

Curiosity killed the cat?

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Australian taxpayers and voters should be wary of the blandishments of those who would tell us that research in public sector agencies like CSIRO or Geoscience Australia and in universities should be more 'practical' and 'relevant', and who would have you believe that 'curiosity driven' research is some kind of an indulgence – boffins entertaining themselves on public money.

In fact all of our modern industries are erected on the foundations of the work of physicists – Maxwell, Thomson, Kelvin, Bragg, Einstein, Fermi, Dirac, Heisenberg, Bohr, de Broglie, Pauli, to name a few – who simply wanted to find out what makes the universe tick. Einstein did not set out to develop GPS navigation, or anything else, but without his work on relativity we would not have it.

The same applies to the work of Watson and Crick unravelling the secrets of the structure of DNA using the X-ray crystallography techniques for which Australian-born physicist Sir Lawrence Bragg and his father were awarded the 1915 Nobel Prize for Physics. Think where that has taken us – from the capacity to predict and the potential to cure genetically related and transmitted diseases to the powerful new tool law enforcement agencies have for solving crimes and defence lawyers have for obtaining the release of unjustly convicted prisoners.

Sometimes solving one problem generates an unexpected application in a quite different field. CSIRO's invention of WiFi, which has earned it hundreds of millions of dollars in royalties, was the result of its efforts in the curiosity-driven field of radio astronomy.



In a broader field, the growing pressure of population on the planet requires us to take urgent action to protect ourselves not only from climate change but from the collapse of vital ecosystems. That requires us to learn a great deal more about the complex interactions that go on at the interfaces of air, sea and land, and the interactions between the myriad plants, animals and micro-organisms that make up the planetary and regional webs of life.

On a purely practical, commercial level, if we want to sustain full employment in a high income society, we need to strive constantly to be able to do things that others don't know how to do – whether that be the manufacture of new goods (eg medical equipment or drugs that embody new knowledge), or the provision of new services.

Of course the invention of new products is important, as is problem-solving research, but we are not going to make our way in the world and sustain our living standards by making incremental improvements to existing products or the existing ways of doing things.

So let us abandon the notion that curiosity-driven research lacks 'relevance', and fund the research efforts of our universities and our national science agencies accordingly. Some research will take us nowhere, some will lead us to 'the next big thing'.