

On HIV, Tiananmen Square and science

Written by Matthew Bailes, ARC Laureate Fellow, Swinburne University of Technology., Swinburne University of Technology

In light of the fact that the Australian government has announced its intention to place a [lifetime visa ban on boat people](#) who arrive here, and that in America one of the candidates for the US Presidency is revelling in [denouncing the science behind climate change](#), a speech I gave to ANU graduates earlier this year seems as relevant as ever.

It isn't hard to see the dangerous parallels between Donald Trump's America and the Cultural Revolution, so here I offer an edited version of that speech.

I first came to ANU in the summer of 83/84 in search of a home for my PhD as a vacation or "vac scholar".

A year and a bit later I returned, armed with a PhD scholarship and all my worldly possessions, to work at Mount Stromlo and Siding Springs Observatories, Australia's premiere astronomical research institute.

I'd like to discuss two important events that occurred during my time here at ANU that had a significant impact on me and have a message for today. The first concerns an epidemic and Australia's reaction to it.

HIV and Australia's reaction to it

Bob Hawke was our Prime Minister when HIV had just emerged in Australia. The virus was particularly prevalent in the gay and later intravenous drug user communities.

Neither of these communities were particularly valued in 1980s Australia.

Just a few hundred metres from here I went to a debate between the president of the gay

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businessman's luncheon society and the Reverend Fred Nile about AIDS. Fred seemed convinced that AIDS was divine retribution for a sinful lifestyle and his opponent was promoting safe sex practices as a way of maintaining a promiscuous lifestyle.

When asked if God was so angry at gay men why had lesbians had been spared the virus, Fred responded that he didn't believe lesbians actually existed – a novel retort.

Our government's response to the virus was multi-faceted and highly effective. It was based on science and the best epidemiological practices.

It employed some particularly terrifying commercials that involved a grim reaper hurling giant bowling balls at frightened citizens. The narrator warned that the virus could kill more Australians than World War II unless we engaged in safe sex practices.

Although viewed as comical by some older Australians I know these advertisements changed attitudes among my peer group.

Governments also targeted the communities most at risk, by providing needle exchange programmes, safe injecting rooms and free condoms.

Our social welfare and health-care system provided care for the sick, and we invested in research aimed at limiting the effect of the virus.

Thirty years of bipartisan support for this effort defeated the virus. I [read that the number of AIDS-related deaths](#) is now so low in Australia that it is no longer recorded.

I'd like to think that the approach to this virus was what should be typically Australian. Based upon science and compassion, and the desire to avoid the development of an underclass.

On Tiananmen Square

My PhD took me to China for the first international astronomical conference in the country. I remember two things vividly from this experience. The first was that many of the academics had been victims of the cultural revolution, a government-sponsored attack on knowledge and the universities.

Many of the astronomers had been sent to the fields for many years and bullied for promoting knowledge. Although it was officially over, many aspects of the cultural revolution's bureaucracy were still in place.

When I entered China I had to formally agree not to give any Chinese person a gift of any Bible, calculator or pornographic magazine. Fortunately I only had one of these three items with me, my beloved CASIO FX calculator.

Today, China possesses the two most powerful supercomputers on the planet, one of which is 18 billion times faster than the VAX I used for my PhD at ANU. The architects of the cultural revolution would be horrified!

The second thing I remember was the incredible enthusiasm and thirst for knowledge of the Chinese students about the West. I befriended many of them, but was unable to ever contact them again as email was still many years from China.

For this reason I found the [1989 massacre of the pro-democracy Tiananmen Square students](#) particularly depressing. I had no idea whether the students I'd met had been butchered by their own army, but figured that if it wasn't them, it was students just like the ones I'd met.

We had a friend from China who was one of the first PhD students at the ANU to study astronomy. She led the students from Mount Stromlo on the memorial march through the streets of Canberra, and we went to Parliament House to hear leaders from both sides of politics condemn the massacre.

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Our government offered the students asylum in Australia because it was the compassionate thing to do. In 1980s Australia asylum was not a dirty word.

My Vietnamese banquets were courtesy of a “Let in the Boats” policy from a Liberal government a decade before and my Chinese friend didn’t need to return to face the totalitarian regime afraid of democracy because of a Labor government policy.

On science

My profession is a highly competitive global endeavour, and rather ruthless in its application of the scientific method. Theories and discoveries are challenged and tested in the most rigorous way. Science is not without politics, but its foundations are exceptionally pure. To challenge orthodoxy requires data or theories that meet peer-reviewed analysis.

The scientific method spans all areas of academia, and has delivered amazing technological advances that continue to improve our standards of living and understanding of the Universe.

Your ANU education is built upon these foundations. I trust that it has taught you to question everything, examine evidence and apply proven techniques to come to conclusions without being afraid to imagine new ways to advance the sub-discipline and society.

But we’re living in a world where it has become increasingly fashionable to applaud and embrace ignorance, arguing that one of our rights is to believe whatever we want, and for governments and large media organisations and companies to control information.

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China may be an emerging supercomputing powerhouse but its citizens can’t access Facebook or the [Wikipedia entry on Tiananmen Square](#) .

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In parallel to Wikipedia, there is now [Conservapedia](#) , a website that not only argues against any link between CO₂ and temperature,

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but also that Einstein's theory of relativity has never been properly verified – something that I have dedicated much of my scientific career proving.

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Australian tax-payers are funding research into [whether windmills make you sick](#) and also we've just elected a senator who wants to teach [climate-skepticism in schools](#) and thinks climate scientists are part of a [UN-sponsored conspiracy](#) to defraud citizens.

In closing, I would implore you, our future scientists, engineers and doctors to mercilessly use your education to fight ignorance and research solutions to the problems the world faces.

Retain your objectivity and treat every decision as if you were entering an examination where you will be marked upon the integrity of the evidence presented, and the rationale for your decision-making.

We can't afford to worship the God of Ignorance, as the founders of the cultural revolution once did, nor ignore the lessons of history. Congratulations on your achievements, welcome to the ANU Alumni, and go forth and prosper.

This article was updated to clarify some points made in the first paragraph.

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Matthew Bailes receives funding from the Australian Research Council.

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