

Hodgson's Choice

Two for the price of one

Professor Chris Rapley is a first class scientist, but he's also an accomplished leader, most recently of the 500-strong British Antarctic Survey. Simon Hodgson talked to him about both.

Well, this is an excellent example of 'two for the price of one'. I had arranged to meet Professor Chris Rapley, head of the British Antarctic Survey (BAS) and recent commentator on climate change. "He's at the Science Museum that day," says his press officer, "why not meet him there?" So inevitably my first question is to ask what his connection is with the Museum and I discover that later that day he will be announced as its new Director. So, ladies and gentlemen, in 1,400 words I give you Chris Rapley – outgoing head of BAS and incoming director of the Science Museum. How's that for value?

In fact, Chris Rapley is generally good value. He had caught my eye through a series of interesting and provocative statements on climate change and a reputation as a charismatic and persuasive speaker, both of which prove to be true. His tenure at BAS gave him, he clearly believes, a unique perspective on the big issue of the day. "The polar regions are particularly important regions of the planet and the Antarctic [particularly so], given its remoteness from the UK and the Northern Hemisphere where so much human activity goes on." Rapley breaks off with a smile: "The Australians and New Zealanders always rib me when I say it's the most remote part of the planet. They say 'it depends where you start mate'."

His style is precise – he speaks carefully and makes his arguments with the care that one would expect from a lifetime scientist. And yet there is a steely determination to him, revealed in some unbending unequivocal asides. How does he react, I ask him, to people who say that climate change is not human made? "They are wrong," he replies, simply. And then the scientist in him asserts itself, and he goes on to set out the argument



Professor Chris Rapley

forensically. "We know how much carbon we have dug up out of the ground and burned. And so we know how much carbon dioxide we have put into the atmosphere. The first part of the argument is completely incontrovertible; it's based on measurements that show humans have put 500 gigatonnes worth of carbon [equivalent] into the atmosphere."

He pauses, clearly relishing setting this out so simply. "The second part of the argument is 'what is the greenhouse effect?'. The greenhouse effect is pretty well understood – although not as simple as it is often portrayed to be; it's actually quite subtle. I have looked at the evidence and I find it plausible that the 0.7°C rise that we've seen on land and the 0.6°C rise that we've seen in the oceans, by [the principle of] Occam's Razor, if nothing else, can be attributed to the changing greenhouse effect."

The argument is complicated and the 'trust me, I'm a scientist' conclusion doesn't always carry the weight it perhaps should. "There is quite a deliberate conflation of the science community and the environmental community, who are often very politically motivated," Rapley laments. "People find it difficult to figure out the difference between the head of an environmental NGO and a Chris Rapley."

But perhaps their confusion is in some measure understandable. Rapley hasn't restricted himself solely to the science of global warming. He has also begun to explore publicly a range of possible solutions including, controversially, raising the question of whether population control must play some part. His insights are as much social as scientific. For example, why is the public so difficult to convince on the matter? "People want to

believe that there's not a problem and so it's comforting to hear 'don't worry about it, put your foot on the accelerator'," he explains. "Secondly, [the population] loves the idea of a conspiracy, however ludicrous. Can you imagine the concept of the scientific community colluding on anything, when their entire life is spent fighting to prove each other wrong? The very idea is laughable."

Why, I ask, did the Director of the British Antarctic Survey go where politicians and even environmental NGOs fear to tread? "The area where I have moved furthest from BAS' remit and indeed my own expertise is this issue of population," he admits. "But we are all so dependent on fossil fuels, frighteningly so. I am not an advocate of any particular course of action, other than the fact that society needs to consider what its options should be. It is a legitimate role for [BAS] to talk about climate science more generally ... and lay out information about choices that society can make."

And then, with characteristic precision, Rapley enumerates the choices. He borrows a phrase from Al Gore: "There is no silver bullet but silver buckshot." And the elements include – of course – societal and behavioural change. "I'm not advocating, I'm simply saying that if society is supposed to be rationally assessing its options, it should have all these on the table. And one of those things that should be on the table is what the size of the population might be. If we have a billion fewer people by 2050 than we might otherwise do, that will save a large impact."

Something about the phrases he uses – an element of well-rehearsed caution

perhaps – tells me that I wasn't the first person to raise an eyebrow at his comments. "Even having thought it through, I've been surprised at the very polarised reaction," he states. "I've had several hundred emails with the message 'thank goodness someone has had the courage to raise this'. And then I've had some other reactions which are 'here is this mad scientist trying to tell us how to behave...'"

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How did his colleagues in BAS react? "It's difficult to tell as director," he laughs. "I suspect that a number are a bit nervous and feel that this is a step too far."

But Rapley has been unpopular with his BAS colleagues before. His nine years there have been remarkably successful, but the early stages were marked by some difficult and painful changes. Rapley arrived in 1998 to find not one unified research team, but five separate 'baronial empires' with division lines along the scientific disciplines, biology, geology, physics etc. "I'll give you an example: on my second day there I was sitting amongst the '-ologists', I won't say which branch, and there was a spare seat next to me. A young visitor of another 'ology' came to sit in it and the person next to me – thinking they were being

helpful said – 'oh no, the 'y-ologists' sit over there'. It was inconceivable that a biologist would talk to a geologist or have anything to say to a physicist. This was catastrophic. We had a huge opportunity to mix and match those minds together to do genuinely interdisciplinary science." His early actions were to break down the fiefdoms, combining teams along project lines rather than by discipline. "There were casualties along the way," he says, but the results were worth it: BAS now has an enviable reputation for its interdisciplinary work.

It's an odd beast, BAS: big – with a £45m budget and 500 people – and decidedly different. Rapley sums it up neatly: "It's a combination of a shipping line, an airline, we run little cities, all on the longest supply chain and in the most remote and hazardous part of the planet. And at the same time we're a world class research organisation." And I get a strong sense that this suits him. Yes, he's a scientist but he needs his science leavened with something else – a management challenge, a big policy debate or the challenge of communicating complex ideas. In his first few weeks at the Science Museum he's already gone public with James Lovelock, proposing some very unconventional technological solutions to climate change – hardly the behaviour of a typical museum director. But I suspect when it took him on that the Science Museum knew they weren't just getting a conventional scientist. Good value indeed.

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What steps are you taking to manage your environmental footprint?