Abstract

The purpose of this essay was to look at the ways in which Disney has been at the forefront of inventing or developing innovative animation techniques, be they traditional or digital, for close to a century. The report discussed at length the on-screen and off-screen tales of two Disney feature films in light of Berys Gaut's "achievement argument." The first of these films is *Fantasia* (1940), a traditionally animated epic that pioneered the use a stereophonic system called Fantasound. The second film is *Fantasia 2000*, which marks a certain changing of the guard in Disney's history as it ushers in a new era of animation that is characterised by digital effects. Through the analysis of these two particular motion pictures, it is here argued that Disney uses technology to create worthwhile art.

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Achievements, Advancements, Animation:

An Analysis of Disney Through Ages of Technological Expansion

For nearly a century, Disney has perfected and revolutionised animation so much so that the organisation has become synonymous with the art form itself. From excelling at traditional, hand-drawn animation to pioneering the use of computer-generated imagery to which new fantasies come to life, Disney has changed the way audiences perceive the two-dimensional cinematic image. But have these particular groundbreaking achievements added to the studio's filmmaking quality? Have their stories improved because of such advancements, or have they been neglected in favour of shows that merely demonstrate a series of magical new brushes? To what end, and at what cost, perhaps, are accolades awarded? Berys Gaut notes that "cinema was born as a technology but rapidly grew into an art" (*A Philosophy* 306). The creation of new technology forms manufactures the risk that cinema, in turn, might actually go backwards from being an art form and revert to its original primitive state—that of a mechanical invention. To avoid this, for their work to still have a cinematic soul, Disney needs to have proven, and continue to prove, that the films they are producing are using technology not just to create worthwhile art, but to create something that is ultimately beneficial for humanity. With specific consideration given to *Fantasia* (1940, traditional animation) and its sequel, *Fantasia 2000* (1999, traditional animation and computer animation), this report seeks to elaborate on the perspective that technological advancements achieved by the Disney

corporation has, in fact, drastically complimented and improved their narrative and thematic filmmaking, from which art of great depth then becomes transcendent.

Before we begin our analysis, it should prove beneficial to first briefly consider Berys Gaut's "achievement argument," which provides the necessary framework for the evaluation of the two films under inspection, *Fantasia* and *Fantasia 2000*. Gaut considers cinematic art to rely upon cinematic technology. For him, if there is to be a sufficient appreciation of cinematic works there must first be a diligent comprehension of their technological components. As such, he developed the achievement argument, "which holds that appreciating a cinematic artwork is in part a matter of appreciating the achievement that it is, which depends in part on understanding the kinds of difficulties that the filmmakers overcame in making it, and that understanding this partly depends on understanding the technology that the film incorporates" (Cinematic Art 17). Two perfect examples to be inspected under this particular microscope, then, are Disney's *Fantasia* (1940, traditional animation) and its sequel, *Fantasia 2000* (1999, traditional animation and computer animation). Considering the respective backstories and efforts that went into making the two films, one learns of two laborious techniques and routes that require of its workers years of training and dedication that are to be then grouped with talent, intelligence, belief, and drive. As well as these aspects and traits, a keen and adaptive knowledge of the technologies used was imperative for the animator. Without all these things, and without the respective technologies at hand, be they a pencil or computer, the *Fantasia* projects and experiments surely would not have got off the drawing board. Determining just which of the two films was harder to make is almost impossible, but some inferences based on sound judgment and insight and analysis can be made on the types and measures of the difficulties faced by the respective animators. Upon having a better under-

standing of this, we should then be able to better appreciate the moving images presented and achieved as well as ascertain the good they bring about for the collective whole.

In the 1930s, Walt Disney was looking for a way to bring Mickey Mouse back to the levels of popularity that had made him a star. He decided upon featuring him in *The Sorcerer's Apprentice*, a cartoon short based on the Johann Wolfgang von Goethe poem that would be set to the orchestral piece by Paul Dukas, which was itself drawn from the tale. This project soon developed into a feature film that consisted of eight animated segments, each of which was set to a different piece of classical music. Sound would prove to be arguably the most important component of the project and, at the same time, the most elusive. Technology to make the film and provide audiences with the best possible experience would not come easy nor cheap. Trying to obtain such a development would see the Disney brothers (Walt and Roy) risk their careers and company on it. Implementing and devising new techniques did not prove immediately successful neither; projecting an animation at the same time as ad-libbing sounds and dialogue was neither a step in the right direction nor a step in the wrong direction. However, they persisted, and did so in a time when there was no industry consensus on which technology worked best for the incorporation of sound. As Jay P. Telotte notes, "[Walt and Roy Disney] then worked out a method for adding [sound] by timing the action to be animated to a metronome that was set to the measure of the music and sound effects they wanted to use" (25). Further to this was the creation of Fantasound—a stereophonic sound reproduction system developed by Disney and RCA to accompany *Fantasia*. Disney Fantasound engineers William Garity and J.N.A. Hawkins noted two distinct goals that drove the studio's innovation: the first was an greater level of realism and an advancement of sound-picture quality thats results would be seen at the box office; the second was that a technology like Fantasound might allow film to break ground where live entertainment could not. (36). An innova-

tive addition to the Fantasound system was the "tone-operated gain-adjusting device, or Togad, which controlled each of the three sound-track levels through variable gain amplifiers and which could be used to customize the system for ambient noise in a particular theater to create the illusion of a sound moving across the screen and even to isolate specific tracks while muting other sounds" (39).

Fantasia was released to critical acclaim, with praise awarded to its sound, visuals, and and ingenuity and originality that lead to reviews stating the film was a landmark moment for cinema. Having watched the film a number of times now, I can say that I did enjoy it more on subsequent viewing. Having researched the extent to which Disney went to make the technology to make film, it is quite easy me to write that any accolades that were or are awarded to the studio for the film are warranted and deserving. One can only imagine the impact and experience of watching something as bold and beautiful as the *Night on Bald Mountain* with the Fantasound technology booming around the cinema. While the film is at times let down by a number of sequences that went for too long and offered too little in the way of narrative or theme, the work is, as a whole, a great achievement of originality and creativity, art, colour, scene, music, and a boldness thats bravery and depth is found in the final scene when the giant Satan is defeated at the sight and sound of monks singing "Ave Maria" as Angelus Bell rings.

Fantasia 2000 came at a time when Disney's place on the animation spectrum was beginning to be usurped by Pixar just as traditional animation was on its last legs (Pallant 127). Roy E. Disney, Walt Disney's nephew, was the one who suggested the studio make a sequel to the original *Fantasia*. The result was a moderate critical and financial success. Seven of its eight segments were new pieces set to classical music not previously used in the original film. Half of the segments included elements of 3D computer graphics, and all of

them were digitally mastered, including *The Sorcerer's Apprentice*, which was included in this film as a homage to the original. It was restored frame by frame time at Cinesite (Los Angeles) so as to clean it up from dirt, dust, and artefacts (Robertson).

The film is in itself a marriage of old and new. It couples original works with new works and new processes, old pieces of music with new technology, and old techniques with new ones. Perhaps most tellingly is the segment in which traditionally drawn favourites Donald and Daisy board a digitally rendered Noah's ark. What is arguably the most memorable and captivating sequence is that which is set to Beethoven's Symphony No. 5, a scene that sees hundreds of humpback whales ascend out of the ocean, the water dripping off them, as they soar up into the sky and fly through the clouds as a thunderstorm with lightning rolls in. Hendel Butoy, the film's supervising animation director, said of the decision to make the set piece digitally: "I knew that with CGI we could multiply objects and put them into the sky, and it would be hard to do by hand" (Robertson). While this quote might make accomplishments achieved in the traditional animation field sound "greater," computer animation, especially on *Fantasia 2000*, was not without its significant difficulties. Some of the most problematic occurred in the production of the segment based on Hans Christian Andersen's "The Steadfast Tin Soldier" (set to Shostakovich's Piano Concerto No. 2.):

> Two of the most technically difficult parts of the animation were creating the ballerina's hair and dress. For this, Thumrugoti created a dynamics framework that worked for both. She'd receive final animations, attach the skirt or hair to the skeleton, start her simulation program, and the simulator would apply values to inverse-kinematics chains, which could later be tweaked by hand. 'The simulation had to look like traditional animation,' she says. 'The animators had to have control.' In

> addition, even though the folds and pleats in the skirt would naturally smooth out with gravitational forces as the skirt moved, because they were part of an approved look and needed to remain intact, she created a series of functions that plugged into Alias to put them back, as a "post-process," after the simulation (Robertson).

What can be said for digital animators is that much process, critical thought, and persistence goes into their work to bring to life a character, a place, an element, or a part of nature; that is to say that modern animators do not merely press a few buttons and let their computers do all the work. As the above quote entails, digital animation is a process that involves skill and extensive knowledge of both software and physics. Not to mention, as Butoy noted in Robertson's piece, what had to be done in computer animation to make the whales fly would be near impossible for traditional animation to not only undertake but to bring to life with the same fluidity, texture, motion, and crispness that digital animation allows for. As such, digital animation opens up a million more new possibilities for creating fantasies in time with music that changes its rhythm from fast to slow and back again in the space of only few bars. It allows for a greater attempt at bringing to life Walt Disney's original dream of what *Fantasia* could be: seeing music (Stevens 1991).

While *Fantasia 2000* is generally regarded by many as being not on the same level of quality and importance as its predecessor, and I tend to agree that it isn't as groundbreaking as one might expect, I nonetheless find the film to be impeccably animated, beautifully drawn, composed, coloured, and paced, creatively conceived and directed, and much more engaging than its 1940 relative. Aside from a certain nostalgia factor, and regardless of its relatively young age, I have always found *2000* to be a more entertaining film, and perhaps

this is due in part to its shorter length (which the filmmakers make the most of) and the fact that it puts its characters to work in segments that are humorous, dramatic, or both.

Fantasia and *Fantasia 2000* are two works of supreme originality and creativity that present old stories and music in new ways, and their respective enduring natures should prove, if they have not already, that they will continue to do so for new audiences for many years to come. “Many of the early forays into film production were experiments in animation. The quality of animation continues to improve as Pixar, Dreamworks, and other producers push the envelope in the use of technology and breathtaking effects with each successive release” (Krajewski 44). Having considered where Disney has come from to be where they are today, a leader in the media landscape, and considering also the achievements they accomplished over the years in producing the two films in question, it is without doubt that they are the blueprint for technological and artistic creativity and innovation. The *Fantasia* franchise proves that Disney is not reverting back to a primitive, machine-like state that abuses advanced technological power, but that the studio is committed to creating worthwhile art to humanity so as to better our experience.

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