Hollyweird Science — A symposium at the 253rd Annual meeting of the American Chemical Society. San Francisco 3 & 4 April 2017

Conference

HOLLYWEIRD SCIENCE — A SYMPOSIUM AT THE 253RD ANNUAL MEETING OF THE AMERICAN CHEMICAL SOCIETY
SAN FRANCISCO, 3 & 4 APRIL 2017

Reviewed by

Erik Stengler

Abstract

Science in film is gaining attention from scientists and science communicators. Sixteen experts gathered at the 253rd Annual Meeting of the American Chemical Society to explore the role and relevance of science in film. An audience of researchers, academics and students enjoyed first-hand accounts from filmmakers, science consultants and experts in science communication, who all agreed on the important impact the way science is depicted in film has on education, outreach and the relationship between science and society.

Keywords

Informal learning; Representations of science and technology; Visual communication

It often happens that novel or unusual areas of study find fertile ground to germinate in unexpected places. The second Science in Film symposium took place at the annual conference of the American Chemical Society (ACS) annual meeting in San Francisco, CA. Titled "Hollyweird Chemistry", the symposium was organised and funded by Prof. Donna Nelson, currently president of the ACS. Many of the speakers had previously co-authored a book entitled Hollywood Chemistry [Nelson et al., 2014], published as part of the ACS Symposium Series.

Taking place over two days, the symposium gathered together some of the world's most active scientists, science educators, science communicators and science communication scholars who work on science in film.

Donna Nelson herself has been science adviser for the TV series *Breaking Bad*, and told the audience about her experience and approach, always respecting the filmmakers' expertise in their own trade. So did other speakers who have contributed to other well-known shows like *Star Trek*, (Andre Bormanis), *House*, *Torchwood*, *Rosewood* (M. D. John Sotos), *Battlestar Galactica*, *Defiance* and *Eureka* (Dr. Kevin Grazier), or films like *Deep Impact* (Professor Joshua Colwell), *Gravity* and the latest instalment of *Pirates of the Caribbean* (Dr. Kevin Grazier). The common

theme of all these fascinating stories was the scientists' commitment to the importance and power of these media to influence and shape the public perceptions and attitudes to science, including the scientific profession as a career choice, the diversity within science regarding gender, race and disabilities and science literacy. Stephen Cass challenged, however, the notion that there is a lack of science graduates to fill in the positions needed in the near future. In his presentation he pointed out the profound negative impact it has that scientists in movies and TV shows are almost consistently portrayed as "geeks", which is neither representative of the reality in science, nor helpful in terms of getting the *best* students to pursue science.

Colin Campbell (*The Universe*) and Chris Schmidt, Senior Producer at NOVA (*Hunting the Elements*) revisited these themes from the point of view of the non-fiction side of film, with interesting insights on the pressures they are also subject to regarding content, audiences and formats. It was revealing to see the success of the award-winning inclusion of dramatized sequences that re-enact relevant moments of the lives of historical scientific figures and the curious development thereof by which those same historical figures speak to camera as if they were interviewed then and there (Stephen Lyons, *The Mystery of Matter*). The challenge of countering the wilful ignorance in issues like vaccines, climate change or evolution was profusely discussed with the participation of the audience and a common theme that emerged was the need to be aware that, when forced to decide between values and facts, people will almost always favour the former, and that therefore just throwing facts at audiences will not be of great use in the battle for a scientifically educated society. This is the object of a and important area of research and debate regarding the relationship between science and society, as has been discussed, for example by Allen et al. [2001]; Christophorou [2001], Dietz [2013] and Reeves [2016].

Several speakers shared their extensive and impressive experiences in using movies in education and communication of science: Professor Mark Griep, co-author with Marjorie Mikasen of the book ReAction! Chemistry in the movies [Griep and Mikasen, 2009], Dr. Jim Goll, using space-themed films in his teaching at Edgewood College, and Dr. Jessica Cail showing how matters of the brain can be represented in movies in more or less plausible terms, with films like *Awakenings*, *Lucy* or *Memento*.

Dr. Jovana J. Grbic presented the wider science communication context in which scientists could be more active in engaging with the public in popular media. David Kirby, author of Lab Coats in Hollywood [Kirby, 2011] talked the audience through the deeper implications, beyond the well-known educational and literacy issues, of the way science and scientists are portrayed in movies, from the dissemination of incorrect visualisations of science that are then difficult to dispel, through the influence on attitudes and the cultural meaning films convey, to the influence on current perceptions of the future development of science and technology and the institutions where this takes place. I added the perspective of considering movies as a representation of society's concerns of ethical or otherwise controversial issues related to science and took the opportunity to officially launch my new website www.scienceinmovies.com.

Anthropologist, actress and TV presenter Natalia Reagan shared her experience and disinhibited approach to science on TV by means of humour and comedy, joining all the speakers in a call to action to contribute to communicating a passion for science effectively and by all means available, in a day and age when it paradoxically seems more necessary than ever.

Author

Erik Stengler is Senior Lecturer in Science Communication. His special interests in this area include Science Museums and Planetariums and Science in Film.

He has extensive experience in Communicating Science informally in Science Centres, through Outreach Projects and in the Media. He has been project manager of various initiatives that range from a Science Van to Courses on Science in the Movies, including a TV children's show; theatre plays; science programmes for senior citizens, in prisons or in leisure environments; and educational partnerships with Science Historians.

Erik has been involved in the training of museum explainers and in various teacher training programmes.

Erik's scientific background is that of an astrophysicist, with a PhD in the field of Observational Cosmology, using quasars as background beacons to study large scale objects in their line of sight. E-mail: erik.stengler@uwe.ac.uk.

References

Allen, T. F. H., Tainter, J. A., Pires, J. C. and Hoekstra, T. W. (2001). 'Dragnet Ecology–"Just the Facts, Ma'am": The Privilege of Science in a Postmodern World'. *BioScience* 51 (6), pp. 475–485. DOI: 10.1641/0006-3568(2001)051[0475:DEJTFM]2.0.CO;2.

Christophorou, L. G. (2001). Place of Science in a World of Values and Facts. Kluwer Academic/Plenum. DOI: 10.1007/0-306-47623-1.

Dietz, T. (2013). 'Bringing values and deliberation to science communication'. *Proceedings of the National Academy of Sciences* 110 (S3), pp. 14081–14087. DOI: 10.1073/pnas.1212740110.

Griep, M. A. and Mikasen, M. L. (2009). ReAction!: Chemistry in the Movies. Oxford, New York: Oxford University Press.

Kirby, D. A. (2011). Lab Coats in Hollywood. Cambridge MA, U.S.A.: MIT Press. URL: https://mitpress.mit.edu/books/lab-coats-hollywood.

Nelson, D. J., Grazier, K. R., Paglia, J. and Perkowitz, S. (2014). Hollywood Chemistry: When Science Met Entertainment. Ed. by D. J. Nelson, K. R. Grazier, J. Paglia and S. Perkowitz. Oxford, New York: Oxford University Press.

Reeves, J. (2016). 'Values and Science: An Argument for Why They Cannot Be Separated'. *Theology and Science* 14 (2), pp. 147–159. DOI: 10.1080/14746700.2016.1156327.

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