

# Motion Design

## **Precursors of Animation**

The quest for telling stories through the use of moving images dates back to cave paintings found in Lascaux and Altamira, which depicted animals with multiple legs to suggest movement. Attempts to imply motion were also evident in ancient Egyptian wall decoration and Greek vessel painting.



**A boar from the model of the ceiling of Altamira.  
Circa 20000 BCE.**

## How Motion is Created

Animation cannot be achieved without understanding a fundamental principle of the human eye:  
**the persistence of vision.**

This phenomenon: our eye's ability to retain an image for a fraction of a second after it disappears. Our brain perceives a rapid succession of different still images as a continuous picture.

## **Early Experiments**

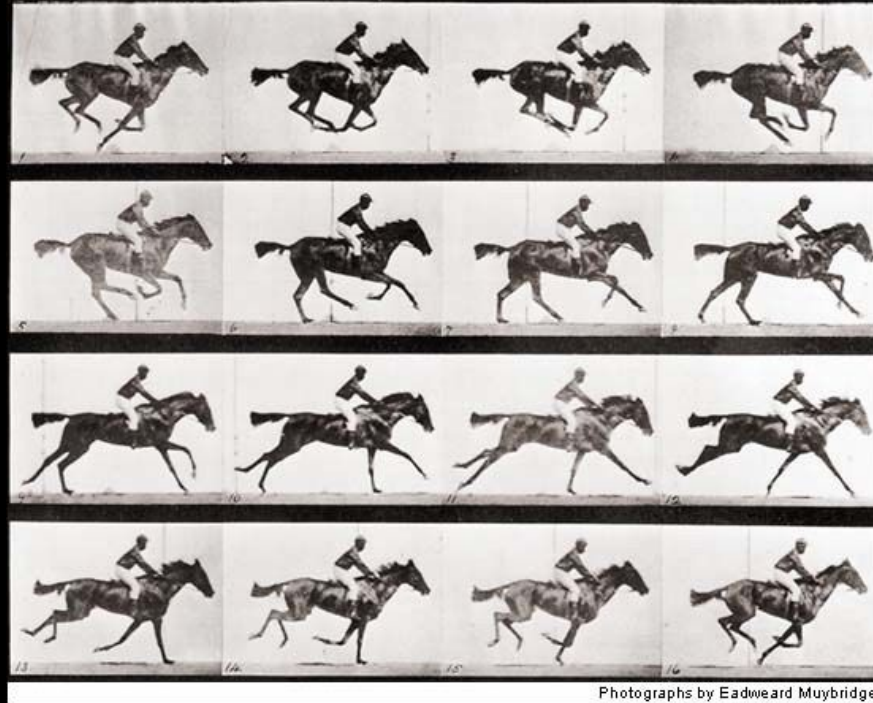
Although the concept of persistence of vision had been firmly established by the nineteenth century, the illusion of motion was not achieved until optical devices emerged throughout Europe to provide animated entertainment.



Motion Entertainment device from the 19th century:  
Zoetrope

**Muybridge  
(1830-1904)**

An English Photographer  
who created pioneering  
photographic studies of  
motion and motion-  
picture projection

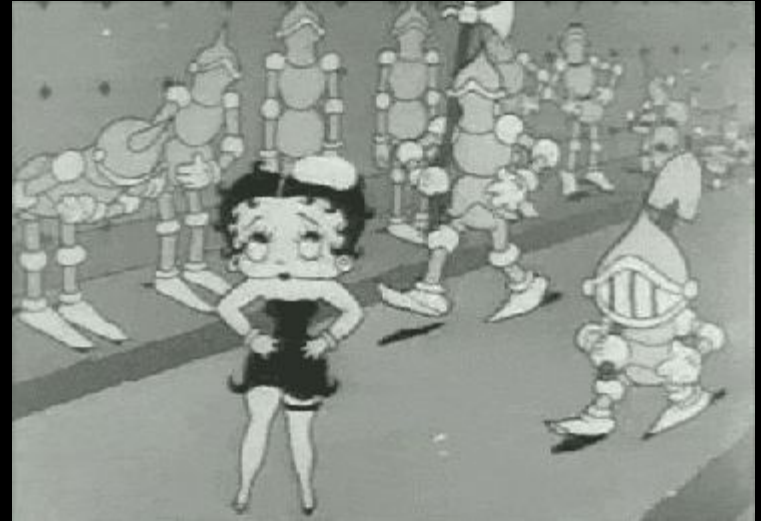


Photographs by Eadweard Muybridge

**Eadweard Muybridge**  
Circa 1878

## Animation Techniques

Figurative Animation. The cell animation process (1910) that involved the use of translucent sheets of celluloid for overlaying images. The background could remain static while overlays included the moving parts. Early artists who utilized this process included Max Fleischer (Betty Boop), Paul Terry (Terrytoons), and Walter Lantz (Woody Woodpecker).





**Felix the Cat**  
Circa 1919 CE

## Animation Techniques

Stop-motion Animation. Stop-motion animation was used by French filmmaker Georges Méliès, a Paris magician.

Additional effects, such as the use of superimposed images, double exposures, dissolves, and fades, allowed a series of magical transformations to take place.



**Le Voyage dans la lune**  
Circa 1902 CE

## **The Rise of Modernism**

At the turn of the 20th century, the rejection of post-war society led to the evolution of abstraction in art.

The Cubists, Futurists, Dadaists, and Surrealists overthrew traditional constraints by exploring the spontaneous, subconscious, and irrational.

Modernism abandoned beauty and organization in attempt to demolish the standards of art.

## Early Pioneers

**Hans Richter.** Richter's silent films of the late 1920's had a more surreal combination of animation and live-action footage. They were shocking films that explored fantasy through the use of special effects, many of which are used in contemporary filmmaking.



# **Intro to Motion Graphics**

# What is Motion Design?

**Motion Design** is the discipline of applying the design process to film and video through the use of animation and visual effects.

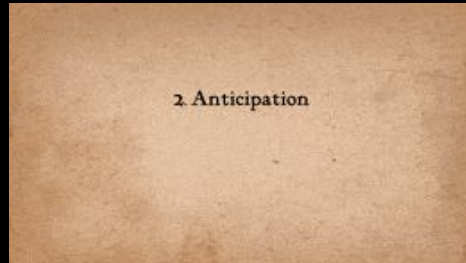
Motion Designers must carefully consider the arrangement of objects in a frame, and how those objects move over time. To break it down to its simplest form, motion design is crafting a journey that objects take over time.

## Where to begin?

Motion design is an interdisciplinary design role, it requires you to know how to **design, animate, and edit.**

# Understanding Animation

Disney's 12 Principles of Animation are still relevant in the wonderful world of motion graphics. Whether it's traditional frame by frame or keyframing vector paths, these principles are crucial to animating objects with an added sense of physicality and liveliness. This 24 minute video by Alan Becker covers the principles of animation with visuals to help you follow along.



# Motion Literacy

Understanding how aspects of time and motion can be used to communicate more effectively.

Communicating with motion involves:

- a) “what” is moving across the screen, and
- b) “how” it is moving

## **Traditional design:**

- + composition
- + color
- + shape
- + depth
- + tension
- + contrast

## **Motion(time-based) design:**

- + progression
- + pacing
- + rhythm
- + sequence
- + velocity
- + kinetic “behavior”

## **Thinking like an Editor/Director**

In order to create strong motion designs, understanding timing is key. You need the timing of a video editor in order to know when to cut. If you create a section of animation that feels a little too fast or too slow, your audience can also feel that something is off, even if they don't know what it is. Practice makes perfect, it is an intuitive process.

Trust your gut, and know when to cut!

# Messages Through Experiences

With time and motion as design elements, we can communicate a message through an *experience*.

This allows much more potential for nuanced messages and audience engagement

# Narrative Structure

Every video or animation tells a story.  
Here's the basic story structure:

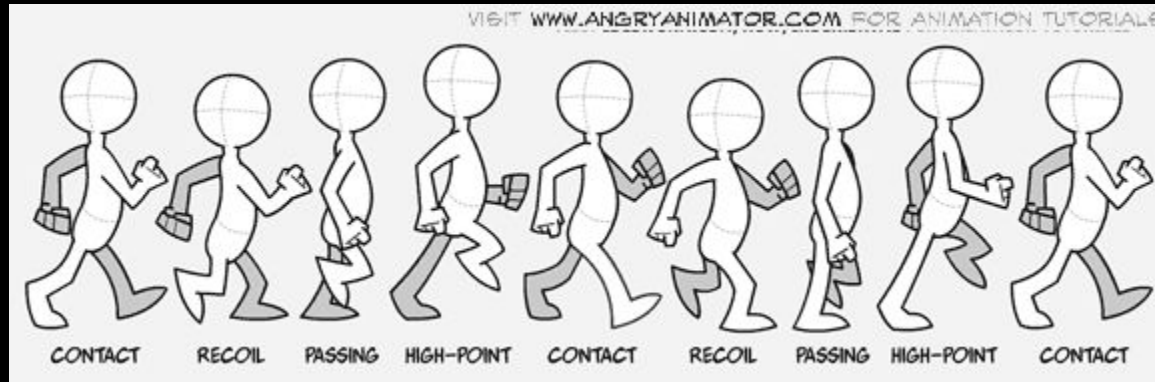
- + **the setup** / characters and their situations are introduced
- + **the conflict** / an incident sets things in motion
- + **the resolution** / the characters confront the problem



# Structure of Film/Video

Letters are the building blocks that form words, and words are joined together to form sentences. This is the anatomy of language.

Similarly, film frames are the building blocks that form a scene, and scenes come together to form film sequences or movies. This is the basic anatomical structure film.



# Thinking about Design:

Denotative (the “what”)

What is the story: plot points, the basics

Connotative (the “how”)

How the story is told:  
both visual and verbal language,  
pacing, rhythm, etc...

## Story vs. Storytelling

As motion designers, we are not only required to think about what the story is, but the way that the story is told.

There's an infinite number of ways to convey a message or story. We are tasked with designing how the story is told, choosing what to **emphasize** as the tellers of the story.



# Sources

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