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Filmmakers as Archivists of Science

Amy C. Chambers (Manchester School of Art, Manchester Metropolitan University)

Science fiction filmmakers often create their own 'archives' of science-based resources (scientific papers, newspaper cuttings, interviews with scientists/manufacturers) in order to produce an artefact (a film) that in turn produces an archive of materials that should be of interest to a range of scholars at the intersection of science and arts. Filmmakers from across several genres have generated and collated research on emergent/future scientific advancements and procedures. Originally intended to give their movies 'scientific' legitimacy and hopefully critical and financial success, these collections can now be used by historians as unique snapshots of the experiences of non-scientists in researching, understanding, and communicating science through fiction.

Stanley Kubrick and William Friedkin, and their films *2001: A Space Odyssey* (1968) and *The Exorcist* (1973), are key examples for this discussion. Both directors made and retained extensive science-based research notes for their films and were heavily involved in all aspects of the filmmaking process. *2001: A Space Odyssey*, released a year before the moon landing, offers an imagined future of space travel that continues to influence both scientists and media producers today. Kubrick generated huge volumes of meticulously organised research that was utilised during the production of *2001* (held at University of the Arts London). Kubrick's collection includes personal interviews with key scientific and industry figures (e.g. physicist Jeremy Bernstein, biochemist Isaac Asimov, psychologist B.F. Skinner), which include speculative discussions about the possibility of space travel and extra-terrestrial contact, and promotional materials and internal industry documents predicting technologies for as yet unknown futures (e.g. pods for hypersleep as imagined/designed by engineers at Honeywell).

William Friedkin's *The Exorcist* presents emerging scientific procedures alongside ancient Catholic ritual. These potentially conflicting components were researched to a similar level of intensity despite the fact that the science-based sequences only appear in the film's first quarter. It was the first film to include graphic footage of an arteriogram and to utilise a functional Magnetic Resonance Imaging (fMRI) scanner onscreen. In 1973 the fMRI scanner was an emergent technology and appeared in very few US hospitals – it was intended to give the medical scenes a futuristic edge to heighten the contrast with the ancient ritual. Friedkin created extensive diagrams and notes about the internal workings of the body using scientific papers, and interviews with engineers and medical practitioners at the forefront of fMRI technology. Friedkin's notes offer a unique snapshot of medical technology and neurobiological research emerging at the time of *The Exorcist's* production and release. Similarly, Kubrick's archive for *2001* sets a benchmark for the type research required for the production of science fiction film that can claim authenticity and remain scientifically relevant 50 years after its initial release as Kubrick's masterpiece has.

One of the issues with this type of archive is the restrictions in place concerning the reproduction of materials even for academic publications. Both the Margaret Herrick Library (the Academy of Motion Picture Arts and Sciences Archives) where the 'William Friedkin Papers' are held and the Stanley Kubrick Archive at the University of Arts London both have extremely strict rules concerning copying materials and gaining rights for reproducing images. In the case of the Kubrick materials the rights for individual items are still held by the individual donors and permission must be granted from a variety of trustees. For a recent talk that I gave at the inaugural conference of STAG (Science Technology Archive Group) my talk did not have images of items I spoke about due to the issues with securing rights.

Science fiction films should be understood as valuable cultural artefacts that allow historians to analyse specific eras and histories and consider the ways in which ideas about science and society are communicated to audiences. Fictional representations of the future are not about predicting the future but rather anticipating human needs in technology-driven futures and inspiring the work of future scientists. Filmmakers leave archives behind them that are potentially useful to a range of scholars, however access to and rights for sharing these materials can be an issue due to the nature of the (commercial) end product rather than the artefacts themselves. Restricted access constrains the stories that can be told about these archives and the unique stories about science that they hold.

Biography:

Dr Amy C. Chambers is a senior lecturer in Film Studies at Manchester School of Art, Manchester Metropolitan University. Her research approaches film as a primary source that can be used as a means of studying specific historical moments and issues as extrapolated by mainstream movies. In particular her work examines the intersection of science and cinema with a focus on representing women in STEM, religion and science, Hollywood science fiction (1968-1977), and contemporary medicalised horror.