

An Investigation Into the Creative Process Behind Believable Photorealistic 3D Animated Characters

Henry Melki - 3rd year PhD Researcher - School of Art



Background

Technology has been the primary driver that pushed filmmaking to uncharted territories particularly with the emergence of Computer Generated Imagery (CGI) that inevitably led to the birth of digital films. Regardless of format, the primary role of these various visual storytelling techniques is to create believable realities that revolve around compelling storytelling. However, just like any new medium, digital films were confronted by many issues that became apparent, from perception and technical perspective, especially after the release of the Film Final Fantasy: The Spirit Within (2001) and the bankruptcy of the studio behind it. Furthermore, after the release of Life of Pi (2012) and the liquidation of Rhythm and Hues, the studio behind the film's stunning effects, other issues regarding the industry's politics, financial state, and the treatment of practitioners became exposed to the public. Despite the efforts to promote awareness and propose solutions, these issues persist and impose a crucial effect on the believable factor of many films.

Objectives

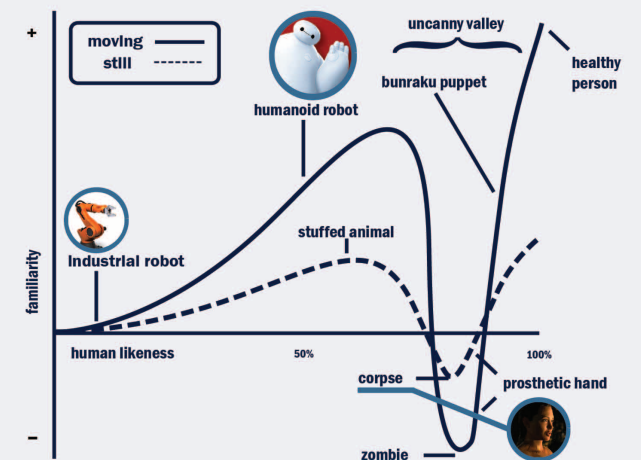
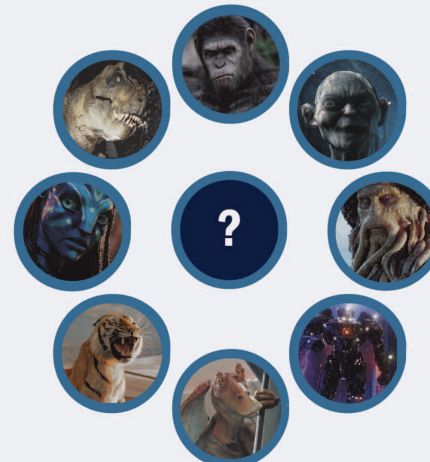
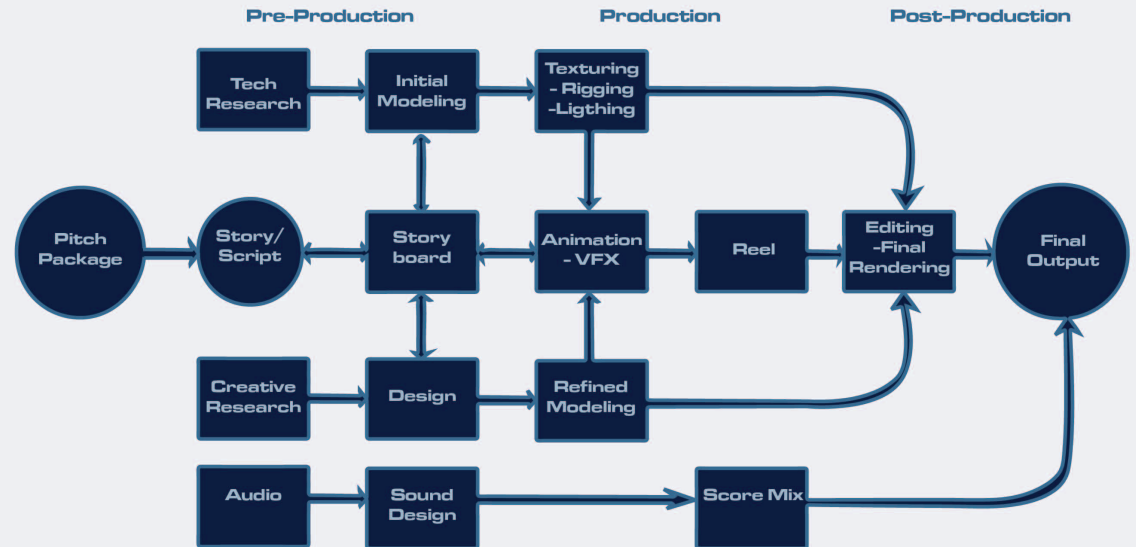
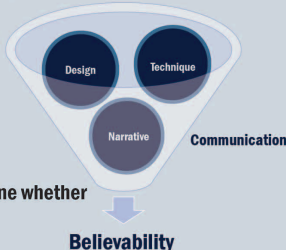
This research investigates the creative process behind believability to formulate a method to accurately evaluate the believability factor of photoreal characters ranging from digital humans to creatures used in animation films and Visual Effects shots consisting of a combination between computer-generated imagery and live action footage. This research argues that believability is achieved through the coherence between the narrative, design, and technical elements, sustained through communication, throughout the different stages of the creative process.

Methods

The proposed approach to believability must be holistic as it is achieved through effective communication and efficient integration of narrative, design, and technique. Instead of relying purely on theoretical or practical methods, this research aims to inquire about the relationship between believability and the creative process by interviewing experts from the industry about their experience and collaborative efforts with other practitioners in the film industry. The practitioners are listed below according to the order in which they were interviewed:

- A: Character Designer
- B: Concept artist
- C: Model Maker
- D: Makeup & Prosthetics Artist

The interview outcomes are categorised under Narrative, Design and/or Technique, and expertise/experience/communication to define whether believability is achieved through the coherence of the four categories.



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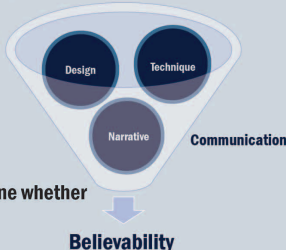
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Results

- The outcomes of the interviews show that the practitioners utilise their design and technical skills to translate the brief, whether it was provided as a script or a verbal description from the director, to a visual format.
- The pipeline and the creative process cannot be defined as fixed methods in filmmaking as it occurs in the industry as organised chaos.
- Specific approaches and policies towards characters are necessary for the survival of the industry. Therefore, believability varies from character to another due to their purpose: main, background, Intellectual Property, spectacle.
- Believability is relative to function.

