

Episode - 27

Artificial Intelligence in Folktales, Novels and Movies

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Signature Tune (Fades out)

Title Song (Fades out)

Narrator: Friends, ...In the last episode of .(Name of the Serial) you heard (brief summary of the last episode) The mere concept of Artificial Intelligence or AI was enough to lend wings to the imagination of the writers and everyone connected to the creative arts. There is hardly any science fiction of movie where AI has not been utilized. The 10-minute-long, silent film called The Mechanical Butcher was created by the French Directors Louis Lumière Brothehrs in1895. This short film is acclaimed as the first science fiction film ever made. It depicts a futuristic machine into which a live pig is fed in at one end and which comes out as edible pork products from the other end.

The famous French silent film Director Georges Méliès in 1897 directed the movie Gugusse and the Automaton based on the concepts of machine learning. In those days' robots were referred to as automatons.

It was not till R.U.R. a 1920 science fiction play by the Czech writer Karel Čapek, that the word Robot began to be used.

Subsequently, the movies directed by Georges Méliès were based on the works of the famous science fiction author Jules Verne. These included the 1902 movie A trip to the Moon; the 1904 movie Impossible Voyage and the Conquest of the Poles which was made in 1912 in which the concept of AI was explored.

The idea of reminding you about these movies is to emphasize that the concept of AI is nothing novel in movies. AI has been a concept that has been explored since the early days of film-making. These movies about which I have spoken were all early experimental films that the audience watched with awe and wonder.

The first movie that can be truly described as a science-based feature film would be the black- and- white movie named Metropolis. It was directed by Fritz Lang in 1927. This was

the first attempt to demonstrate the consequences of new techniques being developed. The impact of this movie was evident on the science-based movies made in the next few decades. This movie also presented the concept of AI. To tell the truth, Metropolis is that movie which heralded the advent of true science fiction movies. Anyway, here I was supposed to take you to Abhishek's house but I have simply been chatting with you...let us catch up again when we visit our characters at home.

Scene 1

Opening Music

Abhishek's Drawing Room. Evening. TV is on. Abhishek's father is humming. Abhishek's mother enters.

Ma: Here...I got tea for you.

Abhishek's father stops humming and takes the teacup.

Father: Thank you. Can't see Abhishek anywhere.

Ma: Abhishek and Neha have gone to watch a movie.

Father (surprised tone): Movie! How did you allow them to go alone to watch a movie?

Ma: Hear me out...Raghav bhaiya had come in the morning. He took the two of them to the movies.

Father (teasing tone): So, this is my brother-in law's doing! Laughs. Anyway what else can two vagabonds do?

Ma (feigned anger): Oh...so my brother is a vagabond!

Father (hurriedly in a somewhat shaky manner): No..no...I meant he had just arrived after a long journey...should have rested...chatted ...what is this...he went off to see a movie instead!

Door Bell rings.

Ma: I think they are back.

Sound of door opening. Four pairs of footsteps. Sounds of voices coming closer...sounds become clearer...as if the speakers are coming inside the room.

Ma: Ah! Raghav is here.

Raghav: Greetings Jijaji.

Father: God bless you.

Ma: Do you know what your Jijaji was saying, Raghav?

Raghav: What was he saying?

Ma: He was saying that when two vagabonds meet what else can they do but go and watch a movie together!

Raghav: (in imploring tone) Oh *jijaji*.

Father: (**somewhat embarrassed**): No, no...I was simply saying that you arrived after a long journey and must have been tired. You should have rested. Instead you went off to see a movie...I am sure Abhishek must have misled you somehow...

Raghav: No Jijaji, it wasn't Abhishek's fault. Actually I could not miss seeing the movie that is showing in your town.

Father: Why? What's so special about this movie? What is its name?

Raghav: Robot directed by S. Shankar. It is the same movie starring Rajanikant, Aishwarya Rai, and Danny. It is a science fiction that has been dubbed in Hindi.

Neha: Ma, in this a scientist makes a humanoid Robot. When he wishes to incorporate emotions into this robot, another scientists messes up everything. This Robot becomes evil.

Abhishek: The fights between robots! Awesome...it was great fun.

Ma: But Raghav what was it that was so essential for you to see?

Raghav: Didi, it is because the topic of my thesis is Artificial Intelligence in Science fiction, novels and films. That is the concept of AI being explored in these.

Ma: What does that mean?

Abhishek: Let me explain. Ma, you must have noticed that there are machines that can execute a given task on command. Their ability to do so is because of what we call Artificial Intelligence.

Neha: Take for example, robots that can carry out so many tasks. In the times of Corona virus robots have been deployed at airports to check the temperatures of passengers and also to dispense sanitizers. In hospitals robots are being used to take medicines and even food to the patients. You saw all this on TV, remember?

Ma: Raghav that means Artificial Intelligence is what has taught the robots to carry out tasks on command.

Father (taunting tone): So, gentleman how many movies do you see in a month?

Raghav: One or two, daily.

Ma and Father: What!

Raghav: Yes, I do. However, mostly I see the movies on my computer.

Father: These must be mostly foreign films. I mean we hardly make science-based movies in India...except for a Koi Mil Gaya or Kkrish. Once in a while someone may make such a film but that is an exception...

Raghav: (Interrupting) That is a commonly held misconception. Most people may think so but this is incorrect.

Ma: So, what do you think?

Raghav: I do not think, Didi. I know! I know that till date, we have made 75 science fiction movies in India.

Abhishek: (amazed): 75!

Raghav (imitating the tone used by Shakuni in Mahabharat): Yes, nephew. We had made just 14 till the year 2000. However, after that the pace accelerated and after 2000, we made about 61 science fiction movies.

Neha: That is so surprizing!

Raghav: The maximum number of movies...33 in all ...were made in Hindi. And 23 were made in Tamil.

Ma: How surprising!

Abhishek: And what about the other languages?

Raghav: Well, science fiction movies have been made in Malayalam, Kannada, Gujarati, Bangla, Marathi and Oriya too.

Neha: Have you seen ALL these films?

Raghav: No Neha...because not all these movies are easily available. However, I have seen the first science fiction movie made in India.

Neha: OK.

Raghav: This was Kaadu or the Jungle. This is a 1952 Indian-American science fiction film directed by William Berke and T. R. Sundaram. This movie was of 1 hour 13 minutes duration and was made at a cost of 1,25,000 dollars. It showed the attack of Woolly mammoths that led to a stampede of wild animals in the jungle and the resultant damage when the fleeing animals enter human habitations. It was made in English and Tamil.

Ma: What about science fiction movies in Hindi?

Raghav: That would be in 1964. The first was Shantilal Soni's Mr X in Bombay and the other was Chand Par Chadayee which was directed by T. R. Sundaram. Technically speaking, it is Chand Par Chadayee that truly qualifies as a science fiction movie. It is also the first Hindi movie in which AI has been presented in a science fiction film.

Father: How so?

Raghav: Well, the movie is about a group of space travellers who reach the moon. There they are confronted with aliens from another planet. They have to fight these aliens. Celebrated actors of the day, like Dara Singh, Bhagwan and Padma Khanna acted in it.

Ma: Enough discussion about movies. Time for Raghav to eat something.

Neha: No, Ma ...we ate on our way back. Mamaji, tell, Ma.

Raghav: Well, yes...I joined these two...

Ma: Ah! I see these two have made the most of their Uncle's company. So, then I must go and get dinner going.

Ma leaves.

Father: So, Raghav I think you could find an adequate number of science fiction movies in Hindi.

Raghav: Yes jijaji. There are about 27 such Hindi movies where the concept of AI has been explored. There are 15 such movies in Tamil and other languages where AI has been used as a central theme.

Abhishek: I have seen Tarzan-the Wonder car.

Raghav: Strictly speaking there is not much AI in the car. The reasons behind the exploits of the car have been linked to the spirit of a deceased person.. the man who created the car and who was subsequently murdered.

Neha: So what now?

Raghav: Well, one of the best Hindi science fiction movies on AI is perhaps Wahan Kay Loog. Then in 2006 came Alag, Janay Kya Hoga and Krish. In 2008 we had Love Story 2050 and Dron. In 2009 there was Aaa Dekhay Zara. This was followed by Ra-One in 2011.; Joker in 2012 and Chand 2013 the next year. In 2017 Mangal Ho was released. In 2019 we had movies such as Mission Mangal, Cargo and Paani where the concept of AI has been used in the movies.

Father: However, isn't the quality of sci-fi movies quite poor in our country. How does it compare with that of other countries?

Raghav: You are correct. However, the fault lies not with the movies but with the movie-makers.

Abhishek: So?

Raghav: We do not have connoisseurs of good sci-fi movies in our country.

Neha: How can you say this?

Raghav: Tamil director Jayaprakash had made a great sci-fi movie in 2017. It was Vinveli Payana Kurippugal...translated the name means Notes on Space Travel. The film was selected as official choice for 28 different international film festivals, ultimately winning 12 different awards, including Cult Critic Awards.

Neha: So?

Raghav: Despite winning so many awards, this movie did not make a mark at the Indian box office.

Father: Are you implying that the Indian audience is the reason why good sci-fi movies are not made in the country?

Raghav: You are quite close to the facts...actually our audience is used to the movies which are termed masala movies!

Neha: What is a masala movie?

Raghav: It is a comprehensive package that our audience demands. It demands dance, romance, songs, and music too.

Neha: Why don't you say that the audience wants a mishmash.

Father: Rightly said Neha..and in the mishmash...the scientific component falls far short.

Abhishek: Mamaji! You are too much. Who has told the Producer and the Director to make us mishmash movies?

Raghav: Well, in 2008, Director Goldie Behl made a sci fi movie called Dron with a budget of 45 crores. Do you know how much business this film did?

Abhishek: How much?

Raghav: A mere 15 crores. Even though the movie had a stellar cast of Abhishek Bacchan, Priyanka Chopra and Jaya Bacchan it fell flat at the Box office.

Father: You may make any excuse but the fact remains. Our movies just do not compare with the AI in sci fi movies as shown in foreign films such as The Terminator, Blade Runner, Matrix, AI-Artificial Intelligence 2008 or Space Odessey.

Raghav: You are quite right. I have seen quite a few of these movies.

Neha: Really, mamaji?

Abhishek: Tell us a little about these movies.

Raghav: Metropolis remains a milestone in the history of sci fi movies. This black and white movie directed by Fritz Lang in 1927 is a pioneer in the field. This was the first attempt to document the ill effects of newly-developing technology on humanity. It made a powerful impact on viewers and Directors alike. In this movie, a scientist fashions a metallic robot that enters the Metropolis city incognito and spreads disorder and chaos.

Father: Raghav...talk about more recent times! I have heard a lot about movies such as Terminator, Robocop, Inter-stellar, EX-machina, Avenger, and Blade Runner. I have also read reviews about these movies in newspapers.

Raghav: Yes, these are significant films of the genre. The 2017 movie Blade Runner is considered to be a classic in the field.

Neha: Why so, mamaji?

Raghav: This is because this movie has explored the concept of bio-engineered humans. These are termed replicants. When replicants malfunction, they are killed of...a process called retirement. The movie deals with how such AI can destabilize our society and civilization. This is the theme of the movie.

Abhishek: What is the concept behind bioengineered humans?

Raghav: This is why it has garnered quite a few Academy Awards for digital effects, cinematography and direction.

Abhishek: I understand the movie EX-Machina is also making waves. Have you seen this movie?

Raghav: Yes, I have because it was necessary to see this movie. In this a programmer in a large Internet company wins a contest. As a reward he gets to spend a week at the owner's bungalow. There he meets a female robot which not only has AI but is also enriched with emotional quotient. This female robot wishes

to be free from the owner's control. From the control of He, who had created her.

Father: You mean there has been an attempt to bring AI at par with human intelligence.

Raghav: Yes. This 2014 movie that is based on Artificial General Intelligence has won many Academy Awards for screenplay, visual effect and direction. So have its cast.

Abhishek: You mean to say that not only are foreign Directors making high quality sci-fi movies but that these are also being greatly appreciated by the audience and thus, are Box office successes earning huge profits.

Raghav: Yes Abhishek. There are many movies that have been made on Ai which are not only excellent sci-fi movies but which have set records with their Box office earnings.

Neha: How so?

Raghav: Take the 2013 American sci fi movie Her. In this the introverted author Theodore buys an AI based system. He falls in life with it...and ultimately is deserted by it.

Abhishek: So in the movies, AI plays a restricted role. It cannot essay the human feelings of sacrifice, love and being true to vows.

Father: What are you talking about, Abhishek. These are human qualities.

Raghav: Most films do seem to have a demarcation...a boundary line between AI and humans. However, this is not true for the 6th sequel of the Terminator series.

Neha: 6th sequel?

Raghav: The Terminator series was first launched in 1984. Then came Terminator 2: judgement Day in 1991, and Terminator 3: Rise of the machines in 2003. After that, in 2009 Terminator Salvation was released. This was followed in 2015 by Terminator Genisys. Subsequently, in 2019 Terminator: Dark Fate followed. This is not all. Many novels, video games, TV series and audio tapes, based on the Series have also been released.

Father: Is the Terminator series a huge project?

Raghav: This project created by James Cameron features Skynet's synthetic Intelligent machines, which along with Resistance forces are poised to wipe out humanity. Each time their attempts are foiled.

Ma enters.

Ma: (slightly angry). Haven't you finished your discussion yet? And Raghav don't you ever get tired from talking so much.

Raghav: Didi...I...

Ma: Not another word. Dinner is waiting.

Scene change music. Fades out

Scene 2

Library

Time: Noon

Raghav is standing outside the library.

Raghav (speaking to himself): Well, Raghav you have reached the library. Now you have to see what lies ahead. Everyone says the guy is eccentric but is immensely knowledgeable about sci-fi. Maybe he even writes sci fi.

Raghav enters. The ambiance will change because he is now inside a room; enclosed by walls.

Raghav (to himself): Ah! There is the librarian's room. There isn't anyone outside...so who will I approach to inform him that I have come? Ok, let me go in.

Footsteps

Raghav (from outside the room): May I come in?

Voice from inside. Please come in.

Sound of a chair scraping the floor.

Librarian: How may I help you?

Raghav: My name is Raghav. I am a PhD student.

Librarian: Hmm.

Raghav: The subject of my PhD thesis is The concepts of Artificial intelligence in sci-fi novels and movies.

Librarian: So?

Raghav: It is in this context, that I need your help.

Librarian: So you have come to consult the reference books in the library. Have you got the authorization letter from your Guide?

Raghav: I have that. However, that is not the only reason that I am here.

Librarian: What do you mean?

Raghav: My Guide, Professor Mehra has sent me to meet you. He says your knowledge about Sci-fi is beyond compare.

Librarian: Raghavji, what do you expect from me?

Raghav: You must be aware of hundreds of books dealing with the many aspects of science fiction.

Librarian: So?

Raghav: Well, first of all I request you to mentor me. And to please suggest those works which are considered significant enough to be considered to be milestones in the field. And please also help me issue all those books which can be issued from this library.

Librarian: You are correct in noting that Artificial Intelligence has always been a favorite topic, not just with current authors but with the earlier ones too.

Raghav: Yes.

Librarian: If we decide to ignore the accounts in our ancient treatises, even our holy books, then the credit for pioneering this topic goes to Samuel Butler.

Raghav: I have read his 1872 novel Erewhon. It is available on the Internet.

Librarian: Butler was greatly impressed by Charles Darwin's Origin of Species. In this context, he even wrote an article entitled Darwin among the machines. In this he compared natural evolution to the self-improvement or constant evolution in machines. This write up ultimately formed the base for Erewhon.

Raghav: This was such a novel thought.

Librarian: Butler wrote it as a satire on Victorian society. In Erewhonian society, law-breakers are treated as if they were ill, whereas ill people are looked upon as criminals.

Raghav: HUUUUUM

Librarian: Butler wrote three chapters that are known as The Book of the Machines. In it he pointed out the advantages as also the potential dangers of AI-enabled machines.

Raghav: Meaning that this is neither an utopia nor a dystopia.

Librarian: Yes, science fiction authors have written articles both praising as well as criticizing it.

Raghav: Scottish writer Iain Banks wrote from 1987 to 2012 his utopian Culture series of books.

Librarian: He elaborated on co-existing humanoids, aliens, and machines enhanced with highly-advanced artificial intelligence. The production of all necessary items is automatic. Thus these items are either low-cost or free. The author termed this as Post-scarcity economy where there is no dearth of anything.

Raghav: Its members live mainly in spaceships or on off-planet artificially constructed habitats. They do not do anything; there is no law and order problem.

Librarian: They do not even want to devote themselves to the planning or administration of the habitable planets, so they have delegated this responsibility to machines enhanced with AI. These are referred to as Minds in the space socialism system described.

Raghav: Iain Banks' Culture series is a sort of soap opera, isn't it?

Librarian: Yes...although that was the era of cyberpunk where imaginative projections would be made about artificial intelligence in the future. It is during this time that Iain Banks' Culture resurrected the space opera technique of science fiction.

Raghav: Utopian science fiction is of four types. In these machines with AI are either immortal or have long lives. Or else humans entrust them with carrying out the tasks and hence are themselves relieved of the responsibilities. Or else humanity is saved with their help. Or else they serve as sources of happiness and entertainment.

Librarian: You appear to have read a lot. However, in dystopias machines appear to revolt against humans. Or by taking on all sorts of tasks tend to render humans, obsolete or useless. Sometimes they even seem to have taken over society. At other times they seem to use humanity to serve their ends. In some works of science fiction, they appear to stand off against all of humanity. In others they seem determined to wipe out the human species.

Raghav: Sir, you seem to be referring to the dystopian science fiction based on AI such as AI- rebellion, AI-controlled societies, Human dominance and Frankenstein complex.

Librarian: Yes Raghav. Let us first discuss AI-rebellion. This includes the 1920 play R.U.R. by Karel Capek in which robots were referred to as automatons. Or Battlestar Galactica by American author Glen Albert Larson where a race of militant intelligent robots called Cylons wage war against human beings.

Raghav: In American author Jack Williamson's story With Folded hands, we see machines with AI totally rule human society.

Librarian: The British author Neal Asher wrote a series entitled Polity Universe from 2001 to 2008. In these five books he described a world where humans created machines with AI to make lives easier for themselves but where over time, the control of human society was taken over by the machines.

Raghav: I am reminded of the work of the Indian science fiction writer, Shiv Ramdas who wrote Dome Child. It is a novel on similar lines.

Librarian: Yes, this is true of many Indian science fiction authors who write in English. They too have explored a society controlled by machines empowered with artificial intelligence.

Raghav: Sir, I have also read the serial novels named Hyperion Cantos written by American science fiction writer Dan Simmons. He wrote these from 1989 to mid-1997.

Librarian: Yes Raghav, In four volumes he describes the Shrike, which are a half-mechanical, half-organic four-armed creature. These are also described as Lord of Pain.

Raghav: There is a recurrent theme I have found in dystopian writings. Initially humans create such creatures to serve as slaves. If the machines revolt, the rebellion is suppressed and the machines are defeated.

Librarian: This is Human dominance. This theme has been well explored by Isaac Asimov's Robot series of novels as well as by the American science fiction writer Frank Herbert in his work entitled Dune. Serialized in four books from 1965 to 1985, the Dune is a significant milestone in the genre.

Raghav: What about the Frankenstein complex?

Librarian: In this intelligent machines turn against their makers and try to annihilate them. The famous Science fiction writer Isaac Asimov is credited with having coined this term.

Raghav: I think the famous story of Frankenstein written by Mary Shelley is the first example of such a theme.

Librarian: It isn't just Victor Frankenstein, the scientist of Mary Shelley's story but many common people...even an eminent scientist such as Stephen Hawking... support the idea the idea that intelligent machines may eliminate humanity from Earth or establish their own rule over human beings. It was to overcome such negative connotations that Isaac Asimov set out the Three Imaginary Rules of Robotics in his writings.

Raghav: Many science fiction stories have been written on this theme.

Librarian: Another theme that is seen in science fiction writings goes by the name Curiosity.

Raghav: Curiosity?

Librarian: In this, the machines with artificial intelligence think and work like humans do. These are not slaves to humans nor do they rule over humans. Examples include The Last Question written by Isaac Asimov and Golem XIV written by the Polish sci-fi writer Stanislaw Lem. In Golem XIV, the intelligent machines refuse to extend assistance to humans in waging war because they consider war to be evil and deadly for humans.

Raghav: I must admit that when my mentor, Professor Mehra sent me to meet you, I had no idea I was about to meet a walking encyclopedia . I salute your enormous knowledge of science writings.

Librarian: Raghav, you are embarrassing me.

Raghav: Not at all...I could not have got so much information even from the Internet. And to add to it your critical viewpoints...that I could not have got anywhere.

Librarian: I almost forgot. We still have to chose the books you need to issue, don't we? Shall we begin?

Change of Scene. Music

Narrator: Friends, today in this episode of the Serial....(name) we have heard how the concept of Artificial intelligence developed till it became part and parcel of science fiction movies and writings. However, this is nothing new. From the end of the 19th century onwards science writers started writing about artificial intelligence in their writings and film-makers began to incorporate the concept in their movies.

If we go back further in time, we also encounter examples of artificial intelligence in our holy books. Confused? Think about the Pushpak Viman and the descriptions of the powerful weapons deployed in wars...weapons with names like Paashupat astra, Brahmastra, Pramadastra, Nagastra, Garurastra etc. These are the results of the imaginations of the fantasy writers of the era.

We will discuss this further in our next episode...same day, same time...till then. Namaste.

-----Closing Music-----