

The image of Science in Greek science fiction magazines

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Introduction

In this work we study and evaluate the texts of Greek science fiction magazines published during the period 1976–2002 by examining the way in which science is portrayed in the texts (stories) of these magazines. Our research focused on:

The way in which scientific research and activity are reflected in these texts, if the science is a social activity or is isolated from the society and what effect does that kind of science have on the lives of individuals or on the environment.

The way in which the scientists are depicted.

This work is part of a wider research project whose principal aim is to examine the way in which these texts can be used as supplementary educational material in an interdisciplinary physical sciences teaching course in order to promote students' critical thinking and positive attitudes towards science and the scientific community.

We have chosen to study science fiction texts, as their plot often involves physical sciences and technology, as well as the impact they have on society, in the context of the relationship between science, culture and society. The portrayals of the scientist and the nature of scientific activity are of crucial importance for issues relating to the public's (or the students') attitudes toward science (Brake & Thornton, 2003), the way science and the scientific community are presented in science fiction texts stimulates students to think about the role of science in our present society and consider what might contribute to its development. Thus, they can learn to anticipate where science and technology may take them as responsible or irresponsible users of them and the impact they may have on society as future scientists themselves.

Methods

In order to study the image of science in Greek science fiction magazines, we have performed Content Analysis (Berelson 1952, Wimmer & Dominick 1994, Mayring 2000).

The first step was to probe the texts (stories) from all the relevant magazines and then, our study focused on the texts whose plot refers to the physical sciences and technology.

The representation of science was assessed by examining each text for the effect that scientific and technological achievements have on humans and the physical environment, and also by assessing the image of the individual scientist portrayed in these texts.

Two *category systems* were constructed:

(i) The effects of scientific and technological achievements on humans and the physical environment.

(ii) The features and qualities of the individual scientist.

For the first category system we have established the following categories:

- (i) *Positive effect*: Scientific and technological achievements affect humanity or the physical environment positively.
- (ii) *No-effect*: Scientific and technological achievements don't affect humanity or the physical environment.
- (iii) *Negative effect*: Scientific and technological achievements affect humanity or the physical environment negatively.

From our analysis of Table 1 we have seen that the vast majority of our texts falls within the *negative effect* category. In order to have a clearer picture we have analyzed the third category by establishing *subcategories*.

These are:

- a. *Machines control humans*: According to Science Fiction Encyclopedia (1995) the term “machine” is used to represent: spacecrafts, weapons, cyborgs, androids, computers, replicas, robots, automatons.
- b. *Mass destruction of humans*. In this subcategory we included nuclear weapons, viruses etc.
- c. *Damage to the physical environment*. In this subcategory we include the irreparable damage of the environment from nuclear explosions, accidents etc.

Table 2 shows the results of the analysis of the third category.

For the second *category system* we have established the following categories:

- (i) *Intelligent*
- (ii) *Psychologically disturbed*
- (iii) *Evil*
- (iv) *Socially isolated*

Each text of our sample is defined as the *unit of analysis* and we established the frequency of the appearance of the categories and the subcategories in the unit of analysis as *quantification system*.

Results

From 1976, when the first science fiction magazine – titled “Analogio” – was published in Greece, until 2002, fourteen (14) science fiction magazines and fanzines were published. Among the 245 texts of these magazines, 58 texts have physical sciences and technology as their main theme. The results of our Content Analysis are shown in the following tables.

Table 1

Categories	Percentage
Positive effect	5,17%
No-effect	6,89%
Negative effect	87,93%

Table 2¹

Subcategories	Percentage
Machines control humans	66,66%
Mass distruction of humans	23,52%
Damage to the physical environment	56,86%

¹ The texts referring to the negative effect are 5, the Percentage was calculated on this total.

Table 3²

Categories	Percentage
Intelligent	100%
Psychologically disturbed	23,52%
Evil	5,88%
Socially isolated	100%

Discussion and Conclusions

The most frequently appearing category regards the negative-effect scientific and technological achievements. Man-made machines turn against humanity, computers terminate mankind, cyborgs and androids have control or dominance over humans. They manipulate the original function of human society. Some of them are even creations of sociopathic individuals, horrific travesties of human beings.

Nuclear weapons cause the destruction of planet earth. In some texts the remaining human beings struggle to survive in a hostile environment, contaminated by radioactivity. Even in the texts where the scientific and technological achievements are not against humanity, they are not used for solving any of the greatest problems of society.

As far as the category of the features and qualities of scientists is concerned, the scientists are presented as extremely intelligent individuals with no private life. They are not interested in contact with others and they lack any kind of social skill. Hence, the scientific community is presented as an autonomous collective, alien to any communal interaction, capable of manipulating science with the sole purpose of imposing its control and power on others. The scientific research is conducted in centers outside society where the dominant mode of thought is the one held by an elite of experts aiming only at the "pure" scientific knowledge.

On the whole, our analysis has shown that in the vast majority of the texts studied, the image of science emerging is absolutely degrading, an activity totally isolated from human society and its needs.

Such an image doesn't promote a positive attitude towards science and it can be employed in a formal educational process only in the context of promoting critical thinking in students.

Bibliography

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² The texts referring to scientists are 34, the percentage was calculated on this total.

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