Science Fiction in Graphic novels

Special Project Report

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Declaration

I declare that this written submission represents my ideas in my own words and where others' ideas or words have been included, I have adequately cited and referenced the original sources. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/ source in my submission. I understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

Signature

Name of the student: SOMNATH PAL

Roll No.: 08634006

Date: April 19, 2010

Acknowledgment

I am eternally thankful to my guide, Prof. Shilpa Ranade, who gave me the opportunity to work on this project. The project was truly exhaustive, and without her motivation and guidance, it would have been impossible to focus on the essential areas in the project. She supported me throughout and advised me whenever I got disordered with my line of thought.

I am also thankful to my friends, Arun, Chaitanya and Vinay who often cited essential books to help me in my understanding.

In addition, I thank everybody who supported me in my venture.

Abstract

The project is an attempt to define science fiction through a set of criteria formulated by assortment of various existing definitions and their further tweaking and restructuring. In addition it tries to classify a few existing (and widely considered) science fiction graphic novels through the guidelines formulated. The idea is to make certain guidelines for a stepwise classification of available science fiction graphic novels which helps facilitates further analysis of specific themes in such graphic novels.

The project limits largely to the American comic book industry though it does touch upon briefly, the Indian and the Japanese comic book scenario.

Introduction

Science fiction was always seen as an imagination of the fantastic. The earliest science fictions were more of science fantasies with room for crazy inventions, unimaginable creatures and out of the world journeys otherwise impossible in comics. Notable authors like Jules Verne and H.G. Wells were continuously pushing the limits to their imagination and could be well credited for inspiring most comic book writers to consider science fiction as an alternate genre. After Wells' novel, comic book editors Julius Schwartz and Mort Weisinger published an early science fiction fan magazine (or "fanzine") called the "Time Traveler"¹. Science fiction as panel art first appeared in the newspapers as "Buck Rogers in the Year 2429 A.D", a strip created by Philip Nowlan and Dick Calkins. It had originally been published in Hugo Gernsbach's Amazing Stories in 1928 as a story, debuting as a strip a year later. Other science fiction newspaper strips soon followed, notably Alex Raymond's "Flash Gordon on the Planet Mongo".

Outside of the Buck Rogers and Flash Gordon reprints, the main

BUCK ROGERS
25%
CENTURY
A.D.

The Big Little Book

A Cover of Buck Rogers (Left) from one of its early issues.

comic book title in the 1940s to publish continuous science fiction was Fiction House's *Planet Comics*, a spinoff of the company's *Planet Science Fiction* pulp magazine. Pulps were hardly known for sophistication and *Planet Comics* followed that tradition by relying on lurid covers and stories that followed the "guy, gal, and monster" formula. Pin-up style women were menaced by grotesque aliens in almost every issue. Two of *Planet's*

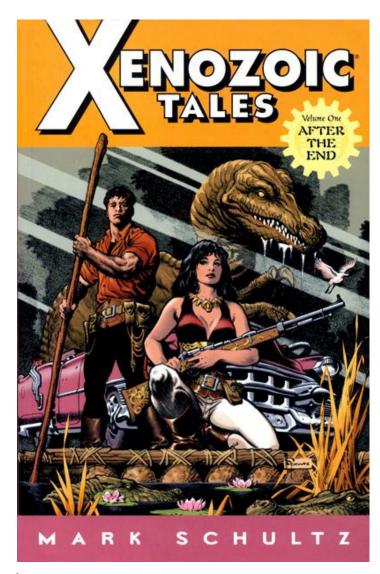
writers were women, Lilly Renee and Frances Hooper, a rarity for those times. Strangely enough, judging from the comic's letter page, *Planet Comics* also attracted an enthusiastic female readership.

With the detonation of the atomic bomb and the increasing sophistication of science fiction itself, the 1950s saw a corresponding growth of maturity of comic book science fiction. E.C. Comics' *Weird Science* and *Weird Fantasy* were proof of that.

E.C. had inspired other publishers to bring out their own science fiction titles. Among them were DC Comics' "Strange Adventures" (August 1950) and "Mystery In Space" (April 1951). Ziff-Davis, publisher of "Amazing Stories" magazine, entered the field with "Weird Thrillers" (September 1951) and "Space Busters" (1952). Virtually all the publishers carried science fiction titles and all them were to suffer a drop in sales until The Space Race began between Russia and the United States, sparking the public's interest in the genre. Two other boosts later came from television and film; *Star Trek*, the1966 TV series, and George Lucas' *Star Wars* movie (1977). Both were adapted in comic's format, with a *Star Wars* series enjoying a ten-year run. There were other adaptations of television shows, among them The "Twilight Zone", "The Outer Limits", "Time Tunnel", and "The Invaders".

In more recent times, while it existed (1986-1995), Kitchen Sink Press published the Harvey and Eisner Award winning "Xenozoic Tales", a post-cataclysm series written and drawn by Mark Schultz. Heavy Metal magazine (once edited by science fiction writer Ted White) has run numerous science fiction stories by European and American creators, and in 1996 DC Comics launched a science fiction line, Helix Comics. That line regrettably folded after a relatively short run, but many science fiction comics are still around to entertain readers today

¹ http://stevestiles.com/sfcom.htm



A cover of 'Xenozoic Tales' written by Mark Schultz

What is science fiction?

Owing to the non-homogeneous nature of science fiction, writers and scholars have had disagreements all around on existing definitions of the genre. It has therefore been considered a rather notorious task to define science fiction, as writers have always found new ways to bend already existing boundaries set by such definitions. So obscure are the boundaries that quite often the very act of deciding whether a story is science fiction or not is left to personal prejudice- as Damon Knight stated, "science fiction is what we point to when we say it"². Defining science fiction is almost as controversial a debate as identifying the boundary between nudity as art and pornography³. Therefore my attempt here is not to fuel the debate but to arrive to a diplomatic solution to carry forward on our venture.

The more primitive definitions either talked about a prophetic extrapolation through science fiction based on existing knowledge⁴, or a world of scientific possibilities where the author rationalizes

² http://en.wikipedia.org/wiki/Science_fiction. Original text at: Knight, Damon Francis (1967). *In Search of Wonder: Essays on Modern Science Fiction*. Advent Publishing, Inc.. p. xiii. <u>ISBN 0911682317</u>.

³ http://en.wikipedia.org/wiki/Science_fiction. Original text at: Glassy, Mark C. (2001). *The Biology of Science Fiction Cinema*. Jefferson, N.C.: McFarland. ISBN 0-7864-0998-3

⁴ According to John W. Campbell, "To be science fiction, not fantasy, an honest effort at prophetic extrapolation from the known must be made." John W. Campbell was an influential figure in American science fiction. As editor of *Astounding Science Fiction* (later called *Analog Science Fiction and Fact*), from late 1937 until his death, he is generally credited with shaping the so-called Golden Age of Science Fiction.

the adventures and experiences as possible to science⁵. What such definitions as a statement do not incorporate is identifying the quintessential role a society plays in this world of scientific possibilities- after all science fiction like all good stories must talk about societies- be it human or alien or creature. Later, Theodore Sturgeon included this aspect when he stated, "A good sciencefiction story is a story about human beings, with a human problem, and a human solution, that would not have happened at all without its science content." By this definition, a serial crime story with insights into forensic techniques and methods and impacts on a local society could well qualify as science fiction instead of being a detective story. First, the understanding of the term 'human' should be extended to other creatures bound in the laws of the author's fictional world and should address it as a society. Second, it does not consider science's speculative possibility (within scientific rationale-meaning once the rules for such a possibility are set, everything and everyone must abide by it rationally) and hence tends to include almost any literature where science plays some sort of a crucial role. Second such a definition should incorporate the concept of change and not just that of impact, where scientific elements make meticulous efforts to generate an understanding of that world where the change leads to. The popular understanding of science fiction is what Chris Evans pointed out as the notion of 'what if' in the realm of scientific possibilities. According to him, "science fiction is a literature of 'what if?' What if we could travel in time? What if we were living on other planets? What if we made

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contact with alien races? And so on. The starting point is that the writer supposes things are different from how we know them to be". But here, the scientific possibility that lends itself to the notion of 'what if' needs to evolve from being just a gimmick to integrating science into the whole philosophy of the context. Science has covered a long distance from merely being a tool for innovations and discoveries- science paves way for strategies and explains behavioral patterns which should find their way into such stories. It is only then can our science fiction stories go beyond a superficial treatment of science- as it is in various spaceship invasion stories where if you replace the spaceships with the Greek army, lasers with swords and bows, blue skins with white, and earth with a kingdom in Punjab the whole story reduces to (and quite often a poorly imitated version of) a mere war between Alexander and the Paurus.

Therefore we'll move along considering the following features for the definition of science fiction

1. An underlying speculative concept, designed systematically in a way that gives room to the author to explore the consequences of allowing any departures from the known reality and consequently taking it as an opportunity to infringe upon the universe we know. In creating such departures, the author should be aware of the body of science from where his speculative world departs so that they are more of conscious and thoughtful departures. In addition, there should be an imposition by the author, of certain limitations somewhere in the assumptions of the

⁵ According to J.O. Bailey, "A piece of scientific fiction is a narrative of an imaginary invention or discovery in the natural sciences and consequent adventures and experiences ... It must be a scientific discovery -- something that the author at least rationalizes as possible to science."

- story. This avoids room for unauthentic possibilities to corrupt the course of the narrative.⁶
- 2. There should be a concern for the change a society can undergo because of such a departure.
- 3. Integrates science in the philosophy in which the society responds to such a change and doesn't assume the society comprising largely of guinea pigs.

Science Fiction versus Fantasy

If there is anything as vexed as defining science fiction it is drawing the line between science fiction and fantasy. Perhaps the simplest way to identify the boundary is by saying that if science fiction is the literature of change, then fantasy is the literature of longing.





Maureen McHugh (Left) and Michael Swanwick

It is interesting to see how Maureen McHugh⁷ extends on the thought⁸ of Michael Swanwick⁹ and distinguishes one from the other by saying, "Fantasy often ends with the re-establishment of order, with evil conquered and good on the throne. Sf often ends with the establishment of a new order, a new way of doing things, with the evolution to a higher order."

Types of Science Fiction:

Crudely, science fiction is classified as either hard or soft science fiction. Hard science fictions attempt to put in rigorous attention to accurate detail in quantitative sciences, especially physics, chemistry, astrophysics or stresses on representing worlds that more advanced technology may make possible¹⁰. Soft science fiction indicates SF based not on the hard sciences but on the soft sciences (including anthropology, sociology, psychology, political science, and so on)¹¹.

⁶ These were outlined in *Robert Silverberg's World of Wonder* as essential requirements for Science fiction

[[]http://www.treitel.org/Richard/sf/sf_authr.html]. Robert Silverberg is an American science fiction writer and a multiple winner of both Hugo and Nebula awards.

⁷ Maureen F. McHugh is the author of the Hugo award winner 'The Lincoln Train' http://en.wikipedia.org/wiki/Maureen F. McHugh

⁸ Michael Swanwick, after writing the IRON DRAGON'S DAUGHTER said that the difference he found between sf and fantasy was that fantasy was a normative kind of fiction and sf was a transformational kind of fiction. [http://www.treitel.org/Richard/sf/fantasy.html]

⁹ Michael Swanwick is a science fiction writer most famous for the Nebula award winner novel 'Stations of the Tide'.

[[]http://en.wikipedia.org/wiki/Michael Swanwick]

¹⁰ Under Subgenres in Science fiction:

http://en.wikipedia.org/wiki/Science fiction

¹¹ http://en.wikipedia.org/wiki/Soft science fiction

Original from "Science Fiction Citations: Soft Science Fiction"

Writer and journalist Christian "naddy" Weisgerber¹² offers this definition of "hard":

"SF that is written to a high degree of conformance with current scientific knowledge, where all extrapolation of new phenomena is plausible, self-consistent, and limited in number and/or scope as to not reduce its effects to arbitrariness. The plot should center around the exploration of a scientific phenomenon, its applications, or generally the application of science and engineering to the solution of problems." ¹³

To put it rather simply, Hard science fictions consider the ways in which natural objects (and consequently machines built out of them) behave in the authors invented world, while soft sciences tell about how people (and societies built out of them) behave in the invented world. However, the boundaries are vague and the best of science fictions account for both the aspects in their stories.

Popular Science Fiction sub genres in Graphic Novels:

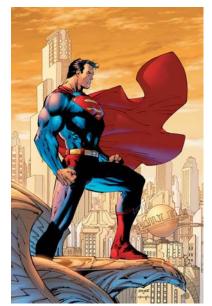
Superhero:

Since science offers a platform for chemical and structural change, many a time writers take the liberty to defend their superhero's super powers on such grounds. Be it Hulk (a victim of large gamma radiations from a 'gamma' bomb explosion) or Spiderman (where a spider bite changed his DNA component giving extraordinary spider powers), superhero powers need a fake belief system possible only

under the veil of science. Interestingly almost all superheroes in the world have some sort of a scientific explanation for either their superpowers or their super armory. It would be interesting to note a few ways in which superpowers exist under the science velum:

Inhuman nature: The character belongs to a class of wholly or partially non-human beings for whom superhuman capabilities are typical. This includes, but is not limited to, characters who are aliens, demons, gods or hybrids.

Examples include Superman (a Kryptonian, i.e. descendant of Krypton), Hawkmen and Lionmen (various races among descendants of Mongol), people of the 'Homo mermanus' race living in the mythical undersea kingdom of Atlantis.



An image of Superman by Jim Lee

Object based powers: Such characters rest on external armory, or systems that feed immense strength into their bodies.

E.g. Iron man, Bane (one of the antagonists in Batman)

Mutation: These powers are a direct result of some form of either induced evolution or natural selection, usually manifested during adolescent puberty when other mental and bodily adaptations take

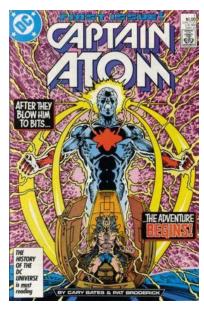
¹² http://sites.inka.de/mips/index.html

¹³ http://www.treitel.org/Richard/sf/hard.html

place.

E.g. The Fantastic Four, X-Men, Namor the Sub-mariner etc.





Namor, the Submariner(Left) and acover illustration of one of the issues of Captain Atom

Chemical Change: The powers are result of a change in the DNA structure of the body due to either exposure to certain radiations or injection of a certain chemical which proposes to have induced the chemical change.

E.g. Hulk, Spiderman, Captain Atom

However, such characters are often dealt superficially and the treatment of the notion of limitation (as delineated in point 1 of the proposed features of science fiction) is rather shallow. The only limitation imposed on Superman is his weakness in

presence of Kryptonite, a detrimental element from Krypton. Second, in most of the stories scientific rationale is not central to the narration of the stories as outlined in the criteria. None of the stories address Superman as an alien on Earth-neither does it focus on issues related to his adaptability to a different atmosphere¹⁴.

In some other superhero comic books the underlying notion of a scientific research is often a part of either the protagonist or the antagonist. But such issues remain the dormant aspects of the story and rarely explore details and purpose of such experiments. Even during interactions between protagonists and antagonists with proposed scientific knowledge, science is mainly a gimmick where it is either some weapon that could counteract the impact of his special powers, or at the an antidote with a techno-chemical name that could destroy the antagonist's powers and render him back to his normal state.

However, once established as a superhero with superpowers, most superheroes are pretty much single dimensional characters¹⁵, whose conflicts rarely come across plots that require any scientific imagination as the central theme. If stripped of the superpowers most superheroes are more of

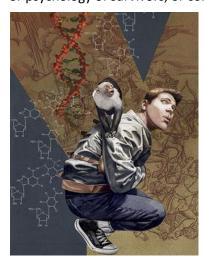
¹⁴ A simple conflict in this regard could be issues related to loss of bone mass and density due to prolonged stay in a lighter gravity system. [http://weboflife.nasa.gov/currentResearch/currentResearchGeneralArchi ves/weakKnees.htm]

¹⁵ In recent years, this has taken a turn, where the inner emotional conflict of the superhero constitutes the second dimension. However, such aspects rarely have any scientific logic to their credit.

detectives whose sole purpose is to restore order rather than the creation of a new order.

Apocalyptic/ Post-Apocalyptic:

"Apocalyptic fiction is a sub-genre of science fiction that is concerned with the end of civilization either through a nuclear war, plague, or some other general disaster. Post-apocalyptic fiction is set in a world or civilization after such a disaster. The time frame may be immediately after the catastrophe, focusing on the travails or psychology of survivors, or considerably later, often including the



One of the covers of Y the Last Man, shows Yorick and his monkey.

theme that the existence of precatastrophe civilization has been forgotten (or mythologized)". ¹⁶ Stories where the world ends in a nuke-war are have scanty technology available in the postapocalyptic scene.

Post-apocalyptic¹⁷ graphic novels present themselves as an excellent platform for highlighting the fragility of a society and its vulnerability to peril in the lack of resources and technology. Quite often in such stories the world is shown fragmented into societies with absolutely no faith in each

¹⁶ As defined in Wikipedia.

[http://en.wikipedia.org/wiki/Apocalyptic_and_post-apocalyptic_fiction] ¹⁷ In the lack of an apocalyptic graphic novel, the discussion has not been taken into consideration.

other. In other times, it is the story of a lone survivor and his attempt at survival in world of dearth and decay. One of the common conflicts is creating alternate life forms (either radiation inflicted or virus mutated), where a bunch of survivors struggle to stay alive. However, most of them rarely get into the issues of survival from a scientific standpoint.

Despite the arguments, "Y the Last Man" proves itself as an excellent science fiction." Y the Last Man", written by Brian K. Vaughan¹⁸ with art by Pia Guerra¹⁹, is the story of Yorick Brown, the last man on earth after a mysterious event kills anyone with a Y chromosome. Not just a gender-based "what if", Y is a true post-apocalyptic tale positing a world where roughly half the world's population suddenly dies. It deals, quite understandably, with issues of gender, which come up as the surviving women react to the state of events, and Yorick, a strange and often hapless catalyst, moves through the new society they are creating with his (also surviving) monkey, Ampersand and various female companions. The World of Y the Last Man isn't one of blasted landscapes and buried ruins, though it is not without its own wreckage. Imagine a plane piloted by men when all the men in the world die. Imagine a world where procreation is impossible. Imagine not having enough people to operate power plants or maintain computer systems or operate necessary machinery. The obvious questions - Why did Yorick survive? How will they repopulate? - are combined with emotional human drama as Yorick & Ampersand are joined on their journey by spy/bodyguard Agent 355 and genetic engineer Dr. Alison

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¹⁸ American comic book and television writer. [http://en.wikipedia.org/wiki/Brian K. Vaughan]

¹⁹ Canadian comic book artist. [http://en.wikipedia.org/wiki/Pia Guerra]

Mann, asking deeper questions like how does one continue a life after such a global tragedy, or why do men & women really need each other. In addition, it also tries to highlight the human aspect of all its characters on scientific grounds- where one section of the women society is shown accepting the whole swipe out of patriarchy, while the other section almost breaking down at its loss. In addition, Yorick is often shown as suffering from survival guilt- an immediate mental condition that occurs when a person perceives himself as wrong for surviving a traumatic event. This is one of the graphic novels that adhere strictly to the features enlisted in the criteria for science fiction. However it addresses only few societies from across the globe- the only negative (with respect to criterion 2) on its claim for science fiction.

Military and Space adventure:

Military science fiction is considered another subgenre of science fiction where the conflict is essentially a war taking place either in space or a distant planet supporting life. Generally the antagonist is one who aims to be crowned as the space lord. A detailed depiction of the conflict, the tactics used to wage it and the role of a military service and the individual members of that service form the basis for a work of military science fiction. The stories often take features of actual past or current Earth conflicts, with countries being replaced by entire planets or galaxies of similar characteristics, battleships replaced by space battleships and certain events changed so that the author can extrapolate on what might have occurred. Quite often the hero in such stories is an

earthling whose mission is to save either the planet or the space in general.

Traditional military values of bravery, sacrifice, sense of duty, and camaraderie are stressed, and the action is usually described from the point of view of a soldier or officer. Often, the technology employed is more advanced than present-day, and described in detail, but serves mainly to establish a sense of futuristic world. In some stories, however, technology is fairly static, and weapons that would be familiar to present-day soldiers are employed- but other aspects of society are seen changed- as in women may be found equal partners in combat. Strikingly, in most of such fictions, wars are rarely won through research, development or tactical logic, but by sheer willpower, bravery, brute force, and other military virtues.



Flash Gordon, one of the most famous space warriors.

Moreover, the alien worlds are quite often human like in thought and values. To reduce the conflicts most of the authors specify them as alternate space communities of 'homo sapiens' or similar humanoid races. To further reduce conflicts the planets are similar to that of Earth with 'all the essential gases and elements suitable for Terrain life'. One such planet is Mongo, the native planet of the evil tyrannical space Lord Ming the Merciless. Flash Gordon²⁰

 $^{^{20}}$ an earthling who along with his counterparts Dale and Dr. Zarkov shoots into space in a desperate attempt to locate the origin of the meteors bombarding the Earth.

crash lands on Mongo and helps restore order after dethroning the evil space Lord. Though such a story is speculative and has genuine concern for the society, falls back on the following grounds: first, the conflicts do not have a scientific undertone- as it is just another war disguised under the veil of space adventure; second the author doesn't explore the limitations of such a voyage. It ends up being a science fantasy much like the popular pulp novels in the first guarter of the 20th century.

Time Travel:

"Time travel is the concept of moving between different points in time in a manner analogous to moving between different points in space, either sending objects (or in some cases just information) backwards in time to a moment before the present, or sending objects forward from the present to the future without the need to experience the intervening period (at least not at the normal rate)."21

Time travel has been a staple supplement for all science fiction fans. However, notions of time travel are more of a novelty in most graphic novels. Rarely does any graphic novel treat it in as much detail as H.G. Wells did in his novel "The Time Machine". Albeit. there are sporadic mentions of time travel to set up conflicts, time travel never received a proper scientific thought. While scientists meticulously consider possibilities of a real time travel, most of the stories have never accounted for even a percent of the existing knowledge on time travel. The present understanding of time, after

Einstein disproved Newton's approach of linear time flow²², is capable of giving birth to such humongous conflicts in fictitious time travel that it could open up dozens of fascinating stories. Unlike most graphic novels which require a central hero and a villain, such graphic novels can open up paths for discovery and scientific education through exciting fictitious reads.

Cyberpunk:

Gardner Dozois²³, one of the editors of Isaac Asimov's²⁴ Science Fiction Magazine during the early '80s, is generally acknowledged as the first person to popularize the term "Cyberpunk", when describing a body of literature. Dozois doesn't claim to have coined the term; he says he picked it up "on the street²⁵ somewhere".

²² Einstein believed that movement of time was more like a river, whose path could be bent unlike that of Newton who believed in a unidirectional motion of time. [http://plato.stanford.edu/entries/time-travel-phys/] ²³ American Science fiction writer and editor. He was also the Editor of

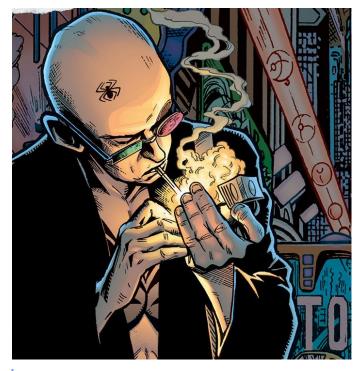
^{&#}x27;Asimiov's Science Fiction' magazine from 1984 to 2004. [http://en.wikipedia.org/wiki/Gardner Dozois]

²⁴ Asimov is perhaps the most famous of "The Big Three of Science Fiction" and is one of the most prolific writers in sci-fi history. He published or edited over 500 books, and an estimated 90,000+ letters and postcards. He has published non-fiction as well as fiction, with books under every section of the Dewey decimal system except for philosophy. He is best known as a science and sciencefiction writer, whose Robot series and Foundation series laid the groundwork for most modern science fiction and are still widely read today

²¹ As defined in Wikipedia. [http://en.wikipedia.org/wiki/Time_travel]

²⁵ It is probably no coincidence that Bruce Bethke [http://en.wikipedia.org/wiki/Bruce Bethke] wrote a short story titled "Cyberpunk" in 1980 and submitted it Asimov's magazine, when Dozois

In the words of Erich Schneider²⁶, "Cyberpunk literature, in general, deals with marginalized people in technologically-enhanced cultural "systems". In Cyberpunk stories' settings, there is usually a "system" which dominates the lives of most "ordinary" people, be it an oppressive government, a group of large, paternalistic corporations or a fundamentalist religion. These systems are enhanced by certain



Spider Jerusalem, the loudmouth protagonist of Transmetropolitan

may have been doing first readings, and got it published in Amazing in 1983, when Dozois was editor of 1983 Year's Best SF and would be expected to be reading the major SF magazines. But as Bethke says, "who gives a rat's ass, anyway?!".

technologies, particularly "information technology" (computers, the mass media), making the system better at keeping those within it, inside it. Often this technological system extends into its human "components" as well, via brain implants, prosthetic limbs, cloned or genetically engineered organs, etc. Humans themselves become part of "the Machine". This is the "cyber" aspect of Cyberpunk. However, in any cultural system, there are always those who live on its margins, on "the Edge": criminals, outcasts, visionaries or those who simply want freedom for its own sake. Cyberpunk literature focuses on these people, and often on how they turn the system's technological tools to their own ends. This is the "punk" aspect of Cyberpunk."

Cyberpunk was in many ways the turning point in science fiction. In past science fiction usually extrapolated from a single idea, while cyberpunk took the larger view that things don't develop in isolation. By considering the many factors that could affect our future, cyberpunk led the way towards a more credible speculation, and more sophisticated writing styles.

The best Cyberpunk works are distinguished from previous works with similar themes, by a certain style. While the setting is urban, the mood is dark and pessimistic. Concepts are thrown at the reader without explanation, much like new developments are thrown at us in our everyday lives. There is often a sense of moral ambiguity; simply fighting "the system" (to topple it, or just to stay alive) does not make the main characters "heroes" or "good" in the traditional sense. Many a times Cyberpunk becomes an alternative tool to satirize the aspects of the society that the author does not conform to. In his attempt the author takes the liberty to exaggerate such aspects in a futuristic world and lament the apparent consequences of disorder.

²⁶ A system administrator and programmer at Caltech Information Technology systems. [http://www.its.caltech.edu/~erich/]

One of the most celebrated graphic novels in this genre is "Transmetropolitan" - written by Warren Ellis and co-created along with artist Darick Robertson. In an unspecified distant dystopic future, America has become a place where there is the City, and then everything else. The City (no name is given or required) is a humongous massive sprawl, where every type of lowlife imaginable eats out their miserable existence as best they can. Half the population in the city is doped up on all sorts of mild-altering, hallucinogenic drugs available. Body modifications are all the rage. Extra breasts, werewolf teeth, and transplanting one's mind into the body of a dog – nothing is too weird or forbidding. Many people called transients are slowly transforming themselves into aliens by injecting alien DNA to replace their own. Deviant religions abound everything from religions celebrating pedophiles to continuous sex are intermixed with judgmental rants and insane prophecies. The rich and powerful live an idyllic existence in this new world order. Corporations and politicians both have the same goals – to dang the population for their own benefits and gratification. Media feeds of all varieties are abounding in the "Transmetropolitan" future. The City is fully wired and monitored so that every happening can be recorded and played back for national amusement. Talk shows have even gotten more deviant than they already are today. In short, the new world is at the peak of all mess humanly imaginable. In every attempt, "Transmetropolitan" tries to be a moral compass that typifies our world, one which puts all the dirty truths of the age of the plain white sheet of the page.

As with many dystopian pieces, it's made clear throughout "Transmetropolitan" that the soulless 'MonoCulture²⁷, in which the

²⁷ Refers to the possible de facto dominance of a single culture brought about by globalization across the major sections of the world. One of Spider Jerusalem's rant includes, "We live in a monoculture. What does that mean? Well... go out to your street corner, you'll probably see

McDonald's or MTV on the screen somewhere, a GAP clothes store. Go out

protagonist is trapped, is in fact our own world, simply distorted and reframed. Globalization has led to a singular identity across the face of the world, and no two cities are truly distinct enough to offer any reprieve. Only in self-destruction, altering the very basis of human identity, do those within the 'MonoCulture' hold on to hope. They buy happiness in drug form, in altering the body, or losing themselves in hypothetical constructs of futures that may never exist.

But all aside, why would a socio-political satire, be essentially considered a science fiction? It is undeniable that most of the novel is a hogwash of sex and violence; in addition concepts of alien DNA and mutation are more of fancy tantrums from the unrestrained writer and could well be treated as mere exhibitionism. However, where "Transmetropolitan" stands itself out in terms of a science fiction is in surmising the proliferation of the internet thereby understanding the possibility of an underground cyber culture which we are a part of today. At the time of its launch it was a world of the future based on scientific knowledge (current then) and almost 10 years after its publication, it is shocking to see how accurate Ellis was in predicting the evolution of the internet, the media and its influence on global city culture among other things.

to a street corner in London and you'll see the same thing... same in Prague, Sao Paolo, Grozny or Hobart. That's what a monoculture is. It's everywhere, and it's all the same. And it takes up alien cultures and digests them and shits them out in a homogenous building-block shape that fits seamlessly into the vast blank wall of the monoculture. This is the future. This is what we built. This is what we wanted. It must have been. Because we all had the fucking choice, didn't we? It is only our money that allows commercial culture to flower. If we didn't want to live like this, we could have changed it any time, by not fucking paying for it. So let's celebrate by all going out and buying the same burger."

Science Fiction in India

In India, though science fantasy has always been a part of our literature and epics and writers have often included scientific elements in their stories. However, since the notion of graphic novels or comic books is comparatively new in India, science fiction



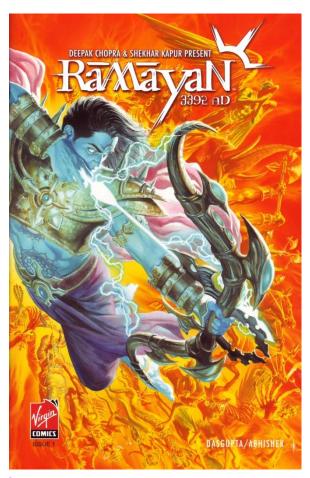
Nagraj (Left) and Parmanu, two of the leading superheroes in Raj comics

has not yet made a distinguished contribution.

Inspired the west, many of the comic book stories do contain fictional scientific experiments leading to superhuman powers or uncalled for circumstances. However, most of these comic books lack any scientific rationale and fall flat when it comes to defending the physics that it tries to create.

Two of the most popular comic book superheroes, Nagraj and Parmanu were created through scientific experiments. This gave the writers a chance to do away with any explanation for their super powers, also giving them the flexibility to modify powers as and when the situation arose. There was no scientific constraint included in the world of these superheroes, neither was any explanation ever given as to how the experiment lead to the making of such super human characters. Their stories were a part of the

everyday world with problems concerning the present. Therefore such comic books could never make it into the category of science fiction.



The cover of the $\mathbf{1}^{\mathrm{st}}$ issue of Ramayana 3392 AD designed by Alex Ross

The one comic book series that is widely considered as science fiction graphic novel in India is Ramayana 3392 A.D. launched by Virgin comics in 2001. There were many reasons as to why this epic graphic novel was considered a science fiction- this was the first time, where a future world was conceived in a comic book format. Moreover, a change in geography was foreseen resulting from nuclear wars. In addition, the series made allusions to various anthropomorphic beings and other intelligent life forms that

The premise includes a post-apocalyptic world where a nuclear war brought the world close to human extinction. With whatever survived, the world got divided into two continents, Aryavarta and Narak. In Aryavarta the last kingdom of humans exists inside a city called Armagarh. Armagarh has superior technology and is blessed by the light of the sun, made possible with a reactor that emits an energy beam to cut through the noxious clouds that shroud the continent. To their extreme south, a polar opposite in every sense is Nark, a land of savage races called the Asuras. Ravan, the spawn of the apocalypse rules the continent and threatens to reign over Aryavarta.

In a series that essentially concentrates on the battle between the good and the evil forces, it loses its grip on the established futuristic premise. The fact that the world doesn't evolve under its own physics is rather hard to digest. Although the story shows the future suffered in the hands of a power hungry race of inhibitors, it never gets into their philosophy and refrains from details, making the whole notion rather superficial and difficult to believe. Ravana is shown as a product of nanotechnology- but the lack of explanation for such a development renders it shallow and unimaginable.

One of the most important reasons why Ramayana is not a science fiction is that it fails to embed any scientific philosophy in its world of war. The battle for power lacks a more serious scientific motivation, and ends up a poor replica of the original epic.

Science Fiction in other cultures:

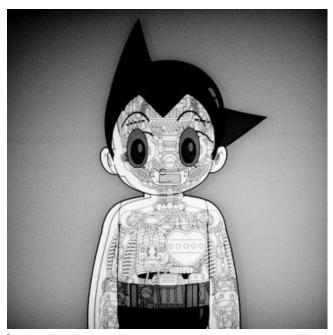
Science fiction has always been an integral part of cultures that have witnessed progress in science and technology. Most of the science fiction was a result of the changes the society underwent due to the advancement of technology. The European and the Japanese cultures especially, have contributed an exhaustive amount in the field of comic books. Analyzing even a fraction of such a contribution is beyond the scope of such a project. Henceforth, the attempt is to take up 'Astroboy' for a short analysis.

Astroboy came out in 1951, when Japan was still under allied (mainly, but not exclusively, American) military occupation.

Henceforth, it couldn't be ruled out that the writer, Osamu Tezuka²⁸ might have well contemplated on the questions related to coexisting with an alien culture. Nevertheless, Astroboy does face the same issues in his series. In here, the hero, a kid (made out of a scientific experiment after its creator loses his son) faces the challenges of living in a human civilization. Though the comic appears cute and funny on the surface, at the core it battled with serious issues such as racism and alienation. In a series of events,

²⁸ Osamu Tezuka was a Japanese manga artist, animator, producer and medical doctor, although he never practiced medicine. Born in Osaka Prefecture, he is best known as the creator of *Astro Boy* and *Kimba the White Lion*. He is often credited as the "Godfather of Manga", and is often considered the Japanese equivalent to Walt Disney, who served as a major inspiration during his formative years. [courtesy: http://en.wikipedia.org/wiki/Osamu Tezuka]

Astro was sold into slavery, imprisoned, tortured, dismembered, and frequently witnessed not only the death of friends but war, mass murder, genocide, and enormous cruelty on the part of humans, both toward robots and toward other humans. The whole series subtly mocked the lack of moral values in society's scientific advancement. Astroboy was created five years after Hiroshima and Nagasaki were bombed- the very creation of Astroboy could be seen as Tezuka's appeal for constructive scientific investments.



Astro Boy, the hero of Osamu Tezuka's series of the same name.

Tezuka's Astroboy therefore makes ingenuous attempts to speculate a future world where androids coexist with humans. In addition it also tries to raise the apparent social conflict that would arise due to such advancement in technology. Since the series was made for average comic book readers and not especially for science

enthusiasts, a considerable lack of scientific detail is understandable. However, the story never violates its underlying scientific principles and refrains from any spurious and unauthentic possibility to corrupt the narrative.

Its social conflict clearly showed a class struggle, and although it never saw a change in the society, it does make a commentary on how humans react to such a situation. In addition it also comments on the nature of science and technology and how it should ultimately lead to the wellbeing of all on the planet.²⁹

'Astroboy' was among the first of superheroes that concentrated on the social and cultural impacts of technology, and is therefore rightly regarded as an important contribution in the field of science fiction graphic novels.

Tezuka's venture is moral scrutiny of technology and its advancement, packed in the graphic novel format. It doesn't rely heavily on scientific knowledge but on the consequences of a mad pursuit for the same.

²⁹ Underpinning the Astro Boy stories is the "robot law," which states that the two main rules are "robots exist to make people happy" and "robots shall not injure or kill humans." In the first story in Volume One, Tezukawho puts himself in the stories to make rather interesting commentaryputs forward the ideas that if we "substitute the word 'science' for 'robot' in the first article of the robot law, I wonder if our science-based civilization has really made people any happier..."

Conclusion:

It is often hard to classify science fiction stories because of inexact boundaries and variegated opinions; and many a times the decision to call a piece of literature science fiction rests entirely on personal jurisdiction.

One important aspect that one needs to observe, in this long history of science fiction- particularly in graphic novels- is its evolution. A culture evolves on preexisting values and ideas- and science fiction is no exception. What is interesting to note is that despite such an early inception of fantastic ideas, such ideas were rarely worked upon and fed with other ingenuous concepts until recently. It is almost in the last decade of the 20th century that people graphic novelists and comic book writers started looking at science fiction beyond inter galactic space wars and megalomaniacal scientific experiments. While classic literature already had such writers like Arthur C. Clarke³⁰ and Ray Bradbury³¹ pouring in, who continuously stretched the boundaries of science fiction! Not only did they churn out brilliant stories that challenged imagination, they kept defining the nature of science fiction and how it was different from science fantasy and the likes. In the comic book industry however, such writers were scanty. And almost till the last decade of the past century, science fiction was more of pulp than any scientific

Despite the apparent dearth of scientific ingenuity in graphic novels there have been attempts which are universally regarded as authentic science fiction. Though they fall short of being close to the works of Isaac Asimov or William Gibson³², but commendably the temperament is much the same. We are probably in one of the most encouraging times for science fiction in graphic novels, as writers are trying to put something original on the charts.

³⁰ Considered one of "The Big Three of Science Fiction," Arthur C. Clarke is known for his Space Odyssey series, particularly the novel "2001: A Space Odyssey," which has become one of the most influential science fiction novels ever written

³¹ While most famous for writing his smash hit novel "Fahrenheit 451," one of (if not the) greatest dystopian science fiction novel of all time, Bradbury wrote a lot of science fiction and fantasy and was a major influence to literally thousands of future science fiction writers

³² William Gibson is an extremely popular and controversial science fiction writer who is known as the father of the modern "Cyber Punk" novel. While people and fans still argue over what kind of an influence Gibson has had on the science fiction genre , there's no doubt his mark has been made. As one anonymous critic put it: "Whether he's saved the genre or destroyed it, only time will tell." A little bit overboard, but it gives an idea of the influence this author of "Johnny Mnemonic" and "Neuromancers" has had