





Module II. Technical

Animation course

Topic 3. Animation as a tool.

Lesson 1. Animation Principles



Co-funded by the Erasmus+ Programme of the European Union



In this lesson, we will learn...

In this lesson we understand how the animated image has been theorized by the wise men of animation. The very forerunners of contemporary animation. Here we will review the 12 principles of Disney animation and how Warner Bros has applied them differently over time, making a clear comparison and differentiation. In addition, we will do simple software activities on some of the basic principles of animation.





Animation Principles



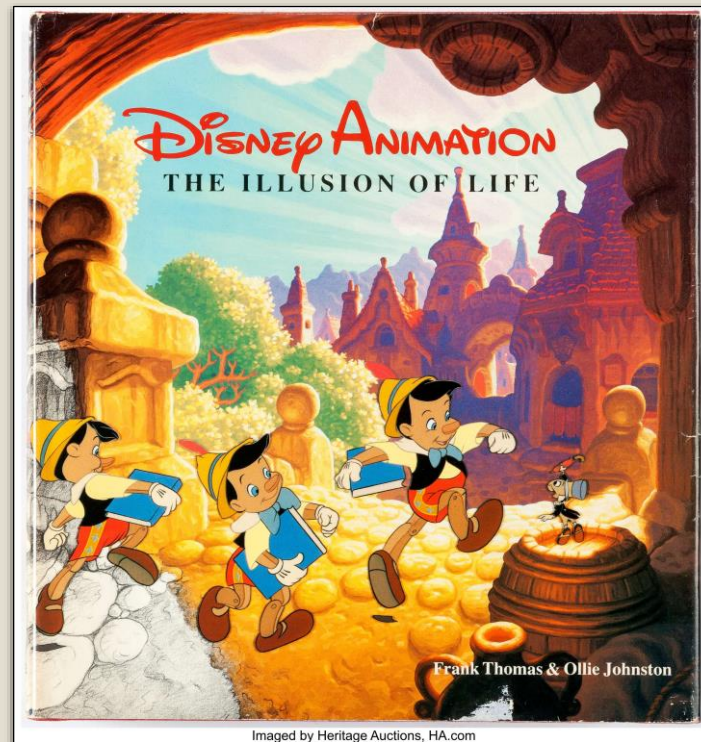
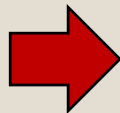
Objectives:

1. Understand and memorize the 12 basic principles of Disney animation.
2. Compare and identify the principles in animated short films made by different animation companies.
3. Make basic animation exercises to understand some of the principles such as stretching and shrinking, complementary and overlapping animation, arcs and anticipation.
4. Carry out a video essay on the ancient and contemporary use of the principles.



- *What are the 12 principles of animation and what are they all about?*

The illusion of life: Disney
animation (1981) Thomas,
Frank; Ollie Johnston



12 PRINCIPLES OF ANIMATION

1.Stretch and shrink: objects deform with respect to their volume, material and amount of applied force. They deform without losing their volume, stretch and shrink.

2.Anticipation and recovery: actions have an action that anticipates it to give clarity about the main action, speaks about the strength and intention of the beginning, in the same way the actions recover to give the feeling of returning to calm.

3.Staging: it is one of the most complex principles, it constitutes that all actions must be well composed and clear within the shot. This is done through performances, time, camera, and stage to give the viewer clarity.



4. Direct animation and pose by pose animation: direct animation is an animation that is done frame by frame and pose by pose animation an animation that is analyzed first in main poses in order to have a better conception of time. Pose-to-pose animation is used for characters and direct animation is used for natural elements and appendixes that are added to objects.



5. Superimposed animation and complementary animation: this principle tells us about the appendixes that we have tied to a body that moves, in this way we understand that the tied bodies have a hint, which is the applied force that tells us about volume and rigidity. It is divided into two, the superimposed animation is with objects that are not part of the body, such as clothes and chains, and the complementary animation with attachments tied to the body such as wings or caps.





6. Acceleration and deceleration: Objects naturally tend to start slower and finish slower. They do not have constant accelerated movements to make them more alive.

7. Arcs: the natural movements of objects move in arcs.

8. Secondary action: It is an action that tells us about the main action, the intention without interfering with the main action.

9. Timing: The most important principle, the basis of animation. It is the principle that tells us about how long each frame lasts on the screen to generate the sensation of movement.





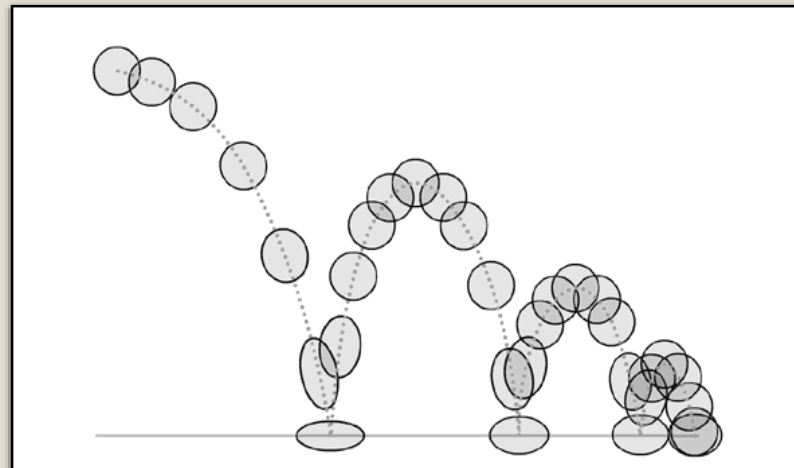
10. **Exaggeration:** The movements should be as exaggerated as the understanding allows.
11. **Solid drawing:** The sensation of three-dimensionality should be generated despite working on animations in two dimensions. (this principle does not apply to 3d animation because all animation already has it)
12. **Attractive:** characters, movements and backgrounds must have a distinctive appeal to make it beautiful and aesthetic for viewers. (it is quite a subjective principle, like beauty)



- *How are the principles used through the exercise of **bouncing a ball** and adding an appendix to it?*

The ball must anticipate for the jump, jump in arches, and when it touches the ground it must have shrinkage and stretch, in addition to accelerating and decelerating in the highest and final points, in order to finish recovering its movement in the last fall.

There, we must add an appendix to give the feeling of leaving, such as a tail or ears that are added to the character in order to understand the arches again and the complementary and superimposed animation.





Do animators affect principles or are they a general law?

The principles of animation are suggestions that after full understanding can be altered by experienced animators.

Why are the principles of animation altered?

They are altered to be more attractive, more dynamic and create a different fictional pact with the viewer in question.



- *Conclusions*

The principles of animation are the basis of the construction of animation, it is important to memorize them, identify them and use them correctly in simple animations.



LINKS:

https://www.youtube.com/watch?v=oJvGHbUHYWU&ab_channel=puuung

https://www.youtube.com/watch?v=PkrT90ESJb8&ab_channel=robcat2075

https://www.youtube.com/watch?v=uDqjldl4bF4&ab_channel=AlanBeckerTutorials



CREDITS

Content: Mauricio Monsalve

Voice: Jorge Andrés Vélez Muñoz



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