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Medicine for a feverish planet: kill or cure?

Planetary scale engineering might be able to combat global warming, but, as with nineteenth century medicine, the best option may simply be kind words and letting Nature take its course, says James Lovelock

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Earth from the moon. Photograph: Corbis

What are the planetary health risks of geoengineering intervention? Nothing we do is likely to sterilise the Earth, but the consequences of planetary scale intervention could hugely affect humans.

Putative geoengineers are in a position similar to that of physicians before the 1940s. The author-physician Lewis Thomas remarkably described in his 1983 book, *The Youngest Science*, the practice of medicine before the Second World War. There were only five effective medicines available: morphine for pain, quinine for malaria, insulin for diabetes, digitalis for heart disease and aspirin for inflammation and very little was known of their mode of action. For almost all other ailments, there was nothing available but nostrums and comforting words.

At that time, despite a well-founded science of physiology, we were still ignorant about the human body or the host-parasite relationship it had with other organisms. Wise physicians knew that letting nature take its course without intervention would often allow natural self-regulation to make the cure. They were not averse to claiming credit for their skill when this happened.

I think the same may be true about planetary medicine; our ignorance of the Earth system is overwhelming and intensified by the tendency to favour model simulations over experiments, observation and measurement.

Global heating would not have happened but for the rapid expansion in numbers and wealth of humanity. Had we heeded Malthus's warning and kept the human population to less than one billion, we would not now be facing a torrid future. Whether or not we go for the recommendations for cutting back fossil fuel use discussed in Bali in 2007 or use geoengineering, the planet is likely, massively and cruelly, to cull us, in the same merciless way that we have eliminated so many species by changing their environment into one where survival is difficult.

Before we start geoengineering we have to raise the following question: are we sufficiently talented to take on what might become the onerous permanent task of keeping the Earth in homeostasis? Consider what might happen if we start by using a stratospheric aerosol to ameliorate global heating; even if it succeeds, it would not be long before we face the additional problem of ocean acidification. This would need another medicine, and so on.

We could find ourselves enslaved in a Kafka-like world from which there is no escape. Sir Martin Rees in his 2003 book *The Final Century*, envisaged a similar but more technologically based fate brought on by our unbridled creativity.

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The alternative is the acceptance of a massive natural cull of humanity and a return to an Earth that freely regulates itself but in the hot state. Garrett Hardin foresaw consequences of this kind in his

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Whatever we do is likely to lead to death on a scale that makes all previous wars, famines and Global Warming Skeptic disease its small globe continue business as usual will probably kill most of us during the century. Is there any reason to believe that fully implementing Bali, with sustainable development and the full use of renewable energy, would kill less? We have to consider seriously that as with nineteenth Millions have already taken the best option is often kind words and pain killers but otherwise do nothing and let Nature take its course.

Global Warming, EXPOSED
The End is nigh to billions of people. Then there is no hope for us, and we can do nothing to avoid our plight. This is far from true. We can adapt to climate change and this will allow us to make the best use of the refuge areas of the world that escape the worst heat and drought. We have to marshal our resources soon and if a safe form of geoengineering buys us a little time then we must use it.

Parts of the world such as oceanic islands, the Arctic basin and oases on the continents will still be habitable in a hot world. We need to regard them as lifeboats and see that there are sufficient sources of food and energy to sustain us as a species. Physicians have the Hippocratic Oath; perhaps we need something similar for our practice of planetary medicine.

During the global heating of the early Eocene, there appears to have been no great extinction of species and this may have been because life had time to migrate to the cooler regions near the Arctic and Antarctic and remain there until the planet cooled again. This may happen again and humans, animals and plants are already migrating. Scandinavia and the oceanic parts of northern Europe such as the British Isles may be spared the worst of heat and drought that global heating brings. This puts a special responsibility upon us to stay civilized and give refuge to the unimaginably large influx of climate refugees.

Perhaps the saddest thing is that if we fail and humans become extinct, the Earth System, Gaia, will lose as much as or more than we do. In human civilisation, the planet has a precious resource. We are not merely a disease; we are, through our intelligence and communication, the planetary equivalent of a nervous system.

We should be the heart and mind of the Earth not its malady. Perhaps the greatest value of the Gaia concept lies in its metaphor of a living Earth, which reminds us that we are part of it and that our contract with Gaia is not about human rights alone, but includes human obligations.

- James Lovelock is an independent scientist, author, researcher, environmentalist. He is known for proposing the Gaia hypothesis.
- This article is an extract from "A geophysicologist's thoughts on geoengineering", published in the Royal Society's journal

About this article

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