

My Cheltenham Science Festival Experience

Emma Suckling – 15/06/09

I am grateful to have been given the opportunity to attend this year's Cheltenham Science Festival as part of the Faculty of Engineering and Physical Sciences bursary scheme at the University of Surrey. As someone who has a keen interest in the communication of science to a wider audience and has been actively involved in several outreach activities in the past, I felt that this experience has given me a truly unique chance to witness first-hand how such an event can provide a fantastic platform for inspiring people of all ages and backgrounds and informing them about the many activities, successes and challenges the scientific community are involved with. I also discovered that a huge amount of effort is required by event organisers, volunteers and speakers to deliver such a successful programme and there still a lot that can be done through other events and different media to promote the work of science to the public as well as future generations of scientists.

During my time at the festival I made every effort to attend as many events as possible that reflect my diverse interests, ranging from the more familiar (to me) physics-based talks to discussions on progress in the fields of genetics and psychology, as well as current topical debates on climate change, energy production and pandemics. I generally found the quality of talks to be very high with an impressive balance of scientific content and entertaining delivery.

Talks such as 'The Big Bang and Beyond', 'Rutherford' and 'Copernicus: Revolutionary or Plagiarist' were familiar topics for me, and all of them proved to be enjoyable. In particular I found that Maggie Aderin's infectious enthusiasm kept the subject of the big bang fresh and interesting, while Lyn Evans provided a thorough and insightful account of the advances and challenges that we face in trying to understand our universe. Unfortunately I was less enthused as Mary Fowler talked about Rutherford's life and work. Her rather dry style was soon replaced though by the livelier presentations of Gary Mathlin and Paddy Regan, who discussed the impact that the Rutherford scattering experiment has had on modern science and some of the work that is going on today within the nuclear physics field.

I was pleasantly surprised by the 'Engineering Apollo' event with Chris Riley. He told a fantastic story about the major achievements of the space race era and was able to clearly demonstrate the influence these have had on aspects of our daily lives that we rely so heavily on today such as navigation devices, computational power and silicon chip technology. 'Obsessive Compulsive' was probably the most serious event I attended. Diana Wilson very bravely told the story of her personal struggle with OCD, which was both shocking and emotional. Two expert panellists followed her talk and they disagreed on the origin of this disorder and the best methods of treatment (drugs or cognitive behavioural therapy). Both speakers put forward convincing arguments and it was actually exciting to see a real debate emerge about a topic that there is still very little know about.

Alice Roberts took her audience on 'The Incredible Human Journey' of evolution and migration from Africa to the rest of the world. Despite the fact this is such a fascinating topic, I found that Alice spent a large portion of time describing her own incredible journey through the filming of the television series that the event was based on. It was great to hear about her adventures, and even see clips from the show, however I personally would have preferred to hear a bit more detail about the science behind this story without the assumed prerequisite that the audience had seen the series.

Robert Winston never fails to disappoint and 'Can Science Make You Happy' was no exception. The talk was informative, entertaining and packed with results from various studies and experiments that were presented in a clear and accessible way. Perhaps one of my favourite talks from the week, however, was 'A Lifetime of Intelligence'. Ian Deary truly succeeded in engaging his audience in a

witty and interesting talk about his research into the correlation between childhood IQ scores and factors such as health and wellbeing in later life. He was one of only a handful of people that showed and explained quantitative results without being dry in delivery and he left me wanting to hear more. Fantastic!

I attended several talks relating to current topical issues, including 'Can We Solve the Climate Change Conundrum' and 'Climate Change: Whose Responsibility'. It was a great opportunity to hear Paul Drayson speak alongside an expert panel, who had solutions for reducing our contribution to climate change, from carbon trading policies to reducing heat loss in buildings and a smart Grid system for renewable energies. The Science Minister offered optimism for a bright future, emphasising his message that we can achieve a greener society without having to drastically change our lifestyles. He delivered a similar message of optimism at the EPSRC Impact! campaign event, which discussed the impact science can have on society and the importance of government initiatives that back small science and technology businesses. Jonathon Porritt also chaired a lively discussion about the responsibilities of society, businesses and government on both local and international scales to prevent further climate change. Whilst I found these talks to be informative and relevant, I felt that sometimes the science that underpins our understanding of these issues as well as the solutions that are on offer were lost to the powerful messages of optimism or urgency that such important topics deliver.

Another highlight for me was the 'Pandemics: Outbreak' event, in which Vivienne Parry involved the audience in creating strategies for dealing with a variety of different scenarios. It was a beautiful demonstration of how tough it can be to make decisions that are beneficial in such situations and it clearly illustrated that there is not always an easy answer. Expert panellist Nigel Lightfoot was on hand to offer advice and guide the audience in the right direction. My only criticism was that he never really got the chance at the end of the session to summarise the kind of policies that are already in place for these very real and current scenarios. 'Pandemics: The Threat' was a nice compliment to this event, with Neil Ferguson and John Oxford providing clear insights into how the risks of a pandemic outbreak can be assessed and their spread can be modelled.

It was great to see Michael Reiss, Ray Tallis *et al* have their say at the 'Faith in Evolution' session and I enjoyed hearing something a little different from Evan Davis in his 'Beginners Guide to Economics'. The passion with which Jonathon Porritt talked about the work and goals of the Green Movement was completely captivating, even if I don't entirely subscribe to all of his views!

Outside of the main science events it was exciting to see such a great balance of entertainment, with showcases such as 'Call My Scientific Bluff', serious discussion at the Science Café and Talking Point events and engaging hands-on demonstrations for both kids and adults at the Discovery Zone.

From the perspective of a bursary student it was fantastic to get the opportunity to meet fellow students with similar interests in public engagement, as well as accomplished science communicators, event organisers and volunteers. The whole experience for me has been an inspiring one and never more so than when I witnessed the amazingly talented communicators of the future compete in the Famelab events. Having the chance to be a part of this festival has reinforced my enthusiasm to get more involved in doing everything I can to make science more accessible and interesting to a wider audience.

My hope is that this bursary scheme continues to run successfully within the University of Surrey and encourages future generations of scientists to become involved with public engagement and outreach activities for many years to come.