

“The whole point of knowledge is to produce both meaning and purpose in our personal lives.” Assess the validity of this statement.

Word count: 1600

As a society, we have a tendency to overlook intention. We blindly accept our obligations and routines once they become systemic and normal. The idea that “the whole point of knowledge is to produce both meaning and purpose in our personal lives,” to me, is a little bit of an idealized concept, especially in today’s context. When I make this assertion, it is important to identify the factors that have lent to this detachment from passion and curiosity regarding learning—in my opinion, it is inextricably linked to the capitalist society in which we live, in which “practical” (or pre-professional) knowledge is most valuable. While in the modern world, most countries aim to provide education to their entire population—this emphasis on education also has perpetuated a socially stratified society in which people believe that education is the key to wealth and comfortable living. With that being said, I believe that there are some human curiosities that are eternally present regardless of the societal changes throughout generations. Essentially, I believe that as long as humans are on the earth, they will question how it is they got there, what their purpose is, and where they will go after death; but certain areas of knowledge are more likely to become detached from this concept because of the selfish nature of man in the context of social hierarchy and monetary gain. Thus, in response to the claim that the whole point of knowledge is to create purpose in one’s personal life, I agree with this title, but conditionally: while often an Area of Knowledge’s identity is inherently connected to purpose and meaning, knowledge can almost always become convoluted because of its association with the societal implications and benefits following the pursuit of practical knowledge in respective fields.

Inherently, the Area of Knowledge of Religious Systems is connected to purpose. The intention of religious systems is to create purpose and find meaning in human life. To create a system of divinity is to find a philosophical and spiritual hierarchy in which a person does not center the universe around himself: in a person's commitment to God comes a plethora of moral obligations and essentially an ethical code. Obviously, there is a similar role in the fields of Ethics and Philosophy. As I mentioned earlier, I would argue that it is an eternal truth that humans will always gravitate towards trying to find who they are, what their purpose is, and where they will go particularly after death. In a way, this is the *quintessential* question of life. Religious Systems aim to answer this question--whether that is through one deity, like in Judaism, a series of Gods like in Hinduism, or a way of life like in Buddhism. Studying religious systems gives solace to those who are craving the answer to *that* question--and when humans truly entrench themselves in their religion through learning; whether that is in a place of worship, through a holy scripture, or a peace of mind as in meditation, they can be at peace in that they have found a meaning and purpose for their life.

With that being said, it is important to acknowledge that prominent figures in religious systems may fall prey to convulsion of purpose. For example, there are several examples of powerful members of the Catholic Church and other religious institutions creating corruption and betraying the trust of their millions of followers. With the extreme power and privilege that religious systems are often granted--even considering the purity and strength of connection between religious systems and significance, purpose, and meaning--there can be a negligence of these original morals in the beneficiaries of the institution's power.

Independent of its societal perceptions, I would typically say that the purpose of the Area of Knowledge of Natural science is to shed light on and serve issues that we face in the natural world, and that the natural science is actually driven by sheer curiosity and commitment to uncovering and solving the world's most prominent issues. In and of itself, this is a very purposeful and meaningful role for a field of study to have in our society. But, I am a firm believer that we cannot separate knowledge from the people who pursue it and attempt to have it: we can't look at knowledge in a "vacuum" in a theoretical lens. Thus, in our society today, driven by power dynamics and wealth associated with the professional field of the Natural sciences, purpose can become convoluted in the venture for comfort. For example, the idea that pharmacists choose to give experimental drugs curing Ebola to the most privileged humans—leaving thousands to die in West Africa because their lives are seen as somehow more invaluable—is a very grave concept. According to Arthur L. Caplan, "The reasons for different treatment are partly about logistics...[and] partly about economics..."¹ While initially a chemist may have been intrigued by molecules and atoms—or maybe had an interest in serving the world to find cures to the most plaguing sicknesses—sometimes, it is inevitable that people succumb to either their own selfish desires or their job's obligation to capitalizing on others. Further, when there are entire institutions that control certain industries—especially rooted in the capital behind the field—this subversion is more likely. Thus, the issue is less that the scientist is selfish and more that his place in society is mandated by the "business side of things". The purpose that drove a scientist to become what he is may have been pure at the conception of this idea, but the meaning becomes convoluted

¹ <http://www.washingtonpost.com/posteverything/wp/2014/08/06/why-do-two->

with the place that he takes in society, and the temptations and power dynamics that come with it.

Additionally, it is important to note that there is no clear distinction, even just regarding the theoretical entities of Areas of Knowledge, between the meaning that belies humanities versus math and science. I would argue that one of the Areas of Knowledge that is perhaps least susceptible to this “desacralization” is the Mathematics. From my personal experience, I can’t really imagine a scenario where someone who isn’t truly captivated with math (I would argue they would have to actually be enchanted, honestly) is lured into the study of mathematics. Perhaps, economics and business would be the fields that would tangentially be considered based in a mathematical foundation, I suppose, but in its purest form—I still wouldn’t say businessmen and investors are the professionals of the field of Math. Mathematicians, in my mind, devote themselves to the abstract, intellectually rigorous area of study, but only because they truly love it and want to discover more about it and further the study. Although this is not the clear-cut *meaning and purpose* that we see from the religious studies, there still needs to be genuine interest because the privilege and power that comes with the aforementioned fields is a lot less attainable for successful mathematicians.

In my own personal experience, when I went to Eritrea (my parent’s native country) two summers ago, I learned that I was completely ignorant of the political turmoil and repression of human rights and this instilled a sort of purpose in my life. Following my trip, I became obsessed with the pursuit of knowledge regarding this topic. In IB Math, I focused my IB exploration on exponential Internet growth in the world and what it means to *not* be exposed to this surge in technology like in the instance of the

people of Eritrea (under authoritarian powers who intend to censor and moderate assembly among young people who pose the threat of overthrowing the government). I learned about authoritarian regimes in History and Spanish; I wrote my IB Extended Essay on how Imperialism affected Eritrea's outlook on government and their consequent pariah status. I would definitely say that the whole point of knowledge in all of these instances was to create purpose in my personal life and my connection to my roots and family members in Eritrea. I am at the point in which I believe I want to study development and African studies in college-- and then work in this specific field. This is a field without a large market value and very little gain for me on the surface, but in a deeper sense, I would be cultivating my connection to my background. If this is to become my primary career, my motivating factor will be a pure purposeful perspective in the subject and a strong passion for the material. However, if perhaps my education in development leads to a position of power in Eritrean politics, my desire to learn more about development in Eritrean could be subverted, as money and power become the most overt driving factors.

As humans, we have a fundamental desire to create meaning for our lives: this can be as heroic as saving people, or as seemingly selfish as having fun. I think that it is important to try and look at Areas of Knowledge as separate entities dependent only on their own natural laws and intentions, but then also take a step back and look at how society has utilized them--and where and how we reward people for pursuing knowledge in these fields. It is increasingly apparent that meaning and purpose is hard to come by in every day professions, because of the pressure society puts on us to learn for capital--and a lot of times our own inward pressures to succeed and often the meaning and purpose we

were glad to have found originally are subconsciously subverted for our own comfort and happiness.

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"There are only two ways in which humankind can produce knowledge: through passive observation or through active experiment." To what extent do you agree with this statement?

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The theory of knowledge question states: "There are only two ways in which humankind can produce knowledge: through passive observation or active experiment." To what extent do you agree with this statement? This question indicates that there are only two ways to produce knowledge, but I believe there are more than two ways to do so, although, the most reliable way is to be determined. This question analyzes how knowledge can only be produced through passive observation or active experimentation. In order to understand this question effectively, passive and active need to be defined. Passive can be defined as the acceptance of what is happening without taking action, while active can be defined as always ready to make a physical change to unexpected results. From these definitions, one has to inquire if passive observation or active experimentation can be used at a continuum, only individually, or can observation be active and experimentation passive? These questions are the basis for this essay and an explanation behind why I disagree with the previously stated knowledge question. These next few paragraphs will demonstrate why I believe a continuum of both observation and experimentation produce the most efficient and reliable knowledge.

According to the question given, there are only two ways in which knowledge can be produced, although I disagree. An active and passive observation can consistently be seen in the area of knowledge using art as an example. Although, taking into consideration there might not be consistent knowledge produced during passive experimentation. Passive experimentation wouldn't be possible because passive is to resist making a change or only having an opinion, but experimentation is making a physical modification, doing something. This would result in creating a contradiction

supporting why passive experimentation is not a way to produce knowledge. Though this could differ depending on one's language or definition of these terms. Active observation could be another example other than the ones listed. One example that could make observation active could be if one changed a piece of art based off of a passive observation. Making one's opinion active, one would have to change for example an art piece until they are satisfied with what it is saying or portraying to a greater audience. This would result in active observation to be considered another way to produce knowledge. Although, another way knowledge can be produced is through a continuum of both observation and experimentation. Seen often in the sciences specifically observation and experimentation are constantly used at a continuum. These examples support how there are more than two ways to produce knowledge and will be developed further in the next few paragraphs.

Passive observation can be used to gain knowledge individually seen through artists and art examples. Banksy is a well known graffiti artist from Bristol, United Kingdom. One of his well known paintings is "Maid in London" which shows a maid sweeping dust under a sheet over a brick wall. This image could be an example of passive observation to viewers of Banksy's work. When people pass his work they might think, oh that's not right to ruin our town with graffiti, but they can't do much to stop it other than have an opinion. This is what I think passive observation is, to have an opinion, but knowing you can't change it. Another reason why this piece can be seen as an example of passive observation is because when creating graffiti the observation of where to put a piece supports this. A piece of art needs to be placed where it will be noticed to gain a reaction, or what the piece will say for viewers or the artist themselves

showing passive observation. "Maid in London" was placed in 2006 in the North of London. Banksy has created many controversial pieces that not everyone agrees with and considering graffiti isn't legal creates more controversy but also more recognition and fan base for him. Banksy said this piece is meant to represent democratizing subjects in art because in the past it used to be just kings, queens, etc that could afford a portrait painted, so he chose a maid. A strength when using passive observation in art, is understanding ones surroundings and the reactions a piece will get as well as the reaction the artist wants to get. This would be producing knowledge through passive observation because of the reactions the piece would get. This is possible through passive observation because it gives time to step back and consider all the options and different reactions. This example shows passive observation because of the way art work is expressed and the reaction of the people, which is seen through passive observation.

Active experimentation can be seen through most of the hard and natural sciences such as chemistry as a way to produce knowledge. A personal example, chemistry can be seen as an active experiment because the whole basis of a chemistry experiment is taking a hypothesis and physically supporting it through an experiment conducted. Chemistry is only one of the many sciences that involve active experimentation due to the hands on support needed for an experiment. One personal example I have recently done in chemistry class is to test and see if sugar levels effect the evaporation rate of a vary of soft drinks. The hypothesis stated previously that the higher the concentration of sugar the higher the evaporation rate will be (less liquid left over). The theory behind this hypothesis was that adding a substance like sugar would

dissolve into the water increasing the particles in the water making the evaporation rate longer when more sugar is added. This hypothesis proved to be correct to some extent because as seen in the data the more sugar added the less liquid collected although there is a positive slope on the graph. This illustrates to some extent how the sugar amount and the evaporation rate will increase, but if too much sugar is added then the evaporation rate decreases. Chemistry supports the idea that there are different ways to produce knowledge. Active experimentation can be supported in this example seen from the hands on experience created and done to support the hypothesis.

In my opinion, the most reliable and common way to gain knowledge is seen through a combination of both passive observation and active experimentation together. Psychology is a soft science that can be seen to use both observation and experimentation to produce the most reliable knowledge. One example of a continuum of both these is a field experiment done by Rosenhan (1973). This study was done to test the reliability of psychiatric diagnoses. Rosenhan took eight healthy participants — five men and three women — to try and get admitted and diagnosed into a psychiatric hospital. These participants had to use passive observation to observe the nurses and doctors, as well as active experimentation with themselves by saying they were hearing voices to get into the hospitals, then act normally to get out as fast as possible. This study was able to support the efficiency of the continuum of both observation and experimentation together. Without one or the other this experiment couldn't be done to show the experimenters and researchers point of view, of how hard it really is to diagnose someone insane as well as resulting in this experiment not being concise in their eyes.

Seen in areas of knowledge such as art, chemistry and psychology, one can support the claim that there is a degree of passive and active and observation or experimentation in a continuum which produces the most reliable data. Contradicting art as only using passive observation, active experimentation can also be seen when the artists would have to try different techniques and styles before they are satisfied with their art works message so it can effectively be portrayed. As well as in the Banksy example the fact that he goes out and strategically places his art work knowing a certain audience will see and react to it supports the definition of active experimentation. Chemistry can be seen to use passive observation for the simple reason as one has to pay close attention to the experiment to watch if a reaction occurs. One main requirement for chemistry labs in high school is that there needs to be qualitative data, which is what is observed from the experiment. These areas of knowledge often might be seen as just passive or active observation or active experimentation but when taking a closer look most areas of knowledge produce more reliable knowledge when a continuum of observation and experimentation is used.

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There is no such thing as a neutral question. Evaluate this statement with reference to two areas of knowledge.

We've always been encouraged to take a side when facing a choice instead of remaining silent, or in other words, staying neutral. So whether if a question can be asked without emotion involvement is the key point. This essay will mainly discuss the knowledge question "How far is sense perception or reason a greater factor of the existence of neutral question in areas of natural science and human science?" Neutral question is generally equal to truth, which I define as things that will never change by the test of time. To a great extent, reasoning, a way to deal with logic provided with evidence is more likely to testify the existence of neutrality rather than sense perception, which mainly depends on personal definition of what we perceive. These two ways of knowing function differently in the areas of natural science and human science. Natural science is based on testable experiments, whereas human science mainly studies people's inner world, which is driven by individual's emotions. This essay will begin by discussing whether news can be reported without bias.

As my all time favourite, the TV series "*The newsroom*" shows partially biased when reporting news. The host Will McAvoy publicly stated his own politics preference. For example, he attacked the Tea Party as "American Taliban", which is "hypocritical and completely inexperienced in politics" (*Robert Schoon, 2007*) in air. However, I used to think that news should be completely neutral to inform audience about the truths, instead of hosts' personal opinions. In the TV series, McAvory's news program

is so popular that it almost represents authority. I started to realize that the news may just be the version of what the host believes is true or what they want us to believe is true. This makes me reconsider that the news broadcasted may involve with reporters' biases in the reality. Not only the news, can any question be asked without any purpose or expecting answers? To explore this question, two contrasting ways of knowing is applied, which is sense perception and reason. Sense perception examines how we form a question by what we see or believe in it, whereas reasoning helps us to consider things more logically without taking a side first. I will further discuss this question in the subjects of Biology and Journalism.

Natural science is generally considered as the most logical subjects. Scientists have conducted numerous experiments, collected countless data as evidences before confirming their theories. Theories like Newton's Three Law of Motion have withstood the test of time and are generally known as objective science. Does that mean that natural science is completely neutral with no bias? Frankly, it is not. "The eye sees only what the mind is prepared to comprehend." (*Henri Bergson, 1907*) Natural science, an empirical knowledge is based on scientists' perceptions. When scientists conduct experiments, they choose the phenomena seems more reasonable to further study on. This selecting process inevitably involves with personal beliefs. Therefore, natural science may be just a hypothesis, reflecting scientists' personal and social values and beliefs.

Only those who are completely isolated from the society can hold absolute neutrality in science. In the real world, scientists are affected by surrounding society and driven by self-interests, thus are difficult to ask neutral questions without personal emotion involvement. For example, the invention of thalidomide was once a huge success in 1950s. Dr. Lenz, involving in the drug testing, was the first to suspect that thalidomide may cause birth defects. However, his pride and eager to cure pregnant women from morning sickness drove him to ignore his questioning. Finally, "The world realized that thalidomide could cause babies born with short arms and twisted hands" (*Dr. Lenz, 1992*). Had Dr. Lenz ever used his reasoning to further investigate his questioning, there would never be so many newborn babies suffered from birth defects. Scientific theories therefore all begin with hypothesis, which are questions with predictions. Scientists then conduct further experiments followed by specific reasoning to testify their predictions. Usually, their predictions reflect their personal beliefs, thus could be biased. Reasoning is a critical way involved in experiment process because scientists use reasoning to limit the influence of bias and eliminate personal emotions in the experiments. Therefore, reason plays a larger role in establishing neutrality than perception. However, the neutrality is hard to pursue since no scientists could examine experiments with sole reasoning.

Another particular case to show scientists' knowledge is affected by outside world is normative science, which is "scientific information infused with hidden policy preference." (*Robert T. Luckey, 2013*) Science could be a major determinant in policy

debate. For example, a GMO labeling lobby, debating on whether GM food should be labeled, was described as "*Bad science, but good politics*". (Mark Lynas, 2013)

Pro-campaigned scientists conducted numerous experiments in favor of showing potential risks of GMO. However, the real reasoning processed for over twenty years shows that no solid cases prove the poisonousness of GMO. Therefore, scientific neutrality is hard to pursue because science can be skewed by certain groups' interests. These scientists ask questions with expected answers, thus conduct experiments to get results they expect to perceive instead of reasoning the whole process. Reasoning, a logical way in examining scientific truth matters more in establishing scientific fact, whereas sense perception could blind people. It is barely possible for scientists, driven by self-interest to some extent, to make neutral scientific statement. Therefore, absolute neutral does not exist in scientific world since few people could always reason things neutrally.

The same case goes with the area of Human Science, which deals with "biological, social and cultural aspects of human life" (Unknown, Oxford University). Unlike natural science, human science incorporates humans' psychological experiences, which generally involve with our sense perception and emotion. Therefore, it is difficult to always stay in the middle ground when we use emotion to interpret what we perceive. Let's take a deeper insight into neutrality in media mentioned above. A particular case is the tragic public shooting happened in Cobb County, Georgia, in April 2014. Almost all authoritative news agency, including "New York Times, CBS

News and BBC published the news without mentioning the gun shoot was happened in a gun-free zone" (Dr. John R. Lott, 2014), though these words can be easily perceived on the photo. Reporters do not want to report on it because gun-free zones are called "magnet for shooters." (Dr. John R. Lott, 2014) The fact that criminals like attacking places where people have no arms to protect themselves would make the news less sensational. Therefore, news reporters prefer only reporting newsworthy side of the news. Although they can perceive the fact, they may still choose to ignore the reasoning and report the news in a more sensational way. We can conclude that reason plays a smaller part since what we perceived could be skewed in the area of human science, thus neutrality is likely to be impossible.

Above examples in the area of natural science and human science has shown that neutral questions barely exist. However, most of the news reporters claim their mission is to pursue the truth and report objective news, is there any possibility that neutrality may exist in some news? The answer is to some extent, it is possible. The most startling news recently is the attack at Charlie Hebdo magazine in France. At the time that people celebrate journalists at Charlie Hebdo as "Martyrs on behalf of freedom of expression" (David Brooks, 2015), New York Times published an article "I am not Charlie Hobdo" to clarify that the news agency would never publish such hate speech or offensive materials with discriminated religious tendency. This shows that, New York Times, an official news agency objectively reasons this attack instead of reporting it with its sympathy to Charlie Hebdo. The news agency is striving to

reach the goal of journalistic objectivity and present viewpoints without being partisan. Therefore, although it is difficult to achieve neutrality, the possibility is still there because news agencies are now making their efforts to report events more rationally.

In conclusion, in this essay the knowledge question "How far is sense perception or reason a greater factor of the existence of neutral question in areas of natural science and human science?" is discussed. I mainly use reason and sense perception to examine whether neutral questions really exist. Above examples of the discovery of thalidomide, GMO labeling lobby in natural science and the publication of sensational news in human science have proven my viewpoint because they all show that science and news could be distorted by human's bias, thus does not represent neutral question. It is difficult for humans, even the most rigorous scientists, to ask questions with no emotion involvement. Therefore, neutrality barely exists in the area of natural science and human science. However, instead of absolute neutral, we could pursue comparative neutral with our reasoning. Above examples show that people usually become biased when they only perceive what they want to perceive and leave some parts of truths behind. In which case, they lose their reasoning when interpret things. Trying to be neutral, just like the case of New York Times above is not being detached from the outside world, but not losing one's reasoning at any time. It is difficult to attain but not completely impossible, thus we could conclude that neutral questions hardly exist in both natural science and human science to a great extent. Meanwhile,

reasoning plays a larger part in the creation of neutral questions, whereas sense perception could act as a mean to take personal emotions into the question, thus cause it to be biased.

(Word count: 1598)

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Examiner Comments

Essay O—Level 5 (10 marks)

Overall this is a clear, well organised and coherent essay. It starts out relevantly but not profoundly but as the essay progresses into the natural science and the writer's personal circumstances there is an improvement in the level of analysis. By the end of the essay the candidate has written an individual and compelling response to the title. The knowledge questions are not explicitly stated but the insightful nature of the essay demonstrates that there has been a consistent focus on the answers to knowledge questions. The fact that the candidate links the areas of knowledge under question back with each other at various points in the essay is indicative of the sophistication of this essay. The candidate succeeds in addressing counter-examples and in showing a variety of perspectives, which results in a highly effective evaluation of the areas of knowledge. The essay succeeds in making some substantive implications, although this could be improved. This is not a perfect ToK essay, but it is lucid and accomplished. Despite the flaws this response fully fits the level 5 descriptors and hence lies at the upper end of that level.

Essay I—Level 3 (5 marks)

The introduction to the essay is relevant but not well focused. The almost immediate focus on passive experimentation before any real exploration of the main concepts raised in the title detracts from the quality of the essay. The treatment of passive observation within the arts has basic relevance and shows a typical level of analysis. The treatment of active experimentation in Chemistry and the subsequent analysis shows a slightly better understanding. The case is then made for a continuum which is reasonably well-handled by the student. The conclusion is very typical of essays at this level. The candidate focuses implicitly on some knowledge questions, but this needed to be more convincing. Counterclaims are identified rather than analysed. There is a limited understanding of the areas of knowledge chosen by this candidate and it does not succeed in developing any different perspectives – it is a one track essay. Overall this is a mainstream and adequate essay, which addresses the basic ideas of the title and demonstrates some analysis. It is in the level 3 descriptor but at the lower end.

Essay G—Level 2 (3 marks)

The introduction has some focus on the title but demonstrates that a full understanding of what is meant by a neutral question is limited. The candidate then moves on to consider an example from the media, which highlights some basic points about the title, but it is unclear how this relates to areas of knowledge. At the end of the paragraph it is suggested that journalism will be considered in this essay, but how this links to human sciences which is the suggestion for one of the areas of knowledge under discussion remains unclear. The candidate makes a rudimentary attempt to consider the natural sciences, but the sentence "Therefore natural sciences may be just a hypothesis reflecting scientists' personal and social values and beliefs." underlines the lack of analysis in the essay. The example of thalidomide has a basic relevance to the title, but only gives the reader a superficial understanding of the role of neutral questions in the natural sciences. The idea of outside groups influencing the natural sciences and hence neutral questions

is relevant, but the argument remains underdeveloped. The candidate then attempts to address human sciences through the media, but this fails to demonstrate any understanding of the human sciences – the Charlie Hebdo example is completely ineffective in the context in which it is being used. The conclusion adds nothing new to the essay. The work on the natural sciences is at the top end of level 2 bordering level 3, whereas the work on the human sciences is at the bottom end of level 2 bordering level one. Hence overall this essay is best described by the level 2 descriptor but at the lower end. This is a rudimentary and superficial essay.