



## Understanding Social Behaviour through Narration of Science Communication in Cinema

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**Abstract-** The growth of sci fi cinema in India is always fascinating to perceive with and able to disseminate more information with adequate entertainment with linear techniques. The present study aims to analyze the core concept of evolutionary journey of science communication genre film in India and the idea behind it to ideate its audience. Apart from mainstream Hindi cinema (Bollywood), it's also important to look at the growth and development of regional cinema of India in term of their contribution to sci fi genre. In order to understand the receptivity, the interview has been taken among school students to know their level of understanding, the technicality and their idea on sci fi films which have been taken into consideration. The reason of not liking mainstream Hindi cinema is the lack of VFX, CGI not very fast paced unlike the foreign language cinema. The emotional connection of Indian films on the other hand plays a vital role for the popularity of sci fi films in India.

**Keywords:** science fiction, film, genre, Indian cinema, receptivity, audience.

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### 1. Introduction

The genre of science fiction is always challenging and deals with delicate subject matter. The various regional literature with amalgamation of elements of science education often been reflected in cinema in India. For ex- the Bengali literature which known as '*Kalpabigyan*' has been illustriously presented with the form of cinema by the father of new wave of cinema Satyajit Ray who is regarded as one of the earliest science fiction writers. Cinema in India has made several science communications films to aim its audience a lucid illustration its core principles and to be familiar with technical terms. The journey has started

from 'Chand par Chadayee' to 'Mission Mangal' (space movies) and from 'Mr. India' to '2.0' What is science fiction films?

Dictionary of Oxford defines science fiction as 'which constructed on illusory impending technical or scientific developments and foremost there for overall societal or ecological vicissitudes, commonly describing astronomical or time travel and extra-terrestrials life of planets'.

The Britannica defines sci fi as 'it is a form of fiction which packs predominantly with the influence of real or imaginary science which focuses upon humanity or society as a whole'.

According to the filmsite.org which further defines sci fi cinema as 'these genres are usually



technical, quixotic, inventive, which envisages fantastic, creative settings, innovative production design, unconventional technology devices (space craft, alien, antiques etc.), scientific advances, or by whimsical unusual effects’.

Brief history –

George Melies first made ‘A Trip to the Moon’ in 1902, it was a French movie which considered be the first sci fi film in world. Apparently, this movie is known for the VFX and later paved the way for other film makers to step in the same genre’s expedition journey. Never the less sci fi movies and literary works are inter-related and inseparable with each other. For this reason, the contribution made by H. G. Wells is noteworthy. His work ‘Time Machine’ which got published as a novel in the year 1895 and the iconic ‘The War of the Worlds’ in the year 1898 which painstakingly regarded him as a father of science fiction. Later on, it paved the way for film makers to be intrigued with literature for sci fi films. It can be evidently seen in many languages of sci fi cinema across the globe.

Evolvement of this genre in Indian Films Narrative-

Indian sci fi cinema first made in Tamil language which is an Indian American film in the year 1952 by William Berke and Ellis R. Dungan. The name of the film was ‘Kaadu’ which means the ‘jungle’. The credit goes to pioneering in mainstream sci fi cinema is ‘Shikari’ by Muhammad Hussain in the year 1963. Bengali sci fi film also first made in the year 1971 but was unproduced ‘The Alien’ by Satyajit Ray which based on his novel ‘Bankubabur Bandhu’. Neverthe less Ray (father of new wave cinema in India) made ‘Hirak Rajar Deshe’ in 1980 which

is considered as the first dystopian satirical sci fi movie.

Telling a very good story remains the central mission of filmmaking, whether or not or now not a movie is about technological know-how. Inside the first-class movies, the principal characters go through conflicts of interest, struggles, or different challenges that interact the pathways in our brains related to empathy, triggering emotions of harmony and affinity. The more engaged an target market is with the arc of a story and its characters, both emotionally and intellectually, the more likely they're to soak up and connect to the thoughts that power the tale, consisting of clinical principles. However, the ones concepts rarely inhabit the arena of the movie for his or her own sake; alternatively, they function devices to force the dramatic conflicts and person improvement forward. Stories handiest assist with science outreach as an awful lot as the technological know-how itself contributes to the ones stories. Our brains have developed a deep hunger for stories to assist make sense of our social surroundings. The brain is a restless organ, usually looking for styles and craving closure and looking to recognize how the story ends. Filmmakers are within the business of satisfying those narrative cravings via a process biologists name ‘supernormal stimuli’ or the artificial layout of an greater stimulus that triggers an severe model of an advanced reaction. Even supposing a filmmaker's primary goal is to interact with the technological know-how, too much didacticism and element will purpose many viewers to lose interest. Filmmakers do not have the luxury of a captive target market with an responsibility to pay attention, as in a



study room setting. As a substitute they're purveyors of entertainment, escapism, and diversion. At its center, amusement is usually a manner of evoking an emotional response from an audience, whether or not amusement, awe, worry, intrigue, or another neurochemical kingdom that stays a part of our evolutionary repertoire. And as researchers have established, our brains are higher at keeping statistics while that statistic is tagged with a sturdy emotion.

Subsequently, honestly 'communicating' medical information will never be as powerful as smuggling that records beyond the cognitive sentries dressed in an emotionally-charged hide. In addition to this intuitionist version of science conversation, we have to additionally renowned a growing public interest in technology for technology's sake, which enhances but does no longer update the need for right storytelling. This interest has been facilitated with the aid of the appearance of the internet and the reference energy of Google and Wikipedia, all of which brings technological know-how toward the middle of our public conversations. As an end result, standard audiences are traumatic better technology of their fiction, and on the identical time filmmakers are hewing in the direction of real technological know-how, a virtuous circle that has produced a current growth in first-rate technological know-how movies. Howling inaccuracies are nevertheless sometimes glossed over – my favorite example is the plot-triggering line 'the neutrinos have mutated!' from the Roland Emmerich movie 2012 – however people are getting much more likely to be aware these liberties and filmmakers recognize they are much more likely to be called out. Of course, audiences stay inclined to forgive a sure degree of inaccuracy for the sake of

creative license. A parallel however come what may much less offensively butchering of science for the sake of tale occurs inside the opening scenes of *The Martian* when Matt Damon's man or woman is injured in gale force winds, which of direction could be not possible with Mars' skinny atmosphere. But, as opposed to just ignoring this oversight, it caused a press release from NASA i and a sequence of famous science articles ii, in addition to a frank discussion from the writer, Andy Weir, on NPR approximately why he felt this become a reality well worth distorting iii. As a result, we have all learned greater approximately Mars, that's a point for technological know-how.

#### Review of Related Literature-

Primer the American sci fi cinema is considered to be a low budget independent film which focusses on time travelling concept has been designed brilliantly with sound design (Johnston, 2012).

On his study 'Female Aliens in (Post-)Soviet Sci-Fi Cinema: Technology, Sacrifice and Morality Feminism (Høgetveit, 2019)' argues that how Russian sci fi cinemas and found that the female character often not an opponent but being depicted as bionic woman (cyborg) and positioned as didactic or decent function.

(Thapa, 2020) on her study 'Resurrection, Remediation, and Religious Fundamentalism in Contemporary Indian Sci-Fi/Fantasy Films' states that there is increasing approach of religious subjectivism and fundamentalism in sci fi films which is very unhealthy for the mass society.

In his book (Hunter, 2014) 'From SF to sci-fi: Paul Verhoeven's *Starship Troopers*' states that literary works of science fiction (stories or novels) proved to be more elusive and creative and intrinsic innovation with mystery and



fantasy are equally corroborated in comparison to sci fi movies which cherished for ideological connotations with subtexts.

On their study 'Does cinema form the future of robotics? a survey on fictional robots in sci-fi movies' (Saffari et, al 2021) finds that most of the movies favourite aspect is to highlight or used the robotics or artificial intelligence for sci fi movies. They have identified 108 films out of 134 have used either robots or AIs for different ideas, design for sci fi story telling approach (Saffari et, al 2021).

(Nama, 2009) on her study 'R Is for Race, Not Rocket: Black Representation in American Science Fiction Cinema' emphasised about hegemonic allegories of American sci fi films position of place and power which she critically examined.

(Lakkad, 2015) on his study on 'Cultural imaginaries of science: A brief history of Indian science-fiction cinema' focusses on the regional along with mainstream Indian cinema of sci fi juxtaposed in contradiction of sociocultural and political milieu of the state of nation with science and technology in the time of films release.

In their article 'Indian Science Fiction Cinema: An Overview' (Langer et, al. 2014) entails that Indian sci fi big budget film like Krrish, Krrish 3, Koi Mil Gaya, Love Story 20250 were not only liked by the Indian audience but it did well in business and got popular in diasporas as well.

In his research on 'The Past 100 Year of the Future: CHI/HCI/UX in Sci-Fi Movies and Television' envisages empirical research on user's experience, metaphors, mental models with navigation of mental model taken into account to know the intricacies of sci fi cinemas journey of hundred years (Marcus, 2014).

Research Gap-

From the above survey which have done on literature by many researchers related to science fiction cinema; it is found that they dealt with various perspectives, parameters which have identified and rigorous attempt also been made in order to understand examine its delicacies. But few significant research has been done on Indian sci fi context. This present research is uniquely incorporating the receptivity effect of sci fi cinema of its audience. In her research on 'Archaeology of an experiment: The science-fiction cinema of Pramod Pati' argues the contribution of Pramod Pati's three film Explorer-1968, Claxplosion-1968, Trip-1970 should be considered as *proto sci-fi* (Sharma, 2015).

## 2. Materials and methods

This study has been adopted mixed methodology. The present study aims to analyze the core concept of evolutional journey of science communication genre and the idea behind it to ideate its audience. The content analysis method has been adopted for the study to explore different categories (biography, fiction, docufeature) as a genre of cinema has been dealt with so far. In order to understand the receptivity, the interview has been taken among school students to know their level of understanding, the technicality and their idea on sci fi films been also taken into consideration.

Aim of the study- The main aim of the study to trace the growth of sci fi cinema in India and audience receptivity especially the school students (the rationale behind the sample because it's always fascinating to perceive sci fi as a film and able to get more information with adequate entertainment.



Research Questions- Following are the research questions which have designed for this study;

RQ 1- What are the different themes that have been depicted in sci fi films in India?

RQ2 Who is the target group that director conveys its science communication genre element with?

RQ3- How far the school students satisfy the way sci fi films made in India?

RQ4- How the regional cinema in India have contributed for science communication genre?

Objective of the research- The broad objective of this research is-

- To understand and analyze the reminiscence of Indian sci fi cinema from its inception to till now.

Theoretical Framework-

Auteur Theory- As sci fi known for its awe inspiration, action, fantasies, invention, discovery, time travelling used heavily VFX, AIs etc.; so, its best theory that fits in here is auteur theory. Auteur theory enables director as an author who takes up the journey on engaging the minds of the audience in a more whimsical way. Director's idea is prime and creative to take forth the story telling narratives throughout the film. So, this theory has been taken into consideration for this present study and it can be observed that in respect to Indian sci fi film which is basically deals with the concept of time travel, aliens, spaceship crafts and other technological advanced gadgets which definitely fit in the auteur theoretical perspective as the director navigates the whole film in his own ideate creativities.

### 3. Analysis and Discussions

Being Bollywood is the largest film industry which contributes maximum number of films per year, but evidently there is very scantily in

number of films made for sci fi genre. The probable justification is likely to be research in a more diligent way in order to understand the factors for a smaller number of movies it has produced and how probably it can be improved by knowing its shortfalls.

Following are the reasons which is identified in present research and based on the interview taken from the respondents;

Unconvincing- The story plot or broader theme is quite unconvincing so it lacks attention for the viewers. The directors or the writers should have emphasized in a more diligent way to make this feel in a realistic manner of depicting or representing the narratives. Hardly any fantastical or imaginary stories could attract the attention or able to call the film goes for watching sci fi films made in Bollywood or any other regional languages of India.

VFX/CGI- There is a lesser emphasis or limited use on VFX or CGI technique in Indian sci fi films. The use of great visual effects and with good quality graphical images or interfaces, the component or theme of science communication genre can be come out with a drastic change. Equipped with good skill and its reflection must be there for Indian sci fi film making scenario which indeed is the need of the hour.

Sound Effects- In a comparison to foreign films especially the Hollywood, it can be felt and states that there is very limited use of sound effects which is the most important factor for any sci fi movie after good VFX or CGI. Bollywood along with regional language films of India should try and go for judicious use of sound effects which generally lacks in this particular genre.

Less focus on story plot- Another significant lacuna for Indian sci fi film is its less focus on



story plot which disables the synchronous flow of narration. The story either full with melodrama or with action without thrilling experience of action.

Lack of research on choosing the plot- Film makers and story writers generally should be equipped with good of research skill in order to depict any sci fi plots for filmmaking. Great synthesis, mode of action, background knowledge, foreseen and strong research techniques are the essentials attributes especially for sci fi genre.

Not fast paced unlike Hollywood- On a comparison with Hollywood, it is evidently seen and experience that Indian sci fi films lack with fast pace. The conventional slow pace of narration does not affect or have any impact for the audiences.

Lack of innovation- Innovation is the key and central intrigued elements for sci fi films which Indian film generally lacks. On a quick recapitulation of the progress that sci fi film has made depicts there is no significant innovation or unique method to be dealt with or to present to its audience especially the children.

Apart from the shortfalls or drawbacks that Indian sci fi film generally have, there are few good points to be note or should be appreciated by the way the Indian filmmakers have depicted their story telling for the various audiences. These includes;

Emotional Treatment- The emotional quotient is very high for sci fi films in India. Be it Mr. India or PK or Mission Mangal, it connects emotionally to its audience in a very deep impacted manner. The narration approach with very much sympathetic or empathetic tone can be seen in these films which is a great strengthening element that any film could have.

It is a great factor to allure the audiences and set back them for view for this genre.

Absence of Subjectivism- Another good factor of Indian sci fi films is that it refrains from the religious attributes or any ideological fundamentalism which is noteworthy and should have more appreciation from the audiences. The foreign languages film apart from India are full of subjectivism, religious fundamentalist thoughts, propaganda and ideologically presented to the world where Indian sci fi films are stand unique in this regard.

Linear narrative approach- The advantage of sci fi films of India has not much twists and turns in its narration which is lucid, simple and retains in the minds of the audiences for a longer period of time. Indian films are generally designs with good music and dance or background score also creates magic in terms of simple narration but with good charisma which lasts long in the viewers psychology.

Availability of Strong literature - India with its diversified culture and rich literature, able to enrich its cinematic journey with metamorphosis and subjugation of scientific terms and its literature in many languages including the mainstream cinema. Different authors have well influenced the contemporary filmmakers now and then to be deal with science, fiction of science, innovation, foresee attributes of science literary manuscripts or available literatures in many languages of India.

There are very few films have been made in Hindi language (Bollywood especially) from 1963 to 2020. Below table depicts the picture with detail name of films, year of release, language, director and their broad theme. There are only 29% of films which falls under sci fi





genre in 57 years (total year span considered from 1963 to 2020).

### Sci Fi Genre in Popular Hindi Cinema

SI No.	Movies Name	Year of Release	Language	Director	Theme
1.	Shikari	1963	Hindi	Muhammad Hussain	Scientist Voyage for saving the forest and a giant ape. This movie has lie and influences by American sci fi 'King Kong-1933' and 'Dr. Cyclops-1940'
2.	Mr. X in Bombay	1964	Hindi	Shantilal Soni	Based on sci fi romantic comedy-story on mishap with an invention of deadliest potion as a weapon for blackmailing
3.	Chand Par Chadhayee	1967	Hindi	T.P. Sundaram	Clash with monsters and combatants after landing on moon. This movie greatly influenced by 1902 movie- 'A Trip to the Moon' by George Melles
4.	Elaan	1971	Hindi	K. Ramanlal	Sci fi thriller film- the story on invention of an atomic ring that puts into person's mouth make him/her invisible and afterward leads to death
5.	Mr. India	1987	Hindi	Shekhar Kapur	Invention of invisibility watch and to save India from Nuclear



					Attack
6.	Koi Mil Gaya	2003	Hindi	Rakesh Roshan	Invention of using syllable of 'Om' to get connected with aliens This movie influenced by 'E.T. the extra-terrestrial-1982'
7.	Love Story 2050	2008	Hindi	Harry Baweja	It's a sci fi romance film based on trip to a utopian Mumbai city futuristically in 2050. This quite similar to Telugu Movie 'Aditya 369'.
8.	Aa Dekhen Zara	2009	Hindi	Jehangir Surti	Sci fi thriller film on future prediction of photographs clicked through camera
9.	Prince	2010	Hindi	Kookie Gulati	Sci fi action film based on ostensible amnesiac thief who races against time in search of an antique coin
10.	Action Replay	2010	Hindi	Vipul Amrutlal Shah	Sci fi romantic comedy film based on time travel to past to fix up the parents disturbing married life.
11.	Ra One	2011	Hindi	Anubhav Sinha	Sci fi superhero film based on the life of a programmer who invents a unconquerable virtual character
12.	Sonchidi	2011	Hindi	Amit Dutta	Quest for a flying craft to escape in cycle of births



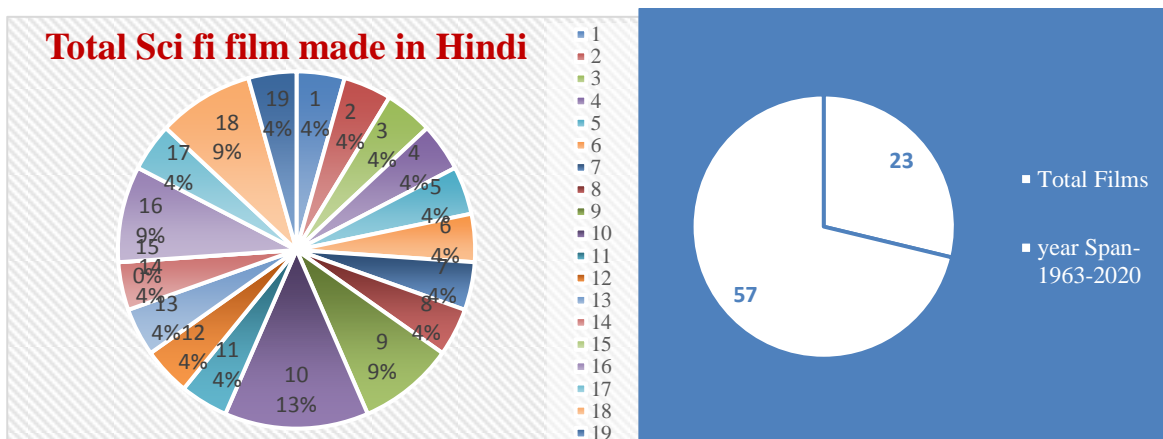


13.	Virus Diwan	2011	Hindi	Bumpy	Programme developer of Virtual infection as-enter-infect and escape
14.	Joker	2012	Hindi	Shirish Kunder	Sci fi comedy film based on Scientists try out for improved communication system/device to get connected with aliens
15.	Shree	2013	Hindi	Rajesh Bachchani	Sci fi thriller film based on ill intended scientific invention and experiment for crime
16.	PK	2014	Hindi	Raj Kumar Hirani	Sci fi satirical comedy based on the life of an innocent alien who come across to earth and happen to meet the people of India
17.	Mr. X	2015	Hindi	Vikram Bhatt	3D sci fi Action film based on invisibility to fulfil his revenge
18.	Bar Bar Dekho	2016	Hindi	Nitya Mehra	Sci fi Romantic film on time travelling
19.	Carbon: The story of tomorrow	2017	Hindi	Maitrey Bajpai, Ramiz Ilham Khan	Based on the scarcity of oxygen and only carbon will overcome in human life
20.	Anukul	2017	Hindi	Sujoy Ghosh	Sci fi drama film based on hiring a humanoid robot to do the household chores.
21.	2.0	2018	Tamil-Hindi Dubbed	S. Shankar	sci fi Action film based on mishap over self-invented humanoid robot



22.	Mission Mangal	2019	Hindi	Jagan Shakti	sci fi drama film based on the ISRO scientists in making of Mars Orbiter Mission
23.	Cargo	2019	Hindi	Arati Kadav	Sci fi morbid humor film based on a spaceship for post death transition services
24.	Rocketry: The Nambi Effect	2020	Hindi	R. Madhavan	Story based on the ISRO scientist who accused with espionage

(Table no-1 Overview of Sci Fi cinema in Bollywood)



(Graph No 1,2- Total Films with Percentage of sci fi cinema in Bollywood)

From the above-mentioned graph 1, 2 it can be stated that there is a very slow and delayed growth in Bollywood for the sci fi genre film. Only 40% of cinema with sci fi genre have come out since its first appearance in 1963 to 2020 with total of 57 years. Although it is very clear that sci fi cinema came to India (Bollywood in Hindi Cinema) only in the year 1963. Whereas film started in India in 1913 (*Raja Harischandra* by Dada Saheb Phalke) and 1931 (*Alam Ara* by Ardeshir Irani) with a gap of almost 50 year (first silent movie) and 32 years (first talkie).

Apart from mainstream Hindi cinema (Bollywood), it's also important to look at the growth and development of regional cinema of India in term of their contribution to sci fi genre. Surprisingly Tamil Film Industry ranks 1<sup>st</sup> in terms of their contribution of sci fi genre. There

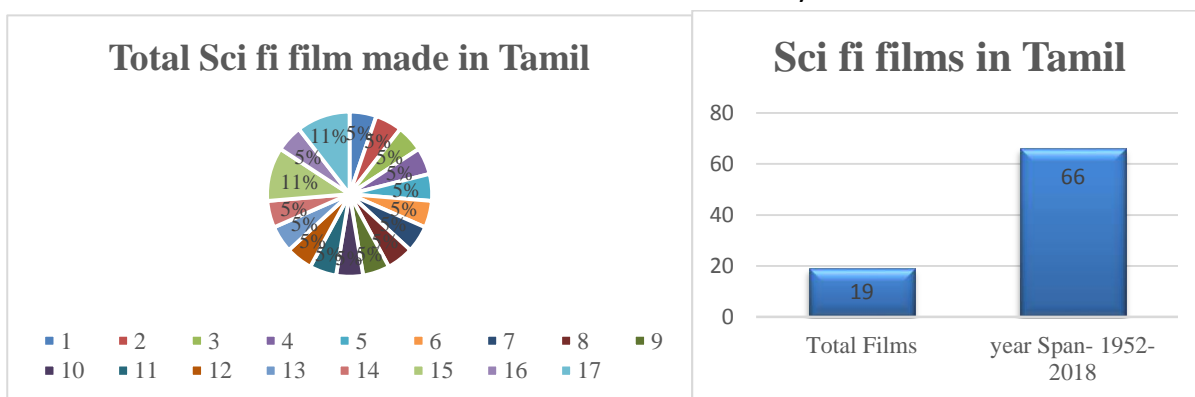
**Sci Fi Genre in Regional Cinema of Tamil**

SI No	Movies Name	Year of Release	Language
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1.	Kaadu	1952	Tamil
2.	Kalai Arasi	1963	Tamil
3.	Ulagam Sutrum Valiban	1973	Tamil
4.	vikram	1983	Tamil
5.	Nalaya Manithan	1989	Tamil
6.	Adhisaya Manithan	1990	Tamil
7.	New	2004	Tamil
8.	Dasavathaaram	2008	Tamil
9.	Enthiran	2010	Tamil
10.	7aum Arivu	2011	Tamil
11.	Ambuli	2012	Tamil
12.	Irandaam Ulagam	2013	Tamil
13.	Appuchi Gramam	2014	Tamil
14.	Indru Netru Naalai	2015	Tamil
15.	24	2016	Tamil
16.	Iru Mugan	2016	Tamil
17.	Maayavan	2017	Tamil
18.	Vinveli Payana Kurippugal	2018	Tamil
19.	Tik Tik Tik	2018	Tamil

There is total 19 sci fi films with 29% from the year 1952- 2018 been made in Tamil film industry which is of total span of 66 years. Tamil industry is known for their unique narrative technique, action and lucid storytelling approach. As it is surprising to note that Tamil sci fi cinema 'Kaadu' first came in the year 1952 which is considered to be the first in Indian film industry



**(Graph No 3,4- Total Films with Percentage of sci fi cinema in Tamil)**

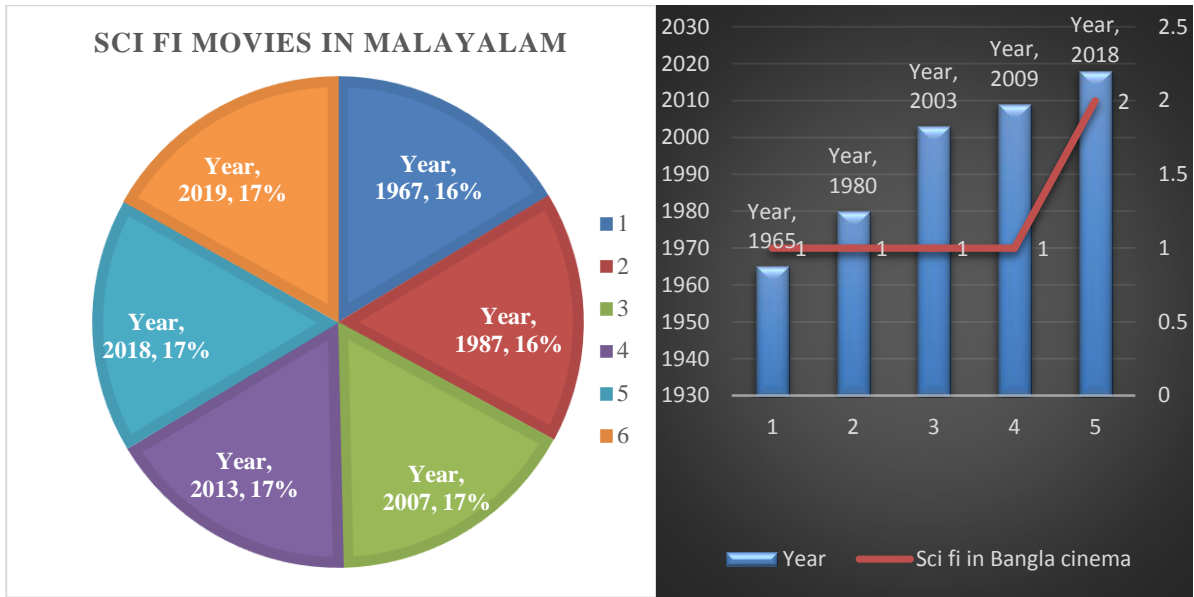


Apart from that there are other regional films which contributed well in terms to experiment with sci fi cinema like Malayalam, Bengali, Telugu, Marathi and Gujarati film industries from the year 1965 to 2020.

### **Sci Fi Genre in Regional Cinema of other languages in India**

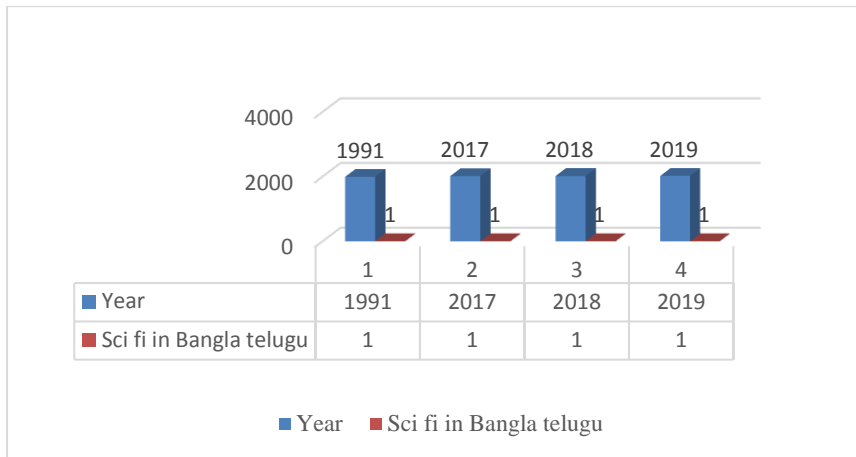
<b>SI No</b>	<b>Movies Name</b>	<b>Year of Release</b>	<b>Language</b>
1.	The Alien	1965	Bengali
2.	Hirak Rajar Deshe	1980	Bengali
3.	Patalghar	2003	Bengali
4.	Friend	2009	Bengali
5.	Professor Shonku O El Dorado	2018	Bengali
6.	Jole Jongole	2018	Bengali
7.	Karutha Rathrikal	1967	Malayalam
8.	Jaithra Yaathra	1987	Malayalam
9.	Bharathan Effect	2007	Malayalam
10.	Red Rain	2013	Malayalam
11.	Who	2018	Malayalam
12.	9	2019	Malayalam
13.	Android Kunjappan Version 5.25	2019	Malayalam
14.	Aditya 369	1991	Telugu
15.	Okka Kshanam	2017	
16.	Antariksham 9000 KMPH	2018	Telugu
17.	ISmart Shankar	2019	Telugu
18.	Phuntroo	2016	Marathi
19.	Unmatta	2019	Marathi
20.	Short Circuit	2019	Gujarati





(Graph No 5,6- Total Films with Percentage of sci fi cinema in Malayalam & Bengali)

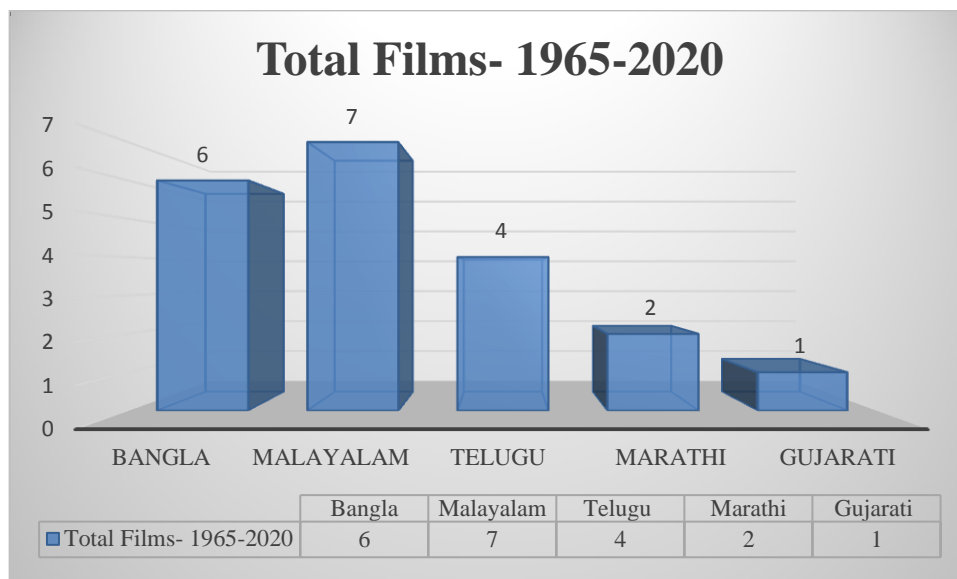
From the above depicted graphs, it is clear that total seven films were made in Malayalam language in sci fi genre from the year 1967 to 2019 (with total span of 52 years); whereas there is total six Bengali sci fi films been made from the year 1965 to 2018 (with total span of 53 years).



(Graph No 7- Total Films with Percentage of sci fi cinema in Telugu)

The above illustrated graph entails that total four sci fi cinemas were made in Telugu from the year 1991 to 2019 with total year span of 28 years.

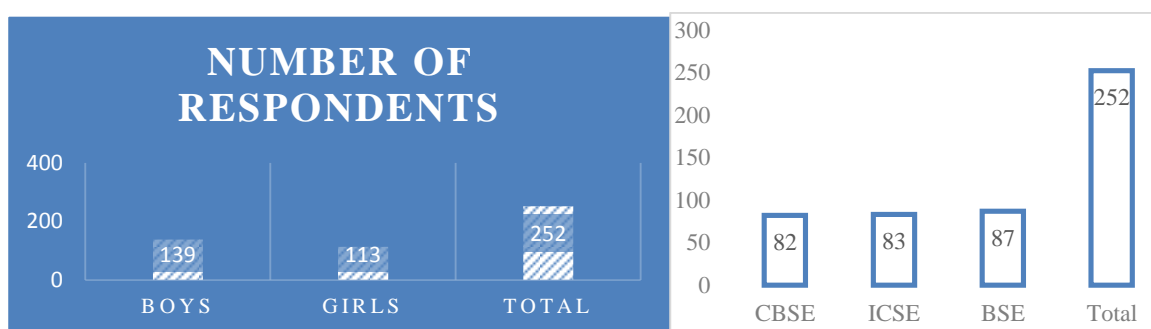




(Graph No 8- Total Films with Percentage of sci fi cinema in Regional Languages)

There is also contribution from Gujarati language film with total one and two from Marathi sci fi films have been made from the year 2016 to 2019 (with a total span of three years) which is quite promising and encouraging.

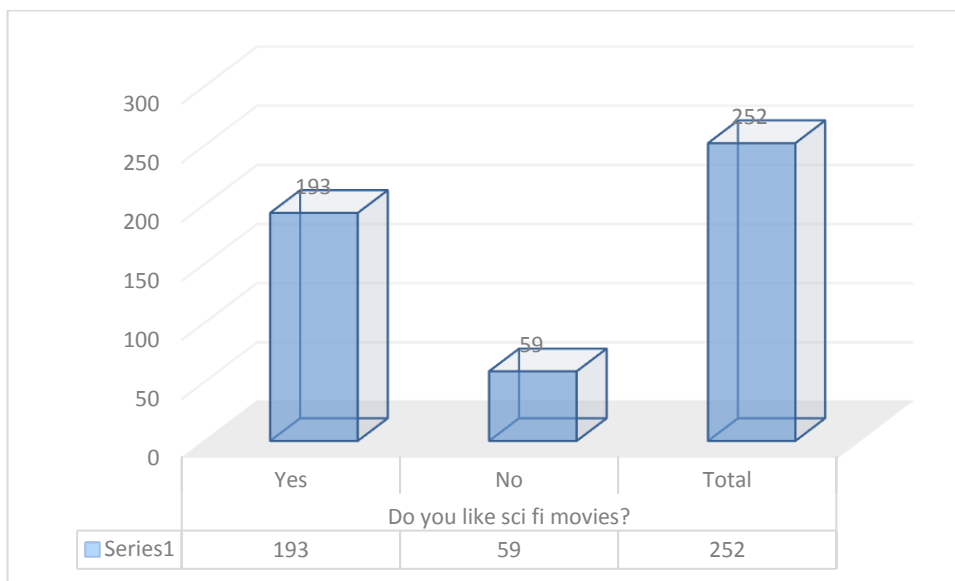
Audience Receptivity- There are total 55% of boys, 45% of girls with 11 to 15 years age has been taken into account. Students represents different schools (board of education taken into consideration are CBSE, ICSE and BSE) from generally class VI to X.



(Graph No 9,10- Respondents Age group and class)

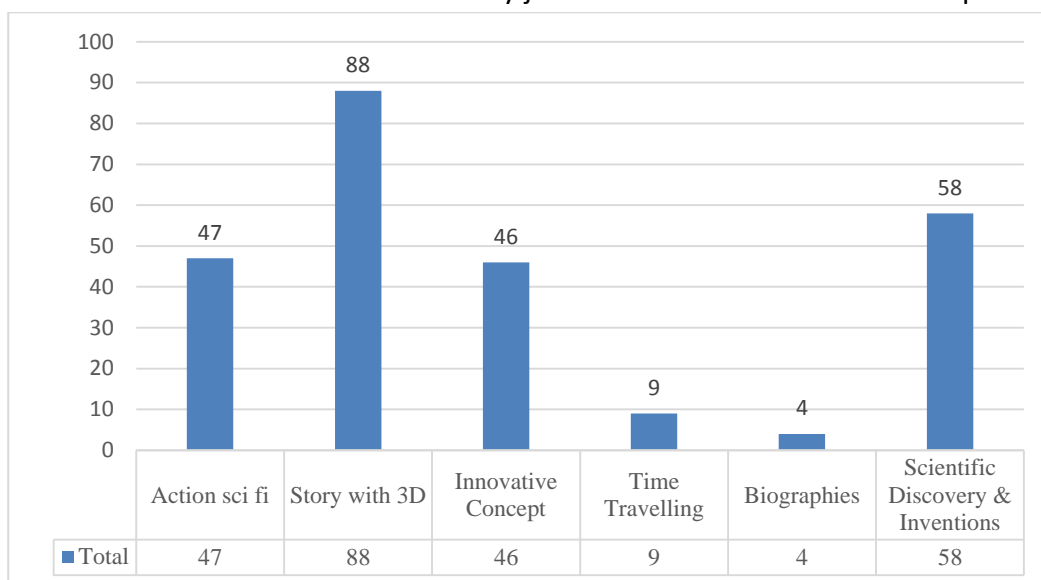
The above stated graph states that there is total 252 students interviewed (online interaction done in presence of a teacher) from four selected schools. For research validation school preference done on the basis of its type and affiliation (CBSE- Central Board of Secondary Education, ICSE- Indian Certificate of Secondary Education, BSE- Board of Secondary Education). There is total 139 boys with 113 girls from class VI to X and out of them 82 were from CBSE, 83 from ICSE, 87 were from BSE with total 252 respondents selected for this present research.





**(Graph No 11- Sci fi movie popularity)**

The above-mentioned figure illustrates that 23% of 59 respondents confessed that they don't like to watch sci fi movies whilst 77% of 193 said that they just like to watch sci fi movies in specific.

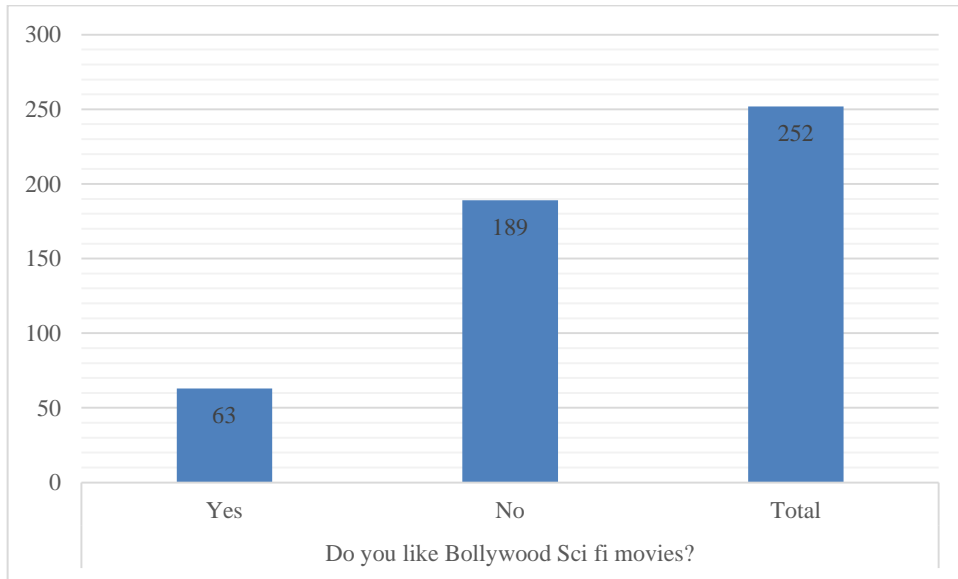


**(Graph No 12- Elements of sci fi cinema liked by respondents)**

In order to understand the reason of liking to watch sci fi cinemas in Bollywood, the respondent's states that 19% of 47 of them like this because of its high action. There are 35%, 88 of them like because its 3D technique story telling method. There are 18% of 46 of them who like it for its innovative concept or theme. 4% of 9 of them confessed that there is the time travelling theme which attracts them a lot. Only 2% of 4 respondents who said they like sci fi biographical film to watch. Lastly, there are 23% of 58 respondents who like to watch sci fi films because of its scientific discovery and invention's theme.

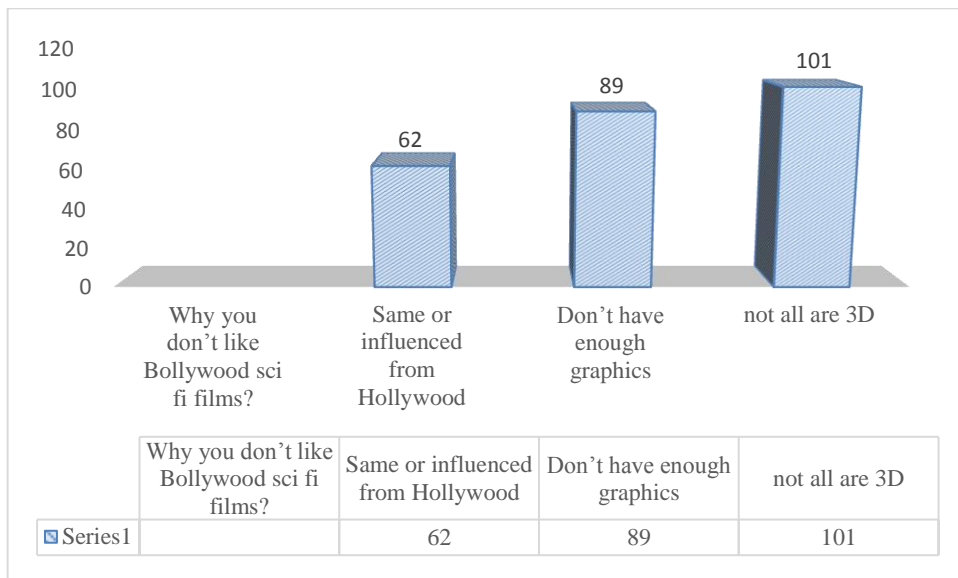






**(Graph No 13- Preference of Bollywood sci fi cinema)**

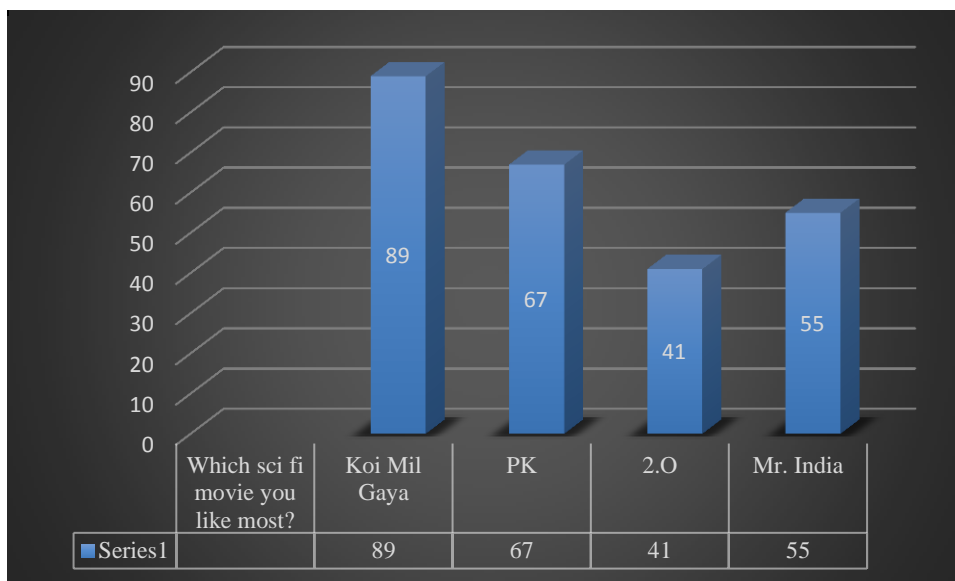
The above-mentioned figure illustrates that 25% of 63 respondents confessed that they like Bollywood sci fi movies whilst 75% of 189 said that they don't like to watch Bollywood sci fi movies.



**(Graph No 14- Reason of not liking Bollywood sci fi films)**

In order to understand the reason of not liking to watch sci fi cinemas in Bollywood, the respondents of 25% of 62 states that they don't like to watch because more or less these films were copied/influenced from Hollywood. On the other hand, 35% of 89 confessed that Bollywood films are lack with latest graphics, animation and VFX. 40% of 101 said that the Bollywood movies are not all in 3D which is a one of the main reasons for their less preference for Bollywood sci fi cinemas.





(Graph No 15- Most liked sci fi cinema of Bollywood)

The above-mentioned figure illustrates that 35% of 89 of the respondents said that they like Hrithik Roshan starring Koi Mil Gaya directed by Rakesh Roshan which has the highest in number. 27% of 67 of them confessed that they like PK very much. On the other hand, being released on 1987, there is still a big fan followers and love for Shekhar Kapur's Mr. India with 22% of 55 respondents. Lastly with 16% of 41 of them like to watch 2.0 starring Rajnikanth and later on Akshay Kumar.

#### 4. Conclusion

Indian films are known for its aesthetics, linear approach of narration which connects emotionally well to its audiences. Many genres with parallel cinema been made for different categories of audiences. In terms of sci fi genre to deal with, Indian cinema tried to deal with this in an intrinsic manner but it can be observed that either this has influenced by foreign languages cinema or they have not attempted innovation for this. Today's younger generation does not want to see the films which drastically resembles with other one but to would happy to consume if it has indigenious

innovation, emotionally narration, fast pace sci fi films, better visual effects, advanced CGI, developed sound effects or the high defined form of animation are the suggestive components for the Indian sci fi genre films. There were not many sub genres that has not been used or experiment with sci fi films but only few subgenres like action sci fi, thriller, romantic comedy sci fi were mainly used in Indian cinema context which is not appreciated by its audience. Now with the advent of technology and in digital platforms, where comparison and access to any language films is so easy compare to the older days; its quite challenging to mitigate the challenges and learn from the past and to promise its film lovers for an aesthetically technically advanced, innovative and a well-informed sci film for the Indian audiences.

Limitations- The present study has been taken into consideration only the receptivity process into account of the school students which could have been integrate college goers or any audience without having age bar which can be considered as a limitation of this study. On the



other hand, many statistical tests could have been to understand the ratio of likelihood, correlation of sci fi and their effect on the minds of the audience. But this study has attempted to trace the growth of sci fi as a genre for science communication films of India. The present study also highlights the thought process of young generation who are school students' receptivity, gratifying reasons which includes the element for not liking it also.

**Future Directions for Further Research-** The present study aims to direct in other perspectives with suitable statistical analysis to evaluate and analyze the science communication as a genre and its perspectives or how literature helps in building the insights and plots to the young film makers to make with.

Movies engage us visually, aurally, viscerally, and emotionally. Incorporating technological know-how issues into films has the capacity to open up new audiences to scientific ideas, pique their hobbies, and encourage them to have interaction in a broader dialogue of the technology itself. Right here, I discuss several narrative techniques and strategies employed in movie to efficaciously interact the target market around science topics, which can be useful tools for scientists looking to grow to be higher communicators.

#### Embracing innovative Approach

Scientific ideas and concepts attain the general public via a selection of channels, from formal training to virtual media and the arts. One of the maximum powerful of this channel is movie, which engages the viewer at multiple ranges and reaches a doubtlessly significant target market. The appearance of computer-generated imagery (CGI) technologies has similarly

elevated the visual range of film as a medium and as a tool for science communicate. As scientists skilled to cognizance on precision and accuracy in verbal exchange, we may also often discover ourselves responding to movies by focused on inaccuracies or oversimplifications. One might also find this greater interesting to discuss the techniques involved in incorporating technological know-how seamlessly into storytelling, thinking about each the challenges and the opportunities science and storytelling offer each other. It's far genuine that writers of screenplays frequently take liberties and use innovative license, creating a choice to bend clinical statistics to match the emotional demands of appropriate storytelling. But even those inaccuracies represent a shape of engagement with science. Incorporating clinical subject matters into movies, whether or not correctly or otherwise, has the capability to open up new audiences to clinical thoughts and encourage them to interact in a broader discussion of science itself, which is useful. A great film can also teach scientists how to become higher communicators and storytellers themselves, with the aid of revealing the human-hobby and emotional middle on the coronary heart of a science-driven story.

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