An Image Without Camera: An Analysis of Digital Visual Effects in Hindi Films

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Abstract

Indian cinema has undergone a myriad of technological changes during the past five years. In recent times, the role of computer-generated images (CGI) has been given great importance by Hindi filmmakers. The techniques used for the construction of reality through cinematic images in Hindi films can be seen as a new-fangled initiation into the structure of narratology. Digital images are purely based on digital visual effects, which create a cinematic landscape. This paper will analyse the use of digital visual effects (DVFX), which are being used to create a pleasing imaginary landscape and other sceneries.

Philosophical questions raised by scholars argue that the use of digital visual effects is limited to filmmaking in India. This paper argues that Hindi cinema has considered less visual effect in its work, but recently, Hindi filmmakers have started using digital technologies to depict new stories. This paper is an analysis of in-depth interviews collection from Hindi filmmakers. Moreover, this paper raises questions about the new form which is shaping Hindi Cinema through DVFX. Can this be considered a new era of narrating stories by Hindi Filmmakers? Furthermore, it will analyse other works of Hindi films which have used DVFX to narrate cinematic time and space. The in-depth analysis of recent films is done from the perspective of their makers. This paper will also highlight whether this new era can lead Hindi films to compete with Hollywood works.

***Keywords**: CGI, DVFX, cinematic, technological, filmmaking, Hindi Film*

Introduction

The digital technology has brought a new revolution in films production all over the world. Cinema itself has been considered as a technological medium from the beginning. In the present scenario, cinema has been seen as an image's enhancement era because of digital visual effects creation in every film. Filmmakers are trying to get desired cinematic images with the help of digital image technology. Lev Manovich (1995) called it a digital revolution in cinema, as he mentioned that there is a new genre of fictional live-action films that have emerged with digital cinema. However, as Manovich called, digital technology is a shift in cinema. According to Manovich, digital manipulation in live action footage is digital cinema.

Hindi films have started digital visual effects to enhance images recorded with film and digital formats. This study examines on digital visual effects (DVFX) used in selected Hind films which were possible to make because of DVFX. The makers of these films have admitted that without the help of DVFX they could not be able to make these films. Digital effects are tremendous challenging work to blend with live action or recorded imaginary because it must look real and authentic on the screen. However, film scholars claim that digital visual effects make filmmakers more manipulative, which they treat as a loss of reality in the physical world. There are more digital images creation takin places with the coming of digital effects. This research paper explores the changes in storytelling in Hindi films caused by visual effects, and also examines the uses of DVFX in different genres.

This paper entitled *An Image Without Camera: An Analysis of Digital Visual Effects in Hindi Films* discusses digitally created images or shot in selected Hindi films which are with a huge production budget. It focuses on the perspective of filmmakers, how they use the techniques and what new cinematic narrative possibilities they are trying to create for Hindi films. After examined and discussed with filmmakers and visual effects supervisor The finding of the study based on primary data collected from the filmmakers and visual effect supervisors, show that DVFX is empowering Hindi Films storytelling. Hindi filmmakers are now creating more pleasing and astonishing cinematic imaginary. It was found that the DVFX has given a new method of creating a narrative structure in Hind films. Hindi filmmakers have identified that DVFX is an excellent tool which helps to form a cinematic appeal with story content if done creatively and authentically.

Defining the term an image without camera

In Hindi films, the use of visual effects has started from the time of Sant Tukaram (Damle. & Fattelal, 1936). The effects were one on filmstrips, and today they do not look real. Digital technologies in every art form dominate in contemporary time. The concept of an image without a camera has emerged from the form of the digital mode of cinema. Digital production has changed people's understanding of cinema. The shift from reel to digital data has given more flexibilities to its creators (Prince, 2012). India always welcomed the technology of cinema from western countries. Indian Cinema, especially Hindi cinema has not given much focus on technology. However, the recent trend has changed; the digital invention in film production attracts Hindi filmmakers.

Professor A.J. Mitchell (2004) has written that image without a camera is an image without using the photographic lens. Eran Dinur (2017) in his book titled 'The Filmmaker's Guide to Visual Effects' defined "Visual Effects (VFX) are digital manipulations and enhancements of the footage that happens during post-production." Here Eran is trying to focus an image creation without using a camera. Digital manipulations lead to creating several images without physical recording (camera). This research paper talks about the digital visual effects (DVFX) used in Hindi films which were released during 2013-2017. The term 'an image without a camera' has emerged from the digital manipulation of images in Hindi films. These films have extensive use of digital visual effects to enhance the films.

Further, the result forms a different picture. It is not the case that analogue mode did not allow to manipulation, but limited it to colour correction and optical effects. It has formed the term to understand the meaning of created images in cinema. There are several technical processes involved in creating an image without a camera. It must not be misunderstood that a computer application can perform the duty. It requires cinematic aesthetic vision and skilled artists. The technique is adopted in Hindi films when digital cinema production has taken over older technologies. The computer-generated-imagery (GCI) has taken place in Hindi film narrative, and with this, digital characters have been introduced in Hindi film stories. Hollywood studios have created several digital characters, and they have franchised of these movies.

The introduction to CGI in cinema has accorded more strength to the Hindi filmmakers. Using CGI has given birth to images without a camera. For example, *Baahubali:* The Beginning *(*Rajamouli*, 2015)* has created 1500 feet waterfall with mountains containing lush green landscapes and the Kingdom of Mahishmati possible with digital visual effects (Animation Kolkata, 2017). *Dhoom 3* (Acharya, 2013) has used large images without a camera. Vijay Krishna Acharya[1] narrated that without digital visual effects this film could not be possible to make as it comes to the cinema theatre. Vijay Krishna told that digital visual effects are spectaculars tools which make a story more connected with emotions and excitement. It has made chasing of bike among *Dhoom3* characters possible with digital visual effects. Jae Hyung Ryu mentioned in his research that spectacular pleasure happened because of digital visual effects (Ryu, 2007).

Hindi filmmakers think visual effects are digital gimmicks. However, Stephen Prince in his book titled "Digital Visual Effects in Cinema"(Prince, 2012) narrated that the filmmakers, all around the world, have used DVFX to achieve 'Perceptual Realism'. The digital visual effects depend upon the manipulation of live-action with CGI. Vanessa Ciccone also defines the term that an image has been created without a camera shot but when it goes through computer manipulation (Ciccone, 2016). Digital visual effects are not limited to the use of computer software and hardware. It has aesthetic consideration also. In Hindi films, these visual effects have used in large varieties. This study has considered the creation of the landscapes, set extension, digital effects, and action sequences that are the images without a camera. Throughout the study, these words have been used to refer to the images without a camera.

From theoretical aspects, the digital visual effects are cinematic illusions (Magerstadt, 2011). Cinema considered one of the critical art forms which have the power to produce several kinds of illusions and realities in the space. Digital visual effects or the images without a camera are the carriers of that illusions and realities on the screen. Kausar and Pandey (2016) have noted that seventy per cent of Hindi films uses digital visual effects. In the future, the uses of digital visual effects shot will increase.

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[1] Vijay Krishna Acharya is writer-director of Dhoom 3 (2013) and Thugs of Hindostan (2018)

The role of digital visual effects

The most critical role of digital visual effects is to enhance any films visually. It allows a director or a filmmaker to perceive audiences' feeling of being into the cinematic spaces in the story. Sometimes, some places exist in the imagination, and some other time, it might be a combination of different background together (Okun & Zwerman, 2010). The selected films in this study have various story settings such as action, thriller, superhero, romantic tragedy, horror and so on. Digital technology has improved the use of digital visual effects. All Hindi films are using DVFX now to enhance different shots. Here, this technique in selected films has been found that without the help of DVFX, story narration could not be told. Visual effects change the perspective of the audience in the cinema theatre. It can take them to travel through the whole galaxy and take back into the ocean as well. Hindi films yet to achieve that spectacular presentation. However, Hindi films also used DVFX to construct the cinematic reality on the screen. The most critical role of digital visual effects in a film would be to achieve reality through visual enhancements. So, visual effects play a significant role to achieve director vision in the storytelling.

Visual Effects creates an illusion of reality in cinematic spaces (Hellström, 2013). In *Dhoom 3* (Acharya, 2013), the bike can transform into water scooter and merge with another bike together. In this film, there is a dual role of the main leading protagonists and who is a circus artist. Now being a circus artist, he is a skilled magician in the film. So, he has changed his bike to perform several magical tricks. Vijay Krishna Acharya stated that digital visual effects play an essential role to transform the bike into something else. Sometimes it goes into the water, other times it is riding on wire also. The principal role of DVFX in *Dhoom 3* is to enhance the dual role. The double role sequences recorded with a motion sensor control rig. According to Vijay Krishna Acharya dual role is the most prominent visual effects in this film. He uses the motion sensor control rig to capture the lead characters' performance. These techniques allow a director to control the movement of the performer digitally and the same actor can play a dual role with accuracy and efficiency back and forth. Their performance can match according to the need of the shot in the digital program.

Similarly, in *Krrish 3* (Roshan, 2013), many shots require the role of DVFX. The protagonist is a superhero in the film. He can fly and perform several action stunts, and on the side, the antagonist is an evil mind who creates some creature mixer of human and the animal called '*Manvaars*'. It is only the use of digital visual effects that makes the actions to perform on the screen. *Creature 3D* (Bhatt, 2013) also has a digital creature in the story. The creature eats human alive. Now without the help of DVFX, Vikram Bhatt cannot tell the story of the creature. In Bajirao Mastani (Sanjay Bhansali, 2015(, digital visual effects have been used to establish a war scene and the last sequence of the film. In Hindi films, DVFX plays a significant role in manipulating and creating the background, set extensions, wire removal, creating creatures, crowd multiplication, object modification and so forth. The safety of the human being also one the primary concern while taking risky shots in film production. It is not only concern about Hindi cinema but for any cinema industry, and digital visual effects are the big solution to this problem. It saves the stuntman from dangers.

The technology of DVFX has changed Hindi filmmakers perspective in production. Now everyone has little or more skills of digital visual effects. The economic benefits also influence them. Hindi Film industry also has produced films which can compete with Hollywood studio production. Films such as *Dhoom* 3, *Krrish* 3, *Bajirao Mastani* and others needed many action sequences to shots which are not possible to take such hazardous shot. Hence, the director uses the path of the digital visual effect and achieve the actions in the film. The image creation without a camera is timesaving. It allows filmmakers to tell their stories the way they decide. Every aspect of filmmaking becomes digital such as the storyboard, scripting editing and so the images manipulations for betterment (Prince, 1996). The role of DVFX has extended the images to be created without a camera. However, Stephen Prince (1996) suggested that images without the camera do not mean it does not require referent.

Most of these effects have been possible because of the morphing technique. In *Dhoom* 3, the bike changing its shapes and dynamics. In *Krrish 3,* characters Maya and Maanvars are doing actions which are made possible with the uses of morphing in the scenes (Whissel, 2014). These films have made filmmakers little more confident in using digital visual effects and spend more amount to generate realistic visual effects in Hindi films. One of the significant roles of DVFX in Hindi films has been towards photorealism of background images. Stephen Prince (2012) has stated that the use of this technique provides a platform for directors for new cinematic aesthetics. Now a filmmaker can think to put a shot in his/her film where a bird is talking to human characters. However, few such works have produced in Hindi films. It has limited uses of digital visual effects in the beginning. Positively, after 2015, this usage has changed in Hindi films storytelling.

The goal of a filmmaker is to get the audience engaged in performing the character. Hindi film industry, however, does not use any computers generated characters in films. Film scholars do not agree to use the animated character and make it authenticate on the screen. Their primary argument is that amination should be authentic and it should not be heartless. According to Stephen Prince (2012, p. 103), it is a great scandal in the film industry. There is a judgement of animation and CG elements in the films among scholars that the removal of the production element is not enough to show the digital visual effects. Hindi films are landscape creation cinematically. Even though a few Hindi films are used to create a different cinematic world or complete imaginary background, there is a use of referent background. VFX plays a significant role in opening more fantasy storytelling, and its demand also is increasing in films.

An image without a camera: an analysis

Analysis of an image without a camera in the context of digital visual effects is a board area of study. The post-production facilities in film making have developed since digital technology is introduced. The analysis carries out the post-production process involved in creating spectacular images with recorded images. The study focuses on films which have more than 75 per cent digital visual effects shots. Here, an image without a camera does not mean that recorded image is not happening organically in Hindi films but they are digitally manipulated and formed new images. It changes camera images entirely and gives a new meaning to it. The

analysis includes films such as *Shivaay* (Devgn, 2016), *Jagga Jasoos* (Basu, 2017), *Padmaavat* (S. Bhansali, 2018), *Thugs of Hindostan* (Acharya, 2018), *Kedarnath* (Kapoor, 2018), *Zero* (Rai, 2018), and *Simmba* (Shetty, 2018). However, there are other films which have used digital images extensively in several scenes. The use of images without a camera is to simulate the actual reality in films.

Theoretically, the concept of Perceptual Realism as given by Stephen Prince, suggests that digital manipulation of images creates a different world. Here Prince is talking about the cinematic world in the films. He gave an example from Steven Spielberg's Jurassic Park (1993):

> *"Digital tools are best understood not as applications undermining realism but as modes of translation–seductions of reality–designs for creating new extensions of realism and fictional truths"* (Prince, 2012).

Similarly, Hindi films have created realism and the fictional world which is possible with digital tools only. Image without a camera is considered as an illusion of digital technology. Without digital tools, it is not possible to create digital images. However, the criticism of Prince here is that the camera also is a tool. Further, his main argument is that digital tool creates a new fictional world which is a mixture of something non-existing things. Creation of digital images is imaginary.

Shivaay is one the films which have extensive use of digital images, wherein VFX production, artists were able to create great spectacular images blended with much action, the main character is running on the snow, jumping on slippery mountain trails and snow storms. In the whole film, they could able to add snow in the background with the help of VFX. In *Jagga Jasoos,* VFX production has three plates of each VFX shot creation. The story has such a location element which is not possible to shoot in reality. From the perspective of VFX, as supervisor Prasad Sutar[2] told that although *Jagga Jasoos* is entirely VFX film, for the audience, VFX is not identical because it is done so professionally. Whereas *Padmaavat* is a complete epic content in it which required many battlefields, and background plates to match with actions. Most of the background has been created in VFX. *Thugs of Hindostan* was a mixer of special effects and digital effects. However, the filmmaker could able to make extra visual grandeur while creating a fantastic visual experience for the audience. We can see Mehrangarh fort with sea and people fighting on the ship. Visuals of the ship going in see looks like full digital images without a camera. Kedarnath climax sequence has been used to sync with the flash flood scene. Digital visual effects have reduced photographing creatures, miniatures, models and other artefacts used to obtain special effects but now with the digitally generated element, it has smooth and more realistic from an audience perspective.

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[2] Prasad Sutar is (VFX Supervisor) founder and managing director of NY VFXWALA.

The concept of 'an image without a camera' has increased the creative vision of filmmakers. The filmmakers have released that the possibilities of creating cinematic images using digital visual effects are creative pathways and able to tell new stories. From the beginning, digital visual effects were limited to specific genres, but in Hindi films, it has become unlimited scope. Now, every film maybe with a small or big budget is using visual effects, to enhance images.

The impact of new media technology on Hindi films are tremendous. It has given much freedom to filmmakers who can depict the new narratives without restrictions of imagination. The creative aspects in post-production have emerged with the dawn of the digital era. Digital visual effects have given several features in film production which can be used in many ways. Most of the respondents admitted that rich content would not have been able to tell if there are no digital effects. The impact of digital effect is ambitiously increasing in Hindi films because they can achieve visual appeal in the films. However, still in Hindi films, the budget stands as a barrier before the department of digital effects. The negative impact of digital effects creation in films is time and lengthy workflow (editing, and whole VFX pipeline). The positive impact is the desired output in recorded images achieved seamlessly. Digital editing also started in Hindi films on location recently. The editorial team is also available during principal photography. Immediately editor can give a rough cut to the director, and further director can decide on film set what to reshot or what to include for visuals. VFX has enhanced the vision of director and film writer to tell meaningful, exciting and new stories which were difficult to tell in celluloid.

Future aspects

The next stage of digital visual effects in Hindi films is yet to be introduced which is virtual reality. There will be coming more new tools for creating stunning visual. Hindi film industry is determined by digital effect and technology. Technology is leading new kind of storytelling with efficient ways. In future, the more visual enhancement will take place, and presently the sync between recorded images and digitally created images are observed. The cinematic atmosphere and shades change. Digital effect or images without a camera have given facilities not only to enhance visual but also an opportunity to explore different stories which fascinate filmmakers as well as audiences.

However, the future of the Hindi film industry is unforeseeable. The new tools and technology will help to achieve the filmmaker's vision and imagination. More organic and authentic stories are going to come shortly. The possibilities of digital effect or to say, images without a camera will be more in numbers. The 3D imaginary to be explored in Hindi films. The replacement of digital human characters is also future items to come shortly. Digital visual effects impact every genre because it is outstanding technically. A lot of action sequences, mountain trialling, snow effects are possible only in VFX. Epic background, and creating digital set will be more authentic and closer to reality. There be will more digital manipulation with recorded imaginary and will blend with live action footage organically. The quality of images will improve as new images technology comes in. Hindi films will have more CGI elements in stories.

There are many possibilities of images without a camera in Hindi films industry such as natural disasters effects usually shown in Hindi films by making a pillar falling. With digital visual effects, it will be shown more impactfully and look like real. There will be a new digital character in Hindi film stories. New Film theory of Hindi films will be identified soon.

Conclusion

The narrative boom happened when digital technology and tools introduced in filmmaking. Various stories have been possible with the digital images' enhancement facilities available in the present time. The concept of images without a camera has been examined throughout the discussion, and it has found that digital visual effects are the things which help a filmmaker to put his vision on the screen. However, Hindi films visual effects are not comparable to Hollywood films because setting and production facilities are different. There is a massive gap in a financial decision made during film production in Hindi films. Even though several Hindi films are coming with a big budget for VFX production and their work is being appreciated by industry and film critics. *Shivaay*, *Padmavaat*, *Jagga Jasoos*, *Thugs of Hindostan* and *Zero* could get awards for VFX categories.

For a Hindi filmmaker, the most critical satisfaction happens when the audience like the film. The digital effects did not consider a technological development in Hindi film; it is an uprising in the historical pattern. The choice of contents and unheard stories are being explored by Hindi filmmakers that is something new thing happening with digital visual effects. However, still, Hindi films are far behind from Hollywood digital visual effects.

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