



How Knowledge became Limited because of the Scientific Method: The Story of Non Sense

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Abstract

Faruqi's project of Islamization mainly focused on social sciences because the social science dealt with man and society. It had somewhat neglected scrutinizing modern natural science arguing that natural science dealt with nature and therefore neutral and objective (Kalin, 2002). However, it is the natural science methodology that dominates and shapes social science methodology and questions. More importantly, the scientific methodology has reduced all matters to physical things and all knowledge reduced to physical knowledge. Any and all non-physical knowledge initially was beyond the scientific methodology to prove right or wrong because the limitations of the physical methodology were held in abeyance and were not judged upon and considered scientifically meaningless. Mach's dictum that "where neither confirmation nor refutation is possible, science is not concerned (Mach, MACCORMACK, & Menger, 1960). Logical positivism adopting Wittgenstein's verification criteria that seeks to legitimize all discourse by placing it on a basis shared with empirical evidence only statements verifiable either by direct observation or logical deductions would be *cognitively meaningful* changed everything. Now, any and all non-physical knowledge becomes non sense statements. These statements become absurd statements, unable to be proven by the only criteria acceptable, the scientific physical methodology and thus become no longer worthy of study. We must engage with science, in fact celebrate science but at the same time, we must also constraint science and guide it with our ethico-religious world view that will make science a true blessing for all mankind. In order to do this, we must purify religion from error and superstition, re-appropriate science as a study of *sunnah* Allah and institutionalize critical and rational thinking within society.

Keyword: Ethics, science, methodology, worldview, Islamization

Abstrak

Projek Islamisasi Faruqi fokus terutamanya pada sains sosial kerana sains sosial mengurus hal manusia dan masyarakat. Ia agak mengabaikan penelitian ilmu sains semula jadi moden yang berpendapat bahawa sains semulajadi yang terlibat dengan alam semula jadi adalah berkecuali dan berobjektif (Kalin, 2002). Walau bagaimanapun, hanya metodologi sains semula jadi yang menguasai dan membentuk metodologi sains sosial dan persoalan. Lebih penting lagi, metodologi saintifik telah mengurangkan semua perkara kepada perkara fizikal dan semua pengetahuan dikurangkan kepada pengetahuan fizikal. Sebarang dan semua pengetahuan bukan fizikal pada mulanya adalah di luar batasan metodologi saintifik untuk membuktikan betul atau salah kerana batasan metodologi fizikal telah diadakan dalam keadaan yang belum dikuatkuasakan dan tidak diadili dan dianggap tiada makna secara saintifik. Pernyataan rasmi Mach bahawa "di mana tidak ada pengesahan atau penyangkalan yang mungkin, sains tidak terlibat (Mach, MACCORMACK, & Menger, 1960). Positivisme logik mengguna pakai kriteria pengesahan Wittgenstein yang bertujuan untuk mengesahkan semua wacana berdasarkan pengkongsiian bukti empirikal hanya kenyataan yang dapat diverifikasi baik oleh pemerhatian

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langsung atau pengurangan logik akan merubah segalanya secara kognitif. Sekarang, semua pengetahuan bukan fizikal menjadi kenyataan yang tidak masuk akal. Kenyataan ini menjadi kenyataan yang tidak masuk akal, dan tidak dapat dibuktikan walaupun dengan satu-satunya kriteria yang boleh diterima, metodologi saintifik fizikal dan dengan itu menjadi tidak lagi sesuai untuk dikaji. Kita mesti

melibatkan dengan sains, sebenarnya meraikan sains tetapi pada masa yang sama, kita juga perlu memberi kekangan terhadap sains dan membimbingnya dengan pandangan dunia etiko-agama yang akan menjadikan sains sebagai rahmat sejati bagi semua manusia. Untuk melakukan ini, kita mesti menyucikan agama dari kesilapan dan takhayul, menganggap sains sebagai kajian sunnah Allah dan menginstitusikan pemikiran kritis dan rasional dalam masyarakat.

Kata kunci: *Etika, sains, metodologi, padangan dunia, Islamisasi*

Introduction

Among famous quotations on this subject is the statement attributed to the Pope John Paul II, which states that “science can purify religion from error and superstition. Religion can purify science from idolatry and false absolutes.” (Pope John Paul II). Another interesting statement on this topic is “we do not want the fate of Galileo in this land under the rule of the Islamic Republic. We do not want religion to become an impediment for science. We want religion and science to be closely linked, and the former to act as the lights do in a car and not as the brakes do.” (Abdolkarim Soroush)

As the world watched in horror the YouTube video that went viral of men, women and children violently trembling and twitching trying to breath only to breath their last and die torturous deaths due to chemical warfare weapons use on them indiscriminately (Cambanis, 2017; Pikrel, 2017) the world is again at a crossroad, witnessing the atrocities that science can inflict. These scientists who created these weapons knew what they were doing and what the purpose of these weapons are but still they create these weapons. Unlike the claims of the scientists who created the first nuclear bombs who were challenged to create a bomb so devastating that it would end all wars without ever being used simply because it threat was so frightening (Rhodes, 1995). Believing in their abilities to harness the power of nature and their naivety that men of power would never use such devastating power, their egos were challenged by the military brass, they rose to meet that challenge and the result is two atomic nuclear bomb innocently called *Fatman* and *Little Boy*. These atomic nuclear bombs were not used once but twice on civilian populations in Hiroshima and Nagasaki, killing horribly tens of thousands and continued to inflict pain and suffering through atomic radiation on the unborn (Selden & Selden, 1999; "The Story of Hiroshima," 2005). The march of science that has produced so much good for all also has and can produce so much evil and suffering. Questioning the progress and goodness of the scientific endeavours. Belluz (2013), Brown (2012) and Riley (2004) reported that many today are demanding that science must be constraint and checked by ethics. Scientific endeavours can no longer be considered ethically

neutral because some of its results are disastrous. Thus, the critiques of scientific endeavours' (Harris, 2010; Popper, 1965; Tham, 2012) have demanded a re-evaluation of the scientific enterprise as it is practice today.

The loudest demand is to incorporate ethics into science is raised in bioethics. Bioethics is the study of typically controversial ethics brought about by advances in biology and medicine. Even though this President's Council on Bioethics is the result of the realization that even science needs constrains and must be guided positively, thus the need to bring ethics into the scientific enterprise, bio ethics considerations and debates do not lead but trails scientific advances. In other words, ethical debate comes after scientific advancements after it has been done and only then do we evaluate whether it is ethical. This is minimalistic and unhealthy. We have to integrate the ethics into science making ethics the *raison d'être* of science, not the other way around.

More and more scientists are beginning to realize and recognize that science needs ethical guidance (Ziman, 2001). With innocence lost, no more can we claim that all scientific endeavours are good. Just because there is a growing realization in the scientific community that science needs ethical guidance, it does not mean that there is a call to return science under religious hegemony. Instead some scientist have argued that it is not less science we need, by making science constrained by ethical considerations but instead they are demanding that we should make science the only criteria, taking out science from its mythical constraints of the physical world and applying it to all areas of human life especially the ethical domain (Harris, 2010). Science should be determining right or wrong, good or bad by simple weighing the results of its action (Chiariello, 2012) by adopting a consequentialist ethics more specifically utilitarian consequentialist evaluation (Goodin, 1995; Smart & Williams, 1973) or a adopting pragmatism (McDermid, 2006; Thayer, 1981) in which if the scientific endeavours results in producing benefit then the action is good and ethical (Stevens, 2003).

The question many scientists failed to ask is why only now the scientific endeavour demands an ethical basis (Lincoln & Guba, 1989). And more importantly why the scientific never began on an ethical

foundation? The naive assumption is that the scientific endeavour is neutral. No endeavour is ever neutral, devoid of ethical implications. The answer to this question of why science lacks an ethical foundation lies in its *raison d'être*, its very reason for existence, which rose from its struggle and fight with the church resulted in its limited scope of study. The scientific goal is only to describe the physical world utilizing only empirical means. Science reduced everything non-physical to be scientifically meaningless and in the end, nonsense.

Church versus Science

The historical relationship between the church and science is turbulent. The conflict, both historical and contemporary, between the church and science, began in earnest with the challenge towards the church's adopted doctrine of Ptolemy's Geocentric (earth at the centre) world view by Copernicus and later by Kepler and culminated historically in the trial and condemnation of Galileo Galilei by the Roman Catholic Inquisition (Beretta, 2005) in 1633 for his support of heliocentric (Gingerich, 2011), which inevitably broke the yoke of the Church.

In contemporary times, the conflict between the church and science continues but the issues have evolved (Huff, 2010). The Descartes mechanical worldview is the first challenge and is seen as a means to remove God's involvement from the inner workings of nature and instead of resorting to power God and will (Des Chene, 1996; Hatfield, 1979) it appeals to inner power of nature to determine the activities of the world. Darwin's evolution theory was seen in the same vein (Bowler, 2003), whereby evolution also removed the involvement or intervention of God in the development of man.

"Does change occur quickly, or slowly? Does it occur according to some fixed law that places limits on how different species can become, or on how many different species can exist at any one time in a given taxonomic group? What is the significance of islands? What are the environmental or geological factors? And, of course, what causes change? It was not until the fall of 1838 that Darwin hit upon the mechanism of natural selection. Darwin long maintained that he was inspired by domestication, and that the Reverend Thomas Robert Malthus's *Essay on the Principle of Population* then provided him with the insight that selection as practiced by breeders could also apply in nature: "All my notions about how species change are derived from long continued study of the works of (and converse with) agriculturists and horticulturalists." (Costa, 2009).

Darwinism lead scientist to confront the religious theory of creation based on the idea that God created the world according to His intelligence and thus, the idea of Intelligent Design (Petto & Godfrey, 2007). This idea leads to a great deal of antagonism between the scientists and science in general and religion (Suloway, 2009). In the medieval conflict between the church and science, it is the church now that had to yield and today all men, including religious men rejects the Geocentric world and instead adopt and accept the scientific Heliocentric worldview as the new norm. However, the contemporary conflict between science and religion is not so easily resolve. For example in the United States, Still, by the 1870s, American religious leaders and thinkers began considering the theological implications of Darwin's theory, and many started attacking evolutionary thinking. For example, Presbyterian theologian Charles Hodge, in his book *What Is Darwinism?* (1874), argued that natural selection was unacceptable because it directly contradicted belief in a benevolent and all-powerful God. Other theologians, however, such as famed Congregationalist minister Henry Ward Beecher, tried to forge a rapprochement between evolutionary thinking and Christianity, arguing that evolution was simply God's method of creation (Masci, 2014).

The early influence of Darwinism in America was still restricted to the elite and largely ignored by the general public. Among these elites, there were attempts to try to accommodate evolutionary theory with God creating by arguing that it is God's method of creation. The most effective of these is Ken Ham's Answers in Genesis, on display last week when Ham debated Bill Nye. Ham was crystal clear in his presentation: science is not relevant to origins and must be largely rejected. All that matters is a literal interpretation of the Bible, with its 6000-year-old earth and worldwide flood as principal historical foundations (Giberson, 2014).

The battles with the church resulted in science instead of treading within the ground of religion, slink away from the fight by limiting and restricting its field of study to only physical nature. Initially, science came from the Latin word "scientia". In latin "Scientia, means "knowledge, a knowing; expertness," from sciens (genitive scientis) "intelligent, skilled," present participle of scire "to know," probably originally "to separate one thing from another, to distinguish," related to scindere "to cut, divide (Online Etymology Dictionary: science) Thus initially *scientia* was meant to study all forms of knowledge and all areas of knowledge. However, with the conflicts with Church, men of science decided to withdraw from the battles with the Church and the best way to do so was to

confine and restrict their study and scope solely to only the physical world, thus leaving aside the spiritual and ethical world to men of religion. It is only in contemporary times, that men of science have regretted their choice to leave aside the ethical world and thus not have any direct guidance to how man and society should live their lives.

Beginning of inductive experimental method

Because science had reduced its scope of study to the physical world only, it adopted the empirical method of proof. However, the history and developments of inductive method did not come from Greek science but rather from the influence of Islamic science which sought to study God's creation through observing God's creation, the world.

“Observation was eventually undervalued by the Greeks in favour of the deductive process, where knowledge is built by means of pure thought. This method is key in mathematics and the Greeks put such an emphasis on it that they falsely believed that deduction was the way to obtain the highest knowledge.” (Violatti, 2013).

Greek science although began with observation, but because it was influenced by Plato's distrust of the senses, eventually undervalued the physical sense observation and thus Greek science was forged and moulded by pure thought in which theory determined what was observed rather the physical senses being the ultimate criteria. It is the influence of Muslims that transformed science from pure thought to combining theory to practise. During the Middle Ages, issues of what is now termed science began to be addressed. There was greater emphasis on combining theory with practice in the Islamic world than there had been in Classical times, and it was common for those studying the sciences to be artisans as well, something that had been "considered an aberration in the ancient world." (Wikipedia: History of Scientific Method) Most of the Muslim scientists were also artisans thus able to make scientific instruments to enhance their powers of observation and thus proving decisive when two dwelling theories are competing

“Islamic experts in the sciences were often expert instrument makers who enhanced their powers of observation and calculation with them. Muslim scientist used experiment and quantification to distinguish between competing scientific theories, set within a generically empirical orientation, as can be seen in the works of Jābir ibn Hayyān (721–815) and AlKindī (801–873) as early examples. Several scientific methods thus emerged from the medieval Muslim world by the early 11th century, all of which emphasized experimentation

as well as quantification to varying degrees.” (“History of Scientific Method”, n.d.).

Thus, the scientific inductive method owed more to Muslim science than to Greek science (Gorini, 2003). In Greek science, theory dominated and thus in many cases even the great Aristotle made so many mistakes without ever checking theory with observation.

Conclusion

The scientific insistence that all theories must be proved through physical sense observation has helped the study of physical nature and in many cases corrected our understanding of the world. However, it is in the successes' of science that has ascertained its own undoing. Since science insists that the only valid prove is through the physical senses, so science not only limited its scope of study to the physical world, it now insisted that initially for scientist to speak of non-physical world as gibberish and nonsense, in other words, absurd. However, scientists being overly confident with their methodology and unsatisfied with other proof, demanded there is no other means to ascertain proof, and thus not reduced all proofs to only one but has also reduce human capability to understand the world to only the physical world. Therefore, ultimately limiting human knowledge to only the physical world, devoid of ethics and spiritual is a path to disaster.

References

- Belluz, J. (2013). Good science vs. bad science: How do you tell the difference? Science-ish has six red flags to watch for. Retrieved from <http://www.macleans.ca/uncategorized/good-science-vs-bad-science/>
- Beretta, F. (2005). Galileo, Urban VIII, and the Prosecution of Natural Philosophers. *The Church and Galileo*, 234-261.
- Bowler, P. J. (2003). *Evolution: the history of an idea* (Vol. 3). Berkeley: Univ of California Press.
- Brown, A. (2012). This isn't bad science. It's evil science. Retrieved from <https://www.theguardian.com/commentisfree/andrewbrown/2012/sep/26/evil-science-soviet-bioweapons-research>
- Cambanis, T. (2017). What Could Possibly Motivate a Chemical-Weapons Attack?. Retrieved from <https://www.theatlantic.com/international/archive/2017/04/syria-assad-chemical-weapons-trump/521919/>
- Chiariello, P. (2012). Can Science Answer Our Ethical Dilemmas? Exploring the Is-Ought Dichotomy. Retrieved from <https://www.aas.org/page/can-science-answer-our-ethical-dilemmas-exploring-ought-dichotomy>

- Costa, J. T. (2009). The Darwinian revelation: tracing the origin and evolution of an idea. *BioScience*, 59(10), 886-894. doi: <https://doi.org/10.1525/bio.-2009.59.10.10>
- Des Chene, D. (1996). *Physiologia: Natural philosophy in late Aristotelian and Cartesian thought*: Cornell University Press.
- Giberson, K. (2014). How Creationism Hurts Christian Colleges - And Their Students. Retrieved from <http://www.thedailybeast.com/howcreationism-hurts-christian-collegesand-their-students>
- Gingerich, O. (2011). Galileo, the Impact of the Telescope, and the Birth of Modern Astronomy. *Proceedings of the American Philosophical Society*, 155(2), 134-141.
- Goodin, R. E. (1995). *Utilitarianism as a public philosophy*: Cambridge University Press.
- Gorini, R. (2003). Al-Haytham the man of experience. First steps in the science of vision. *Journal of the International Society for the History of Islamic Medicine*, 2(4), 53-55.
- Harris, S. (2010). Toward a Science of Morality. Retrieved from http://www.huffingtonpost.com/sam-harris/a-science-of-morality_b_567185.html
- Hatfield, G. C. (1979). Force (God) in Descartes' Physics. *Studies in History and Philosophy of Science Part A*, 10(2), 113-140.
- History of scientific method. (n.d.). In Wikipedia. Retrieved from https://en.wikipedia.org/wiki/History_of_scientific_method
- Huff, T. E. (2010). *Intellectual curiosity and the scientific revolution: a global perspective*: Cambridge University Press.
- Kalin, I. (2002). God, Life and the Cosmos. In T. Peters & M. Iqbal (Eds.), *God, life, and the cosmos: Christian and Islamic perspectives*: Routledge.
- Lincoln, Y. S., & Guba, E. G. (1989). *Ethics: The failure of positivist science*. *The Review of Higher Education*, 12(3), 221-240.
- Mach, E., McCormack, T. J., & Menger, K. (1960). *The Science of Mechanics: a Critical and Historical Account of Its Development...* Translated by Thomas J. McCormack. New Introduction by Karl Menger. With Revisions Through the Ninth German Edition.[With a Portrait.]: La Salle, Ill.
- Masci, D. (2014). The Social and Legal Dimensions of the Evolution Debate in the U.S.. Retrieved from <http://www.pewforum.org/2009/02/04/the-social-and-legal-dimensions-of-the-evolution-debate-in-the-us/>
- McDermid, D. (2006). *The Varieties of Pragmatism: Truth, Realism, and Knowledge from James to Rorty*. New York: Continuum.
- Petto, A. J., & Godfrey, L. R. (2007). *Scientists Confront Intelligent Design and Creationism (Vol. 1)*. New York: W. W. Norton & Company.
- Pikrel, R. (2017). Inside Assad's Shadowy Chemical Weapons Factory. Retrieved from <http://indianaviationn.blogspot.my/2017/05/inside-assads-shadowy-chemical-weapons.html>
- Popper, K. R. (1965). *Conjectures and refutations: The growth of scientific knowledge*.
- Rhodes, R. (1995). *The Making of the Atomic Bomb*. New York: Simon & Schuster.
- Riley, N. S. (2004). The legacy of Nazi medicine. Retrieved from <http://www.thenewatlantis.com/publications/the-legacy-of-nazi-medicine>
- Selden, K. I., & Selden, M. (1999). *The atomic bomb: Voices from Hiroshima and Nagasaki*: Routledge.
- Smart, J. J. C., & Williams, B. (1973). *Utilitarianism: For and against*: Cambridge University Press.
- Strevens, M. (2003). The role of the priority rule in science. *The Journal of philosophy*, 100(2), 55-79.
- Sulloway, F. J. (2009). Why Darwin rejected intelligent design. *Journal of biosciences*, 34(2), 173-183.
- Tham, J. (2012). Does Science Need Ethics. Retrieved from http://www.academia.edu/8954497/Does_Science_need_ethics
- Thayer, H. S. (1981). *Meaning and action: A critical history of pragmatism*: Hackett Publishing.
- The Story of Hiroshima. (2005). Retrieved from <http://www.hiroshima-remembered.com/history/hiroshima/page14.html>
- Violatti, C. (2013). Ancient Greek Science. Retrieved from http://www.ancient.eu/Greek_Science/
- Ziman, J. (2001). Getting scientists to think about what they are doing. *Science and Engineering Ethics*, 7(2), 165-176.

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