

The Role of Science Fiction Films in Creating Awareness about Science & Technology

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Abstract

Communication of information about science and technology is essential for social and economic development. Communicating science to the public comprises diverse approaches such as public talks, debates, exhibitions, publications, science theatre and films. Often, these activities form a part of a wider campaign to engage people in science. Formulating programmes require a collective effort between scientists and communicators.

Science fiction is a broad genre of fiction that often involves speculations based on current or future science or technology. Science fiction differs from fantasy in that within the context of the story, its imaginary elements are largely possible within scientifically established or scientifically postulated laws of nature. But the borderline between fantasy and science fiction is blurred. In watching science fiction films, abstract concepts such as mutations, radiation, time travel, space travel and planets are experienced. Although science fiction films are made primarily to entertain, many authors use the genre to provide insight into science and its application in society.

The Day After Tomorrow is a 2004 apocalyptic science-fiction film that depicts the catastrophic effects of both global warming and global cooling. The film was inspired by The Coming Global Superstorm, co-authored by Coast to Coast AM talk radio host Art Bell and Whitley Strieber. The film was directed by Roland Emmerich (Independence Day, Universal Soldier, etc). It aims at informing the public about the catastrophic events that could take place due to global warming which is a major concern today. The film tells about the various effects of global warming especially about the climate shift that could occur if we go on ignoring the damage we render upon the mother nature. It portrays the events that happen when most of the world lies frozen under the snow. The film was well received by both the audience as well as the critics as the film, though containing imaginative elements, depicts what actually could happen.

Science fiction films keep people aware of the latest in the field of research and development and help them to lead a life with better knowledge and understanding of newer advancements. Of late, people are particularly interested in health and environment, and this has been reflected in increased coverage of these subjects in the media. Thus, science fiction films play a very important role in informing the

experts, children, farmers, students and the common man about the various developments that could take place in the field of science and technology, and the various calamities that could occur if we go on exploiting the natural resources.

Key words: *Science fiction, Communication*

INTRODUCTION

Communication of information about science and technology is essential for social and economic development. Communicating science to the public comprises diverse approaches such as public talks, debates, exhibitions, publications, science theatre, and films. Often, these activities form a part of a wider campaign to engage people in science. Formulating programmes require a collective effort of scientists and communicators. To communicate is one of the most important abilities of a human being. The world is now becoming a Global Village by the day, and countries need to communicate effectively with each other. The media plays a pivotal role in shaping the views of the youth, the experts, and the public in general. Films are one of the most powerful media which helps revolutionise the views of the public. Science is the backbone of all the development that is happening around the globe today.

CIENCE FICTION Science Fiction (SF) has been defined as “Any story that argues the case for a changed world that has not yet come into being. . .” A “changed world” means a temporary suspension of belief in what we know to be true to allow for the possibility of extraordinary occurrences that cannot happen in terms of the Bible (God) and evolution (chance). These mad scientists saw themselves as titans — a new breed of gods — creating men and women in their own image. These grim SF classics are hardly family viewing fare, especially when you learn more about the themes present in their

literary counterparts. I have chosen a series of films with a mix of themes. Most are adventure stories. Some have a science twist to them. A couple might make you a bit uneasy.

While not technically a SF, *October Sky*, based on Homer Hickam’s book *The Rocket Boys*, is more than a film about four high school students who work against the odds to win the gold medal in the National Science Fair in 1960 with their solid-fuel model rocket. It is a story about transcendence, rising above or beyond perceived limitations. It portrays a yearning that is inherent in most SF films. Good SF blurs the distinction between the worlds of make-believe and operating reality. SF works come in all types, shapes, and forms.

SCIENCE FICTION FILMS

Film should make aware children young, experts and common people to live in the world of future and the world of tomorrow. It will help them to cope with certain profound problems and handle situations that have critical scientific and technological dimensions. The inter-dependency of science, technology and society is increasing day by day. Our country confronts crises every now and then, which has scientific overtones and implications that touch our national deeply. The history of film goes back to 1889 when Thomas A. Edison developed clear celluloid that was coated with developing chemicals. This celluloid strip contained a series of photographs. Edison did not think his invention was important, but other European inventors continued inventing cameras

and projection equipment. The Lumiere brothers filmed outdoor scenes for their 1895 showings. Some early viewers were not pleased when people were captured in action. They thought there was a danger in presenting humans as "soulless parts" because their only previous art representations of people were paintings. These replicas of the human form followed rules of art that consistently used a whole figure style. People in the 1890s were shocked to see the photographs start to move and began to attend displays of this new marvel. Some of the women actually raised their skirts as to stay dry when a scene of ocean waves was shown. The invention of moving pictures caught on quickly but as the shock wore off, the business almost died. The motion pictures rebounded because they learned to tell a story and not just show a scene. By 1907, there were 5,000 nickelodeons in the United States. These silent film halls were a popular treat for just a nickel and the price included *piano music* (Knight 1976). Children enjoy watching a Charlie Chaplin film like *The Immigrant* and paying a nickel admission price can reinforce a historical perspective. The pranks of Chaplin can be compared to those of a current children's show called "Nickelodeon."

SF films have been a source for speculation about the future of technology. SF is all about imagining the future. It is said to be the branch of literature concerned with the man's response towards the impacts of science and technology on the future of human. The pace with which technology is altering the ways of our lives, it appears that the world of tomorrow will be very changed and different from what we see and know today.

As one can conclude from the term SF film, these films have a background of an advanced, fictional technology that is normally set in the future. What most of these films have in common is that they expose their own vision

of the future, with new technologies commonly being the most noticeable change in these hypothetical worlds. Besides visions about all kinds of scientific areas, the given context of this work concentrates particularly on computer interfaces. Before we observe the selected cut-outs, we will examine in short the key factors that contribute to the resulting interaction techniques. We should keep those in mind for later evaluation in have a better understanding (especially historical) of the context of a film.

The most important aspect in creating a SF film is probably the availability of special effects technologies – including the budget of a production to use those. Some films that will be shown are made at a time where digital editing was not yet existent, whereas other recent motion pictures do not even contain a single scene without computerized backgrounds or animations. Moreover, the commercial success of the film industry increased a lot during the past 10 years, such that higher budget films became more and more feasible.

SF is an incubator for imaginative minds to create visions that help us to glimpse not only the future, but also something about ourselves in the present. Fuelled by the extrapolation of "what is" into "what can be", science fiction transports us beyond the horizon of our current technologies enabling us to observe the possible incarnations of scientific progress and to experience and appreciate the many ways this may impact us.

The following films could be cited as examples:

- 1) *E.T. The Extra Terrestrial* directed by Steven Spielberg (1982)
- 2) *Back to the Future Series* directed by Robert Zemeckis (1990)

- 3) *Terminator 2: Judgment Day* directed by James Cameron (1991)
- 4) *Jurassic Park* directed by Steven Spielberg (1993)
- 5) *Independence Day* directed by Roland Emmerich (1995)
- 6) *The Bicentennial Man* directed by Chris Columbus ()
- 7) *The Day After Tomorrow* directed by Roland Emmerich (2004)
- 8) *Transformers* directed by Michael Bay (2007)

RESEARCH DESIGN

Research design can be thought of as the structure research. It is the “glue” that holds all of the elements in a research together. A design is often described using a concise notation that enables us to summarize a complex design structure efficiently.

METHODS OF DATA COLLECTION

The researcher has adopted two methodologies in this particular study namely

- (1) Content Analysis
- (2) Focus group methods

The first methodology for understanding the role played the media in covering science news is content analysis. Content analysis is an element of media evaluation or media analysis. Media content analysis has been a primary research method for studying portrayals of violence, racism, and women in television programming as well as in films. Noted media researcher Harold Lasswell said: “...content analysis operates on the view that verbal behaviour is a form of human behaviour, that the

follow of symbols is a part of the flow of events, and that the communication process is an aspect of the historical process... content analysis is a technique which aims at describing, with optimum objectivity, precision and generality, what is said on a given subject in a given place at a given time (Lasswell H.D *et al.*, 1952, p. 34). A widely used definition of content analysis was provided by Bearlson who described it as a “research technique for the objective, systematic and quantitative description of the manifest content of communication” (Bearlson 1952, p. 18, Newbold *et al.*, 2002, p. 79). But, mostly, the early approach to content analysis was criticized because of its focus on basic quantitative elements and an inherent assumption that quantitative factors indicated likely social impact. In more contemporary times, Robert Weber (1990) says: “Content analysis... is a research technique that is based on measuring the amount of something (violence, negative portrays of women or whatever) in a representative sampling of some mass-mediated popular form of art”. It can be a useful technique for allowing us to discover and describe the focus of individual, group, intuitional, or social attention (Berger, Arthur Asa 1991). It also allows inferences to be made which can then be corroborated using other methods of data collection. Krippendorff (1980) notes that “much content analysis research is motivated by the search for techniques to infer from symbolic data what would be either too costly, no longer possible, or too obtrusive by the use of other techniques”.

The second methodology for focus group method. In my focus group, which consists of students and experts, we discussed the film, *The Day After Tomorrow*, directed by Roland Emmerich and released in the year 2004. *The Day After Tomorrow* (2004) is an apocalyptic SF film that depicts the catastrophic effects of both global warming and global

cooling. The film was inspired by *The Coming Global Superstorm*, co-authored by Coast to Coast AM talk radio host Art Bell and Whitley Strieber. The film was directed by Roland Emmerich (*Independence Day*, *Universal Soldier*, etc).

DISCUSSION

We discussed the film, *The Day After Tomorrow* aims at informing the public about the catastrophic events that could take place due to global warming which is a major concern today. The film tells about the various effects of global warming especially about the climate shift that could occur if we go on ignoring the damage we render upon the Mother Nature. It portrays the events that happen when most of the world lies frozen under the snow. The film was well received by both the audience as well as the critics as the film, though containing imaginative elements, depicts what actually could happen.

The Day After Tomorrow is a well crafted and well executed film, and though it may be more of fiction than fact it does carry with it a hard hitting message that we need to start looking after this humble little planet called Earth. While the scientific accuracy of *The Day After Tomorrow* may not stand up to serious scrutiny, the film's very realistic visual effects do a great job of suspending your disbelief. In a time where most audiences tend to be rather blasé about computer graphics it does take something very spectacular to make a film stand out from the crowd. *The Day After Tomorrow* not only stands out from the crowd but raises the benchmark just a little bit higher. Just like *Independence Day* was in its time, *The Day After Tomorrow* is at the forefront of visual effects and many of the sequences throughout the film are enough to make your jaw drop. The water effects in particular, while still not

'perfect', have advanced considerably in the last few years. You need simply to look back at a film like *The Perfect Storm* to see how far the technology has come in only a few short years. Once again the special effects artists have edged ever closer to that thin line that separates computer graphics and true photo realism.

The film does contain some fictional elements, just to add that tinge of entertainment to it. But it could be called more of infotainment rather than entertainment. I can imagine this being rather detrimental particularly to a child's education as they are likely to read this, thinking it is all fact (which most of it is) and being fooled into thinking the Hollywood sign was actually destroyed by a tornado in 2004. A poor choice. These are essentially concept photographs of what various major cities around the world would look like in the event of a big freeze as depicted in the film. This film takes a big budget, special-effects-filled look at what the world would look like if the greenhouse effect and global warming continued at such levels that they resulted in worldwide catastrophe and disaster, including multiple hurricanes, tornadoes, tidal waves, floods and the beginning of the next Ice Age. At the centre of the story is a paleoclimatologist (a scientist who studies the ways weather patterns changed in the past). Professor Jack Hall (Dennis Quaid) tries to save the world from the effects of global warming while also trying to get to his son Sam (Jake Gyllenhaal) who was in New York City as part of a scholastic competition, when the city was overwhelmed by the chilling beginnings of the new Ice Age. In addition to all of the other challenges, this left Jack with one more - to rescue his son.

CONCLUSION

Science communication is of utmost important, since it helps create awareness about the advancements in technology among the general public, as well as the experts. SF films play a vital role in aiding Science Communication, by relaying to the public, information, in a form such that will both enlighten and entertain them. Science Fiction films which speak about happenings in the past or future, or those that speak of the various environmental hazards that the world could face based on the present world conditions, help create awareness among the public and are more effective than any other forms of communication in this field. Science fiction films keep people aware of the latest in the field of research and development and help them to lead a life with better knowledge and understanding of newer advancements. Of late, people are particularly interested in health and environment and this has been reflected in increased coverage of these subjects in the media. Thus, SF films play a very important role in informing the experts, children, farmers, students and the common man about the various developments that could take place in the field of science and technology, and the various calamities that could occur if we go on exploiting the natural resources.

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