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## **“A Comparative Study Of Hollywood And Kollywood Films With Reference To CGI Elements”**

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**Abstract**— The main objective of this research is to investigate the key differences of CGI elements and other key advances between the two different movie industries, namely Hollywood and Kollywood. This research work is based on the new approach called a comparative case study approach. This type of comparative case study method analyzes the logic underlying the overall comparison and contrast and the search for the origin between industries. Such an approach allows us to study differences such as culture, space, place and context. A CGI transformation, the analysis of four separate case studies was studied using a coding sheet. For the analysis four movies I, Robot (2004), Troy (2004), 2.0 (2018), and Baahubali 2-The conclusion (2017), were selected. The content analysis method is adapted to analyze the CGI elements. These films were chosen because of their similarities in genres, content and production methods. The study concludes that there is a significant difference in the application of technology between the two film industries, Hollywood and Kollywood. In addition, advanced concepts like artificial intelligence, humanoid and the confrontation between men and machines were introduced over a decade ago in Hollywood. The technology behind the application of computer graphics, visual effects, special effects, and advanced thoughts are based on various factors such as genres, film market size, cultural differences, scientific temperament, space, place and movie context. This research shows that there is more scope in the Kollywood film industry to apply futuristic technology to reach the widest audience. This research also demonstrates the massive availability of tech-oriented market for technically advanced films. The research results clearly demonstrate the transformation techniques and ideologies of movie making trends in Kollywood films.

**Keywords**—Computer Graphics, Hollywood movies, Tamil film industry, Comparative case study, Visual effects, Genre, Transformation, Trends of film industry

### **1. Introduction**

**Hollywood film industry:**

Hollywood is one of the top five film industries in the world. The other five top film industries are Bollywood, cinema of China, cinema of United Kingdom, and cinema of Japan. The cinema of United States of America is referred to as Hollywood. It is the oldest film industry in the world. It is the highest film revenue industry in the world. Hollywood is a district within the city of Los Angeles, California. The climate of Los Angeles was suitable for film making and processing during the 19<sup>th</sup> century. Also, it had a suitable labour market and film production facilities. H.J. Whitley, a real estate businessman, transformed the city into a wealthy and popular film production industry. He was known as the father of Hollywood film industry (Britannica).

### **Bollywood film industry:**

The Bombay-based Indian film industry is known as Bollywood. Bollywood is the highest film producer in India. Hindi, Telugu, and Tamil cinema had reached US dollar 2.7 billion in 2019. The first film was introduced to Bollywood by Lumiere brothers during the 1894 in Watson Hall, Bombay. Later the first indigenously made film 'Raja Harishchandra' was directed and produced by Dada Saheb Phalke in 1912. The highest Indian film award was named as Dada Saheb Phalke National Award.

### **Kollywood film industry:**

Tamil cinema is known as Kollywood. It is one of the top film-making industries of Indian film-making industry. Kollywood is based in Chennai city, in the neighbourhood of Kodambakkam. The Kodambakkam area is known as Kollywood. The name is inspired and developed from the word Hollywood. Kollywood film industry is one of the top three film producers of Indian film industry. The first Tamil film was directed and produced by Natarajanar during the 1910s. The Tamil film produces more than 250 movies per year from last decades. The Kollywood films have fan clubs across more than 35 countries in and around the world. The South Asian countries like Singapore, Malaysia, and Sri Lanka had overseas markets for Tamil films. Apart from the South Asian countries, it has markets in Arabia, Japan, America and United Kingdom.

## **2. Review of Literature**

New York Film Academy's (NYFA, 2020) data on Hollywood films visual effects revolution showed the top twelve movies that set the milestones in visual effects technology. According to the NYFA's data, visual effects using CG technology is a difficult and subtle science. Before the release of the Hollywood movie 'Westworld', robot movies used analog effects. The movie 'Westworld' used the raster (computerized) graphics to show the POV shot of Brynner. Later, this technology was used in Terminator and Robocop movies. In 1978 the Hollywood movie named Superman used in the iconic flying Superman titles. In 1984 the space adventure movie named The Last Starfighter used CGI models of spaceships. Integrated CGI shots were used in the movie for the first time. Major 3D effects and multiple morphing effects were used in the movie

named ‘Terminator 2. Photo realistic bodies of dinosaurs introduced in the movie ‘Jurassic Park’ in 1993. In 1995 the movie named CASPER used the completely computer generated protagonist (humanoid) character for the first time in the film history. At the same time the movie Toy story released by PIXAR studios, USA. In 1999 the film named ‘Matrix’ released with CG interpolation for the first time. The movies like, The lord of the rings, Sky Captain and the world of tomorrow, Avatar (2009) did wonders in visual effects technology. (NYFA, 2020).

According to Rama Venkatasamy (Rama, 2012), the visual effects technology information technology, and digital revolutions changed the way of making Hollywood movies. Furthermore, the evolution of visual effects technology changed the intensive filmmaking methods.

The researcher Ebert (Ebert,2009), discussed about the making style of cameron’s Avatar movie and its technical advancements. He mentioned the breakthrough technology used in the movie ‘Avatar’.

The researcher Schatz, (Schatz, 1993) mentioned about the blockbuster movies like Indiana Jones, Crusade, and Batman and its commercial success. He credited the movies collection to its pathbreaking visual effects usage and technology.

Elsaesser, (Elsaesser, 2005), discussed about the inclusion of new digital technology in contemporary Hollywood cinema and its reachability during this 20<sup>th</sup> century. Tzioumakis (Tzioumakis, 2011), also mentioned about the recent changes in technology based cinema in his research article.

### 3. Research Methodology

The comparative case study method was adopted in this research. Four films were compared to understand the similarities and differences in making style, story, visual effects, technology, market, investments, and reachability of the two different industry named as Hollywood and Kollywood. Due to the wide gap between the two different film industries this research took the movies with the ten years gap. It would be very difficult ot anlyse all the differences. So this research considered the four case studies related to Hollywood and kollywood films.

#### Data analysis and interpretation

S.No	Film Name	Year of Release	Budget	Total collection (Worldwide)

1	I, ROBOT	2004	\$120 Billion	\$353 Billion/1 Oscar
2	TROY	2004	\$ 175 Billion	\$ 497 Billion/ 5 Oscar
3	Baahubali-Series	2015-2017	250 Crores Rs	1,810 Crores Rs
4	2.0-Series	2010-2018	542 Crores Rs	800 Crores

S.No	Film Name	Rating/Audience	Rating/IMDb	VFX company	Market
1	I, ROBOT	5,24,969	7.1/10	Digital Domain and Weta Digital	Worldwide
2	TROY	5,17,453	7.3/10	MPC company, Framestore CFC, Cinesite, Artem Digital Ltd	Worldwide
3	Baahubali-Series	1,11,822	8.2/10	Alzahra VFS, Craer Studio, United Soft, Postmodern digital	Released worldwide-Indian market focused
4	2.0-Series	23,389	6.2/10	DNEG (UK), EI Ranchito (Mandrid) 80 percent	Released worldwide-Indian

				completed in India	market focused
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<b>S.No</b>	<b>Film Name</b>	<b>VFX shots</b>	<b>VFX elements</b>	<b>Narrative structure</b>	<b>Placements in storytelling</b>
1	I, ROBOT	460 CG robot shots,	Computer Graphics, Animatronics, 3D Animation, Rotoscopy, Matte painting	Used in three act structure	Along with the story
2	TROY	400 Epric VFX shots	Computer Graphics, Animatronics, 3D Animation, Rotoscopy, Matte painting	Used in three act structure	Mostly in fight sequences
3	Bahubali-Series	2300 VFX shots	Computer Graphics, Animatronics, 3D Animation, Rotoscopy, Matte painting	Used in three act structure	Mostly in fight sequences and song sequences
4	2.0-Series	2150 VFX shots 25 VFX studios New sound technology named 4D SRL	Computer Graphics, Animatronics, 3D Animation, Rotoscopy, Matte painting	Used in three act structure	Mostly in fight sequences and song sequences

<b>S.No</b>	<b>Film Name</b>	<b>Type of movie/ Genre</b>	<b>Plot</b>	<b>Narration technique</b>
1	I, ROBOT	Action-Mystry	Mystry of a murder due to humanoid robots's involvement	Flashback techniques
2	TROY	Drama-History	Troy is based on a epic poem The Iliad-HomerIt is about the battle between the ancient kingdoms of troys and Sparta. Conflicts due to love and war	Straight narration
3	Bahubali-Series	Action-Drama	Baahubali is a fictional epic story. Mahendra Baahubali raised and defeated the army to take revenge of his father's death.	Flashback techniques
4	2.0-Series	Action-sci-Fi-Thriller	Supernatural power of Pakshi Rajan destroyed the Chennai. A scientist saved the city with his Robot	Flashback techniques

#### **4. Findings and Suggestion**

The coding of the film analysis data shows the vast differences between the investments between the four case studies. The market value of the Hollywood movie was more than the kollywood movie industry. Technically there was a wide gap exists between the two different film industry. The comparison of movies between the two industries from the released years clearly shows the advancement of Hollywood film industry. But after a long period (Ten years gap) the themes, story, investments, box office collection, worldwide release and expectation of the kollywood movies increased undoubtedly.

#### **5. Limitations**

This research paper considered the two different type of movie genres and technicality of two different film industry. Due to the advancement of the Hollywood film industry this research considered the movies between the gaps of ten years. Even though many stunning visual effects movies developed in Hollywood film industry this research considered the theme and movie type based on the similarities. There were many movies with excellent visual effects and animation produced and released in Hollywood but very few technically advanced movies released in Kollywood. So, this research considered the most advanced movies of Tamil cinema industry.

#### **6. Conclusion**

This research concludes that there is a vast difference present between the two notable film industries in the world namely Hollywood and Kollywood. The story, theme, technology, investments, profitability, business market, reachability, and film base of the two film industries have a wide difference. Movies like Bahubali and 2.0 have undoubtedly developed the standards of Tamil cinema. Particularly it reaches to the international level. The themes are also gives a new standard to the Indian film industry. Without any doubt the visual effects in the movie 2.0 is suitable to compare the visual effects used in Hollywood movie like I, Robot. Like that the Bahubali series movies have the comparable visual effects and animation sequences like in particularly the Troy war sequences. This research concludes that there is a changing trend happening in Tamil cinema for the past ten years in terms of visual effects, animation and new MoCap technology.

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