

Christopher Frayling, *Mad, Bad and Dangerous? The Scientist and the Cinema* (London: Reaktion Books, 2005), ISBN: 1861892551.

The relationship between cinema and science has always been an uneasy one, caused primarily by the gap between public understanding and the realities of esoteric knowledge. The ‘Eureka!’ moment, colourful, glowing materials and dangerous explosions inhabit the popular image of science rather than the boredom of academic life and struggles for funding. The intuitive, mad genius and his glamorous assistant struggling against a conservative world are preferred over collegiate projects and methodical, rational, ethical practitioners. Using this divergence between public perception of the ‘scientist’ – an umbrella term covering all scientific disciplines - and ‘fact’ as his framework, Frayling, popular culture expert, looks at ‘the changing image of the scientist in the movies’ (p. 8) and how it has altered in association with various international phobias such as poison gas and death rays in the 1920s, medicine in the 1930s, H-Bombs in the 1950s or genetic engineering since the 1980s.

Chapter One begins by arguing that ‘the gap between specialised knowledge and public understanding lies at the root of most fictional representations of the scientist’ (p. 11) and that popular cultural representations of the scientist have been fairly stable throughout the twentieth century, highlighting sociological studies by Margaret Mead (1957), *New Scientist* (1975) and D.W. Chambers (1983) which asked a large number of people to draw and describe a scientist. Whilst recognising the origins of many of these images in literature, Frayling identifies two elements of the image. Firstly, a visual component: the white-coated, ageing, abnormally-shaped and bearded or mustachioed man. Secondly, two contrasting moral views of scientists: the ‘Good’ scientist as an intelligent, morally correct, cautious, persistent genius working for mankind’s benefit and the ‘Bad’ or ‘Mad’ scientist described as an uncaring ‘brain’ doing lonely, dangerous work, disconnected from

society, and neglecting his family and friends (pp. 12-13). However, one unanswered question is why are scientists different to other professionals? The format of film necessarily requires visual 'shorthand' for reasons of cost and time - one could take almost any profession, chess-players, for example, and find cinematic distortions. Indeed, as Chapter Two demonstrates the creators of projection and film technology were celebrated as 'wizards' and 'magicians' (p. 59) but portrayed also as outsiders and possessors of special knowledge whilst technical details of their creations were omitted from newspapers. This also raises the issue of whether filmmakers and media, by simplifying science, unwittingly helped create and enforce the 'knowledge gap'.

Chapters Three and Four examine two scientific archetypes and their associated moral messages. Firstly, Rotwang, in Fritz Lang's 1927 *Metropolis* - an outsider, wild-haired, physically-deformed magician living in a small laboratory away from society - creates life in the form of the robot-human Maria, thus highlighting the moral battle between 'modern science and [medieval] occultism' (p. 60). Secondly, Dr Frankenstein, the DIY surgeon who, in Shelley's book, also creates life, but, unlike Rotwang, with benevolent intent. However, cinematic interpretations such as *Frankenstein* (1931) and *Bride of Frankenstein* (1935) introduced Faustian elements about transgressing God's laws. Demonstrating Dr Frankenstein's influence, the 1931 interpretation 'launched a thousand imitations' (p. 114) including *Son of Frankenstein* (1939). Later films altered the transformative technology, but not the message, from twisted surgery to the magic potion, most famously in *The Invisible Man* (1933).

Contrasting such fantastic science were the pseudo-documentaries of real-life scientists Marie Curie in *Madame Curie* (1943) and Thomas Edison in *Young Tom Edison* and *Edison, the Man* (1940). Frayling notes the difficulties filmmakers had in filming these and how certain clichés were utilised to 'sell'

the film to a supposedly scientifically-illiterate audience – again emphasising how filmmakers contributed to the ‘knowledge gap’. Personal relationships were emphasised over scientific labours, public demonstration scenes added to explain basic scientific concepts and ‘Eureka moments’ invented to provide dramatic tension.

Chapter Five explores the development of the military-scientist, reflecting the moral impact of WWII with scientists required, as in the Manhattan Project, to produce lethal weapons within a military-led operation. A second moral dilemma was the employment of Nazi scientists after 1945 such as V-2 designer Werner von Braun – parodied in *Dr. Strangelove* (1964). Both issues mirrored older cinematic questioning of science without moral constraints. Continuing, Chapter Six examines the movement from hero-scientists to destroyers who were unsuitable guardians of their own technology. 1950s sci-fi, such as *Them!* (1954) emphasised technological catastrophe and the threat of Soviet invasion, portraying the military, rather than ‘egghead’, politically suspect scientists, as society’s only safeguard. Similarly, scatter-brained, British ‘boffins’ such as Q were seen as harmless government employees, although Frayling recognises a distinct ‘iconic sense’ (p. 195) of British scientists different from Hollywood portrayals.

Frayling concludes by replicating Mead’s 1957 study, arguing that ‘the stereotypes seem to be alive and well [amongst] the young generation’ (p. 221) and noting an increased awareness of female scientists, perhaps due to films such as *Contact* (1997). Also contemplated are the potential dangers of a communication breakdown between scientists and the general public leading to science becoming marginalised for lack of understanding or fear. Overall, the work, suitable for specialists in cultural history and film studies, provides an economical and entertaining overview of the evolving cinematic image of scientists and could inspire the basis for more in-depth research on individual

themes. Regarding presentation, the book is well set-out, providing visual reinforcement in the form of posters and images from relevant films. Adequate endnotes and references are given on the general themes as well as some well-directed further reading suggestions.

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