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PHILOSOPHY OF CRITICAL THOUGHT

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1) INTRODUCTION

Critical thinking is described in literature as the systematic methodology to define and problem through the synthesis of the surrounding knowledge. The process then leads to a perspective that helps to develop new ideas. The continuous evolution of philosophical traditions across the world still benefit from classical Greek philosophy. The Greek philosophers such as Plato and Aristotle guided the human thought over centuries to analyse a problem. The ancient Greek philosophers used the three-stage question sequence to understand a problem. The first question is, *An sit* (Is the problem a fact?), the second question is, *Quid sit* (What is the definition of the problem?) and the third question is, *Quale sit* (What kind of problem is it?). The philosopher poses these to narrow the thought on a focused aspect and thus is able to understand the problem (Thayer-Bacon 2000, 30).

Critical thinking is an integral part of understanding problems in hard sciences. Complex mathematical equations can now be solved by using modern computing and mathematical programming languages. I learned programming as a young engineer to solve structural engineering problems using the “Structured Query Language” (SQL) also commonly known as rational databases. The prefix of “rational” to the database added the critical logic dimension to the collected data. In simple words, it meant that the data collected as not a result of transcription or records only. The collected data followed the critical analysis path of its validity, relevance to the problem and its ability to reach a conclusive result if applied in a mathematical equation. The SQL rational database criteria remarkably follow the three classical Greek philosophical questions stated earlier for the critical thinking process of understanding the problem.

The suggested text for this period is a book by Professor Patrick Grim. Grim’s philosophical work also follows the same trajectory of studying philosophy and applying the philosophical critical thinking knowledge to modern computing problems. Grim is an advocate of applied philosophy. Grim states very clearly in the opening lecture of the book and states, “The best philosophy borrows from and builds on diverse areas of thought, including psychology, statistics, mathematics, economics, the history of science, and even physics” (Grim 2013, 7).

This paper provides an analysis of Grim’s (2013) work with useful references from the literature to elucidate the underpinnings of critical thought in philosophy.

2) EXPLAINING CRITICAL THOUGHT

Critical thought is closely linked to the rhetoric in ancient Greece of fifth-century BCE. The etymology of critical thinking can be traced to Socrates. Socrates raised the

question of fact establishment without being impressed by the influences of those in positions of authority or rule. Socrates argued that those in power can have knowledge that is irrational. Socrates argued that knowledge can only be sound if its establishment is based on deep questions that critically deliver an honest belief. Socrates challenged the authoritarian rule at the time by rejecting any ideas that were enforced without robust critical analysis and proof. He was sentenced to death in 399 BCE for his philosophical teachings that injured the Athenian rulers. His most famous pupil Plato carried on his philosophical teachings (Colaiaco 2013, 15).

Critical thinking has many dimensions. The most common dimension is reflective questioning of commonly held beliefs and carefully teasing out implications not only of the stated beliefs but also of the actions based on those beliefs. Such a system of critical thinking allows the society to reflectively question its ideals that are reasonable and logical from those that are the result of egocentric whims. The ability of the society to challenge and remove beliefs that serve vested interests leads to an equitable social system. The critical thinkers are not just philosophers, they are people involved in the day-to-day functions within the society. Critical thinking allows humanity to correct its course in the midst of authoritarian rule and criminalisation of thoughts that challenge the status quo.

The scope of developing and encouraging critical thought is much wider than its perceived academic role. It is the collective responsibility of the society to nurture critical thought in all forms and in all walks of life. Without critical thought, any society starts to follow blind-beliefs and relegates itself to authoritarianism (Giroux 2015, 19).

Grim (2013) takes the logical approach to understand the classical Greek philosophical underpinnings of critical thinking. Grims acknowledges that amongst the classical Greek philosophers, social context was the thread running through their philosophy on critical thinking. Logic, according to Grim is the key. Grim states,

With Plato's student Aristotle, logic begins. In Aristotle, it is clear that the philosopher's task is not merely to figure out how people think but how to think better—more systematically, more validly, more logically. The enterprise of logic is a major thread in the history of philosophy that runs from the pre-Socratics down to the present day (Grim 2013, 7).

Grim also acknowledges that Greek philosophers like Pythagoras, Euclid, Ptolemy, and others are all philosophers but their intellectual disciplines became individual branches of knowledge. The core of all knowledge according to Grim (2013) is philosophy (9). If the argument of Grim is accepted that the core of all knowledge is philosophy than it can also follow by analogy that the core of philosophy is critical thinking.

3) VARIOUS TRADITIONS OF CRITICAL THOUGHT

The tradition of critical thinking laid down by Socrates was followed by his star pupil Plato. Aristotle followed Plato. It was Aristotle who presented the ideological differences in how we view our beliefs. Aristotle argued that we either have a delusive understanding of our beliefs that are based on the cursory understandings or deeper beliefs

that are the result of trying to look beneath the surface. Aristotle paved the way for later thinkers to systematically challenge beliefs by deeper reflection on the implications of the held beliefs. Reasoning based on comprehensive analysis and responsive objections emerged from the works of Aristotle (Rychlak 1987, 186).

Grim (2013) concedes that classical Greek philosophy considers two distinct sides of any held belief. Grim's finding is based on Plato's definitions of the visible and intelligible sides of any held belief. Grim also states that visualisation is the basis of defining the lines between visible belief and the intelligible belief. Grim states,

In *The Republic*, Plato outlines a theory of the relation between the visible and the intelligible world, between mere opinion and genuine knowledge. He maps out the theory visually, with an image known as Plato's "divided line"—a division between the visible and the intelligible, further divided on each side between superficial understanding and a deeper grasp (Grim 2013, 23).

The Christian Roman Church dominated the philosophical domain during the Middle Ages in the western world. Thomas Aquinas *Summa Theologica* held the belief that philosophy was the "handmaiden" of theology. Aquinas had to balance the theological beliefs with the philosophical transformation of the society based on theological beliefs. Aquinas argued that the potential power of reasoning justified the need for reasoning to be included in the objective analysis of the purpose of faith and not the faith itself. Of course, Aquinas's argument illustrates that critical thinking does not necessarily reject held theological beliefs, rather it helps to reject beliefs that lack reasonable foundations (Rychlak 1987, 186). Aquinas eased the thinking of the Church into a reconciled position that allowed the Church Fathers in the Middle Ages to accept philosophical intrusion in matters of faith.

The Renaissance period Europe saw the philosophical development of religious dogmas that far exceeded the limits that were imposed on philosophy during the Middle Ages. Arab-Islamic scholars like Averroes helped in further reinforcing the critical thinking directed at theological beliefs. The Islamic concepts of exegesis for divine scriptures introduced the philosophical ideals of "Ijtihad" or *Exegesis Analytica* by the Islamic Jurists (Haftador and Khodaparast 2015, 125). The Islamic Exegesis Analytica is seen hidden within folds of the renaissance period European theologian philosophers like Francis Bacon and Descartes who argued for an empirical understanding of the world. Machiavelli's *The Prince* critically argued about the reformation of the political philosophies at the time. The combined effect of these philosophical reformers during the renaissance period allowed the emancipation of social and political thoughts without destroying the theological beliefs of the masses (Serrat 2017, 1097).

The French philosophical emancipation movement led by Bayle, Montesquieu, Voltaire, and Diderot has left lasting impressions on the philosophy of critical thought. These eminent French philosophers argued that the human mind is disciplined by reason and logic. The reason and logic allow the human critical thought to grasp the complexities and the true nature of the world. The thrust of the main argument by these philosophers is to use critical thought as the medium for the weaknesses and the strengths of held beliefs.

Montesquieu and Voltaire rigorously argued for disciplined and intellectual analysis for critique. Diderot believed that all authority must submit to the scrutiny of reasonable critical questioning (Bartlett 2001, 12).

The 1906 *Folkways* by William Graham Sumner is a seminal work on the foundations of sociology and anthropology. Sumner (1906) argued against the tendency of the human mind to think in socio-centric patterns in the rapidly industrialized world controlled by corporate interests. Sumner also cautioned against the tendency of universities and philosophical schools to serve the function of social indoctrination by strict adherence to traditions. Sumner's words are profound in this regard. Sumner states,

schools make persons all on one pattern, orthodoxy. School education, unless it is regulated by the best knowledge and good sense, will produce men and women who are all of one pattern, as if turned in a lathe. An orthodoxy is produced in regard to all the great doctrines of life. It consists of the most worn and commonplace opinions which are common in the masses. The popular opinions always contain broad fallacies, half-truths, and glib generalizations (Sumner 1906, 360).

Sumner's views can be seen as a prophecy in the contemporary failed studies of applied economics that has been reduced to obfuscating mathematics. The widening income-gaps around the world and the declining middle-income groups around the world speak of the blind-following by economists who are scared of challenging the failed theories of main-stream leading economists of our times.

Grim (2013) argues that rhetoric has gained a negative imprint due to the 19th-century philosophical work by Schopenhauer. Grims states that:

our contemporary and negative sense of rhetoric is firmly in place in the work of the 19th-century philosopher Arthur Schopenhauer. Schopenhauer was the author of *The Art of Controversy*, a user's guide to rhetoric in the contemporary negative sense. He characterizes the topic as intellectual fencing used for the purpose of getting the best in a dispute (Grim 2013, 112).

In classical rhetoric, the central appeal is not to the emotions or *Pathos*, but to reason or *Logos* according to Aristotle. Have we come far from what Aristotle stated or are we in a state of intellectual fencing according to Grim (2013). George Orwell in his 1946 novel titled *1984* posed the question of constantly looking at what's in front of one's nose as a constant challenge. Orwell in *1984* provocatively argues that perhaps the difficulty in critical thinking arises not from our concentration on the problems in front of us but perhaps the difficulty arises when we minimize the subjectivity and increase the objectivity of our critical thinking. Orwell argues that the struggle is not to look away from our problems, and the surrounding reality, the struggle is to not face it with one-eye closed.

Orwell's view does not agree with the view presented by Grim (2013). Orwell's view has more appeal as it encourages us to face the problems in front of us with our eyes open-wide. Euclid and Pythagoras brought a systematic beauty to critical thinking with the logically driven rhetoric of mathematics. The Euclidian logic in geometry stands to proof

after thousands of years. Critical thought stands its ground regardless of how rhetoric shapes the argument.

Church Father Thomas Aquinas, Jewish philosopher Baruch Spinoza, Islamic philosopher Averroes and Protestant philosopher Gottfried Leibniz were logicians who used rhetoric as a tool to reason the ultimate philosophical question-God. Did rhetoric bring any disadvantage to the carefully detailed logic about the question of God? This is not an easy question to answer. Each of these great philosophers defined God differently. That is the beauty in the intellectual fencing of rhetoric as ultimately the quest is one reality-God. Contemporary philosopher Wayne C. Booth aptly tackles this difficulty and describes it as, “blind scepticism versus rhetorical assent” (Booth 2005, 378). Booth (2005) has given a fitting definition to the rhetorical duelling between competing propositions about the singularity of the God concept.

Grim (2013) tackles the question of philosophical understandings for scientific phenomena in the 21st- lecture of the book. Grim hinges his arguments on the philosophical works of Francis Bacon, John Stuart Mill, and R. A. Fisher (176). Grim prescribes a set of questions in his toolkit and states, “The scientific method is as follows: Define a question. Formulate an explicit hypothesis. Design a test with a measurable outcome. Perform the test and analyze the results” (Grim 2013, 177).

Barry Gower (2012) has published useful research on the philosophy of scientific experiments and their findings. Gower starts his arguments with Galileo’s 1632 seminal work “Dialogue Concerning Two Chief World Systems, Ptolemaic and Copernican” (Drake 1962). Galileo’s famous trial took place in 1633, a year after the publication of his seminal work. Galileo was sentenced to life imprisonment and was forced to publically denounce Copernicanism as being false and heretical in nature. Gower attempts to shed light on the importance of pragmatism when dealing with scientific knowledge. Gower states that Galileo could have easily side-stepped the controversial findings of Copernicus about the Earth not being flat and the universe being infinite. Rather, Galileo took-on the task of exploring the findings of Copernicus with his own toolbox of scientific knowledge. Gower encourages discovery through experiments and not through simple scepticism and empty questions.

Grim’s (2013) prescription to test the veracity of scientific methods does not provide the depth that Gower (2012) has explained in his seminal work. This is not a negative interpretation of Grim’s argument, rather it simply elucidates a better-framed analysis by Gower on the topic.

Gower (2012) encourages us to move away from labelling or fixing our philosophical approach towards critical analysis of scientific ideas. Gower highlights the capacity of human nature when confronted by ideas that are not easily assimilated. Gower states,

after all, natural science has been a subject of interest for many people for many hundreds of years. It is not an insignificant object of knowledge. But still, there is much more which

is not, and cannot be, illuminated in an appropriate way by natural science or by any other kind of science (Gower 2012, 12).

The most striking conclusion by Gower is about how we perceive scientists after all the amazing inventions and the lightening speed discoveries that we experience each day. Gower (2012) states that confidence in the truth is not by simple questioning of facts or by any other systematic approach. Rather its an experiment in itself where the philosophers exit the comfort zone and enter the domain of the unknown without any bias (32). Gower states,

Euclid's geometrical postulates, they were not justified on the basis of some further, more secure, statements; they were intended, rather, to be self-justifying in the sense that they do no more than make explicit what we intuitively know on the basis of familiar experience (Gower 2012, 27).

4) CONCLUSION

The critical thinking as philosophy goes all the way back to Socrates. Grim's (2013) essays provide useful references and easy-to-understand examples for those who are looking to familiarize themselves with the basic philosophical concepts about critical thinking and philosophy.

I have explained counter-views by relying on other scholarly literature to provide further elaboration of the points raised by Grim's essays. Critical thinking forms the fundamental basis for our understanding of the social and natural state of the world around us.

Rhetoric since the times of the Greek philosophers allows arguments to be framed in a manner that may seem adversarial outwardly but inwardly it encourages critical thought and a moment of pause to listen and consider the merits of the opposing arguments.

The human journey of discovery would have halted if there was no critical thinking. Critical thinking is not just about empty scepticism rather it encompasses rhetorical assent in matters that are about seeking the ultimate truth- God.

REFERENCES

1. Bartlett, Robert C. 2001. "On the Politics of Faith and Reason: The Project of Enlightenment in Pierre Bayle and Montesquieu." *The Journal of Politics* 63 (1): 1-28.

2. Booth, Wayne C. 2005. "Blind Skepticism versus a Rhetoric of Assent." *College English* 67 (4): 378–88.
3. Colaiaco, James A. 2013. *Socrates against Athens: Philosophy on Trial*. Routledge.
4. Drake, Stillman. 1962. *Galileo Galilei, Dialogue Concerning the Two Chief World Systems-Ptolemaic and Copernican*. University of California Press.
5. Giroux, Henry A. 2015. *Dangerous Thinking in the Age of the New Authoritarianism*. Routledge.
6. Gower, Barry. 2012. *Scientific Method: A Historical and Philosophical Introduction*. Routledge.
7. Grim, Patrick. 2013. *The Philosopher's Toolkit: How to Be the Most Rational Person in Any Room*. Teaching Company.
8. Haftador, Hasan Rezaee, and Azam Khodaparast. 2015. "Ijtihad in Quranic Exegesis." *Asian Social Science* 11 (27): 125.
9. Rychlak, Joseph F. 1987. "Can the Strength of Past Associations Account for the Direction of Thought?" *The Journal of Mind and Behavior*, 185–93.
10. Serrat, Olivier. 2017. "Critical Thinking." In *Knowledge Solutions*, 1095–1100. Springer.
11. Sumner, William Graham. 1906. "Folkways: A Study of the Sociological Importance of Usages." *Manners, Customs, Mores, and Morals*, Ginn & Co., Boston, MA.

12. Thayer-Bacon, Barbara J. 2000. *Transforming Critical Thinking: Thinking Constructively*. Teachers College Press.