

# The role of science fiction movies as stimuli in content-based language teaching, in particular in Future Studies.

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## Abstract

With the undeniable power of the visual image and the rich resource that film represents in language learning, not only as a source of language but also as a source of cultural content, the use of film would seem an ideal resource for content-based learning. This paper seeks to examine the role of one genre of film, that of science fiction, in the area of Future Studies taught as a content-based language program at Kyoto Sangyo University. After a brief explanation of the role of film and Futures Studies itself, the role of science fiction in education overall and content-based language learning in particular will be considered, and the practical applications in the classroom will be examined.

**Key words:** science fiction, movies, Future Studies, content-based

## Introduction

The use of video in the language classroom has long been recognized as a powerful tool, both in terms of the motivation of students, as well as a rich source of language study material. With the growing popularity of the content-based approach to language learning, the use of the movie has taken on an additional role — the visual images and storyline provide information about the content area itself.

Content-based language learning has been an important part of the program for first and second years in the English Department of the Faculty of Foreign Languages at Kyoto Sangyo University for almost seven years. Both first and second year students have a three-times-a-week course, with teachers teaching different content areas and rotating after approximately 27 classes.

One of the content areas that is taught to the second year students is Future Studies<sup>1)</sup>. In this course, students are encouraged to create their own vision of the future. As the course description states ;

In a rapidly changing world the shape of the future is important to consider. This will be a speaking based course that will examine various aspects of the future including technology (such as robotics and space travel), education, lifestyles, and computers and

the Internet. The image of the future in popular media (such as movies) and the role of science fiction will also be covered. Students will be encouraged to research areas that interest them and build a picture of where they think they will be in ten, twenty or thirty years time and how changes will affect them personally.

In practice, students find applying their imagination to constructing their own future and to considering future issues very difficult, and it is here that the power of the visual image of science fiction<sup>2)</sup> movies (the availability and use of which will be discussed in the next section) comes into play.

### *Using Video in the Language Class*

The visual image is becoming more and more dominant in our culture, and the use of it as a teaching tool more and more important in language teaching. Two comments, made ten years apart, by Alan Maley, series editor of the Oxford University Press Resource Books for Teachers, illustrate the change. Maley notes in the foreword of *Video* in 1991 :

Few things make a more immediate impact than the visual image — and that impact is enhanced when the image is a moving one. Hence the popularity which film, TV, and video enjoy both as a medium of entertainment outside the classroom and as a focus for learning activities within it. (Maley, 1991, p. 3)

Ten years later in 2001, in *Film*, which appears to be the updated version of *Video*, Alan Maley's Foreword begins :

We live in a culture dominated by the visual image, and in particular, the moving image. The written word has, to a large extent, ceded its pre-eminence to visual representations of the world which in turn has created the need for us to make sense of this visual rhetoric ... In language teaching terms, film offers a wide range of alternatives. It is increasingly available ... (*and is a*) medium which is globally accessible, even in environments where technology is not widely available ... Film also offers an enlargement of our knowledge of the world and the cultures that it contains. It is in the broadest sense 'educational'. (Maley, 2001, p. ix)

Films produced primarily in English are very popular and readily available in Japan. The increasing sophistication of special effects, in particular computer graphics, and the increasing reliance by many film producers on special effects to sell movies has also led to a boom in movies which can loosely be termed science fiction. These movies and the special effects in them create very powerful and realistic images of the future. This means that even stills or short excerpts from such movies can be used to stimulate student imagination, encourage speculation, and introduce the area of Futures Studies, a brief introduction of which will be the focus of the next section.

*A Brief Introduction to Futures Studies*<sup>3)</sup>

H. G. Wells, who is the accredited founder of Futures Studies, (Wagar, 2004) said in a 1932 speech :

It seems an odd thing to me that though we have thousands and thousands of professors and hundreds of thousands of students of history working upon the records of the past, there is not a single person anywhere who makes a whole-time job of estimating the future consequences of new inventions and new devices. There is not a single Professor of Foresight in the world. But why shouldn't there be? All these new things, these new inventions and new powers, come crowding along; every one fraught with consequences, and yet it is only after something has hit us hard that we set about dealing with it. (Slaughter, 1989, pp. 3-4)

Alvin Toffler's 1970 *Future Shock* predicted that many of the "Citizens of the world's richest and most technologically advanced nations ... will find it increasingly painful to keep up with the incessant demand for change that characterizes our time." (p. 9) Analysis of the impact of "new inventions and new powers" and the ability to adapt to the "incessant demand for change" have become very important, and, in the words of Slaughter (1995), people need to be "empowered" to handle them. This is the role of Futures Studies.

But what is Futures Studies? As Dator elaborates in his introduction to the 2002 book *Advancing Futures: Future Studies in Higher Education*;

Future Studies ... is interested not in itself furthering any particular view of the future, but rather in furthering both narrowly professional as well as broadly participative inquiry into the future; understanding the roots and consequences of each of the manifold images of the future that exist in people's minds and in support of people's actions. We are interested in identifying and understanding the many different images of the future that exist, understanding why certain people have certain images rather than others, how their different images of the future lead to specific actions or inactions in the present, and how present actions or inactions themselves create certain aspects of the future. (Dator, 2002, p. 7)

In doing this, a futurist will discuss, explore, map out possibilities, theorize and seek to predict the future, but cannot create it. (Massini, 2002, Slaughter, 2002a) What role does science fiction have in doing this?

*Science Fiction as a Teaching Tool*

One would hope that any material, such as a movie, that was brought into the classroom was there to enhance the learning environment — either by providing information, food-for-thought, or providing inspiration. If it were to be used as a teaching tool, the most appropri-

ate use of science fiction would seem to be in the teaching of sciences.

There is apparently little doubt that science fiction has been an inspiration for scientists-to-be. In 2004 Alok Jha and Adam Rutherford reported in *The Guardian* that; “We asked leading scientists from around the world what science fiction meant to them: how they related to it and what influence it had on them. The answers showed that science fiction not only reflects science but is also an inspiration for it.” As James Hendler (2005) put it in a letter from the Editor in *IEEE Intelligent*; “For one generation of AI researchers (including me), the first encounter with AI wasn’t at a workshop but at the movies.” Timothy O’Shea, Principal of the renowned University of Edinburgh and professor in artificial intelligence, claimed that he was “initially inspired by science fiction, which he read voraciously as a boy.” (Taylor, 2004)

In recent years, science fiction has also been making its presence felt in university level science degree programs. It has been used in a range of fields, such as physics, and it has recently begun to appear in artificial intelligence courses, such as at the University of Southern California Viterbi School of Engineering in 2006 in the study of artificial intelligence. Milind Tambe, an associate professor of computer science, states; “We are using the science fiction as the spice for the main dish of teaching an important new area of our discipline.” (2006) The Welsh University of Glamorgan offers a BSc (Hons) Science and Science Fiction degree in which students study, “the areas involving the social and ethical concerns of scientist and the need for effective communication of scientific concepts with the public.” Science fiction is also used in their new BSc Science (Robotics) course where students will be taught how to “apply science fiction in science.”

However, the use of science fiction to inspire future scientists or teach artificial intelligence or physics is only one aspect of its possible use. Arguably, a more important use would be in stimulating students imaginations to deal with the pace of change that we are experiencing, just as in the ‘Science Fiction and the Future’ course taught at the Yale-New Haven Teachers Institute (Dils, 2005). This course attempts to “expose students to the concepts of future and change...encourage students to think about their own future and the effects of change upon their lives... (*and*) to encourage students to predict possible alternative for the future.” By raising possible future issues through the use of science fiction literature (short stories), the course aims to encourage students to develop the flexibility to adapt to change. This ability is the “empowerment” that citizens in the modern world need to have to handle “Future Shock” brought on by the “incessant demand for change” mentioned by Alvin Toffler above. So science fiction does have a role as a teaching tool in a variety of settings. Before going further, it would seem appropriate to give a brief definition of what science fiction is.

Dils (2005) points out that it is difficult to find a ‘tidy definition’ for the genre science fiction. The glossary that comes with the Knowledge Base of Futures Studies CDROM states that Science Fiction is a:

Branch of speculative writing with roots in the Gothic imagination, Utopian fictions and other tales of wonder. Takes notions of estrangement and dislocation consequent upon the impacts of science and technology and explores implications. In no way a reliable guide to the future, but provides a fascinating tapestry of speculation about a wide variety of future worlds; some plausible, others not. Can provide a useful grounding in a grammar of futures imagery. Many futurists began thinking about the real future after having their imagination stimulated by sf. (Slaughter and Inayatullah, 2004)

The key phrases here are “provides a fascinating tapestry of speculation about a wide variety of future worlds” and “can provide a useful grounding in a grammar of futures imagery.” In providing a grounding in ‘futures imagery’ along with speculation of what may or may not happen in the future, science fiction encourages students to think of the world and their own future in more creative, productive, and constructive ways. It provides a model for students to follow that then allows them to organize their own thoughts more effectively.

But what of science fiction movies as opposed to literature? Costello (2004) states, “Most sf films are pale imitations of sf literature, marketed by the studios to people who wouldn’t normally like it in an attempt to generate maximum profits.” (p. 13) Science fiction author Frederik Pohl wrote “When print science fiction is translated into film science fiction the subtle parts are left out.” (Costello 2004 p. 13) Costello goes on to point out that to sell the movies the fantasy part is played upon by the producers, to the detriment of the science and subtle messages in the movies. He goes on to state, and it seems appropriate to quote him at length here:

Fantasy escapes from the real world, but sf originates there. Robert Silverberg said ‘... I think one role of science fiction is to serve as an insulator against what Alvin Toffler called “Future Shock”... We may reach a point where we’re horrified by what’s coming next, but at least we can’t say we’re surprised by it.’ Biotech, nanotech, wearable computing, cybernetics, biometrics: these concepts are familiar because sf prepared us for them. Captain Kirk stuck a silly plastic card into his chair to record his Captain’s Log; now we insert much smaller cards into our cameras and use portable electronic devices to transmit images instantly to our friends, or access the cyber universe of the Internet. The design of the Enterprise crew’s communicators wasn’t light years (distance, not time) away from mobile phones. The astronauts in *2001* carried portable flat-screen TVs; now laptop and notebook computers are *de rigerur* on Starbucks sofas, where people tap away while listening to a gadget the size of a pack of cigarettes that holds their entire music collection. (Costello, 2004, p. 15)

We can thus see that, even if the movie as a whole is a “pale imitation,” the visual imagery can be very powerful. In addition, as Dils (2005) points out, students are all in contact with science fiction through the medium of movies and, as Maley (2001) noted, “We live in a culture dominated by the visual image.” (p. ix) Students relate far more easily and quickly to the visual image. The ‘silly plastic card’ and the design of communicators in Star Trek and

2001's flat-screen TVs are visual images and can even be shown as simple photographs and excerpts that illustrate the issue or idea in the literature and, whether the film be a 'pale imitation' or not, they are enough to encourage future speculation and thus provide a basis for Futures Studies. Consideration of the film as a whole and its portrayal (or lack of portrayal of the subtle parts) of the literature that inspired it is not important in utilizing the visual impact of the images portrayed in the movie, although it can certainly make an interesting addition to the class as students generally enjoy when a teacher 'trashes' a film.

So, if the visual imagery of the science fiction film has the possibility of being effective in introducing students of English to Futures Studies, how can this actually be done in the language classroom?

### *Practical Applications in the Classroom*

As each film and classroom are different, it is difficult to make generalizations about how the genre of science fiction as a whole can be used in the classroom. For this reason, what follows is an account of how science fiction is used and what sort of effects it has in one set of classrooms — the previously mentioned second year classes at Kyoto Sangyo University where Futures Studies is a content area in a content-based language learning environment.

Horror and science fiction have long had a close association (Costello, 2004, p. 11) and so pictures of aliens from movies like *Alien*, *Predator*, and *Independence Day* provide what our common image of aliens is — scary, predatory and invincible. Even the Martians in the comedy movie *Mars Attacks* have huge brains, indicating our own probable insufficiency in brain power. Students are presented with images from these movies and asked about their own image of aliens. Those images are often very similar — humanoid, silver, with antennae, and scary in some way. However, after having discussed this with the students, images from the movie *E. T.* (where aliens are friendly and more than human in many ways) and *K-PAX* (where we are never sure if the alien really is an alien) are shown and the power of using one's imagination to ask "What if ...?" is introduced — What if aliens are friendly? As Costello notes, "Woe betide the first genuine alien emissary to visit Earth — movies have shown us time and again the welcome they'll get." (2004, p. 12) This is a simple and powerful image that never fails to start the students thinking.

Going one step further and showing students that the teacher's Foreigner's Registration Card actually in English labels the teacher an 'Alien' further encourages students to consider the meaning of words and their impact. An alien is actually just someone who does not come from here — and thus is not necessarily from outer space.

This is followed by excerpts from *Men in Black I* and *II* which encourage use of imagination, and show how our world, and others, can be seen in a different light. Students laugh at the little world of the aliens living in the locker and find the visual image of what appears to be a normal human being becoming an alien and giving birth in a car entertaining, but be-

come very thoughtful when they realize a video card has become the religion for the locker aliens, and even more thoughtful when they see our world depicted as being in a locker in a giant alien terminal (presumably not a train station). Again, short sections of the movie are all that is required.

Science Fiction movies are thus introduced as not only being a story, but also being about an issue or idea. As Philip K Dick, an eminent science fiction writer, once stated “I think Dr Willis McNelly at the California State University at Fullerton put it best when he said that the true protagonist of an sf story is an idea and not a person.” (Costello, 2004, p. 11) Students are required to prepare a presentation about a science fiction movie that includes the following sections: issues, new ideas/technology, vocabulary, story summary, and discussion questions. Two movies, *Starship Troopers* and *Gattaca*, are presented as models, one a poorly written movie (despite being from an excellent book) that relies on special effects and stereotypical reactions to *Aliens*, the other a thoughtful consideration of an important topic in our future, genetic engineering. The primary emphasis of the presentations are the consideration of the topics themselves and the importance of the discussion questions in encouraging debate on topics.

To follow this up, the issues involved in science fiction movies are elicited. Students find this challenging, and so several headings are used to help them in organizing their thoughts. These are ‘Computers and Robots’, ‘DNA’, ‘Aliens’ and ‘Others’. While the resultant list is different each time, the following gives an idea of the sort of issues that students come up with.

We fight computers, computers control us, robots can feel, we fight robots, robot children, our pets control us, recreation of dinosaurs, genetically engineered babies, making super people, cloning humans, making people invisible, breeding clones for spare parts, we meet aliens and they are (un)friendly, aliens live on earth, aliens attack Earth, we are food/toys for aliens, we destroy the earth, meteor hits the earth, time travel, we live on the moon, we go to Mars, we can predict crime, global warming leads to environmental disaster.

As you can see, there is a wide range of topics represented here, from those of current concern (meteor hits earth), concern for the near future (we go to Mars), and perhaps of comparatively little concern (we are food/toys for aliens) except for during the movie in question<sup>4</sup>). In an attempt to divide these issues in terms of urgency, students are asked to divide them into four areas — of current concern, in the near future (which is defined as during your lifetime), in the far future, and never. They are then encouraged to debate their choices. Naturally, each student divides them up in different ways, and the debate is always lively and heated. As a follow up, students are asked to produce a written piece — ‘*Science fiction provides a clear and useful vision of the future. Discuss.*’ — that is then read by classmates and discussed in the following class which is followed by classes in which students make their own speculations of what the future will bring.

### Conclusion

The visual image provides a very powerful teaching tool and the increasing dominance of the visual image in our culture perhaps makes it even more powerful than the more traditional literature as a method of inspiring and engaging students. As Cooper, Lavery and Rinvoluceri (2001) skillfully summarize in the text of *Video*;

Video is a supercharged medium of communication and a powerful vehicle of information. It is packed with messages, images, and ambiguity, and so represents a rich terrain to be worked and reworked in the language learning classroom. (p. 11)

The visual power of science fiction movies does indeed provide a 'rich terrain to be worked' in engaging students in Futures Studies, in particular as students find initially the area a hard one to approach. The presence of science fiction in their lives and their familiarity with the story lines and issues of popular movies provide stimuli that then allow the teacher to broach areas of concern that the normal language learner would have a hard time explaining or understanding if they had to approach them 'cold', without the benefit of science fiction.

In the samples of classroom practice given, science fiction movies are used to encourage the students to question their own views of the world (are we in a locker ourselves and if so how important are we?), consider the unconscious messages that many movies provide us with (the fact that almost all aliens are hostile and we are helpless), discover and discuss the relative urgency of topics and themes in our future (are we going to be eaten by aliens any time soon?) and consider what topics they believe important for their own future.

Thus, the powerful imagery of the medium of film combined with the popularity of the English-speaking world's science fiction movies among the public in Japan mean that science fiction movies provide a potent tool and powerful stimuli in beginning students' education in Future Studies. Student interest in and reaction to the topic, as it is taught in a content-based approach, and its effect on their study of and interest in English as a whole, while beyond the scope of this article, would certainly make an interesting and appropriate follow-up article<sup>5)</sup>.

### Notes

- 1) It should be noted that a consideration of Futures Studies overall can be found in this publication last year: Clafin, Matthew 'A Consideration of the Nature and Place of Futures Studies in an Academic Program: A Case Study at Kyoto Sangyo University.' Kyoto Sangyo University, Humanities Series No. 34, March 2006. pp. 176-186.
- 2) Throughout the paper the terms science fiction and the abbreviation sf are interchangeable.
- 3) As noted in footnote one, an introduction to Future Studies and its place at Kyoto Sangyo University was discussed in more detail by the same author in this publication last year.



- 4) It is both interesting and important to note that there is nothing to do with nanotechnology here, but then there is little public knowledge of nanotechnology. Scars to do with biotechnology such as hideous diseases and cloning along with the threats that robots and computers might be to society play easily on the human psyche, but no-one has yet to tackle nanotechnology. This is one significant problem in relying on commercial movies — significant areas that should be of concern are not covered.
- 5) A final note on student response: There are several things that almost always occur that are surprising. Many students do not know what a science fiction movie is and do not realize that their favorite movies are science fiction. Also, a significant number of students, in diary feedback, state that they did not like science fiction movies before, but now like them.

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## コンテンツベースド・ラーニング：未来学における SF 映画の役割

クラフリン・マシュー

### 要 約

映画は、映像そのものが持つ強烈な力及びその内容から文化を紹介するための豊かな情報源として、コンテンツ・ベースドの語学学習の素材として理想的である。

本論では映画の中でも、未来学の研究領域にあたる SF（空想科学映画）というジャンルに着目し、京都産業大学の授業の中でそれをどのように生かすか、ということを論じる。まずは学習における映画の役割及び未来学の説明からはじめ、次に SF 映画が教育全般及びコンテンツ・ベースドの教授法においてどのような役割を果たすかを論じた後、それを教室でどのように具体的に活用したらよいかを検討していく。

キーワード：SF 映画，未来学，コンテンツベースドラーニング