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Suprapti
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SCIENCE FICTION FORMULA OF FUTURE LIFE
IN DUNE AND FAHRENHEIT 451

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ABSTRACT
Science fiction is a prose writing that presents the possibilities of the future, using known scientific data and theories as well as the creative imagination. This research is aimed at explaining the future life and formula found in Dune and Fahrenheit 451. It is done under deterministic approach. Deterministic theories assume that art is essentially a contingent and dependent from of behavior that is generated and shaped by some underlying social or psychological dynamic. This approach has been widely applied to the interpretation of all sort of literature. The result of the result shows that the formula of both “Dune” and “Fahrenheit 451” are based on Robert schools opinion. Even though there are several formulas didn’t exist in the novels. The formula consists of the theme imaginary world, imagery being, and self reflection.

Keywords: science fiction, future life, formula

INTRODUCTION
Science fiction is a combination of “science” and “fiction”, two words that lexically has contradictory meaning. Science refers to the study of real things meanwhile fiction focused on imagination or unreal thing. One thing that is really interesting is that “imagination,” said Albert Einstein “is more important than knowledge.” This statement may seem surprising, especially coming from one of history’s most famous scientists. But, in fact, imagination and fantasy often point the way to real-world developments. Many inventions, such as airplanes, cloning, radio, robots, the laser, and electronics, were first described in science fiction. From this statement, it is clear that fiction has a relation with science and vice versa.

Science fiction is a prose writing that presents the possibilities of the future, using known scientific data and theories as well as the creative imagination. It is a kind of time machine that transports readers to the future. Robert A. Heinlein (slides) stated that, science fiction is "realistic speculation about possible future events, based solidly on adequate knowledge of the real world, past and present, and on a thorough understanding of the nature and significance of the scientific method". Meanwhile Frank Herbert insisted that "The function of science fiction is not always to predict the future but sometimes to prevent it.”

DISCUSSIONS
Science Fiction in the Society
In order to give a description about the science fiction in the society, I presented the following table based on Katharine Duckett Research (Internet) about US domestic of top 20 films & science fiction. The graphic below shows that science fiction film has a high trend in the US society. It means that science fiction commonly popular in the US society.
The top twenty movies in the US grossed 3.7 billion dollars. Science fiction movies accounted for 2.5 billion of that. In 2008, sci-fi (science fiction) rocketed out of the basement to become almost 75% of the total.

In this paper I would like to give two example of science fiction novel that popular they are *Dune* a novel written by Frank Herbert and *Fahrenheit 451* written by Ray Bradbury. The data on the Table shows that these two novels are popular.

**The Definition of Formula**

Cawelty (p.20) stated that the formulas are the cultural products (pattern) and it have some sort of influence on culture because they become conventional ways of representing and relating certain images, symbols, themes, and myths. The changing and developing process of formula is a kind of cultural evolution that determined by audience selection. Formula can be useful to distinguish the pattern of a literary works and help us in answering the question why a literary work become popular although in persuasively. When formula becomes such a widely successful formula, a story pattern clearly has some special appeal and significance to many people in culture.

In explaining the cultural significance of the culture function need approaches. There are three main approaches that have been mainly applied according to Cawelty (p.22). They are 1) impact or effect theories that most widespread way in which men have defined the cultural significance of literature. Such theories assume basically that literary forms and/or content have some direct influence on human behavior. Naturally, the tendency of this approach is to treat literature as a moral or political problem and to seek to determine which literary patterns have desirable effects on human conduct and which have bad effects, in order to support the former and suppress or censor the latter. 2) Deterministic theories assume that art is essentially a contingent and dependent from of behavior that is generated and shaped by some underlying social or psychological dynamic. This approach has been widely applied to the interpretation of all sort of literature. 3) Symbolic or reflective theories. According to this approach, the work of art consists of a complex of symbols or myths are defined as images or pattern of images charged with a complex of feeling and meaning and they
become, therefore, modes of perception as well as simple reflection of reality.
Based on the three approaches above, the

Formula of Science Fiction
According to Scholes (1978, 175-189) that the formulas of Science fiction are:

Table: The Comparison between Dune and Fahrenheit 451

<table>
<thead>
<tr>
<th>Title</th>
<th>Dune</th>
<th>Fahrenheit 451 *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Author</td>
<td>Frank Herbert</td>
<td>Ray Bradbury</td>
</tr>
<tr>
<td>Genre</td>
<td>Science Fiction</td>
<td>Science Fiction, Dystopian Novel</td>
</tr>
<tr>
<td>Publisher</td>
<td>Ace Trade</td>
<td>Ballantine Books</td>
</tr>
<tr>
<td>Pages</td>
<td>544 (Ace Trade 40th Anniversary Edition)</td>
<td>201</td>
</tr>
<tr>
<td>Number of copies</td>
<td>1st best selling hardcover novel sold over 12 million copies worldwide</td>
<td>5 million copies in print</td>
</tr>
<tr>
<td>Awards</td>
<td>Hugo Award, Nebula Award</td>
<td>Hugo Award, BAFTA Award, Golden Lion</td>
</tr>
<tr>
<td>Adaptation</td>
<td>a. <em>Dune film</em> (David Lynch), b. <em>Dune TV miniseries</em> (made by the United States-based Sci-Fi Channel), c. Computer Games, and d. a series of prequels co-written by Brian Herbert, the author's son, and Kevin J. Anderson.</td>
<td>a. A movie version of the novel was released in 1966 (by François Truffaut and starring Oskar Werner and Julie Christie) b. In July 1994, a new film adaptation (Warner Bros and actor Mel Gibson) c. the Obie Award winning off-Broadway theatre The American Place Theatre is presenting a one man show adaptation of <em>Fahrenheit 451</em> as a part of their 2008-2009 Literature to Life season d. At least two BBC Radio 4 dramatizations have also been aired, both of which follow the book very closely.</td>
</tr>
</tbody>
</table>

The writer chooses the second approach the deterministic theories to analyze these two novels.
race and sex- and those of physical origin-the themes of time and space. It is also based on technology.

2. Imaginary beings
Unhuman beings in science fiction take either two forms. Either they are constructs, artificial creation such as androids, robots, cyborgs or golems, or they are the products of some unearthly evolution-aliens. The stories of mankind have always employed imaginary beings, devices used to dramatize many fictional concerns, from human passions. Also the plot is sometime face danger [particularly from other life forms]

Stanislaw Lem has suggested that there are four archetypal relationship between human and robot in science fiction:

a. The relationship between man and machine;

b. The relationship between master and slave;

c. The relationship between man and succubus or incubus;

d. The relationship between man and transcendence (Deity, etc)

3. Sex and Race in Science Fiction
Although the Oedipus myth permeates science fiction, and although that myth uses sexual symbols, graphic depiction of sex is rare in science fiction, thought at one remove from the literal such items as ray guns and spaceships may well function as phallic symbols. Until recently, most science fiction was written for men; the women in the stories served only as prizes awarded of stage-so much so that one used to encounter the truism that “There is no sex in science fiction.” Like many widely believed truisms, however, this notion is not true. Nowadays, much science fiction has affection to sex.

4. Self reflection
Although often filled with strange characters and bizarre happenings, science fiction stories usually shed a light on ordinary human nature. Enduring examples of science fiction help us to better understand the psychological processes involved as intelligent beings face change, challenges, moral decisions, and even tragedy. Most science fiction comments on present-day society through the writer’s fictional conception of a future society.

The Formula of Dune and Fahrenheit 451
The themes usually Imaginary World.

The themes of Dune are combination of several themes they are Time Travel because of the setting thousands of years in the future 10,191, the human race has scattered throughout the galaxy; Alternate Universe because the ecology was set on the planet Arrakis, a desert planet with valuable mélange, a spice which extends life enormously.

The Technology in “Dune” The mélange has Spacing Guild; its navigators use the spice to safely plot a course for the Guild ships via prescience using “foldspace” technology, which allows instantaneous travel to anywhere in the galaxy. The planet Arrakis is completely covered in a desert ecosystem but the native Fremen tribes have a complex system in conservation of water on their arid planet. They conserve the water distilled from their head.

Another of the more interesting pieces of technology presented in the book is a weather satellite. These satellites orbit the planet and are capable of influencing the weather of the entire planet. With the current technology we cannot even imagine how such satellites would be achievable. Our knowledge of weather patterns is much greater now than it was fifty years ago, but we are still decades and decades away from having control over our climate.

The soldiers in the novel carry around personal communication devices. These small boxes that latch onto their belt act much like two-way radios. This
comes as no surprise, because radios were the primary type of portable communication at the time the novel was written. The radios were still rather big and not convenient enough to be carried around at all times, but as we can see today, the prediction of much smaller and more portable devices was very precise. Cellular phones were of course not even on the horizon in the beginning of the 1960s, so it’s unlikely that the author could have predicted this.

The final piece of technology I would like to mention is a tiny book. Books in the novel are the size of a match box, but contain thousands of pages. They are activated by finger motions on the side of the book and contain a magnifying glass to allow the tiny text to be read. They are too fragile to be flipped with fingers, so certain motions on the edges of the book tell it to flip on its own. Today we can relate this to portable ebook readers. These are small computers that can contain hundreds of books and allows you to read just like a real book. I was rather surprised to see that the author was able to foreshadow this kind of development. While he did not predict that the books would be electronic, there has definitely been a great deal of compressing the information into much smaller space. Libraries of books can now fit in the palm of your hand.

The theme of “Fahrenheit 451” has little bit different characteristics that are focuses more on sociological and psychological [mental aspects] than technology also it is a kind of allusion which called dystopia. In science fiction, the dystopia became immensely popular during the 1950’s as writers protested against what they saw as the overwhelming tide of conformity and cultural emptiness typified by mass-market television and other powerful forces in the postwar world.

Bradbury “Fahrenheit 451” was a dystopia or a critic to the tyranny of an oligarchy in 1984 is matched by the tyranny of the anti-intellectual majority in Fahrenheit 451. Bradbury’s novel partakes of the atmosphere of anticommunism following World War II. The government seems distant, unconcerned with life in Montag’s city, involved instead in the threat of atomic war that hangs over the nation.

Beatty, Montag’s boss, in a series of lectures on the history and theory of the firefighters’ work, makes clear that the firemen act on behalf of ordinary people who know what happiness is, who want to be sure that everyone is happy, and who want to extirpate any who fail to conform to this idea of happiness. Book collectors are discovered and exposed by their neighbors, acting from a sense of civic duty; no secret police are required.

Imaginary beings

Supernormal power/talents that belongs to Paul, as Frank Herbert said in his interview published in Omni Magazine in July 1980, “Enormous problems arise when human mistakes are made on the grand scale available to a superhero … Heroes are painful, superhero are a catastrophe. The mistakes of superheroes involve too many of us in disaster.” This statement gives tends to be political because describe the position and the decision of a leader is very important.

The protagonist, Paul Atreides, is “the One,” a messiah-type character whose arrival people have been anticipating and expecting to bring about great change. Paul is different from the other “ones” in science fiction because of his steadfast resistance to his destiny and his concern about the consequences of power. Paul does not believe – he knows he is Kwisatz Haderach (cryptic)

The Protagonist faces danger or conflict, the danger is from Leto and his family are also threatened by Baron Harkonnen, who wants to rule the planet himself. The Baron proves to be even more dangerous than Duke Leto initially thought: he manages to bribe a very close friend to the Atreides family, Dr. Yueh to spy on the family and then eventually
sabotage their security. On the positive side, the local people on the Arrakis, the Fremen, do not like the Barron and his cruel techniques, so they are more content with supporting Duke Leto and helping him fight the Barron. Shortly after the Atreides family settles into their new home, the Barron, with the help from Dr. Yueh, strikes and manages to kill Duke Leo, but fortunately Paul and his mother Jessica manage to escape. The high ranking officers who were under Duke Leto’s command also escape and eventually reunite with Paul and Jessica. All this time, due to his exceptional intelligence and ability to tell the future, usually the protagonist can overcome the danger as Paul is becoming a long awaited and prophesized savior of the Fremen. Paul amazes the Fremen by showing his familiarity with the native secrets. As a result Paul quickly climbs the ladder of power in the Fremen society, eventually becoming their co-leader and religious icon. He eventually leads the local people of Arrakis, along with the soldiers who were loyal to Duke Leto, to defeat the Barron and claim his title as the Duke of Arrakis. After some negotiation, Paul convinces the emperor of the universe to let his daughter marry him, thus making way for Paul’s eventual advancement to the throne.

The novel Dune ends with Paul becoming the emperor of the universe, but leaving many loose ends and, thus, setting up for later novels in the series.

In “Fahrenheit 451” the protagonist is Guy Montag. He was a fireman whose job it was to start fires, to burning all the books along with the houses in which they were hidden.

Guy Montag enjoyed his job. He had been a fireman for ten years, and he had never questioned the pleasure of the midnight runs nor the joy of watching pages consumed by flames. never questioned anything until he met a seventeen-year-old girl who told him of a past when people were not afraid. Then he met a professor who told him of a future in which people could think... and Guy Montag suddenly realized what he had to do. His activities at first symbolizes that he was constructed as a machine of government, doing everything that was asked by the aristocracy. But after then he was realized what he doing were wrong. Also the Firemen in Fahrenheit 451 are a machine of the government authority to burning all the books, to obey all government’s order. It is contrary with real life that the firemen should extinguished fire.

The Mechanical Hound, in this story is a deadly robot that can be programmed by the government to track down those considered to be criminals by scent. It comes loaded with deadly morphine that it injects into its victims. Apparently it is also available as a kind of watchdog for one’s home. The Hound expresses how desensitized this society is to killing and the death penalty itself. Here in the real world, people still fight over it but in Fahrenheit 451, no questions are asked; they just send out a Hound to get the “bad guy.”

Bradbury has constructed that the books become something that was dangerous in the future. It can contaminate people’s mind that will be dangerous to the government. That is why all of the books should be burning.

Sex and race in science fiction.

There is no sex to be found neither in Dune nor Fahrenheit 451. In Dune Jessica is Paul’s mother. Jessica is the concubine of Duke Leto Atreides. Though she acts like a wife to Leto and he has no other concubines, she is not married to Leto. Jessica is a member of the Bene Gesserit, a school that teaches and practices what many others think of as witchcraft. An orphan who never knew her parents, in this story Jessica described as is tall and slender, with bronze-colored hair and green eyes. Event those characters became her sexual appearance.
Meanwhile in Fahrenheit 451 Mildred and Montag sleep in separate beds, which might have more to do with the fact that Bradbury was writing in the 1950s than anything else. We know couples have sex because they still have children, and Montag even references Mildred’s friends having had an abortion, or twenty. You know, for a book full of "the cycle of life" stuff, there’s surprisingly little procreation going on here...

Self reflection.

Dune series include human beings’ susceptibility to mass manipulation by political propaganda, religious dogma, and sexual temptation, and the importance of self-awareness and self-mastery in resisting these types of control, as well as the study of power and control.

Frank Herbert in his Dune created an easily believable universe full of planets, societies and people. The structure of the empire that unifies the known universe is similar to that of the Middle Ages. The most obvious connotation of this historical period is strong knights on high-steppers fighting in tournaments and the ladies watching and admiring them. Some of them may even faint when their favorite is in danger. It described the condition in the society when Herbert writes this novel.

In Fahrenheit 451, the strongest political message is that all books are burned by a government organization whose personnel are known as firemen. They make fires instead of putting them out. This demonstrates that censorship is not something to be toyed with because it will get out of hand and you will be left with something akin to the state of things in Fahrenheit 451, namely, an unconscious population who allow the rulers to wage nuclear war and punish protesters without trials.

All these factors combined create a state of constant superficial happiness in the society. Books make people think about issues. So what do they do? Burn them. Anything that makes one unsure of one’s ideals, or city, or country, is simply burned (whether literally or metaphorically). If it does not make people happy, there is no point to it for their society. This very state of constant “happiness” really depreciates the value of actually being happy. However, Montag realizes this and joins a rebel group fighting to keep emotions and actual thinking alive. With the messages in this fifty-year-old book that are frighteningly applicable to our current state of affairs, it is clear we must pay more attention to our society to prevent it from delivering this sort of distorted existence.

At the end of the book, Bradbury leaves hope that maybe Montag and his group will revive civilization after it has fallen to its knees. Perhaps this is a sign that we too can fix the problems in our civilization.

CONCLUSION

People are always interested in knowing what’s going to happen tomorrow, either so they can be prepared for it or so they can try to keep it from happening. Reading science fiction stories is a way for you to immediately visit the future or visit parallel universes if that’s your preference. It brings readers to science, write and think about being different - an outsider or an alien. It also as an Assess the future that can be used not only trying to predict future, but also trying to prevent the disaster might happen in the future.

Science fiction can pose not only a possible future, but also a possible past, based both on known scientific data and the imaginations of the writer. Science fiction often comments on the author’s contemporary society through the historical, technological, and societal details which the author presents.

The formula of both Dune and Fahrenheit 451 are based on Robert
schools opinion. Even though there are several formulas didn’t exist in the novels

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