

Not out of Greece

Decolonisation by challenging the false history of science

C. K. Raju

A tentative outline of 5 lectures

Lecture 1: The stock model of the history of science

Terminology: I begin by clarifying that “West” and “White” both refer to a state of the mind,¹ and not to a direction in space or the color of the skin. Many black thinkers such as Fanon² have struggled to understand what “white” means given that many people with black skins start thinking like whites. The concept of the West is a cultural concept used by historians such as Spengler³ and Toynbee⁴ to understand history. It is also a strategic concept used by modern-day military strategists, such as Huntington,⁵ as I have discussed.⁶

Stock model of history of science: The “stock model” of the history of science glorifies whites: all science is attributed to early Greeks and then to Europeans after the renaissance. Though the Greeks are mostly from Alexandria in Africa, they are invariably portrayed as white. As a recent article claimed, much mathematics is the work of dead white men. Examples of this “stock model” from Wikipedia accounts glorifying figures such as Euclid, Archimedes, Claudius Ptolemy, Copernicus, Newton, as the creators of mathematics, astronomy, and science.

Examining the sources: Primary, secondary, and tertiary source. Wikipedia as an unreliable tertiary source. Some other accounts from secondary sources Egypt,⁷ China,⁸ Arabia⁹, India,¹⁰ and the non-West¹¹ generally. Pyramids and calendars in South America. What resources are required to get back to primary sources?

1 “the most potent weapon in the hands of the oppressor is the mind of the oppressed”, Steve Biko, *I write what I like*, ed. Aelred Stubbs C. R., African Writers Series, 1997 (also Heinemann, Oxford, 1987), p. 62.

2 Frantz Fanon, *Black skins, white masks*, trans. C. L. Markmann, foreword Homi K. Bhabha and Ziauddin Sardar, Plut Press, 2008.

3 Oswald Spengler, *The Decline of the West*, vol. I, *Form and Actuality*, trans. C. F. Atkinson, George Allen & Unwin, London, 1926.

4 Arnold J. Toynbee, *A Study of History*, abridgement in 2 vols. by D.C. Somervell, Oxford University Press, 1957.

5 Samuel P. Huntington, *The Clash of Civilizations and the Remaking of World Order*, Viking, New Delhi, 1997.

6 C. K. Raju, *The Eleven Pictures of Time*, Sage, 2003, chp. 3 and the term “West” in the glossary.

7 M. Clagett, *Ancient Egyptian science: A source book*. 3 Vols, especially vol. 3 *Ancient Egyptian mathematics*. American Philosophical Society, Philadelphia, 1999.

8 Joseph Needham, *The Shorter Science and Civilisation in China*, esp. vol. 2, abridged by Colin A. Ronan, Cambridge Univ. press, 1981.

9 Salim T.S. Al-Hassani ed. *1001 Inventions: Muslim Heritage in Our World* (2nd ed.). Foundation for Science Technology and Civilization, London, 2011.

10 C. K. Raju, *Cultural Foundations of Mathematics*, Pearson Longman, Delhi, 2007. Also, *Is Science Western in Origin?* Multiversity Penang, Daanish Books Delhi 2009. Reprint Other India Bookstore, 2014.

11 Helaine Selin ed., *Encyclopedia of the History of Science, Technology, and Medicine in NonWestern Cultures*. Kluwer Academic Publishers, Dordrecht, 1997, Springer 2008, Springer (online) 2014.

Lecture 2: Political consequences of the stock model

Relation to racism. The first moral justification for slavery was the Biblical “curse of Kam”, and this justification was being mentioned in books¹² published shortly before the American Civil War, and the declaration of emancipation. However, after the organized slave trade, many blacks turned Christian, and given also the rise of science, moral justification based on “science” came to be preferred. Since the Greeks were portrayed as white, this history of science was used to project black/brown/yellow people as inferior, and morally justify slavery. Common examples of Western academic consensus in support of racism: Kant, Hume, Mill etc.

Relation to colonialism: This stock history of science was used by Macaulay to declare that all or most science is Western. On this ground, Macaulay in 1835 declared the West as “immeasurably superior” in science¹³ and imposed Western education on the colonised arguing that the colonised needed it for the sake of science.

Who needed colonial education: the colonised or the coloniser? The colonised were gullible and believed that the colonisers were actually working for the benefit of the colonised, and not their own benefit. In fact, it was the colonisers who were militarily insecure and afraid of revolts. Colonial education was imposed because the colonisers needed it as a way to curb revolts. The same Macaulay in an 1848 speech to British parliament¹⁴ argued at length that education for the British poor was the best means to exorcise the spectre of revolution that then haunted Europe. The first Western universities were set up in India shortly after the Indian revolt of 1857.

How does colonial indoctrination capture the mind?

Evidently, Macaulay understood that Western education creates a slave mentality, and makes the ruled submissive to the rulers. Why does Western education enslave the mind? If we examine its history, we find that Western education was a church monopoly until 1870, when the first bill for secular school education was introduced in Britain. Until that date the church controlled Western education, not only that provided by countless missionary schools, but ALL Western universities (such as Oxford and Cambridge) which were founded by the church, remained under church control. The church, too, invested in that education for its own benefit, not the benefit of the educated. Church education was designed to produce missionaries in the service of the church. The job of a missionary is to sell church dogmas which may be contrary to commonsense, like virgin birth, and remain firm in his belief in the teeth of opposition. Accordingly, the missionary mindset due to church education created a person who (a) trusts authority above commonsense, and uses that to cling to church dogmas, and (b) is deeply prejudiced against all critics, and denounces them without ever engaging with the critique. Given the church state alliance, colonial education was a slight variant: it taught trust in Western authority, not church authority. Hence, as a consequence of colonial indoctrination, the colonially educated learn to trust the West and are deeply prejudice against the non-West. They develop an inferiority complex in relation to the West, and can be observed to blindly mimic the West, and accept all things Western, carrying this mimicry to an absurd extent.

12 Josiah Priest, *Bible Defence of Slavery...and A Plan of National Colonization Adequate to the Entire Removal of Free Blacks*, by Rev. W. S. Brown, Louisville, Kentucky, William Bush, 1851.

13 T. B. Macaulay, *Minute on Education*, 1835. The Minute may be found online on many sites, such as <http://www.languageinindia.com/april2003/macaulay.html>.

14 T. B. Macaulay, Speech to the House of Commons, 18 April 1847. *Miscellaneous Writings and Speeches of Lord Macaulay*, vol. IV, *Speeches of Lord Macaulay*, http://www.gutenberg.org/files/2170/2170-h/2170-h.htm#2H_4_0031.

Lecture 3: Resistance to colonialism

To challenge the racist and colonial claims of “superiority”, it is important to contest this stock history of science.

Resistance to false history. Resistance to racism led to some earlier critiques of the stock history of science. The counter-claims that black Egyptian achievements were appropriated to the white Greeks. A brief account of George James,¹⁵ Cheikh Anta Diop,¹⁶ Martin Bernal,¹⁷ etc. Summary of responses to these critiques: Mary Lefkowitz¹⁸ et al.

The new critique 1: The above critiques are inadequate since they do not connect to the history of science (the reason cited for colonial education), and Greek glorification persists in the history of science. Further, both critics and supporters have totally failed to take into account the origins of racist and colonial history in earlier false history fabricated by the church, and also the imperial concerns to maintain those fabrications today. Thus, ever since its marriage to the state, in the 4th c., the church used false history to “prove” its superiority. The first church historian Eusebius wrote an extravagant hagiography of Constantine. The next church historian, Orosius, unabashedly used false history to denigrate “pagans”. This Christian triumphalist model of history as a means of glorifying supporters, and denigrating opponents became the model of history down to Toynbee and Fukuyama.

During the Crusades this history went ballistic, and was applied against Muslims. At that time, numerous texts were translated from Arabic into Latin. This translation was made theologically correct by advancing the fantastic conjecture that all secular knowledge in Arabic texts was the work of early Greeks. Where was the knowledge hiding all those centuries? A story of the “dark ages” was invented to “explain” that this knowledge was lost to Christian Europe, but was retained in the safe custody of Muslims, and hence was a rightful Christian inheritance. This history was boosted during the Inquisition, when knowledge was imported from all parts of the world, including India, and China, but its non-Christian origins were denied for fear of persecution. Examples are Copernicus and his heliocentric model (due to Ibn Shatir), Mercator and his chart (copied from Chinese star maps, using Indian trigonometric values), Newton and the calculus (imported from India). Another term “renaissance” was invented to explain the sudden spurt in purported European creativity.

The new critique 2: Racist historians did not begin *ab initio* but appropriated this long legacy of false history by a simple trick: an easy change of categories. The purported early Greek authors instead of being regarded as “friends of Christians” were regarded as whites! (Though it remains a mystery how the color of the author's skin can be deduced from a text!) That is, claims of Greek achievements in science, a fiction of Crusading history against Muslims, was repackaged and reused by racist historians against blacks.

Colonial historians used the same trick: but instead of religion or race they brought in the nebulous cultural category West, and spoke of the spread of “Hellenic” culture, to dispel the doubt about how some small Greek city states with meagre resources could have invented science. This simply chained one myth to another: barbarian incursions such as those of Alexander (or Hulegu, or the Crusades),

15 George James, with foreword by Molefi Asante, *Stolen Legacy: Greek Philosophy is Stolen Egyptian Philosophy*, African American Images, 2001.

16 Cheikh Anta Diop, *The African origin of civilization: Myth or reality*, ed. and trans. Mercer Cook, Lawrence Hill and Co., 1974.

17 Martin Bernal, *Black Athena: The Afroasiatic roots of classical civilization*. Vol. 1 *The fabrication of ancient Greece 1785-1985*. Free association books, London, 1987.

18 Mary Lefkowitz, *Not out of Africa: How Afrocentrism became an excuse to teach myth as history*, Basic books, 1996.

result mainly in a flow of advanced knowledge *towards* the barbarian military conqueror. Hulegu acquired astronomy from Khwaja Nasir ud din Tusi, and Moghuls turned Muslim. As Zoroastrian sources tell us, Alexander looted the library of Dara at Persepolis, and got it translated into Greek, much the same way as the fall of Toledo to Christian Crusaders led to its texts translated into Latin.

Lecture 4 and 5 Cross-checking the history of science

The strange thing is this: though the colonised changed their entire education system, based on this history of science, no one among the colonised cross checked it themselves. A billion Indians did not cross check it for nearly two centuries. Any school boy from an elite Indian school will rattle off names like Archimedes, and Euclid, and these are all portrayed as whites in Indian school texts, the same boy would be totally unable to tell you what the evidence for Archimedes or Euclid is. Let us take Archimedes as a test case, for the analysis is very similar for other glorified Greek figures.

Archimedes: Only a slight investigation is required to show that our information about Archimedes has been speculatively “reconstructed” from 4 texts dated between 1450 and 1564. However, the date of Archimedes is -300. So, the texts come from 1800 years after his date! How do we know that these texts are in any way connected to Archimedes? A 9th c. Baghdad book-seller may have slyly attached a famous name to a manuscript to increase its market value. A Byzantine priest may have interpolated the name of Archimedes into a Greek translation of an Arabic text, and so on. The possibilities are endless. The simple fact is that there is nil evidence to connect the actual text to Archimedes. As such Greek glorification is faith-based history, not history based on evidence. Further, as a matter of commonsense, scientific texts are frequently updated to reflect the latest knowledge, so a 16th c. text reflects 16th c. knowledge, even if we believe the text originated with Archimedes. For example, a manual on traditional navigation, from the Lakshadweep coral islands, attributed to the legendary Arabic navigator Ibn Majid, of the 16th c. accreted tables from an 18th c. British sailing manual. Nevertheless, Lefkowitz in *Not out of Africa* makes a fine point about something that Archimedes did about the sphere and cylinder, which is not to be found in the Rhind papyrus. What evidence do we have that this was done by Archimedes? Since Lefkowitz is demanding evidence for Egyptian origins, and ignoring the lack of evidence for Greek origins this shows the typical double standards which characterize racist history.

Archimedes is a typical representative example. ALL claims of Greek achievement in sciences are similarly based on late texts. In my book *Is Science Western in Origin?* I have taken 4 key figures, 2 Greek figures, Euclid, the purported mathematician, “Claudius Ptolemy” the purported astronomer, and 2 post-“renaissance” figures, Copernicus, and Newton, to show that the histories written about them are not based on evidence, but rather suppress the available evidence. We will mostly stick to Greek glorification in these lectures, since the other two cases require technical knowledge.

Speculative history based on the “evidence” of such late texts is unreliable and subject to manipulation. We must cross-check and calibrate it using commonsense, and robust non-textual evidence.

We take up the two cases of purported Greek astronomy and mathematics in detail using robust non-textual evidence. The evidence of Greek and Roman numerals made it impossible for them to do astronomy, and even to represent such as that of the Julian calendar, and Greek and Roman numerals which made it impossible for Greeks and Romans even to correctly represent a basic astronomical parameter such as the length of the year, resulting in a persistently deficient Julian calendar.

There has been much debate about the Pythagorean theorem in Egypt, Iraq, and India. These traditions stated the proposition for the diagonal of a rectangle which was with the one taught in schools today to decide which is superior. In fact, the way the theorem was stated in all three ancient traditions required a knowledge of square *roots* which were unknown in the West until the 12th c. as clear from the name *surd* for the square root of 2 which is a hilarious mistranslation.

Rejecting the false history of Greek achievements will not by itself result in decolonisation, it is only one step forward. The next step is to reject the bad philosophy which results from the false history.

As a simple example we consider the claim that deductive proofs are superior knowledge, and the claim that there really is a deductive proof of the Pythagorean theorem in the *Elements*.

What is the alternative to colonial knowledge? A blanket rejection of the West is not appropriate, since, as the preceding lectures show, much scientific knowledge was stolen by the West from the non-West. However, a critical rejection is in order. Example of Indo-Egyptian string geometry and the common geometry box used for school geometry. Critical return to roots: critical rejection as the distinction between decolonisation and Afrocentrism or Indocentrism or Sinocentrism.