A SHORT (SHORT) HISTORY OF ANIMATION

The moving picture is generally taken to have started with Eadweard Muybridge’s multi camera experiment for Leland Stanford in 1872, when he set up a series of cameras along a racetrack. These were triggered by the horse’s legs breaking strings across the course and produced a series of photographs that proved all four of a horse’s legs leave the ground at the same time, winning a bet for Stanford. However when the glass plates were shown rapidly one after the other Muybridge discovered that the horse appeared to move. This effect, known as persistence of vision, appears above around 16 frames per second.

Moving pictures were rapidly taken up in both America and Europe. The lead was taken in Paris, France by the Lumiere Brothers, who began showing motion pictures in Paris in 1895. However they did not believe the process was widely useful and refused to sell their camera designs, returning to still photography for the rest of their lives. Other pioneers, including Georges Melies, then developed their own designs. Melies in particular was an innovator in the use of special effects and editing (including stop motion animation) and produced over 500 films in the early years of the 20th century.

In the United States the rapidly expanding movie industry started to concentrate in Los Angeles for financial and climatic reasons (plenty of free sunlight for filming). In contrast to Europe, where drawn and stop motion animation became part of the fine arts, animation in America became a part of the entertainment industry. Many of the accepted techniques of animation were developed by the Walt Disney Company in the 1920s and became codified as the Twelve Principles of Animation (Squash and Stretch, Follow Through, etc). They also developed, informally, the non-realistic conventions known as Cartoon Physics.

Hand drawn cartoons in the 1920s and 1930s were highly labor intensive. The work of the skilled illustrators was therefore spent on “key” frames that showed characters at important points of the story. The frames between the key frames were estimated and drawn by in-betweener or “tweeners”, and the process became known as tweening. Motion and impact was often enhanced by smeared blurs on the clear celluloid sheets used for the images, standing in for the motion blur seen on live filmed images.

Pixar, a spin-off from Lucasfilm, pioneered the use of computer generated animation for entertainment. From the start, based on its background in the movie industry, Pixar emphasized the importance of story and character over technology. Many of the early shorts such as Luxo, Jr (1986) and Tin Toy (1988) are still entertaining despite the recognizably early technology involved.

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