

## The Next Generation Symposium

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The 1997 presentation of Jesus College's Science and Human Dimensions Project brought together 24 young Cambridge scientists to discuss the work of their respective disciplines. The aim of these symposia is to improve the public understanding of science and this year's focus was to review the scientific disciplines most likely to make a 'striking difference' to our future. All of the scientists presenting this year were in their 30s, giving an audience to the upcoming generation of researchers and an appreciation of the views held 'in the trenches', rather than at the 'safe distance' of their older colleagues. The young scientists took the opportunity to consider how our future society might look 25 years from now, seen from the perspective of their respective disciplines.

It was quite an intellectual marathon with 24 half-hour talks, including discussion time, spread over the two days. The symposium was sponsored in part by *New Scientist* magazine, and you can find the full proceedings published on their Web site (<http://www.newscientist.com>). The presentations were split into six sessions, each encompassing four talks in chemistry, physics, engineering, medicine, computing and biology. There was also an hour of free discussion at the end of the conference, where we talked over the major issues and concerns of the participants.

Throughout the presentations, I became increasingly aware that many of the scientists presented their work in terms of technology - concerned with making something - rather than an exploration of the world around us. I thought this was rather odd considering that the symposia were designed to improve public *understanding* of science. This aspect wasn't true for all presentations. Indeed, one chemist began her presentation by stating that her work had no applied value whatsoever! (Actually it did have, since it might be used to search for life on other planets). However, I felt there was an strong underlying desire for each speaker to justify what they were doing by couching it in terms of a glittering, shining technology of tomorrow. To be fair, several scientists commented that they were under external pressure to work this way as the limited amount of research funding available is funnelled more often into applied research, making the technological spin-off more important. Perhaps this is indeed what the public needs most to understand about modern science!

I was a little disappointed that most of the 25-year 'predictions' of our future science, medicine and technology were little more than logical next steps of current research. While it certainly true that few can foresee where quantum leaps in understanding will arise, I felt that much would have been gained by considering the *impact* of the various scientific disciplines on society, rather than simply what they produce for society. For example, I see science undergoing a radical change over the next 25 years, necessitated by the unfathomable amounts of information produced now and in the future. It will, I believe, lead to new approaches to learning and understanding the quantities of material. However, based on the presentations at the conference, our future will be filled only with improved versions of the same thing: better chemistry, better physics, better engineering, better medicine, and so on. The point about information-overload was not lost on the speakers when it was raised during the final discussion. The idea that computers could help in

processing such information was well received by several of the scientists. However, it seems that the current trend of ever-finer specialisation within the various disciplines, brought on by the ever-increasing quantities of information, will be with us for some time.

I would like to finish this report with a quote from my favourite of the presentations. It was by the evolutionary biologist DR. DAVID L. STERN. He gave a highly entertaining talk about the role of genetic analysis in evolutionary science. He discussed the high degree of sequence conservation in genes that encode the basic body plan of an animal, and the high likelihood that they would have been the same in the dinosaurs. He said (*sic*) 'So, knowing these sequences, does it mean I want to recreate a dinosaur? No! But, I want to *know* the dinosaur - down to that level of detail.' From all the talk of applied technology, at last, one scientist promoted the simple joy of discovery. This is what I hope the Next Generation *public* will be treated to when they learn why it is we do science.