ANIMATION PRINCIPLES

Follow Through, Overlapping And Slow In & Out

Lennox, Eddie & Aida

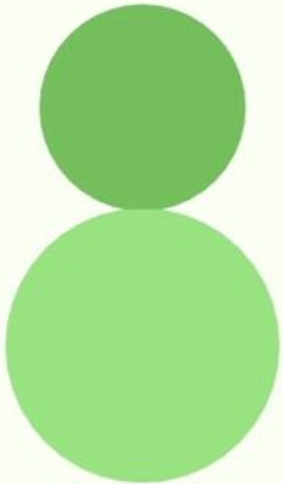
FOLLOW THROUGH

- Follow Through is an animation principle that helps animations appear more realistic
- It gives the viewer the impression that the character follows laws of physics (force of momentum)
- Without it, a character can seem too rigid and static
- If a character has an embellished body part, such as long ears or a pointy nose, after the character has stopped moving these body parts should follow through with motion.

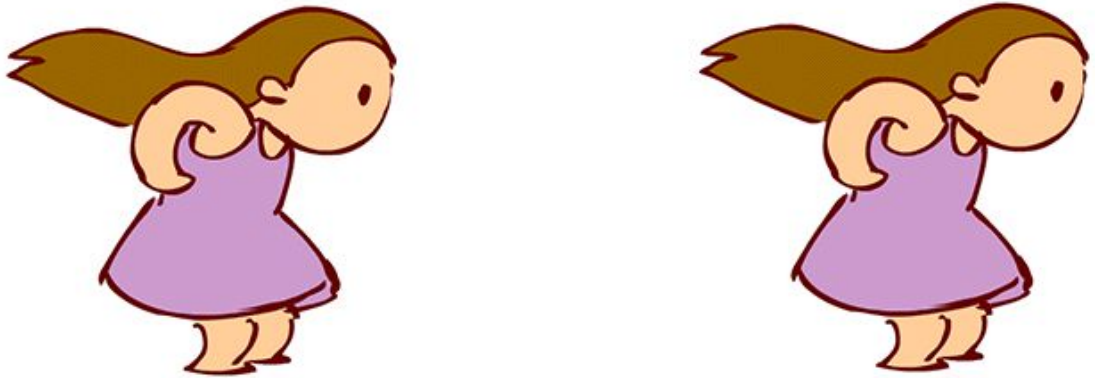
- Loose flesh like Goofy's ears have a slower speed than the rest of his body and can create a dragging motion.
- Bodies in motion do not move all at the same time.
- The follow through action creates a more believable character that has weight to them.
- Hair, clothing, fat, tails are all examples what can follow through after the main action.
- As seen on the right gif, Donald Duck spins the package and the tag follows through and has a loose/lightweight feel to it.

5. Follow Through & Overlapping Action - 12 Principles of Animation

OVERLAPPING ACTION



- A principle of animation which helps bring realistic mass into a character.
- By overlapping the actions of a characters' hair, body, clothing, etc. the animation will feel more fluid.
- Happens in just about every single movement we make, nothing moves at the same time.
- Some parts have different timing or speed compared to other parts, so they overlap the main action.



This example shows us how essential this principle is. The one on the right appears static. Notice, on the left, how the clothes moves at a different speed from the body. That is because clothes tends to be lighter which takes longer to be affected by gravity.

In this example, the ears are doing some overlapping action. Notice how they start off slightly pointed up and gradually flop down.

SLOW IN &
SLOW OUT

- Slow in & out is a very important principle to follow in animation, it was developed by observing life, so when applied to animation, it makes things feel more life like and grounded in reality.

- All things in motion start slowly, speeds up, and then settles back down. In animation, the way this principle is executed is by adding more drawings near the start and end of the pose while adding fewer near the middle.

- Fewer drawings make actions faster and less drawings make actions slower. Adding frames evenly spaced throughout the action will make it glide in a mechanical and unnatural way. Another way this principle can be broken is by not adding enough frames at the start or end of your action. It will end up looking very choppy and won't flow well.

Fig.Si1

In this gif we see a car pull up to a stop sign and then drive away as another car pulls up. Since this is a looping gif, the car comes in at it's full speed from the top left before settling down and coming to a stop. The car then slowly drives away before picking back up to its original speed once more.

Fig.Si2

In this gif we see an object sliding along in the void. On the top we see the frames evenly spaced out. On the bottom said principle is applied.

Ease IN/Ease OUT can also be applied in After Effect with the combined "Easy Ease" option. When used, the speed of the object is changed. It slows down as it approaches a keyframe, and gradually accelerates as it leaves.

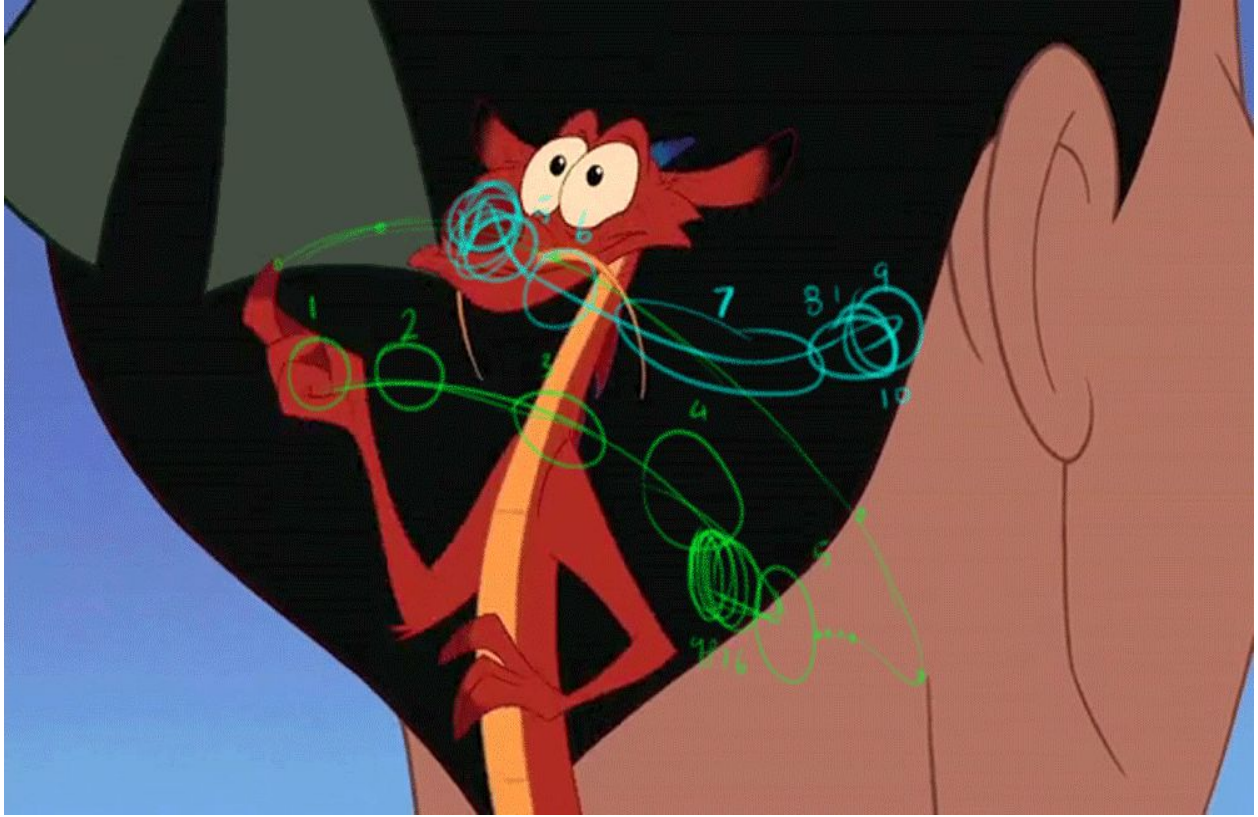


Fig.Si3

In this gif we see multiple principles applied. Pay attention to the face, or rather, specifically the nose. It slowly picks up near the start and slows back down near the end due to more frames. The middle feels much faster in comparison due to few frames and the addition of the smear.

GIFS CITED

FOLLOW THROUGH

Gif 1 Gif 2 Gif 3 Gif 4 Gif 5

OVERLAPPING

--[Fig.1]
(https://iwanttobeananimator.files.wordpress.com/2017/08/follow_through03.png?w=620&h=113?w=1240&h=226)

--[Fig.2]
(https://nextgenluke.files.wordpress.com/2016/11/7-girl-jump.gif?w=540&zoom=2)

--[Fig.3]
(https://66.media.tumblr.com/85a99b379f48d4cb227cd1ea418f57ad/tumblr_ntvo8eOn5n1sijkk4o1_1280.gif)

SLOW IN & OUT

--[Fig.Si1] https://www.danrstack.com/twelve
(https://cdn.dribbble.com/users/228367/screenshots/3434803/carloop.gif)

--[Fig.Si2] http://ani-s18518-ak.blogspot.com/2016/01/reflection-on-easing-in-and-easing-out.html
(http://4.bp.blogspot.com/-jAbtpq016OQ/Vk0-Nbqw-rI/AAAAAAAAAHY/BHdRrFfNyR4/s1600/EaseInAndEaseOut.gif)

--[Fig.Si3] http://www.timrudder.com/animationmentor/breaking-up-movements/
(http://www.timrudder.com/animationmentor/wp-content/uploads/2015/07/mushu04.gif)