**Module 5: Editing**

Editing is the process where all of the pieces of the film come together; in this module we will cover the visual aspects of editing. In Module 6, we will examine how sound is recorded and edited. Later modules will cover adding advanced visual effects and special audio effects.

The very first editors had it pretty rough; they had to literally hold pieces of film up to the light to pick the proper frame to edit on.



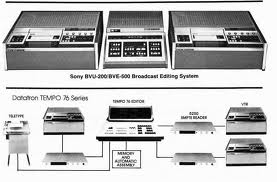
Next came simple reel to reel systems; the scenes were actually spliced into the rough cut with a tape splicer: you put the two frames together, put scotch tape over the edit, and used the splicer to cut out the holes and trim the edges to make a clean splice. When cutting the original film, the editor would use film cement to glue the frames together so that the finished product would not “flash” like it did with a scotch tape edit.



Weird looking machines like the upright Movieola (bottom left) then became popular(some editors referred to it as the Green Monster), followed by the flatbed Steenbeck systems(bottom center); both allowed you to play the film track and two sound tracks together. But first, you hung the strips of film on a nail, and let the footage rest in a cloth bin until you needed to edit the scene into the film.



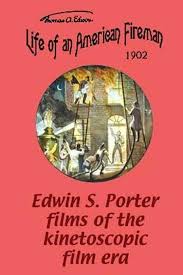
Video Tape Editing systems first appeared in the 1970’s; one of the earliest and most popular was the Sony ¾” U-matic system. These were “linear” systems: you had to edit the video in sequence, as it was not possible to later “splice in” a scene, so there were definite limitations. If you wanted to do dissolves or wipes, you had to have a system with (2) playback machines and (1) recording machine, and create the effects on the fly in real time.



Today, we edit with computers, which have revolutionized the world of **non-linear** editing. The first of these systems were used in the 1990’s; the most popular in the beginning was the AVID system. These systems initially cost over $100,000 ; today you can buy the AVID software as a student for $295, or you can buy other popular editing software like Apple’s Final Cut Pro, or Adobe Premiere for similar prices. These systems display the video and audio tracks on screen in what is called a **timeline**, and you can edit the footage as easily as you can edit words and sentences in a program like MS Word:



We define editing as the “assembling of shots into a coordinated sequence”(Wikipedia). 90% of edits are **DIRECT CUTS**. The concept of editing was discovered in 1902-3, some 7-8 years after the first films, which were shot on 50 second rolls of film. **Edwin S. Porter** is considered to be the “father” of editing; he used the concept of crosscutting to create dramatic tension in *Life of an American Fireman*. Looking at the clip, notice how he cuts back and forth between the fire in the apartment and the responding fireman to do this.

Life of an American Fireman  
<https://www.youtube.com/watch?v=p4C0gJ7BnLc>

Other common transitions in editing are the **Fade In (used to start a movie or scene),** **the Fade Out (used to end a movie or scene),** **the Dissolve (used to either transition from one location to another, or to create a “montage” of non-continuous shots),** and **the Wipe (used mostly in a dramatic context to make a scene transition**). But again, 90% of edits are **cuts.** Other transitional effects should **only be used** when there is a specific purpose involved.

Early **fade ins** were created by literally opening up the lens aperture on the camera, and this is why these are sometimes referred to as “iris” ins.



(above: an iris in for the opening shot in Charlie Chaplin’s *The Kid* (1921)

The dissolve is aptly named; one shot literally dissolves into another one. Before the computer era, this effect was created in a film lab. The two shots would be on different rolls of film; the timing light would fade out on the first shot. The lab would then back up the rolls, and the timing light would then fade up on the second shot. The labs charged for each effect, so this could get quite expensive.

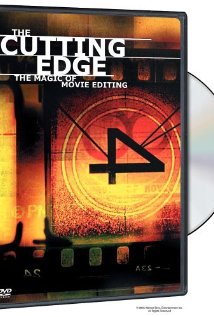


(a dissolve from the opening scene in *Citizen Kane)*

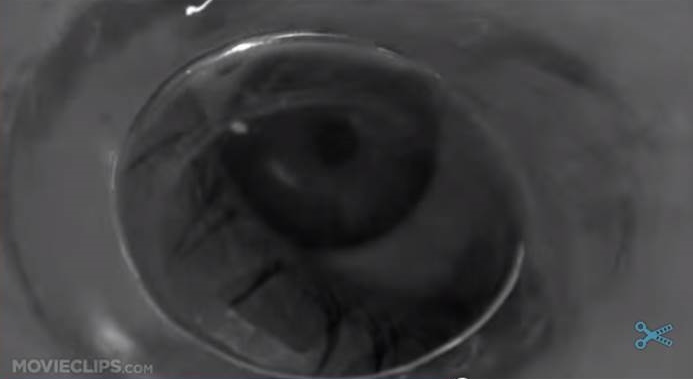
**The Wipe** brings on the new image by use of either a hard edged wipe, or a soft edge; there are vertical wipes, horizontal wipes, angled wipes, and even clock wipes, where the new image is brought on like the hand going around a clock.



(left: a hard edged wipe from *The Seven Samurai*; right, a soft edged wipe from *Star Wars*)

There is a wonderful film about the process of editing that we would like for you to watch as much as you can of. It’s called “The Cutting Edge: The Magic of Movie Editing”, directed by Wendy Apple.  
The Cutting Edge: The Magic of Movie Editing  
<https://www.youtube.com/watch?v=U76MBDKQe8s>

**Graphic Relations Between Shots**  
Good editing takes advantage of what we call **persistence of vision**, which relates to where the point of greatest interest is in the frame. Cutting or dissolving to another shot that has another object of interest in this same point in the frame is what is desired with this technique. One of the best examples of this is from *Psycho*; the transition from the blood going down the bathtub drain to the victim’s dead, but very wide open eye.

Here’s the clip:   
<https://www.youtube.com/watch?v=0WtDmbr9xyY>

**SPATIAL RELATIONSHIPS BETWEEN SHOTS**  
Film sometimes cannot show a complete relationship between two objects from beginning to end; we see a cannon fire, then we cut to a building blowing up. The audience assumes that the former caused the latter.

The Kuleshov effect is named after a Russian named Lev Kuleshov, who intercut the same shot of an actor with a bowl of hot soup, a dead child, and a woman, and also did it without every using an establishing shot that shows both the actor and the object of his attention in the same shot – the audience just assumes that they are in close proximity because of how the footage is edited. [Vsevolod Pudovkin](http://en.wikipedia.org/wiki/Vsevolod_Pudovkin) (who said he was the co-creator of the experiment) described in 1929 how the audience "raved about the acting... the heavy pensiveness of his mood over the forgotten soup, were touched and moved by the deep sorrow with which he looked on the dead child, and noted the lust with which he observed the woman. But we knew that in all three cases the face was exactly the same."(WIKIPEDIA)



<https://www.youtube.com/watch?v=4gLBXikghE0> (The Kuleshov Effect)

Some films use an editing technique known as PARALLEL EDITING. A great example of this is in the film *The French Connection*. For the first half of the movie, we cut back and forth between scenes in the French port city of Marseilles and the actions of two undercover cops in Brooklyn. Again, we just assume that these events are roughly happening at the same time, even though have no idea initially of how these two scenes are related.



(left: the film opens in Marseilles and an undercover detective is killed; right, the two cops chase a suspect through the gritty, urban streets of Brooklyn)

**COMPRESSING TIME IN FILMS**  
Films generally take only take 90 minutes to 2 hours to tell their stories, so a lot of the unnecessary action is cut out of a film. As an audience, you both expect this and also demand it, because you don’t want to be bored. Frankly, a lot of the skill in editing involves successfully telling a story in as few shots as you actually need – you trust that the audience can fill in the gaps. We call this practice **ELLIPTICAL** editing: what you see on screen happens in less time than it did in real time. Notice in this clip from *Batman Begins* how the editor cuts from the scene in the village, to a shot of a mountain, to a shot of the man climbing the mountain to compress time:

<https://www.youtube.com/watch?v=dpJGC13TG6k>

**CONTINUITY EDITING**  
Is meant to be invisible – we call this “seamless” editing between different angles or perspectives of a shot that give you the illusion of a continuous scene --- well, actually today, as noted before, you may very well be seeing a continuous scene that was shot with many different cameras. Cameras used to be SO expensive ($500,00 for a Panavision 35MM Film Camera) that only one camera was used on a set, and the action broken down into different takes, but today, with the advent of HD Digital Video, multiple cameras have become the new normal, and scenes are often simultaneously shot with 6 cameras or more.  
There was a great explanation of CONTINUITY EDITING in the film you viewed earlier, *The Cutting Edge: The Magic of Movie Editing*.   
https://www.youtube.com/watch?v=U76MBDKQe8s (start at 2:47 into this clip)



(the first shot “cuts” to a closer shot, at the frame where the editor matches the action)

**SPATIAL CONTINUITY: THE180 DEGREE SYSTEM**This concept is best explained by asking you to think about a sporting event you have watched on TV. The cameras are placed on only **one side** of the field or court; picture a line drawn between the goals or goalposts. The cameras all stay on one side to avoid confusing the audience and to make things seem consistent. This 180 degree line is drawn in a scene between the two main characters, and the camera should never cross the axis of action.

**JUMPCUTTING:**

Film Schools teach you to avoid making cuts of the same scene from the same angle that don’t match, because these feel like “mistakes” when a viewer sees them. But these became stylistically popular during the French New Wave period, when directors like Jean Luc Godard used them. Notice how the scenes in the car jump cut from one shot of the actress to another shot from the same angle.

<https://www.youtube.com/watch?v=1KUVwKp6MDI>

Breathless

Director Tom Tykwer also used a lot of jump cuts in *Run Lola Run,* like in this scene you should remember:

<https://www.youtube.com/watch?v=ppeZQ8inevE>

Run Lola Run

**CROSSCUTTING**  
*Life of an American Fireman* used this technique, where you cut between scenes in different locations that are taking place simultaneously. A wonderful, relatively recent example of this is from the remake of *The Italian Job*; in the opening scene, the criminals pretend to escape by boat with a stolen safe, but the actual safe is at the bottom of the canal, where it is opened by other criminals who are in on this scheme:

<https://www.youtube.com/watch?v=764r3kF5tZg>

The Italian Job

**THE L CUT OR OVERLAPPING DIALOGUE CUT WHEN EDITING AUDIO**  
When teaching basic editing to students, one of the first concepts you have to impress upon them is that you don’t automatically cut from one person speaking on camera, to the next person speaking, to the next person etc. Audiences get very bored with this – we call it the “he said/she said” style of editing. What you want to do is show part of a person speaking, then continue with their audio while you cut to a reaction shot from the person listening, and vary this going back and forth. Pay attention in almost any film you watch to how directors and editors do this, as it is universal.

Look at this example from *The Social Network.* Notice how the editing does not always visually cut at the exact same time that the audio cuts between Zuckerberg and the lawyer.

<https://www.youtube.com/watch?v=mehUC5l-lGM&list=PLB2DE32871180A772>

The Social Network

This technique is also used to “soften” a transition, by bringing in the audio of the next scene before you actually see the visual part. This youtube clip gives a good explanation of this:

<https://www.youtube.com/watch?v=UmvmQHvl9dc>

Explanation of the L Cut