Danielle Murakami

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Animation: From Eyes to TV

Despite what the public knows, animation actual started in the peripheral vision. According to Richard Spilsbury, Human eyes can sense the patterns of light and shade as well as color and shape. Nerves carry messages about what the eye has sensed to the brain which then processes the information into an image. The brain then compares it to other images that have been seen before and allows them to recognize things so when the brain processes information about an image, it retains the image for a brief moment of time before it is ready to process another image. When a very slightly different image follows in quick succession, the brain blends together the stored image and the new image as if it is seeing a single image so any minor differences between the two images are smoothed out by the brain. When sequences of different pictures or individual frames are shown at 12 frames per second (FPS), or faster, they blend together, creating the illusion of smooth movement, however, any slower than this and the movement appears jerky. Most cartoons and animated movies are shown at 24 FPS, so in other words, each minute of movie has over 1,400 separate frames (Spilsbury, 2007).

The very first animated pictures were optical toys called Magic lanterns, dating from back in the 1640's. Invented by Anthonasius Kirchner, a German scientist, the magic lantern projected images onto a screen by shining light through glass slides that were rotated mechanically, giving movement to the pictures (Spilsbury, 2007). In 1832, Joseph Antoine Plateau created the phenakistoscope, a machine that consisted of a series of drawings in continuous steps of motion on a disk that turned independently of another disk (Spilsbury, 2007). Other inventions appeared soon after, such as the zoetrope, the praxinoscope, and the kinetoscope. One might consider that the biggest and greatest invention was the movie camera, created in 1895 by the Lumiere brothers, Louis and Auguste Lumiere, they developed cinematography by taking sequences of photographs on long strips of film with the use of the movie camera. With this new piece of technology at hand, animators could photograph different pictures and run different speed sequences to create animation (Spilsbury, 2007). These devices were used to screen the first animated films and the many others that came afterwards.

From the book "All About Techniques in Drawing for Animation Production," there were multiple animated films released such as El hotel electrico (The Electric Hotel) by Segundo de Chomon, Humorous Phases of Funny Faces by James Stuart Blackton, and Fantasmagoria by Emile Cohl, who was considered by many historians as the true father of animated cartoons (Barrons, 2006). The first cinematic adaptation of a comic character was Little Nemo by Winsor McCay in 1911, which consisted of over four thousand drawings altogether. In 1912, the first animated film using dolls was titled The Cameraman's Revenge by Russian cinematographer Ladislaw Starewicz which lasted nearly thirteen minutes. The book goes on to say that in 1915, Earl Hurd was the inventor of acetate for animation which consisted of a transparent sheet on which the animated objects and characters were painted, then it's laid over a fixed background, revolutionizing the industry of that era as it was no longer

necessary to draw the background in each frame (2006). During that same year, Max Fleischer invented the rotoscope, which was used for capturing live action images that were used as reference for traditional animation.Also in the same year, Fleischer and his studio became famous for such series as “Betty Boop,” “Popeye,” and “Out of the Inkwell”. In 1917, an Italian immigrant living in Argentina named Quirino Cristiani created and directed “El apostol” (The Apostle), it was the first documented full-length film in the history of animation whose duration was about 70 minutes and it was filmed in 35 Millimetre (mm) using drawing and cutout techniques, though unfortunately the film was lost in a fire. Pat Sullivan and Otto Mesmer made the first “Felix the Cat” movie, which then became what is considered to be the first cartoon series that made approximately 175 films between 1919 and 1930. (Barrons, 2006).

The book, “All About Techniques in Drawing for Animation Production,” describes that though animation was steadily progressing, it wasn’t until Walt Disney stepped into the scene that animation took a drastic turn. It further adds on that Disney had made the first animated film with sound, with Mickey Mouse as the star, titled “Steamboat Willie” that lasted 7 minutes and 45 seconds in 1928 (Barrons, 2006). History has noted that the first animated film in color was also produced by Disney called “Flowers and Trees” using the Technicolor system. Disney produced the film “The Old Mill,” it was the first short film to use the multiplane camera animation stand, which consisted of a system for filming different levels, adding depth of field to the two dimensionality of animation in 1937 (2006). The book states that this system was later used for another Disney film, “Snow White and the Seven Dwarfs,” which was released the same year. Though the fact that it was not the first full-length animated film in history, it was the first to achieve international acclaim from both critics and the public. Also, Ken Knowlton, from New York, made the first attempts at computer animation at Bell Laboratories in 1964 (2006). It further writes that an early attempt at digital animation in 1982, Disney created the movie “Tron”, which has some scenes created by computer. Later, in 1986, the film “The Great Mouse Detective” contained a sequence in side Big Ben in which 3D animation was used to create the machinery of the clock, which was used as a reference for the traditional system resulting in an impressive integration of the images (Barrons, 2006). In a joint effort, Pixar and Disney released the film “Toy Story,” the first full-length film made completely with computers using 3D techniques. (Barrons, 2006).

Works Cited Page

Richard Spilsbury. “Cartoons and Animation.” Heinemann Library, 2007, Chicago Illinois

Barron’s. “All About Techniques in Drawing For Animation Production.” Barron’s Educational Series, Inc. 2006, Canada