



Australian Government

Chief Scientist

DR ALAN FINKEL AO

**Australian High Commission Science and Innovation
Reception Address**

Great Endeavours

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**Australia House
LONDON**

The Chief Scientist was invited to address representatives and friends of Australian science in the United Kingdom, at a reception hosted by the Australian High Commission. Dr Finkel travelled to London as part of a fact-finding mission for the review of the National Electricity Market, in his role as review Chair.

London. There is no city to equal it. Last night as I walked the inspiring streets of this city of knowledge, commerce, enlightenment and science I was reminded that science collaboration between the UK and Australia goes back a very long way indeed.

You could call Australia itself a spin-off from UK field research.

When the Endeavour set sail in 1768, it was on Royal Society business, at least on paper – to observe the transit of Venus in Tahiti. There were seven so-called “gentlemen scientists” on board.

The astronomer and the botanist were English. The natural scientists were a Swede and a Finn. The scientific artists were Scots. The captain, James Cook, was a cartographer, navigator and mathematician.

And he was conducting his own experiment on the side – to see if tweaking the diet could bring down the death toll from scurvy. A weekly kilo of sauerkraut seemed to be the best. Imagine that, as a crewman, you had to choose between the two: cabbage or demise.

For their part, the Royal Society, the most prestigious scientific society of all, was so impressed that they awarded Captain Cook the Copley Medal and made him a Fellow.

So the voyage of the Endeavour was a *big science* mission, first and foremost, setting the pattern for the era of multinational, collaborative projects to come.

Four nationalities! At least six scientific disciplines! And in time-honoured tradition, commentators complained about the waste of taxpayer funds.

As it happens, the voyage was a splendid example of mixed government and philanthropic funding. King George III contributed £4,000 pounds; and Joseph Banks £10,000 pounds.

And with this great Enlightenment experiment – this endeavour – science came to Australian shores.

It brought passion in the quest for knowledge. Rigour in the testing of ideas. Integrity in the conduct of research. Openness in our dealings with the world.

To this day, we have no better compass in science or companion in research than the UK.

We can measure that by quantity, in the 6,000-plus co-publications we add to the global knowledge base every year. By that count, the UK is Australia's second most significant partner; and Australia consistently ranks in the top 3 partners for the UK outside the European Union.

Or we could measure it by quality. The impact factor of our co-publications is 2.4 – considerably higher than either country achieves, on average, alone. Of Australia's thirteen Nobel Laureates in scientific fields, at least nine studied or worked in the UK.

And of course, we have abundant evidence in this very room.

We have Phil Diamond, the Director General of the Square Kilometre Array. Ed Byrne, who along with Nigel Thrift built the award-winning Monash-Warwick University Alliance.

We have representatives from the CSIRO, currently collaborating with the Australian Bureau of Meteorology, the UK Met Office and the Korean Meteorological Administration on atmospheric modelling, led by the UK.

Who knows better than Australians that British science is the admiration of the world?

That brilliant output is built on an enduring policy consensus:

- That science needs strategy and commitment for the long haul.
- That academic independence must be rigorously defended.
- And – importantly – that Britain is stronger for its scientific leadership role in the world.

When Australians look at Britain, that's what we see.

So, what do the British see in Australia? On Captain Cook's voyage, the records would suggest "not a lot".

Since that time, it's clear the Brits have found a good deal more to like.

We have great universities, in the British tradition; and an impressive portfolio of research infrastructure assets. Both are strengthened by a wealth of global talent.

The National Innovation and Science Agenda, launched in December 2015, reflects a widely-shared commitment to grow that legacy through the next generation of investments.

And in innovation, I would hope that when the British look at Australia they would see that our performance is better than international rankings would give credit. One day

I hope to describe one of the mysteries of innovation metrics, which I call “embodied innovation”.

It’s difficult to measure innovation that underpins Australia’s success in sectors like iron ore, an industry in which constant technological development has enabled our miners to operate their mines and logistics with every increasing efficiency, lower environmental impact and greater employee safety.

But unravelling that mystery will be for another day. For tonight, suffice it to say that the fundamentals of the Australian economy are sound, our cities are the world’s most liveable, and our people are outward looking and diverse.

Perhaps the world has something to learn from the Australian way.

This is a critical time for science. The challenge for those of us who value it is to make our case.

To put the focus on expertise. To recognise that the breadth and velocity of change is confronting. To understand that, as science advisors, we must be aware of politics – but never be political.

All my experience as Chief Scientist persuades me there is still a respect for genuine experts and a hunger for ideas. We have to live up to these expectations.

Our role is to look for, and explain, the opportunities for our leaders to guide us into the future.

The contributions to that mission of Australians in Britain, and vice versa, are very welcome.

I have spent today meeting with representatives of National Grid; your energy regulator Ofgem; staff from the Department for Business, Energy and Industrial strategy; and the planning experts from Scottish Power.

The Scots flew down especially, and all these experts spent the day with us to share the UK strategies for managing the transformation of the electricity grid to a radically different future.

Their enthusiasm and generosity was fantastic. Even better, I believe we helped each other.

The last time I was in London it was to discuss innovation strategy; higher education reform; and research impact measures.

Throughout, I have observed a commitment to evidence in policy, and excellence in research and strategy in planning.

I'm delighted to meet you all this evening, and I appreciate the initiative of the High Commissioner, and the hospitality of the Deputy High Commissioner, and the Embassy staff this evening.

I like to think that our greatest endeavour has only just begun.

Thank you.