



The Summerfield Lecture at Cheltenham Science Festival

4th June 2013

Lord Rees of Ludlow

It was a delight to welcome Martin Rees, the Astronomer Royal, back to Cheltenham again to deliver the Summerfield Lecture 2013. A regular visitor to the Festival, Lord Rees took his spellbound audience on a parallel journey. One rooted firmly in the human world on Earth, with its frailties, suspicions and potentially hazardous technological innovations depending on who is in control; the other out in the cosmosphere, where Man may need to look if he is to preserve the future of the human race in some shape or form.

Lord Rees' premise is that we are firmly in the grip of the man-made "anthropocene" era – the population is growing fast (it will probably top 9 billion by 2050, 2 billion more than today), food production is under pressure, energy is more difficult to produce affordably and our collective human footprint is making a serious impact on our planet. Add to this the threat of Error or Terror – the danger, intentional or not, of a significant man-generated disaster, be it nuclear, IT-related or environmental and there is, Lord Rees opines, reason for alarm. As it becomes easier to network through improved speed and communications capacity, so smaller, perhaps more extreme or fanatical groups become empowered and can spread disease or misinformation planet-wide. "The global village has its village idiots" as Lord Rees succinctly puts it and this represents a measurable threat to our security. So much in fact that he entitled the book he wrote on this subject "Our Final Century?".

Taking us through the variables for addressing the energy crisis and the untested but viable options available to us if we are confronted by global threats (eg geo-engineering dust into the atmosphere or mass storage of CO₂ under the sea), Lord Rees finally launched us into space – his favoured subject. Worried by the fact that Man's Moon landings may now be viewed by today's schoolchildren as ancient history, he sees space exploration in much the same light as Antarctic exploration from a few decades ago – stern tests of man's abilities in new climates which ought to be lauded for their pioneering spirit and which may very well wind up with newly adapted post-human species living on a new planet by the end of next century. In fact, Lord Rees goes further and suggests that this almost has to happen – and should start in earnest now. Whether or not there is life out there already (in his view unlikely), the chances of us humans creating a survival problem for ourselves on our own Earth are entirely plausible.

To end Lord Rees posed some major scientific questions for us: as our brains are only modifications of the ones that kept us alive while hunting on the original African savannah, can we accept that there are other life forms out there which are superior to ours - are we simply the goldfish to their intellects? How do we grapple with the unknown unknowns – is there a dimension in existence already which we simply cannot detect? Serious questions which Lord Rees managed to project with minimum complexity in his highly listenable to manner.

After some lively questions which touched on the tensions between scientific freedom and the need for security, the mental capabilities of our current MPs and the risks of alien invasion (they already know we're here, according to the Astronomer Royal), he exhorted us to read some good sci-fi literature (such as Stapleton and Arthur C Clarke). In Lord Rees' view, scientific education is vital and the best sci-fi authors are free to write and well researched.

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