

## Education and counter-revolution

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This refers to Irfan Engineer's comment on Maulana Azad and education. (*Frontier Weekly*, Vol. 46, No. 1, Jul 14 -22, 2013).

First of all, I would like to take this opportunity to extend my condolences. I knew the late Dr Asghar Ali Engineer for a long time. He was a man deeply rooted in tradition who could yet interpret it in a very nice way, often to the discomfiture of hide-bound traditionalists. I heard he was in hospital and was waiting for him to come out, to inform him about my rewritten version of "Islam and science",<sup>1</sup> which he had earlier published in his *Indian Journal of Secularism*. Unfortunately, he never recovered.

That also brings me to my comment. The issue cannot be just the *availability* of education: we need to rethink the *content* of education.

Over the last few years, a group of people under the banner of Multiversity (Penang, not Pune), with the cooperation of various other universities and institutions, have been trying to build a new "decolonised" model of university education,<sup>2</sup> to end academic imperialism,<sup>3</sup> and hegemony.<sup>4</sup> My role here has been to decolonise (and de-theologise) the *hard sciences*, particularly math,<sup>5</sup> physics,<sup>6</sup> and the history and philosophy of science.<sup>7</sup> I think it is essential to focus on "hard" sciences, since colonial education was originally instituted with the help of a false history of science,<sup>8</sup> and the demand for Western education continues to be justified today by the need to acquire science and technology.

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- 1 "Islam and Science" keynote address at International conference on "Islam and Multiculturalism", Asia-Europe Institute, University of Malaya, Jan 2013. <http://ckraju.net/hps-aiu/Islam-and-science-kl-paper.pdf>. In Proc. (ed. Waseda University Japan and University of Malaya), pp. 1-14.
  - 2 *Decolonising the University*, ed. Claude Alvares and Shad Faruqi, Multiversity and USM, Penang, 2012.
  - 3 Academic Imperialism. Meeting in Tehran, 2010. E.g., C. K. Raju, *Ending Academic Imperialism: a Beginning*, Citizens International, Penang, 2011. Draft at <http://multiworldindia.org/wp-content/uploads/2010/05/ckr-Tehran-talk-on-academic-imperialism.pdf>.
  - 4 Conference on Hegemony, USM and Multiversity, Penang, 2011.
  - 5 C. K. Raju, *Cultural Foundations of Mathematics*, Pearson Longman, 2007. A summary published in *Ghadar Jari Hai* is posted at <http://ckraju.net/papers/GJH-book-review.pdf>.
  - 6 C. K. Raju, *Time: Towards a Consistent Theory*, Kluwer Academic, 1994. See also, "Decolonising math and science", in Claude Alvares and Shad Faruqi, cited above and available at <http://ckraju.net/papers/decolonisation-paper.pdf>.
  - 7 Details of the alternative HPS curriculum, the earlier struggle in USM, and the related curriculum development workshop are posted on my blogs <http://ckraju.net/blog/?p=89>, and <http://ckraju.net/blog/?p=73>.
  - 8 Thus, Rammohun Roy, even before Macaulay, asked Lord Amherst for Western education in 1833, and Macaulay in his note of 1835 pointed out that half the people were already with him. Thus, consent for colonisation was engineered by means of a false history. See, *Ending Academic Imperialism*, cited above.

Now, the Communist Manifesto started out most famously by saying that “A spectre is haunting Europe”. A few months earlier, Macaulay (whom Marx called a whig historian<sup>9</sup>) described this spectre rather more graphically in his speech to the British parliament in April 1847,<sup>10</sup> describing the British riots of 1780.

...a hundred thousand people rise in insurrection. During a whole week, there is anarchy in the greatest and wealthiest of European cities. The parliament is besieged. Your predecessor sits trembling in his chair, and expects every moment to see the door beaten in by the ruffians whose roar he hears all round the house. The peers are pulled out of their coaches. The bishops in their lawn are forced to fly over the tiles. The chapels of foreign ambassadors, buildings made sacred by the law of nations, are destroyed. The house of the Chief Justice is demolished. The little children of the Prime Minister are taken out of their beds and laid in their night clothes on the table of the Horse Guards, the only safe asylum from the fury of the rabble. The prisons are opened. Highwaymen, housebreakers, murderers, come forth to swell the mob by which they have been set free. Thirty-six fires are blazing at once in London. Then comes the retribution. Count up all the wretches who were shot, who were hanged, who were crushed,...and you will find that battles have been lost and won with a smaller sacrifice of life. And what was the cause of this calamity, a calamity which, in the history of London, ranks with the great plague and the great fire?

The cause of revolt, Macaulay argued, was lack of education. Hence, he argued that the right way to counter these revolts was to “educate” the poor. He urged the government to do so pro-actively to prevent revolts, instead of just killing militants after the fact. (This is similar to, but more insidious than, the present-day argument that “development” will curb militancy.) Macaulay argued that such intervention was part of the duty of the state to protect private property from the loss caused by revolts. [He cited Adam Smith to discriminate between education for the rich (off limits for the state) and education for the poor.]

Clearly, Macaulay saw education as the most powerful (and cheapest) counter-revolutionary tool. So, while a spectre was indeed haunting Europe then, as now, attempts were on to dispel it. Macaulay's infamous minute of 1835 which initiated colonial education in India was presumably motivated by similar thinking, that it would help to stabilise colonial rule, by curbing revolts. By a curious coincidence, Western education in India really took off starting 1857 (though isolated institutions like Presidency College did exist earlier). In any case, this education established the “soft power” needed for the conquest of the mind which distinguishes colonialism from mere physical conquest. Without this counter-revolutionary tool, a handful of Britishers could hardly have continued to rule a vast country like India. At any rate, the fact is that neither Britain nor India had a real revolution! And, today, the Western educated are the strongest counter-revolutionary force in Iran, as they are in Egypt.

Regrettably, few have bothered to study or theorise about Western education as a counter-revolutionary tool. The counter-revolutionary nature of Western education, was it by design? Indeed it was. Historically, the first Western university was set up in the late 11<sup>th</sup> c. during the Crusades against

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9 Karl Marx, *Capital* vol 1, note 88 to chp. 10, “Macaulay, who has falsified English history in the interests of the Whigs...”

10 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](http://www.gutenberg.org/files/2170/2170-h/2170-h.htm#2H_4_0031).

Muslims. Western universities were designed from the start as a tool of the church to produce Christian missionaries. They were fully controlled by the church for centuries. As late as the 17<sup>th</sup> c. CE, graduates of Cambridge were required to sign an oath of allegiance to the church. Why? Because as Newton's mentor, Isaac Barrow, Master of Trinity College, explained, the aim of the college was “the breeding of clerics”.

Though church influence in education has receded, it is still visible today. For example, some of the most “prestigious” colleges in India (St Xavier's College, Mumbai, Loyola College Madras,...) are still controlled by the church, and still educate many of the future ruling Indian elite. (This was in line with the age-old church strategy of winning empires, by converting the rulers or their children, a strategy which worked with Constantine even if it failed with Akbar.) That is, contrary to the mythologised image of Western education as “liberating”, for centuries its real aim was to produce people who would help the church to control the masses. This aim was later taken over by colonialists (who aimed for indoctrination rather than full conversion).

Now, how would one design such education intended for mind capture? Let us put on the table the fact that church doctrine (as distinct from early Christianity) is just a bunch of the most absurd lies and superstitions, all told for its immediate political benefits.<sup>11</sup> Now, one lie requires a thousand more, and the church strategy is exactly that: to defend each lie by telling a thousand more. This is achieved by employing an army (of missionaries *and* academics) for that purpose. That is, church education was designed to train this army to defend those lies and to breed the fanatic commitment required of a missionary who must go further and propagate them. Clearly, apart from extreme loyalty, they must be convinced about their own superiority, and believe only their own sources are reliable. And, it is no accident that even today, the Western educated are loyal to the West, feel superior and believe (like Wikipedia) that only Western sources are authoritative and reliable. Just examine the references section of any social science paper or book, by a non-Western academic.<sup>12</sup> They are all stuffed with reverences [:)] to Western authorities.

I should clarify at this stage, that I use the word “West” not to refer to a direction in space, or even to “culture” in the sense of Spengler, or “civilization” in the sense of Toynbee. Rather my use of the term “West”, as defined in the glossary of *The Eleven Pictures of Time*, is closer to its contemporary use by Huntington (“capitalism as a cultural value”) and refers to a combination of church and capitalism. A key thesis underlying my definition is that, to succeed, capitalism required a transformation of values (or programming of human minds) brought about by the Western church (as a whole, and not any limited part of it, as in Weber's “Protestant ethic”).

Now, just because church education was designed to produce mental slaves, in this sort of education, achievement is measured by how long a student has sat silently on his backside in a semi-hypnotised state, switching off his mind and absorbing (or, memorising) the suggestions emanating from the lecturer's pulpit. The church is notorious for punishing critics in the most inhumane manner (as e.g. during the Inquisition). Likewise, any critic in the classroom is punished harshly by the teachers (as I

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11 Thus, for its material benefits, the church not only encouraged for centuries the crimes of the Crusades and the Inquisition, it also incited other crimes against humanity such as genocide on three continents (“doctrine of Christian discovery”), and slavery (“curse of Ham”) on a fourth. The church was in the forefront of the Cold War propaganda against Soviet Union, and now against “Islamic terrorists”. Fascism just used some well-established church tactics.

12 Claude Alvares, “Steeped in Eurocentrism”, *Economic and Political Weekly*, Vol - XLVI No. 42, October 15, 2011

have experienced both as a student and the head of a university department). People keep suggesting naïve ways of improving the existing educational system without realizing that the system was so *designed* to encourage blind belief and deter potential dissenters. This facilitates mind capture, for the majority of the “educated” have uncritically absorbed all sorts of superstitions<sup>13</sup> and false stories.

It is a sadly neglected fact, lost in the church-sponsored myths of “renaissance” and “enlightenment”, that through this system of education, the church dominated European minds and thinking for centuries. Hence, commonsense would suggest that those church superstitions are likely to permeate many Western academic products.

Let me give just two examples of such superstitions in science and mathematics. Thus, today, the first lesson in science typically relates to Newton's laws. These are called “laws” on the belief that there are eternal laws of nature. Hence, the Western educated come to regard the belief in laws of nature as a key scientific belief. Then (as pointed out in my paper on “Islam and science”), this belief is used to attack Islam as anti-science, since Islam allows regularities, but not *laws* of nature. *But is the belief in eternal laws of nature a scientific belief?* Hardly (for example, it is not refutable, and thus unscientific on Popper's criterion). Fallible scientific models, subject to constant revision, are fine, and such models (astronomical models, for example) existed long before the West had heard of science, but the belief in *eternal laws* comes to us specifically as a Western superstition, packaged as part of science.

Historically, this belief that God rules the world with eternal laws first originated as a church superstition in the Crusading theology of Aquinas<sup>14</sup> (obviously for political reasons which I explained long ago, in another article published by Dr Asghar Ali<sup>15</sup>). Our present education system feeds children this superstition about “laws of nature” as the first lesson in science, without ever informing them about the true historical origins of this belief in “laws of nature” or “laws of God”. Nor are they informed of Newton's religious beliefs that those laws had been *revealed* to him. Nor even are our budding scientists informed that the eventual failure of Newtonian physics was a direct consequence of the conceptual confusion (about time) arising from this very belief which led to the intrusion of religious metaphysics into science.<sup>16</sup> Adam Smith's “hidden hand of God” incorporates similar superstitions about the “laws of Deity” taught as the first lesson in economics.<sup>17</sup> More subtly, the contorted church

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13 C. K. Raju, “Escaping Western Superstitions”, talk at the BHU international seminar on Transcultural Asian Modernities. <http://ckraju.net/hps-aiu/Escaping-Western-superstitions.pdf>.

14 Thomas Aquinas, *Summa Theologica, First part of the Second Part*, 91,1, “a law is nothing else but a dictate of practical reason emanating from the ruler...the whole community of the universe is governed by Divine Reason. Wherefore the very Idea of the government of things in God the Ruler of the universe, has the nature of a law. And since the Divine Reason's conception of things is not subject to time but is eternal, according to Proverbs 8:23, therefore it is that this kind of law must be called eternal.” <http://www.newadvent.org/summa/2091.htm>.

15 C. K. Raju, “Benedict's maledicts”, Zmag <http://zcommunications.org/benedicts-maledicts-by-c-k-raju>. Reprinted in *Indian Journal of Secularism*, 10(3) (2006) 79-90. Briefly, post-Crusade church theology chose laws over Providence because Providence made God too powerful, and interfered with its earlier doctrine of sin.

16 C. K. Raju, “Retarded gravitation theory”, in: Waldyr Rodrigues Jr, Richard Kerner, Gentil O. Pires, and Carlos Pinheiro (ed.), *Sixth International School on Field Theory and Gravitation*, American Institute of Physics, New York, 2012, pp. 260-276. [http://ckraju.net/papers/retarded\\_gravitation\\_theory-rio.pdf](http://ckraju.net/papers/retarded_gravitation_theory-rio.pdf). Also, C. K. Raju, “Einstein's time”. *Physics Education (India)* 8(4) (1992) pp. 293-305.

metaphysics of time is what makes capitalist values credible.<sup>18</sup>

It is interesting how the “educated” react when these superstitions are pointed out. Like all indoctrinated people, the Western educated too are very comfortable with the church superstitions which they imbibed in their childhood, but are outraged when those superstitions are challenged! They respond with the usual church tricks such as suppression or censorship (as in your usual Western academic journals). Or with a personal attack to denounce the critic as a Hindu or Muslim chauvinist: recall that this method of denouncing dissenters as pagans, heathens, heretics, atheists, or Islamic terrorists etc. was always a stock church strategy. Such denunciations never needed any more evidence than was needed to burn a witch: as Witzel from Harvard demonstrated in his personal attack on me. Those not in an adequate position of authority react like the insular followers of any godman: they just recall other stories to support the story being challenged. Using one story to support another, or piling on the stories (or hypotheses), is the stock mythological trick used by the church. It is elementary philosophy of science that this way of piling on hypotheses (or stories) can be used to indefinitely defend any falsehood from refutation against any evidence.

Western education has yet another built-in strategy to preserve these superstitions. It ensures that the vast majority of people learn too little, so they are scientifically illiterate. Hence most are afraid to decide on their own, and are forced to trust scientific authority (which lies in the West). (Real knowledge is given only to a carefully chosen few, who are kept under control by other means, such as controlling the grants of scientists.) That is what allows church superstitions to be passed off as scientific truths. Scientific illiteracy is especially relevant to more technical examples, like that of Stephen Hawking's singularities used to support church superstitions about one-time creation, as I tried to explain in my book on *The Eleven Pictures of Time*.<sup>19</sup>

To come to my second example, concerning mathematics, I have repeatedly pointed out that the story of “Euclid” in our school texts is false. (My article on this too was published by the late Dr Asghar Ali in the *Indian Journal of Secularism*, in 2008.) In all these years, the NCERT could not locate any primary evidence about Euclid, but the story stays put in our school texts. I have now written a whole book *Euclid and Jesus*, and even offered a prize of Rs 1.8 lakhs for serious evidence about Euclid, which no one has claimed so far. A top NCERT official just brazenly said that primary evidence was not needed, and the committee's approval was what was important.

Once again, note that the issue of “Euclid” is not limited to the history of an individual: this is also a substantive criticism about the kind of math being taught today. This superstition (about Euclid) in the history of mathematics is related to church superstitions about mathematics per se.<sup>20</sup> Thus, the story

17 Don't believe the Wikipedia falsehood that “the hidden hand of God” was a metaphor. Chapter V of the *Theory of Moral Sentiments*, is about “Laws of the Deity”, in which Adam Smith quite explicitly compares these “laws” to the laws of motion. <http://www.econlib.org/cgi-bin/searchbooks.pl?searchtype=BookSearchPara&id=smMS&query=the+deity>.

18 C. K. Raju, *The Eleven Pictures of Time*, Sage 2003, chp. 10, “Time as money”.

19 Or see the recent blog on the metaphysics of infinity, <http://ckraju.net/blog/?p=93>, or see my earlier review of Hawking's latest book in DNA, [http://www.dnaindia.com/lifestyle/review\\_the-christian-propaganda-in-stephen-hawkings-work\\_1495047](http://www.dnaindia.com/lifestyle/review_the-christian-propaganda-in-stephen-hawkings-work_1495047), and see the related blog entry, “Hawking singularities”, <http://ckraju.net/blog/?p=50>.

20 This is explained for the layperson in my book *Euclid and Jesus: how and why the church changed Christianity and mathematics across two religious wars*, Multiversity, 2012. More details at <http://ckraju.net/Euclid>.

goes that mathematics is secular and universal. Like the story of Euclid, no educated Indian bothered to check out *that* story in almost two centuries. In fact, the calculus originated in India with a different philosophy and a different number system from that used in calculus teaching today.<sup>21</sup> So, how can one say that math is universal? Educated Indians did not even notice what racist historians meant by “universality”: simply that all other ways of doing math are axiomatically inferior! Specifically, they maintained that empirical knowledge is inferior to church metaphysics (underlying present-day formal math), although empirical knowledge is secular and universal while church metaphysics can hardly be either.

Thus, *why* is  $2+2=4$ ? Most people will put 2 objects and 2 objects together to make 4 objects. That is practical, empirical (hence universal) and secular, but it is not math! Thus, formal math disallows empirical proofs on the grounds that they are inferior, and we should prove things metaphysically. This is already a religious bias against *all* early Indian systems (Nyaya, Advaita Vedant, Buddhist, Jain, Lokayata) which all accept *pratyaksa* or the empirically manifest as the first means of proof. Likewise, it is also a religious bias against Islam, which too accepts *tajurba* as a key means of proof, as does science.

To prove  $2+2=4$  metaphysically, we must first specify (using Peano's axioms or set theory) that the numbers involved are integers, a specification impossible for computers, since it brings in the notion of infinity by the backdoor. The Western metaphysics of infinity relates to church notions of eternity and is certainly not universal. When this religious bias in present-day formal math (and notions of infinity) is explicitly pointed out,<sup>22</sup> we go through the usual cycle of responses. People are first outraged (due to childhood indoctrination), and denounce the critic. Then they recall other stories to support their view. Eventually they say they are not experts in mathematics, and a Western-certified expert must decide.

Now it must be a really rotten kind of education which does not even teach people *why*  $2+2=4$ .<sup>23</sup> But, if people are that ignorant, how on earth do they *know* who the real experts are? (They don't; they just blindly trust Western labels of approval.) Going to “experts” means a stalemate, as in the case of Euclid, because of a conflict of interests: the interest of the “expert” is naturally linked to the West—the certifying authority. (Of course, the blind trust in experts is misplaced. For example, many IIT professors of math I met, did not know enough math. Hence, I left the math department of IIT Delhi in 3 months after joining there for PhD.) Thus, this technique of reference to “experts” serves to control dissent. Sad that a billion Indians are still so easily controlled by a handful of Western-approved people for even so simple a matter as  $2+2=4$ . This, in itself is sufficient ground to reject Western education.

To summarise, given the Western agenda to use church education to extend its “soft power” by creating mental slaves, why do we want more of this sort of education? I should clarify that this strategy of “soft

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21 For an early (and partial) explanation of the differences, see C. K. Raju, “Computers, mathematics education and the alternative epistemology of the calculus in the Yuktibhasa”, *Philosophy East and West*, 51:3 (2001) 325–362. <http://ckraju.net/papers/Hawaii.pdf>. For further details, see *Cultural Foundations of Mathematics*, 2007, and other recent works cited.

22 See, e.g., C. K. Raju, “Teaching mathematics with a different philosophy. Part 1: Formal mathematics as biased metaphysics.” *Science and Culture* 77 (7-8) (2011) pp. 274–279. <http://www.scienceandculture-isna.org/July-aug-2011/03%20C%20K%20Raju.pdf>.

23 For a brief explanation see my recent article in *NaiDunia*, <http://naiduniaepaper.jagran.com/Details.aspx?id=511188&boxid=28683834> and the full article with references posted on my blog at <http://ckraju.net/blog/?p=92>.

power” was not confined to colonialism, and was explicitly resurrected by Huntington after the end of the Cold War, and the demise of the Soviet Union. (This is discussed in *The Eleven Pictures of Time*.)

To refute a common caricature of my position,<sup>24</sup> let me further clarify that the demand is not to reject everything wholesale, but to critically review and correct the knowledge being imparted by current education. Particularly, the demand is (1) to throw out all that trash church metaphysics in it, and (2) to throw out blind reliance on Western (“internationally accepted”) authorities, together with church systems of secretive evaluation (“blind refereeing”) etc. (which bring in the same metaphysics by the backdoor).

Who is going to do it? Will the state do it? Irfan Engineer is absolutely right that the Indian state has intended all along to use education to provide subsidies to the rich (the IITs are a symbol of that). Therefore, recalling pre-independence visions of education (including those of Gandhi and Tagore) is unlikely to deter the Indian state which is today going full steam in the exact opposite direction of selling out to corporates and the West, by privatising education, by legalising reliance on Western experts, and by demanding imitation of the West to the extent of forcing our semesters to synchronize with theirs, irrespective of Indian seasons.

Can *other* nations do something? That brings us face to face with the real problem. Even if a state agrees to change the education system, as Iran is still trying to do, there is no comprehensive alternative *content* available as of now. Iran has failed to implement an alternative model even 30 years after its revolution because of the great practical difficulties involved. While the outlines of an alternative are now beginning to emerge, to be successful, such an alternative *must* include hard sciences. My courses on “Calculus without limits”, and “History and philosophy of science” are the only two “decolonised” courses related to “hard” sciences which have already been tested with student groups. The simple idea is that math should be taught for its practical value, and that there should be solid evidence for history, considering how the church systematically falsified history since Orosius, and how a whole lot of history, from Euclid and Ptolemy to Copernicus and Newton (and down to this day) stands exposed as false.<sup>25</sup> The last course also explains how changing history leads to a new philosophy *and* a new science. The students clearly understood the proposition about an education designed to free the mind instead of enslaving it. Claude Alvares recently interviewed some students of the latter course,<sup>26</sup> and I hope the videos will be put up shortly so people can see the truth of the matter for themselves.

So, why not work to create alternative education content which could be used worldwide? Further, alternative content may well require alternative delivery modes, such as the *mujawara* system I am trying out in my university, to teach open-source computing. This effectively puts the alternative systems outside state purview and control. Even if the task of building alternative content is a long and difficult one, let us at least initiate it and spread awareness about the need for it with the help of debate and discussions.

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24 C. K. Raju, “Be critical, choose what is best”, *The Sun*, Malaysia, 29 Aug 2011, p. 16. Archived at <http://ckraju.net/press/2011/the-Sun-29-Aug-2011-p16-clipping-ckr-response.gif>.

25 C. K. Raju, “Is science Western in origin?”, Multiversity, Penang, and Daanish books, Delhi, 2010. Dissenting Knowledges Pamphlet series, No. 8. Also, क्या विज्ञान पश्चिम में शुरू हुआ? Daanish books.

26 Interviews by Claude Alvares, vol 5, Multiversity, Penang, 2013.