

History and 12 principles of animation

Early depictions of motion through drawn/carved images date as far back as 3000 BC. These images were often put onto cups or pots and while not exactly animation they are some of the earliest forms of it. The first real forms of animation, or something that creates an illusion of movement to the viewer, all involved spinning the drawing around to create the illusion. These inventions were made around the 1850's and were things such as the phenakistoscope which would be spun and face a mirror with slits in the paper to look through and see the images. After this, things like the zoetrope and praxinoscope were invented, both involving spinning the images around in an open cylinder, while in the zoetrope you would simply look through slits on the outside, for the praxinoscope you would look at the images reflected in mirrors in the center. After this Eadward Muybridge would begin photographing the specific movement of humans and animals alike. These photos, when put together, would create a coherent animation of the movement. Much later on, cel animation began to be used. In 1928, steamboat Willie, nearly the first animation ever to have the soundtrack synchronized to the animation. This was a breakthrough for animation as a whole. From then on animation would be used in music videos and things such as rotoscoping were beginning to emerge. In 1957 animated cartoons began to be put onto tv channels made using limited animation in order to save money. It was at this same time that Disney began to enter its "golden age" and produce multiple beautifully animated feature length films with more realistic movement and depictions of characters. In 1983 Animations were used in music videos such as the beatles as it began to be more available. The beginnings of stop motion animation were also arising around this time. At the same time, Studio Ghibli began making incredibly detailed feature films using cel animation and backgrounds with watercolors. In 1993 Aardman began making stopmotion/claymation animations. The characters would be made of plasticine and various other materials. In the 2000s, animated cartoons became more popular and by 2015 to today, most animated cartoons are made using software called ToonBoom which allows the animators to do their entire process digitally. In the modern day, multimedia animation, combining things like stop motion and cel animation, is used often. Additionally animation is used often in commercials.

The 12 Principles of animation are as follows; Squash and stretch, anticipation, Staging, Straight ahead & pose to pose, follow through and overlapping action, slow in slow out, arcs, secondary action, timing, exaggeration, solid drawing, and appeal. Squash and stretch describes the fact that when things are moving they should stretch when experiencing the movement and then squash when it ends to make the movement more believable. Anticipation describes making it clear as to what actions are going to be performed before they happen. Staging refers to drawing the attention of your audience to specific places so that they can understand what is going on. Straight ahead and pose to pose describe ways of animating. In straight ahead animation you animate each pose back to back whereas in pose to pose you draw the places you want the character to be and do, and then fill in the inbetweens. Follow through and overlapping action describes the way that appendages must follow through after experiencing movement. Slow in slow out describes the fact that most movement will be slow when starting, fast in the middle, and slow when ending. Arcs are often present in our movement, so adding them makes movement more believable. Secondary action describes smaller movements done in order to give character and personality to your character while they

perform a primary action. Timing refers to the amount of frames used to animate something changing how it is perceived by the audience. Exaggeration describes the fact that actions and movement should be exaggerated in animation. Solid drawing refers to making your characters and drawings seem as though they are in a 3d environment and have actual weight and mass to them. Finally, appeal describes the fact that all characters should have some sort of factor to them that makes them interesting.

Animation analysis:

📺 Simon vs Anti Spiral Fist Fight 4K



0.19

Staging: The main focus of the shot is the fist and the character who is about to be hit by it

Anticipation: Probably the main principal at play here, The fist is being winded up before releasing and hitting the main character.

Exaggeration: The punch is being winded up incredibly far and the arm is swinging out very wide

Overlapping action/follow through: The hair of the main character is still moving even when the character has mostly stopped

Timing: The windup of the punch has nearly three times the frames that the actual punch has, making it seem fast and powerful.

Solid drawing: Both the characters are drawn accurately and realistically, making the punches feel as though they actually have weight to them



0:11

Squash and stretch: The arm is being greatly stretched

Staging, the main focus is the character who is going to get punched

anticipation: the punch is greatly wound up before being released

Exaggeration: the punch and perspective is greatly exaggerated to make it seem as though it will have more power



0:14

Staging: the arm that grasps the floor is put greatly into focus along with his angry face

Squash and stretch, the arm is stretched out greatly to show the perspective

Anticipation: he is winding up to pull himself forward and dash

Solid drawing: his body feels as though there is weight to it and the proportions are all accurate



0:36

Staging: The kick is the center of the viewers attention

Squash and stretch: The antagonist's leg is being stretched greatly to emphasize the speed of the kick

Solid drawing: by using his hands to balance himself from the kick, the antagonist seems very realistic



1:00

Staging: The viewers attention is focused on the glowing drill due to the character being shaded from the light of it as well as the background being the brightest behind the drill

Appeal: The massive glowing drill on his hand is very cool and adds lots of interest to his character

Secondary movement: He grits his teeth as while lifting up the drill in order to show his persevering personality



1:29

Staging: by moving the camera further away and having both characters on opposite sides of the screen it is showing that the fight is over

Secondary action: In this scene, the main character also dissipates his drill, further showing the viewers that the fight has ended

Timing: this shot is held for a very long time, giving it a somewhat solemn feel.