a Youtube video by The Federal Communication Commission CEO on the benefit of removing the net neutrality law [1]. Net Neutrality is the principle that makes all internet providers charge data to all the internet users in the the same way [2]. The video tried to argue

against this law. On the surface, I viewed the video as reliable since the provider of the argument works with the US government. However, as I viewed the video and critically analysed the video, I found flaws. One of the flaws is that the CEO of The Federal Communication Commission, Ajit Pai, used to be the Associate General Counsel at Verizon communications [2]. The CEO therefore may have a bias towards removing it, since the removal of Net Neutrality would allow companies such as Verizon to charge the customers more for using different types of software, such as Netflix, for example [3]. Furthermore, the removal of Net Neutrality would result in an increase of profits for these companies. As a result, this workshop conveyed the importance of skepticism of information, as it may have a bias.

Week 11's lecture was on arguments and rhetoric. One of the points presented was that people tend to use confirmation bias, which is the use of new evidence to support one's belief or theories. I realised that I use confirmation bias all the time, especially when it comes down to controversial political issues such as pro-life/pro-choice and progressive tax/flat tax and also for general issues. Realizing this makes me question whether I'm really open-minded or not, because I realise that when I'm questioned on something I often make invalid arguments but immediately find evidence to support my case, which impacts my decision-making. Another point that was conveyed in the lecture was how to exactly think critically, as the information presented may be incorrect or biased. The lecture is said to take each point and question it. This method presented by the lecturer will help me to become a better IT worker. In IT, we are constantly bombarded by new technology, so questioning the adoption of it will assist me in making a sensible decision.

The Question and Answer panel in Week 12 was on cloning humans. This topic out of all the quizzes was on a topic I had very little knowledge about. My stance at the start of the lecture was absolutely "against" when it comes to cloning humans. But at the end of lecture, my stance on cloning slightly shifted, although still not enough to convince me. First, I do think the public is misinformed and fear is indeed perpetrated by the media. For example, the novel "Frankenstein" comes to mind here. It reinforces the fear that cloning could be abused, which is justified. I also think that regulations will not do enough to deter the abuse of cloning. For example, in Australia, we do regulate guns but they're still abused and used for negative reasons, and if we do allow cloning we could regulate it but not enough reasons were provided to influence my opinion that the positives of cloning outweigh the consequences. Also, cloning would be a nightmare to regulate. Once the news hits mainstream media, I believe the issue of cloning would be as volatile as pro-life and pro-choice. Essentially the fear instilled by the media in the past on cloning and religious reasons will cause this volatility. It will be addressed as more of a political issue than a scientific objective issue, which will halt the progression of human cloning.

In conclusion, at the start of the unit, I had many doubts about the usefulness of the unit. I would argue that I'm an IT person, so why should I be learning about philosophy? However, the ideas that were presented every week could link up IT. For example, the main objective of the unit was to use creative thinking to solve complex issues. The emphasis on adopting creative ways of thinking will help me flesh out IT ideas and also solve IT issues. Another big emphasis of the unit was to challenge what is known and unknown. Before the unit, I didn't realise that information presented by the

media may be biased. So understanding this will assist in sensible and logical decision-making required in IT.

References:

[1] Ajit Pai . (2017, Dec, 14). FCC Chairman Ajit Pai Explains Net Neutrality (1 ed.) [video]. Available: <https://www.youtube.com/watch?v=JqONIPwidQw>

[2] "Net neutrality", *En.wikipedia.org*, 2018. [Online]. Available: https://en.wikipedia.org/wiki/Net_neutrality. [Accessed: 21- May- 2018]

[3] K. Collins, "Why Net Neutrality Was Repealed and How It Affects You", *Nytimes.com*, 2018. [Online]. Available: <https://www.nytimes.com/2017/12/14/technology/net-neutrality-rules.html>. [Accessed: 21- May- 2018]

By: Jin cherng chong

33170193

