

# Decolonisation of universities begins with us

BY **ZAINON AHMAD**  
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THEY were knocked off their pedestals just as rudely as Saddam Hussein statues were pulled down from their mountings after the Americans and their mostly western allies overran Baghdad in 2003.

Among them are such gods of science and mathematics as Sir Isaac Newton, famous for his law on why apples fall. He was pilloried for allowing his fear of the Church of England to deter him from publishing some of his best discoveries – his true masterpieces.

Others who were knocked down included people like Kepler, Descartes and Einstein. And so was Galileo who invented the telescope but was in trouble with the Catholic Church when he could see too far into the heavens.

All these bashings and the questioning of the assumptions on which human knowledge is based took place during the three-day International Conference on Decolonising Our Universities that ended on Wednesday in Penang. It was the fourth in the series of Multiversity Conference organised by Citizens International and Universiti Sains Malaysia.

Nicolaus Copernicus is remembered mostly as a mathematician and an astronomer but few know that he is also a monk and it was because of this that his claim that the earth moves around the sun and not the other way round as was originally believed was easily

accepted by the church.

But the conference was told that he was not the revolutionary scientist he has been made out to be. He was just a common plagiarist. He merely translated the work of Ibn Shatir of Damascus.

It was also told that few academics, scientists, mathematicians, astronomers and other researchers were really free of the influence of Christian theology because for centuries the church was the key consumer of the products of the western university system and therefore had to remain loyal.

The conference was told that anyone who challenged the church had to suffer and it was for that purpose that the Inquisition was instituted. Rival institutions also suffered and this was the fate of the great university complex of Alexandria, of which the famous library was a part.

Many wondered aloud whether Christian theology still influences western academicians and brought up the brilliant Stephen Hawking whom most Malaysians know only as the writer of a small book, *A Brief History of Time*.

Hawking wrote many other books and some contain quite a bit of Christian propaganda. He even attempted to reconcile the Big Bang of a few billion years ago with the Bible story of creation in seven days some 6,000 years ago.

Many other gods of science and mathematics, as the world know of them, were also called liars. The great 16th century cartographer Gerardus Mercator whose maps

and charts helped the Europeans to reach the East was so fearful of the church that he did not acknowledge his non-Christian and especially Muslim sources.

Another great god of science and mathematics, Albert Einstein, was dragged down from his Olympian heights when it was disclosed that his formula on the theory of relativity was corrected by Indian scientist and mathematician C. K. Raju recently.

The expose by the scholars and participants from 20 countries help to convince those who were still hesitant about the need for efforts to decolonise universities – still very much Eurocentric – in Asia and Africa that the knowledge they had been “brainwashed” into believing as being universal was not universal at all and based on false assumptions.

It was also meant to provoke re-thinking about the assumptions they had made based on discoveries and ideas of western scholars published in western academic journals, that nothing should be accepted as universal truth without careful scrutiny.

Students have often assumed calculus, the subject they learn in mathematics, is of western origin. Nothing is further from the truth. It was stolen from India by the Jesuits, said Raju who said the mode of calculation was important for navigational purposes.

It helped Vasco da Gama to reach the Cape of Good Hope and Goa.

According to Datuk Shad Saleem Faruqi, emeritus professor of law and legal adviser, Universiti Teknologi Mara, who is also visiting

professor at Universiti Sains Malaysia, the Europeans think nothing of falsifying history.

He said everyone seems to think that the Johannes Gutenberg's printing press, developed in the 15th century, was the first in the world when a number of western scholars were aware that Pi Sheng had already developed one in 1040 but little is said of him.

Likewise, the West seems reluctant to acknowledge scholars from India, China, Africa and those from the Muslim world and promotes the idea that the Bologna monastic school was the first university.

Thus, few know about the great universities of Taxila, Nalanda, Zaytuna and Nanjing which preceded Bologna.

On legal education, he said, it is still very much western-centric and lamented that despite the existence of local law programmes since 1972, the Legal Profession Act continues to recognise foreign (mostly UK) law degrees and qualifications.

On the Act's permission to foreign lawyers to be admitted on an ad hoc basis to argue special cases, he was cynical to the idea of inviting Cherry Blair as a human rights expert when there are hundreds of local ones. Fortunately, the judge was not an Uncle Tom and he rejected her application.

Because of this, the conference agreed that while the physical colonisation is long gone – hopefully so, said some – the mental colonisation is very much alive. Thus the call for the need to purge the “West in us” before efforts to decolonise can truly begin.

# Scientists build on work of predecessors

**IN REPORTING** on the Conference on Decolonising our Universities (July 1), your writer highlighted the work of the Indian scientist and mathematician C.K. Raju who recently corrected Einstein's formula on the theory of relativity. Good for Raju!

While we celebrate yet another step in the advancement of science, the writer's contention that Raju's achievement resulted in "another great god of science and mathematics, Albert Einstein, (being) dragged down from his Olympian heights" shows a misplaced understanding of the way science advances.

Science progresses when researchers build upon the foundation laid down by their predecessors.

From the 13th century, researchers in Europe studied and translated the earlier work of scientists from the Arabic-speaking world who in turn, from the 8th century, studied and translated the learning bequeathed by the Greeks.

In research, scientists confirm, disprove or refine the findings of those who have gone before them. Indeed, even if a scientist were proven wrong down the road, there is no dishonour as long as his conclusions had been properly drawn from information available at the time.

The landmark discoveries of Einstein that modified the basic laws of gravitation promulgated by another scientific luminary, Newton, three centuries before do not lessen our admiration of the latter. Is there need to denigrate Einstein if someone else has now elucidated further on his discovery?

**Researcher  
Kuala Lumpur**

# Science is about why, not what

THIS refers to the comment by “Researcher” (July 4) on the article by Zainon Ahmad on the Conference on Decolonising Our Universities. As a general proposition, I agree that science is fallible, so there is no need to denigrate a scientist for making a mistake. However, Einstein’s mistake occurs in a context where he is suspected of having copied the entire theory of relativity from Poincare. In this context, a mistake has a different significance.

Anyway, my point in the conference was that science is not about what you believe but why. People blindly trust scientists and stories about them, and such blind trust amounts to superstition, not science. People blindly trusted Einstein and went wrong about science.

“Researcher” too should have read what Einstein wrote, what Poincare wrote, and what I wrote (<http://ckraju.net/misc/Einstein.html>, with references to published work). By commenting without understanding the facts of the case, “Researcher” has only proved my point. My further point was that such gullibility of the colonised was exploited by the colonisers who fed them a false history of science to change the education system and thus dominate their minds.

**C. K. Raju**  
**Visiting Professor**  
**School of Mathematical Sciences**  
**Universiti Sains Malaysia**

# More level debate called for

I REFER to “Decolonisation of universities begins with us” (July 1). Firstly, it is good that mistakes of the past are highlighted. For example, we now know that many European scholars might have been academically dishonest as your news report implies.

However, if we're not careful, the post-colonial approach might degenerate into mere west-bashing and thumping the egos of non-westerners. If we truly desire academic honesty, then one has to scrutinise every scholar and historian's work. Can we say that historical accounts by Asians are more neutral, not racist, etc? That Asian academicians have never plagiarised? If we can come up with specific examples of Asian academicians, then the debate will be more level.

Secondly, it is true that the Catholic church did commit some errors in persecuting academicians (e.g. Copernicus, etc). It should be pointed out that the church's claim to infallibility (safeguarded from error) is only in her teaching on matters relating to morals and faith. Hence, the church may be liable to error when it makes statements about say, science and business, but safeguarded from error when it makes statements about the moral aspects of science.

# Greater than the sum of its parts

I AM not a physicist and I don't know very much more about Einstein's Theory of Relativity than the next person. My response to the article "Decolonisation of universities begins with us" was made owing to what I felt was undue disparaging of Einstein just because someone else had made a correction to one of his equations.

Prof C.K. Raju has now said (July 6) that Einstein's vilification is justified because the latter is suspected to have "copied the entire Theory of Relativity from Poincaré".

Prof Raju's erudite analysis of the works of Einstein and Poincaré that led him to this conclusion are best left to discussion among experts. Here, I would just like to share a few common sense thoughts.

Plagiarism in scientific research does happen. For example, someone could rehash a long forgotten report in an obscure research discipline, and have it published in one of the less read journals. However, such shenanigans are difficult to pull off in a high profile area of research where each new discovery is minutely discussed, analysed and dissected by experts in the field.

If Einstein had essentially plagiarised the discoveries of Poincaré, this transgression would not have been lost on a host of expert physicists who had applauded Einstein for his discovery. As much as they were Einstein's contemporaries, they were also Poincaré's.

It would arguably have been easier for scientists of the day to be persuaded by the writings of someone of the stature of Poincaré, a distinguished professor at the Sorbonne, than Einstein, a Bern Patent Office technical expert, third class.

Indeed, if Poincaré had in fact anticipated Einstein's findings on relativity, wouldn't the community of physicists have hoisted Poincaré on their collective shoulders and declared him a genius, even before Einstein's publication? Why did they hold back their praise until Einstein's paper came along?

Rightly or wrongly, the scientific community at large were of the opinion that the body of work accomplished by Einstein represented an important advancement over existing knowledge at the time. How would such a turn of events square with Prof Raju's contention that Poincaré had in fact articulated all the essential elements leading to the theory earlier?

I would hazard a guess that what Einstein offered to the scientific community in his Theory of Relativity was greater than the sum of its parts. Think of a jigsaw puzzle. All the pieces are already there to begin with, yet someone still has to put them all together to make sense of the final picture. Might Einstein have been that someone?

# Scientists can err

THIS refers to the letter “Greater than the sum of its parts” (July 8) from Researcher. Poincare noticed what Einstein never did, that relativity leads to functional differential equations. Accepting this changes physics fundamentally, as I have pointed out in the book *Time: Towards a Consistent Theory* (Kluwer, 1994). One cannot get around this simple fact by counterfactually arguing that the scientific community is utopian and hence infallible.

Science and scientists are both human and fallible, else science would never progress. Researcher’s argument is a known fallacious one, which rules out the possibility of research leading to fundamentally new knowledge.

This was my point at the conference on “Decolonising our Universities” – that there are

far too many people like Researcher steadfastly refusing to examine the facts and groping in the dark to preserve the stories they were indoctrinated with from childhood. Superstitions flourish in an atmosphere of ignorance, and the present education system is designed to keep people scientifically ignorant. (That includes scientists who are forced to overspecialise.) Thus, people are forced to trust (Western) authority. The solution I proposed was to decolonise the math and science curriculum, for math and science are easy, if taught correctly, and this would make scientific knowledge accessible to all, so they can decide of their own knowledge.

Here is an easier example from my conference talk – how the scientific community

can persistently err even on elementary science. The belief in “laws” of physics is not scientific, since it is not refutable. It is a religious belief, for Aquinas said God rules the world with eternal laws, contrary to Islamic beliefs. Nevertheless, this belief is taught to school children (as in Newton’s “laws”) as the first lesson in science! Physicists like Hoodbhoy have exploited this pseudo-scientific belief in “laws of physics” to fault Islam as anti-scientific. Should we apply Researcher’s anti-research argument to accept this conclusion as valid?

**C. K. Raju**  
**Visiting Professor**  
**School of Mathematical Sciences**  
**Universiti Sains Malaysia**

# An inquiring mind will set you free



## ► SCENE: Restoran Raju, PJ

**C**HONG: Azman, when Cikgu and you were in Penang a fortnight ago did you manage to take him to your favourite *nasi kandar* restaurant, Line Clear, in Penang Road?

**Azman:** Of course I did!

**Mohan:** Tried other *nasi kandar* stalls?

**Azman:** Nope. Tried them many years ago. But after discovering Line Clear, I refused to go anywhere else. I have been persuaded to go back to the stall beside the Kapitan Keling mosque, also the

one at the Immigration Department, Kassim Restaurant in Chulia Street or even the Hameediyah Restaurant in Campbell Street, but I

am now completely loyal to Line Clear.

**Chong:** A faithful customer?

**Azman:** Yep, a faithful and satisfied customer. For years now I have not eaten anywhere else.

**Zain:** Once in a while you must try out others as well. They may have improved, or have introduced several new dishes, or the cook might be a new fellow now.

**Mohan:** I agree with you, Cikgu.

**Zain:** Blind faith is bad.

**Mohan:** I agree, Cikgu.

**Chong:** I know this is leading to something you have been saying over and over again ever since you attended that conference in

Penang, "let's free the mind of Western colonisation". I know you are about to say that blind faith in the West is just as bad.

**Zain:** That's right. I'm glad I attended that International Conference on Decolonising Our Universities in Penang a fortnight ago. I am grateful to Azman for letting me tag along when he was assigned to report on the conference. The three-day proceedings removed the shackles and blinkers I have been wearing all these years, leaving me free to think independently and be critical of any new discovery.

**Mohan:** To question everything.

**Azman:** That nothing should be accepted at face value. Inquiry by some critical eastern minds has led to the discovery that Copernicus' discovery of the earth going around the sun was not his original idea at all.

**Chong:** So I heard. And this questioning has led to many gods and goddesses of science - the ones we have been worshipping - being toppled from their pedestals and some being dragged in the mud.

**Mohan:** It's not going to be easy. While the physical colonisation ended with the lowering of the Union Jack on Aug 31, 1957, the colonisation of the mind has not ended. And our minds have been colonised to such an extent that many of us would come close to lynching a guy for saying that it was a Christian church that ordered the destruction and burning of the Great Library of Alexandria in the

5th century A.D.

**Azman:** But the West is clever at explaining and rationalising discoveries made by non-Europeans which it copied. They use the word modern for something they took from us. Thus the redevelopment of the movable type printing press by Johannes Guttenberg in 1436 was called modern to differentiate it from the one invented by the Chinese almost 400 years earlier.

**Zain:** Well, it has been proven that there was a lot of duplicity in the past. There were many cases of Westerners taking the discoveries of Easterners without acknowledging them. Yes, they stole. But they would scream blue murder if any Easterner today were to use their discoveries without acknowledging it.

**Chong:** Some of our minds are so completely colonised that we find it difficult to believe that Europeans plagiarised our discoveries but would not hesitate to condemn any of us who has been suspected of "stealing" the work of a Westerner.

**Zain:** By being critical and

unwilling to accept something without question, we may discover that much of what we know - our knowledge - has been based on wrong assumptions and basis.

**Azman:** I like one fellow at the conference who asked that since we are the sum total of what we know and since much of what we know is based on false assumptions, what are we?

**Mohan:** It is a difficult task.

**Zain:** Decolonising? Of course it is. But we must do it. Otherwise, stop complaining that our minds are colonised. I understand you saying that. After all, our university system is a Western one. And it moulds our mind.

**Mohan:** So what can we do?

**Zain:** Question. Why is a university divided into faculties? Africa and Asia had universities long before the first European university was established in Bologna in 1088. How were the pre-European universities of Africa and Asia divided? Why do we structure our campuses the way the Europeans do? Is there any other way? Already there

are some experiments going on in certain campuses in Africa? And then there is the Swaraj University experiment in India.

**Mohan:** Are we going about this independent of the West?

**Zain:** No. The idea is to work together. The Westerners too have to critically examine what they have in place. It is going to take a long time, but the conference in Penang is a start.

# Poor journalism

I REFER to "Decolonisation of universities begins with us" by Zainon Ahmad (July 1). It is an unbelievably poor piece of journalism on an extremely negative and xenophobic conference.

If you really want to decolonise your universities, will you stop using penicillin in your medical colleges and cease using the internet immediately, please?

**JD**  
**via email**



# Stop explaining away incompetency

I REFER to "Decolonisation of universities begins with us" (News without borders, July 1). The article is surprising in that it is reporting an international proceedings at a Malaysian university. It is cause for alarm if our universities think that such processes can bring them forward.

I believe that nearly all countries were colonised at one time or another and some for hundreds of years. England by the Normans, Spain by the Moors, China by the Mongols, North America by England and South America by Spain and Portugal, Taiwan and Korea by Japan just to name a few.

Has Spain been conducting these type of proceedings to excuse away its incompetence after 800 years of being colonised? When a nation overthrew the colonisers or the colonisers became one of them a hallmark of such nations that became truly independent was when they absorbed the best from their "masters" and developed their thought and philosophy from then on.

Assertions that the Jesuits stole calculus from India is a point to ponder. How were Indians then prevented from developing calculus independently? Was there a patent restriction then to prevent its use in its "native" country? We should take pause and look at the development of lasers carried out independently in the Soviet Union and the US and the west. It found its fruition in open societies with the development of lasers now in equipment used daily. Does it imply that calculus could not be developed in India simultaneously

This business about the planets revolving around the sun historically, heliocentrism was opposed to geocentrism, which placed the Earth at the centre. The notion that the Earth revolves around the sun had been proposed as early as the 3rd century BC by Aristarchus of Samos but had received no support from most other ancient astronomers. Glibly one can say that there is nothing new under the sun.

The debt to ancient Greece and Rome has been underestimated by the conference and they would do credit to themselves by researching how these civilisations have contributed to modern thought. The operative is in "thought", as it is this that frees the mind.

The conference-goers pay medieval European society a left handed compliment when they stated that even under that face of persecution, the "Galileo" of this period continued to work and make more progress.

It is time to stop playing the colonising card to explain away incompetency.

South Korea and Taiwan had experienced a most brutal period of colonisation and now are at the top by their own effort.

To waltz away from poor international ranking of universities and say that we have something special in our educational system that is unrecognised will do us no good.

**Ir Patrick C. Augustin**  
Kuala Lumpur

# Human failings not the issue

THIS refers to the letter "More level debate called for" (July 7) in response to "Decolonisation of universities begins with us (July 1). The issue is not of human failings, but of the systematic falsification of history by the church. The declared church policy since Orosius (4th c.) was that it was moral to tell lies to benefit the church. That is, after the church combined with the state, it used false history as an instrument of mind control.

This Orosian history turned virulent during the religious frenzy of the Crusades when world-knowledge in Arabic books was indiscriminately attributed to "Greeks", concocted where necessary, like Euclid and Claudius Ptolemy. This wholesale falsification of history continued during the Inquisition with people like Copernicus refusing to acknowledge their non-Christian sources like Ibn Shatir or Nasiruddin Tusi for fear of church reprisal. (Copernicus personally avoided persecution by waiting till he was on his deathbed before publishing his work.) This false history was later used to control the minds of the colonised. (See *Ending Academic Imperialism*.) Why the fear of a critical challenge to this after 17 centuries? Because it was a source of power? All we want is the truth and the whole truth.

In fact, the field is still tilted markedly in favour of the West. Westerners from influential universities still control academic journals and routinely suppress any challenge to this false history. For example, Owen

Gingerich from Harvard lamely defends the Copernicus story by saying that even though Ibn Shatir's book was in the Vatican library which Copernicus consulted, he could have "independently rediscovered" the very same ideas in it! We still have roads named after Copernicus (in Delhi), but none after Ibn Shatir or Khwaja Nasiruddin.

Similarly, many people now claim that Newton might have "independently rediscovered" the calculus just when a dependent discovery was possible, for Jesuits in Cochin started translating books there in the 16th c. (including books containing calculus results which Newton later claimed) and despatched them back to Europe. That is, the false history built by the church continues to be institutionally maintained today. One of my proposals at the conference was the creation of forums for an open debate on history and philosophy of science, not mediated by the heavy arm of Western authority.

Decades after political independence, countries like India and Malaysia have few institutions to re-examine this history which was the source of their mental bondage. So we need a lot more of such attempts, not less for a level debate to be possible.

**C. K. Raju**  
**Visiting Professor**  
**School of Mathematical Sciences**  
**Universiti Sains Malaysia, Penang**

# Nasi kandar shop in need of clean-up

MAY I make a comment on Azman's remarks in Zainon Ahmad's column "What They Say" (July 12)? Azman said he is "now completely loyal to a shop in Penang where he goes for his favourite *nasi kandar*."

Unfortunately while the food there may be good, I cannot say the same about the cleanliness or hygiene of the place, and I think the Penang Island Municipal Council should check on the place and order its closure before people fall ill from food poisoning.

Recently I took some friends there for dinner and while we were eating, we noted some stray cats running about the place. And when the diners at a nearby table finished and left, the cats jumped on the table and began to feed on the leftovers. And to think that the same plates are then used by later customer.

We were totally disgusted and left in a hurry without finishing our meal. We swore never to eat there again. And Azman, if you know the owner of the restaurant, please ask him to clean up his place.

**Michael Goh**  
via email

# History must be based on evidence

THIS refers to "Stop explaining away incompetency" (Letters, July 18) which followed the article "Decolonisation of universities" (July 1). The writer, Ir Patrick C. Augustin, has confounded colonialism with mere physical conquest. This is incorrect. Though some Moghul conquerors like Timur were brutal, Moghul rule in India was never colonial. Colonialism involved a peculiar conquest of the mind by indoctrination through the education system. False history was the key instrument of soft power used for this mental conquest. Falsifying history to glorify itself and belittle others was a declared church policy since Orosius (4th century).

However, it assumed a particularly virulent form during the religious frenzy of the Crusades and the Inquisition. All knowledge was given a theologically correct origin. Past knowledge was indiscriminately attributed to "Greeks", to deny credit to Arabs and Egyptians among others. Subsequent knowledge was claimed to have been "independently rediscovered" by Christians in Europe, like Copernicus. However, history must be based on evidence, not faith. And there is no serious evidence even for the existence of major Greek figures of western history like Euclid and Claudius Ptolemy, let alone for wild claims about Aristarchus of Samos.

Greeks could hardly have done any science for they were a superstitious lot, who condemned Socrates and Anaxagoras to death on the charge of studying astronomy, as described in Plato's *Apology*. Roman arithmetic, like Greek,

was primitive: to write 1788 in Roman numerals, as MDCCLXXXVIII, needs 12 symbols. Hence, both Greek and Roman calendars were excessively erroneous, even by the standards of their times.

Anyway, what the conference on "Decolonising our Universities" advocated was a critical re-examination of the educational policies based on colonial history. Such a critical re-examination has not been done since independence.

About calculus, and the false history that it was created by Newton, Augustin should read my book *Cultural Foundations of Mathematics*. My point is that Newton's difficulties with calculus led to the failure of his physics and its replacement by relativity. Thus, Newton unsuccessfully tried to fit the imported calculus to the Christian theology of infinity, which is completely irrelevant for any of its practical applications. This was not progress but regress.

Therefore, today, if we do maths for its practical applications, not indoctrination, we must eliminate that Christian metaphysics from maths. This also makes calculus easy for non-maths students, and enables maths students to work on more advanced problems. I demonstrated this last year with four groups in USM. At the conference, I advocated that policies on maths education should be reconsidered accordingly.

**C. K. Raju**  
**Visiting Professor**  
**School of Mathematical**  
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## Show us the evidence

I REFER to "History must be based on evidence" (Letters, Aug 12) and would like to examine a few propositions by Professor C.K. Raju.

He says: "Colonialism involved a peculiar conquest of the mind by indoctrination through the education system." If after 54 years of independence our educators are still shackled in their mind, then indeed we have much to fear.

He says: "Falsifying history to glorify itself and belittle others was a declared church policy since Orosius (4th century)." What is the source of this material?

Orosius was preoccupied "to become better acquainted with these questions concerning the soul and its origin" and "aided St Jerome and others in their struggle against this heresy". He wrote *The Seven Books of Histories Against the Pagans*.

Raju says: "However, it assumed a particularly virulent form during the religious frenzy of the Crusades and the Inquisition." How does this curious labouring about the Inquisition free the Asian mind? It would appear that European minds are the one that had been shackled and not Asian. Hence the Europeans should be pitied.

Raju says: "Greeks could hardly have done any science for they were a superstitious lot, who

condemned Socrates and Anaxagoras to death on the charge of studying astronomy, as described in Plato's *Apology*." With this sweeping statement Raju consigns to the dustbin the works of Thales, Pythagoras, Euclid, Archimedes, Ptolemy, Eudoxus (Real Number) and many others.

When it suits Raju, he casually states: "And there is no serious evidence even for the existence of major Greek figures of western history like Euclid and Claudius Ptolemy." We are indeed indebted to these superstitious lot who may have not even existed.

Raju says: "About calculus, and the false history that it was created by Newton, Augustin should read my book *Cultural Foundations of Mathematics*. My point is that Newton's difficulties with calculus led to the failure of his physics and its replacement by relativity." This curious statement belies the fact that Newtonian physics in its three fundamental laws of motion are still taught in schools and universities. Raju could usefully help us all in the dark which are the Newtonian physics that has failed?

Raju must in his own words defend his assertions, "History must be based on evidence".

**Patrick C. Augustin**  
Kuala Lumpur