ARCHITECTURAL ANIMATION AND CINEMATIC INTERPRETATION

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Abstract. Cinemas have always communicated beyond space and time. However, the illusion of being in a synthetic environment in cinema seldom exists in an architectural animation. The same digital animation technology may have been used, but the method of engaging the viewers and capturing their interest in cinemas, distinguish them from architectural animations. The focus of this paper is to examine the essential elements in cinematography such as mise-en-scene, collage, and entourage which can effectively transform one animation style to another. Depending on the storytelling and use of cinematographic elements, the built environment can bring the sense of immersion that is, the thread of emotional connection between the audience and the animation. The topic explores ways to permit the viewer’s immersion in the presented environment for architectural animation. Transforming the style of the animation allows us to experiment with different ways of capturing audience attention, translating design concepts and articulating information rather than being another form of transcription only in motion. In this paper, the attempt is to bring the reflex of an architectural project in animation by introducing the cinematic depth rather than being a narrative knowledge transfer.

1. Introduction

Architectural animations have developed to be a real metaphor for the audience or client’s perception of the building that is to be built. Relationship between architecture and architectural animation is being
stretched and tested in every way possible these days. Animated walkthroughs, photorealistic renderings, illustrations, photographs, presentational and visualization gimmicks along with special effects such as graphics, animation and sound provide sensory support to a computer generated environment.

Instead of providing crucial support the special effects have started becoming a central feature of the architectural animations resulting in disoriented navigation, rapid camera movement, annoying camera angles without conveying the sense of space for which the medium is intended.

Animation is an artistic medium which is used to define an architectural space or to visualize a sense of space. Cinema is a medium characterized by its relationship to the worlds because we see a reflection of ourselves and the events in life. To engage the audience in an architectural animation, this paper focuses on analysing a few elements from the cinematic language so as to create experiences for the audience who can respond to it emotionally and intellectually.

2. Background

Technology, built environment, pre visualization gives a cue about the connection that exists between cinema, video, architecture and presentational methods. Space is static. It doesn’t express life, but transforms into architecture when the sense of place is introduced. For this interpretation of a built environment, film language could be adopted to render a different perception of the space.

2.1. ARCHITECTURAL ANIMATIONS

For a discussion of architectural space and time, let us take ‘to animate’ as meaning to give life and ‘animation’ as the condition of being animated (Burry, 2001). Apart from the alluring photorealistic renderings, architectural animation serves 2 main purposes. Firstly, it is used as a presentation tool to represent the built environment. The building is visualized by a sequence of computed images or dynamically changing images. Secondly, architectural animation is used as a part of the design procedure to address the nature and quality of spaces.

2.2. TYPES OF ARCHITECTURAL ANIMATIONS

Generally, architectural animations present factual information about a project which is about a built environment or to be built. These animated movies may speak about it, or elucidates a design problem. These animations metaphorically convince the viewer about a design solution or influence the mind of the viewer with the design concepts, principles and arguments about the building. Architectural animation can be divided into four genres: narrative, documentary, pure design and intuitive animation (Laybourne, 1998).
2.2.1. Narrative architectural animation
Narrative is the most widely occurring of all types in which the stories are told in a linear and logical format. The storyline is the base on which the computed images along with sound and narration are grouped and superimposed.

2.2.2. Documentary architectural animation
The documentary genre is apparently the second most used genre. Documentaries present factual information about a chosen subject that might be historical, scientific, technical, political, etc. The purpose of the documentaries is to enlighten, educate, and/or persuade.

As a quick note, documentaries have the power to control our perception of reality by means of editing and special effects.

2.2.3. Pure design architectural animation
Pure design videos demonstrate the development of the conceptual aspects of the design, usually undertaken by an architect. The storyline gives the whole process of how the design solution was achieved starting from the thought process.

2.2.4. Intuitive architectural animation
These are self generated, obtained through intuition rather than from reasoning or observation. This kind is seldom used in creating architectural animation videos.

3. Film Language in Architectural Animations

3.1. MISE-EN-SCENE
The most prominent vehicle for cinematic realism of the mise en scene, however, is the scenic realism of the mise en scene which enables us to recognize sets and settings as accurate evocations of actual places. (Corrigan, Timothy and White, Patricia: 2004 P.45) Mise-en-scene, a French term means placed in a stage. It refers to the elements of a movie that are placed in a scene before beginning to film. These include sets and settings, props, actors, lighting, costumes and make up.

In an architectural animation the elements of mise-en-scene could be seen as those substantial reference points to maintain the mood and style to remain in focus on the line to keep the audience attentive and engaging as every single frame is predetermined.

3.1.1. Settings and Sets
The places, spaces, lights and shadows, people, objects are a part of the movie experience. Settings and sets are the fundamentals for a movie or an architectural animation. Apart from setting the right environment for the
action to take place, when used in architectural animations imbibing physical, cultural and historical accuracy they gain significance.

Open or closed spaces can generate feelings of potent or hopelessness. The objects around us are intensified by bright morning light or a serene ambience is created by filtered moonlight entering a space. A certain arrangement of furniture in a room also causes feeling of comfort or discomfort. Careful use of such mise-en-scene creates a link between the responses people have to such physical and material surfaces and the sensations associated with them. These settings when observed closely highlight the principles of architecture.

3.1.2. Props

Props are objects that function as parts of the sets or as tools used by the actors (Corrigan, Timothy and White, Patricia: 2004 P.51). Props in architectural animations could be used in different contexts. Victorian Aesthetic Ebonized Gilded Gypsy Table behaves as a cultural prop for a house designed in the Victorian style. The architectural style of the house gets conveyed and also the viewer gets interested to look for more cultural props in that setting. A building with smooth, white walls and a sleek streamlined appearance, cube-shaped spaces expressing the spirit of the machine age conveys it belongs to the Art Modern Home Styles of 1930. Cultural, contextualised, instrumental and metaphorical props carry meanings associated with their place in a particular society or environment.

3.1.3. Lighting

Lighting is one of the most important dimensions of mise-en-scene. This includes both natural and electrical lighting located within the scene. The play of light can create its own scene. When watching a movie involving any emotion to a great deal, the director makes us see what he wants us to see. The images in our minds fade away. The flood of light entering a darkened cathedral creates an atmospheric mise-en-scene, stirring humility and deliberation. Manipulating the senses, scenes, lighting, props and sounds create experiences that people recognize and respond to in their everyday life.

Architecture is an exchange of experiential feelings and meanings between the constructed space and the mental space of the viewer. It is evident that the film language can possibly make the architectural animation involving without destroying the content or the message it intends to convey. Architecture like cinema exists in the dimension of time and movement. A building is perceived in sequences. The framings, openings, levels, layers are similar to cuts and edits, depth of field and superimposition of screens in a cinema.
4. Architectural Animation Film making

4.1. STORYBOARD

A visual roadmap is essential for the feasible use of cinematographic elements. In addition, storytelling based on everyday life’s activities, people’s emotional response to the environment, and the meaning of space become the backbone of an architectural animation.

Story telling is the most important element in a film (J. Pilling, 2001). Storytelling in the western world tends to follow a prescribed structure. Stories usually begin by setting up the situation or dominant problem. The location in which the story takes place is introduced along with the characters and relationships among them.

The very process involved in making a film requires that the artist manipulate the subject material to some extent. The movie making style is determined by the extent of manipulation. To achieve particular effects and integrate them into the total film, the film editor groups, cuts, conjoin and superimpose various research shots. Storytellers often manipulate traditional story structure to heighten the drama and suspense of the story or to otherwise make the story more interesting to the hearer, reader or viewer.

For example, in the film “The Fugitive”, the main character (Dr. Kimball played by Harrison Ford) is being transported to prison in a bus. The bus unexpectedly crashes and Kimball unexpectedly escaped. This is a surprising and unexpected change of direction in the story. As this new directions unfolds, additional new and unexpected directions, complications and struggles are introduced to the storyline.

In animation narration should be generally as short as possible without damaging the story. In writing scripts for animation, the idea is to write in such a manner that the reader sees the story in his/her mind’s eye. Fast cutting back and forth communicated the frantic pace of the action visually. Such a fast series of cuts are sometimes called montage. The idea is to use the technique to heighten suspense and the resulting emotional involvement of an audience. Ironically, the effect is to communicate a frantic pace by drawing out the time it would take in the real world to complete the action. That is to say, time is expanded. Otherwise the action would be over in an instant and would have little emotional effect on the audience.

In the case of visual storytelling, stylistic devices such as sound and camera actions are also introduced.

4.2. ILLUSIONARY INTERACTION

While sitting in a non moving train, one gets the sensation that the train began to move. This would have been the result of train moving on the neighboring track. Such confusion is a little less in the real world, but can be achieved in a virtual world in a more convincing and engaging way. Consider the case of static foreground objects, which can appear to move while the background, which is actually moving, appears stationary. In film,
the scene would look exactly the same if the camera were to move backward while the car remained static. This idea can help in creating complex scenes. In creating an environment with a seamless backdrop, alignment of camera and 3D models, will reduce the need for modeling or repetition.

Usage of third person cameras, cinematic camera and camera styles along with real world illumination and non photorealistic rendering makes the architectural animation closer to reality and more like a real life experience. Thus, achieving illusions using the digital media enables illusionary interaction between the audience and the movie.

5. Conclusion and Future Work

Feeling or sense of space can influence one unconsciously. A short interpretation of film language to cater the needs of architectural animation has been presented. Direct verbal communication tends always to be surpassed by the image of movement. More than visualization medium or an aid to the presentation process, the architectural animation is a frame, it needs life and colors to make the essence of the content reach the audience. The architectural animations need to have a cinematic depth in order to keep the audience focused and involved. The paper will proceed in making two videos with the same time length and content. One video will be a conventional architectural animation video which will be similar to those used for client presentations explaining the content and giving a good idea about how the building will look like. The second video intends for the same purpose but will use the elements of film language from the inferences made through the study and analysis to test the efficiency of the architectural animation. Both videos will be tested with the same group of audience to understand the effects of cinematic depth in architectural animation videos.

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