Thanks to nanotechnology, there could be a major breakthrough in the field of transportation with the production of more durable metals. These could be virtually unbreakable, lighter and much more pliable leading to planes that are 50 times lighter than at present. Those same improved capabilities will dramatically reduce the cost of travelling into space making it more accessible to ordinary people and opening up a totally new holiday destination. *Q34* *Q35*

In terms of technology, the computer industry will be able to shrink computer parts down to minute sizes. We need nanotechnology in order to create a new generation of computers that will work even faster and will have a million times more memory but will be about the size of a sugar cube. Nanotechnology could also revolutionise the way that we generate power. The cost of solar cells will be drastically reduced so harnessing this energy will be far more economical than at present. *Q36* *Q37*

But nanotechnology has much wider applications than this and could have an enormous impact on our environment. For instance, tiny airborne nano-robots could be programmed to actually rebuild the ozone layer, which could lessen the impact of global warming on our planet. That's a pretty amazing thought, isn't it? On a more local scale, this new technology could help with the clean-up of environmental disasters as nanotechnology will allow us to remove oil and other contaminants from the water far more effectively. And, if nanotechnology progresses as expected – as a sort of building block set of about 90 atoms – then you could build anything you wanted from the bottom up. In terms of production, this means that you only use what you need and so there wouldn't be any waste. *Q38* *Q39*

The notion that you could create anything at all has major implications for our health. It means that we'll eventually be able to replicate anything. This would have a phenomenal effect on our society. In time it could even lead to the eradication of famine through the introduction of machines that produce food to feed the hungry.

But it's in the area of medicine that nanotechnology may have its biggest impact. How we detect disease will change as tiny biosensors are developed to analyse tests in minutes rather than days. There's even speculation nano-robots could be used to slow the ageing process, lengthening life expectancy. *Q40*

As you can see, I'm very excited by the implications that could be available to us in the next few decades. Just how long it'll take, I honestly don't know.