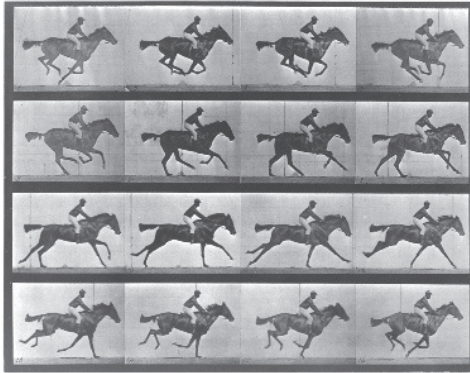


The ORIGINS of ANIMATION

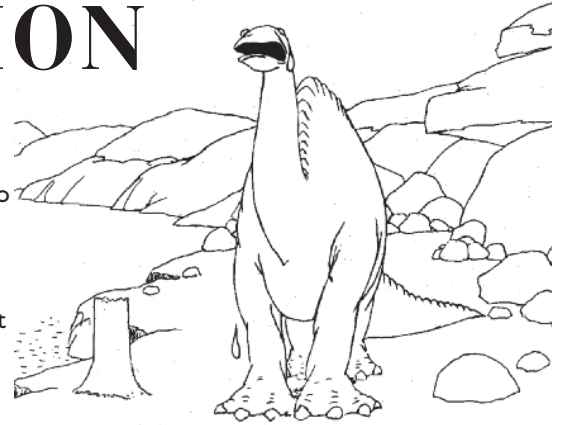
The earliest animation used mechanical devices such as the praxinoscope, the thaumatrope, and the zoetrope instead of film. After the invention of the movie camera, filmmakers such as Georges Méliès in Paris and J. Stuart Blackton in New York mixed animation with live-action film for magical effect. In 1906, Blackton made the first completely hand-drawn animated film, *Humorous Phases of Funny Faces*. In 1914, Raoul Barré and Bill Nolan built the first studio devoted to animated films. Winsor McCay took animation a step further with the creation of “Gertie the Dinosaur.” He became one of the first animators to use a distinctive style of movement to express an animated character’s personality. Then in 1922, a group of animators headed by Walt Disney opened a studio in California that would influence animated filmmaking for decades, producing such works as *Steamboat Willie* (1928), *Flowers and Trees*—which won the first Oscar for Cartoon Short Subject in 1931/32—*Snow White and the Seven Dwarfs* (1937), *Beauty and the Beast* (1991), and *The Lion King* (1994).



Eadweard Muybridge Motion Study Circa 1872

All animation, whether mechanical, on film, or in a digital format, works because the human brain perceives a quickly moving sequence of still images as continuous action. This is called “persistence of vision.” Animated films are assembled one “frame” at a time, each frame or exposure representing a tiny change in the character or scene being animated. When the film is projected, the drawings appear to move. For traditional movies, 24 frames add up to one second of viewing time when projected.

Think of an object or action you would like to animate. Begin your flipbook by drawing the first image on the last page of a pad of paper or a stack of index cards.



Gertie the Dinosaur (1914)

On the next page, trace over the drawing, changing it slightly each time until you have completed at least 24 pages. Think of each page as a frame of film. When you have completed the drawings, you can darken the lines with black ink, and color or shade the figures. Hold the book together at the top and flip the pages from back to front to see your image move.

What happens when you flip the pages slowly?

How does the movement change when you remove some of the pages?

What happens if you mix up the pages?

How is your flipbook similar to an animated film?

BASIC ANIMATION TERMS

FRAME: One exposure on the filmstrip. There are sixteen frames in each foot of film and twenty-four frames per second of running time on the screen.

LIVE ACTION: A motion picture of real people and things, filmed in real time.

PERSISTENCE OF VISION: The perceptual phenomenon that creates an illusion of movement when a series of still pictures flashes by in rapid succession.

PRAXINOSCOPE: An early animation device similar to a zoetrope that uses mirrors instead of slits.

REGISTRATION: Any system that holds the drawings, cels,

or frames in place. In a flipbook, the binding of a pad of paper, or the clip that holds a stack of index cards resembles the pegs used by an animator to keep drawings lined up.

ROTOSCOPE: A tool that enables an animator to trace live-action footage frame by frame.

THAUMATROPE: A flat disk with a different drawing on each side. When the disk is rotated, the drawings appear to combine. A common example has a bird on one side and a cage on the other.

ZOETROPE: A hollow cylinder containing a strip of paper with sequential images. When the cylinder is spun, images seen through regularly placed slits seem to move.