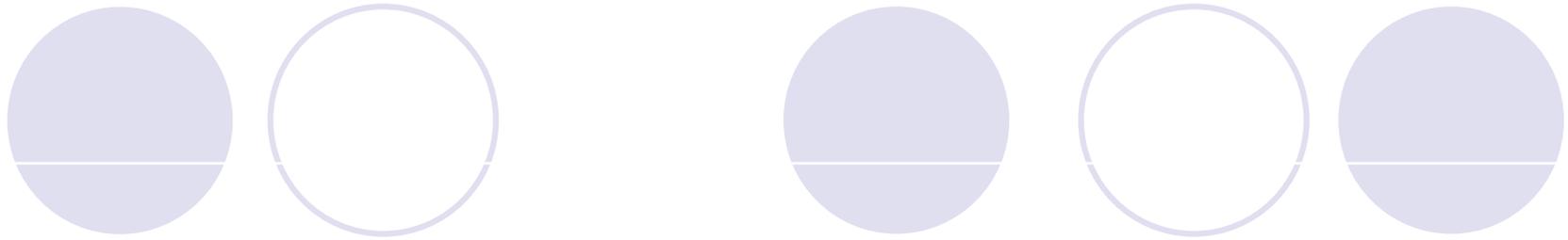


ELEMENTS OF Cinematography

The background features six light purple circles arranged in two rows of three. The top row consists of one hollow circle on the left and two solid circles on the right. The bottom row consists of two solid circles on the left and one hollow circle on the right. The text is centered over these circles.

Definition of Cinematography:

The art or technique of moving photography, including both the shooting and development of the film.

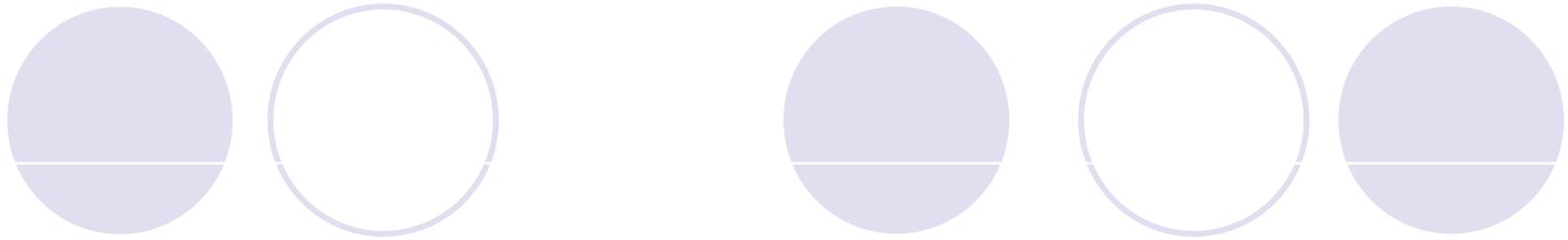


- **Camera:** In film making multiple cameras (multiple camera positions of a single camera) are often used.
- In editing phase scenes/shots are assembled in a way that the story is told in an effective way.

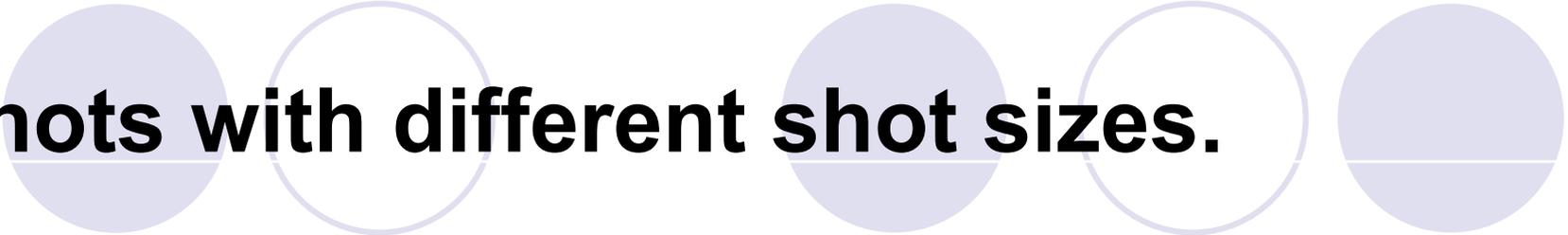


Elements of Cinematography can be divided into:

- Types of shots -- shot size, camera angle, POV, two shot, over the shoulder shot.
- 180 degree rule
- Camera moves
- Composition rules
- Safe areas

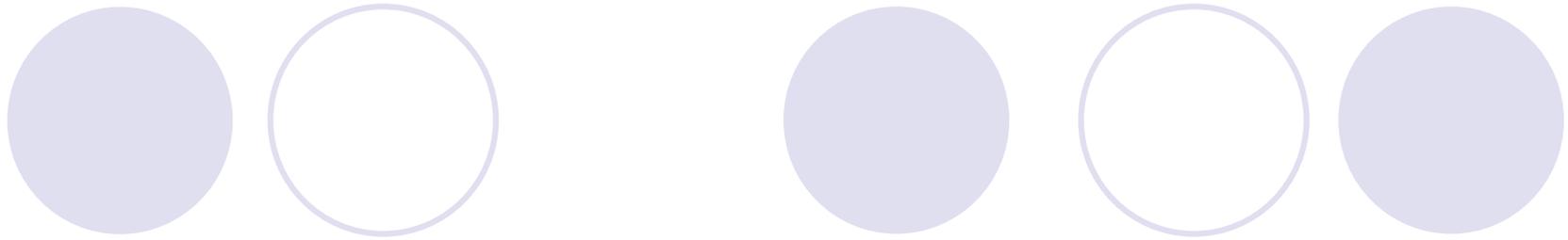


The followings are types of shots commonly used in film, video, and animation.



Shots with different shot sizes.

One of the major distinctions among types of shots is the shot size. The shot size identifies how large and area will be visible within the frame. Among the following common shot sizes the distance between the camera and subject varies



- **Extreme wide shot (EWS)** shows a broad view of the surroundings around the character and conveys scale, distance, and geographic location.
- **Wide shot (WS)** shows an entire character from head to toe.
- **Medium wide shot (MWS)** shows a character usually cut off across the legs above or below the knees. It is wide enough to show the physical setting in which the action is taking place, yet it is close enough to show facial expression.
- **Medium shot (MS)** shows a character's upper-body, arms, and head.
- **Close-up shot (CU)** shows a character's face and shoulders. It is close enough to show subtle facial expressions clearly.
- **Extreme close-up shot (ECU)** shows only a part of a character's face. It fills the screen with the details of a subject.



Extreme wide shot



Wide shot



Medium wide shot



Medium shot



Close Up shot

The images are from "The Art of Technique: An Aesthetic Approach to Film and Video Production" by John Douglass and Glenn Harnden



Extreme Close up
shot



- **2. Shots with different camera angles.**

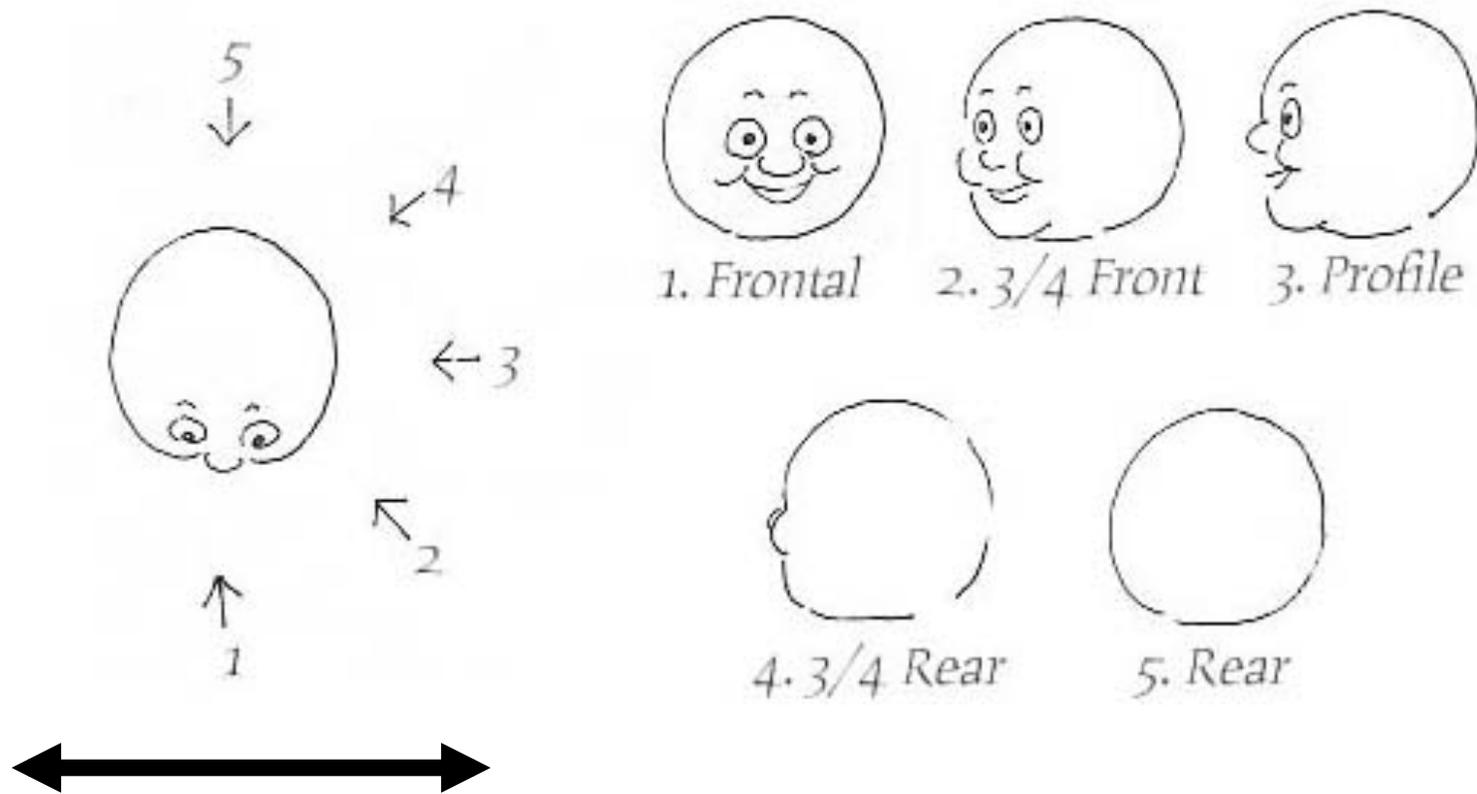
Another one of the major distinctions among types of shots is the camera angle. Changing the camera angle changes the appearance and function of your shot.



Horizontal camera angles.

- Moving the camera around the subject horizontally while aiming at the subject creates different camera angles below:
 - **Frontal.** The frontal angle tends to flatten the three dimensionality of facial features and environments.
 - **Three-quarter front.** The three-quarter front angle is more often used than the frontal angle or profile because it shows more depth and volumes.
 - **Profile.**
 - **Three-quarter rear.**
 - **Rear.**

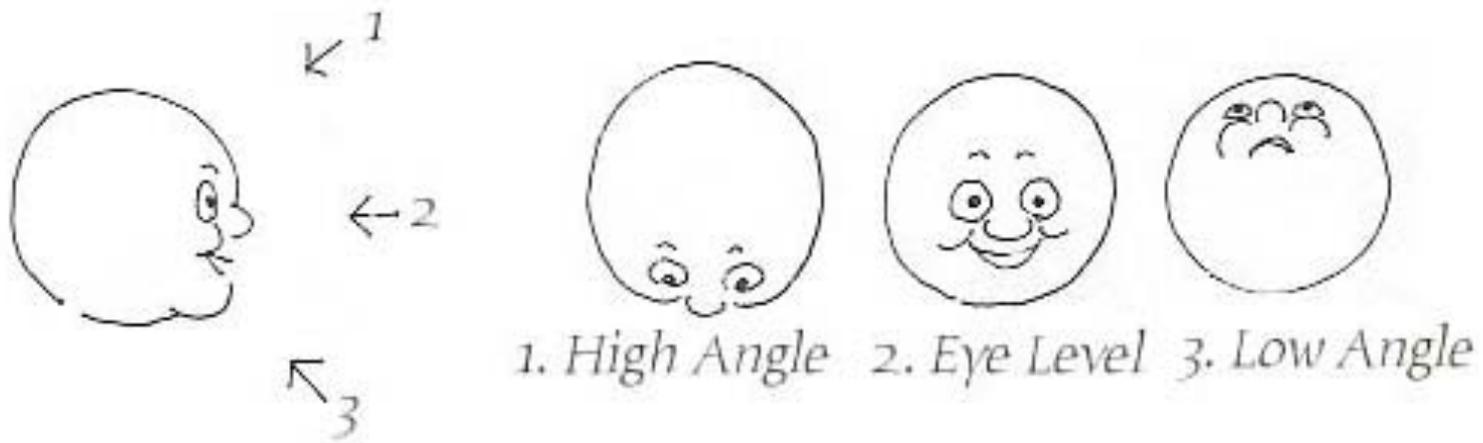
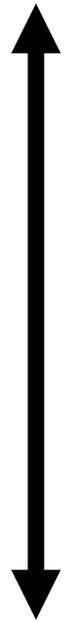
Horizontal camera angles

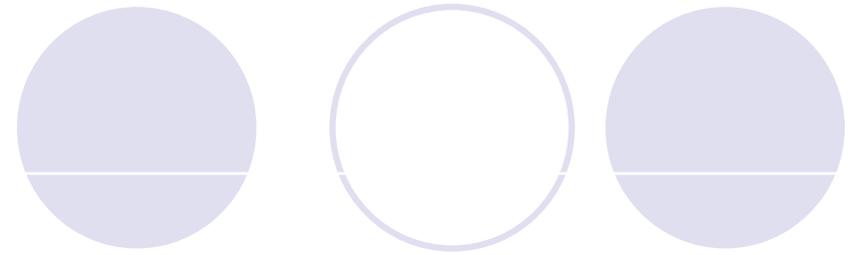
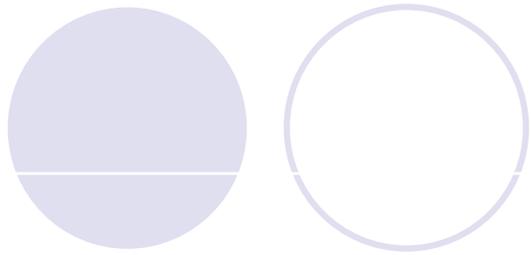


- 
- **Vertical camera angles.** Moving the camera around the subject vertically while aiming at the subject creates different camera angles below:

- **High angle.** The camera is placed above eye level, looking downward. A high angle shot can make a character look smaller, younger, weak, confused, or more childlike.
- **Eye level.** Most commonly used.
- **Low angle.** The camera is placed below eye level, looking upward. A low angle shot can make a character look bigger, stronger, or more noble. It also gives the impression of height.

Vertical camera angles





High Angle



Low Angle

POV shots.

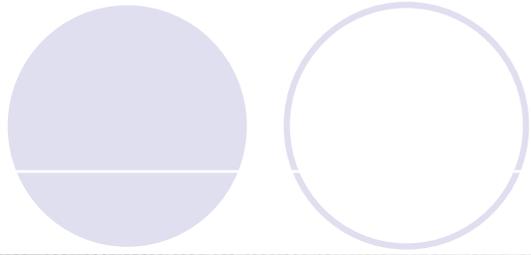
- In a point of view (POV) shot, the camera is placed at the eye position of a character.



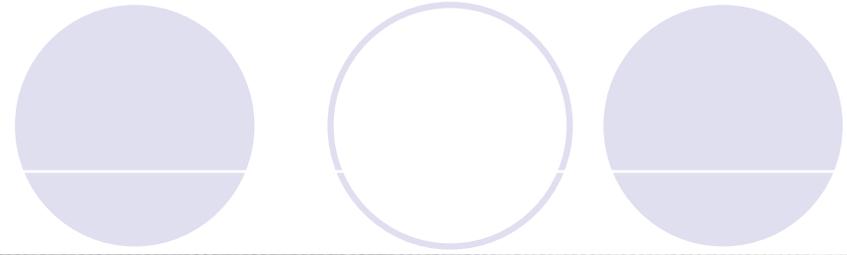


Two shot & over-the-shoulder shot

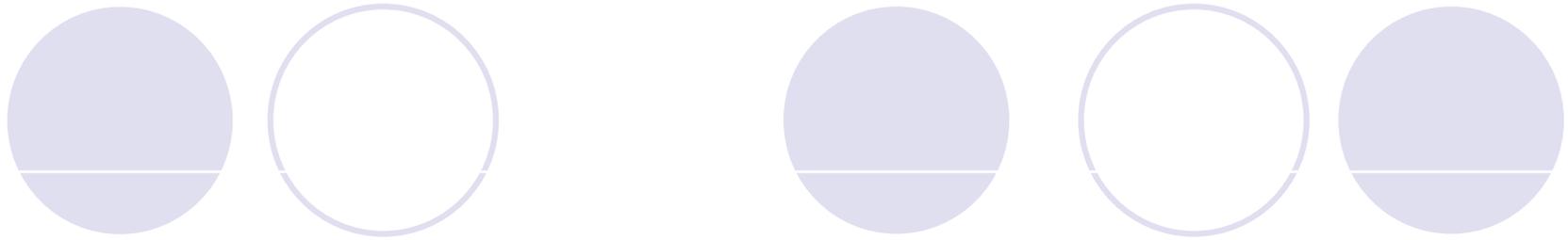
- **Two shot** shows two characters.
- **Over-the-shoulder shot** is a close-up of a character as seen over-the-shoulder of another person in the foreground.



Two Shot



Over the Shoulder shot

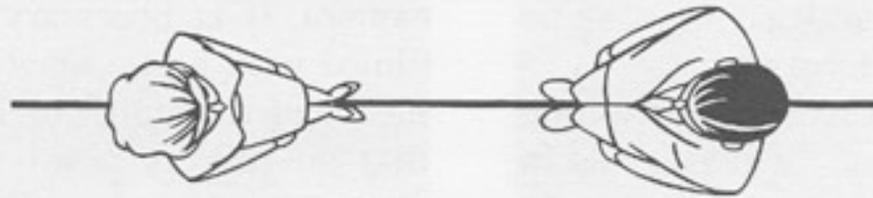


- **180 degree rule**

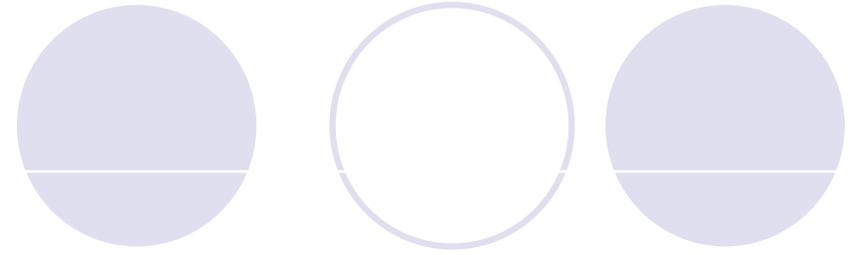
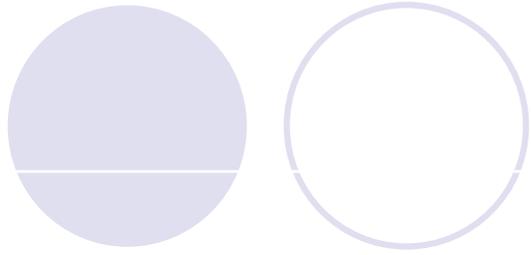
If you are using multiple cameras and plan to edit the different shots in a scene into a seamless sequence, an important rule to keep in mind is to place all the cameras on the same side of a line of action.

- **A line of action** is a path which your subject is traveling along or an imaginary line between two characters who are interacting. This rule is called "180 degree rule".

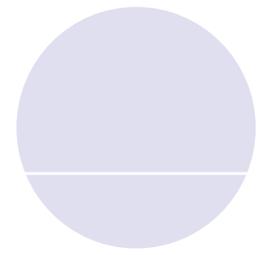
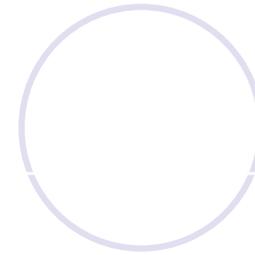
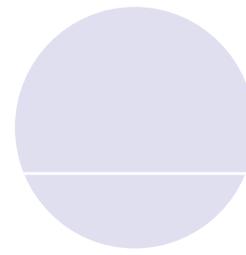
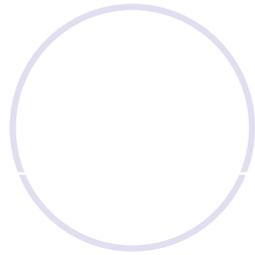
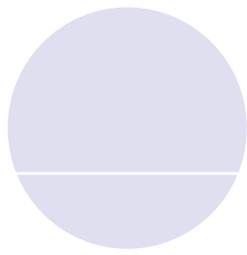
Look at the following camera placements:



Camera #1 films two-shot – girl on left, boy on right. Camera #2 shoots close-up of boy over girl's shoulder. Camera #3 shoots close-up of girl over boy's shoulder. Camera #4 crosses axis and films over wrong shoulder of boy – thus transposing players: boy is now on left and girl on right.



If Camera 2 and Camera 3 are used, the audience stays on one side of the line of action. These shots are called **"reverse angle shots"**.

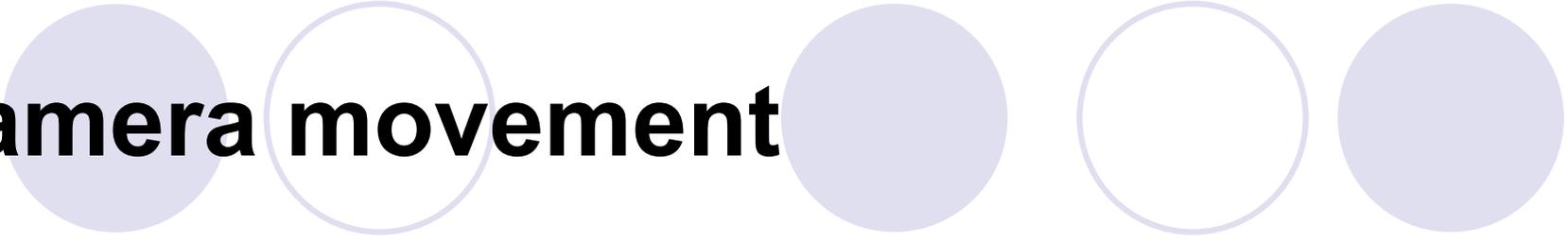


If Camera 2 and Camera 4 are used, the audience crosses the line of action. It's disorienting and confusing.



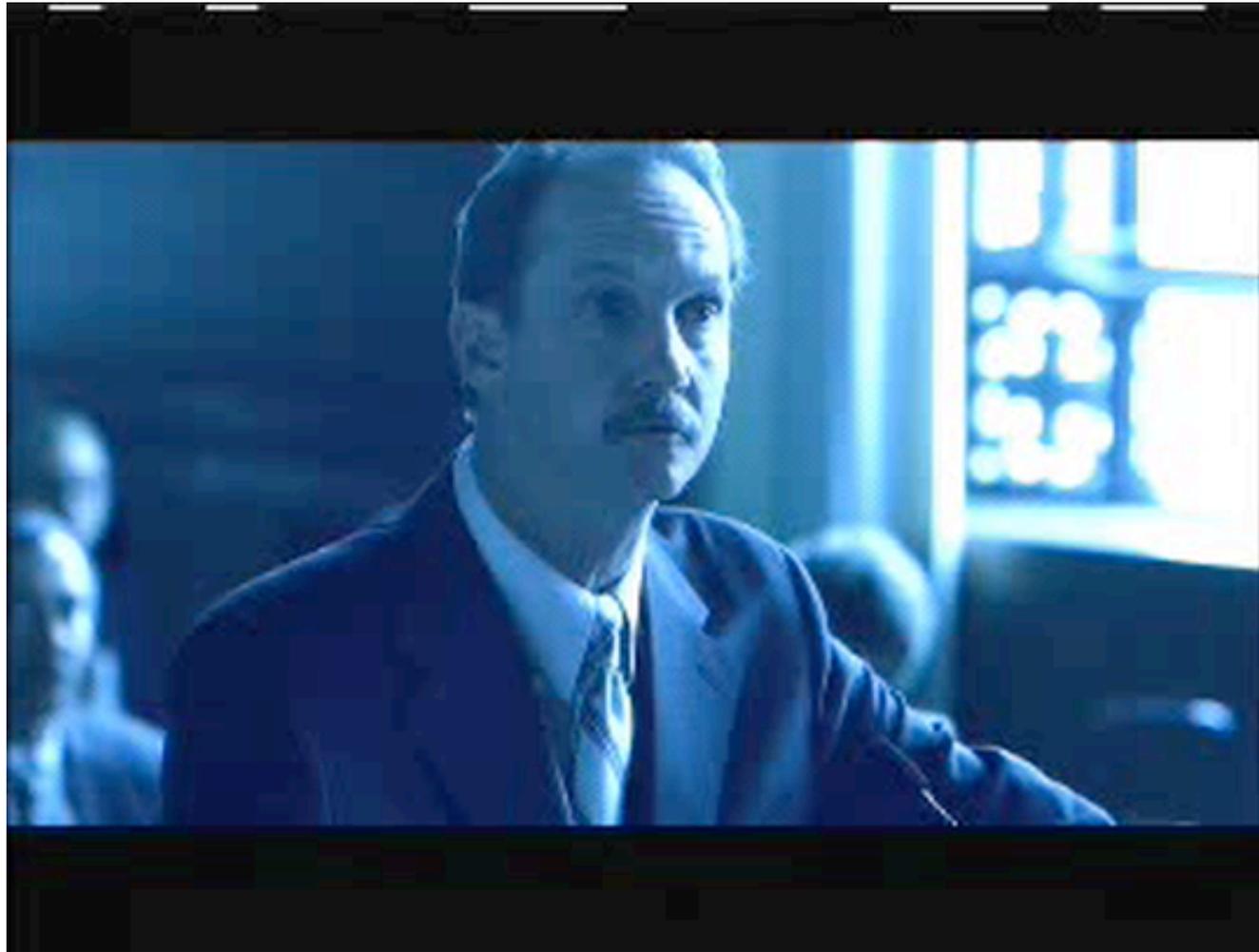
The images are from "The Five C's of Cinematography" by Joseph V. Mascelli

Camera movement



- **Pan.** The camera rotates from side to side, so that it aims more to the left or right. The camera does not change the location.
- **Tilt.** The camera rotates to aim upward or downward without changing the location. Tilt is sometimes called "**pitch**".
- **Zoom.** The camera's lens is adjusted to increase or decrease the camera's field of view, magnifying a portion of the scene without moving the camera.
- **Dolly.** The camera's actual position changes, such as to move alongside a moving subject or to travel closer to a character during a scene. **Dolly in** moves the camera closer to the subject. **Dolly out** backs the camera away from the subject. Dolly in and dolly out are sometime called "**track**".

Pan



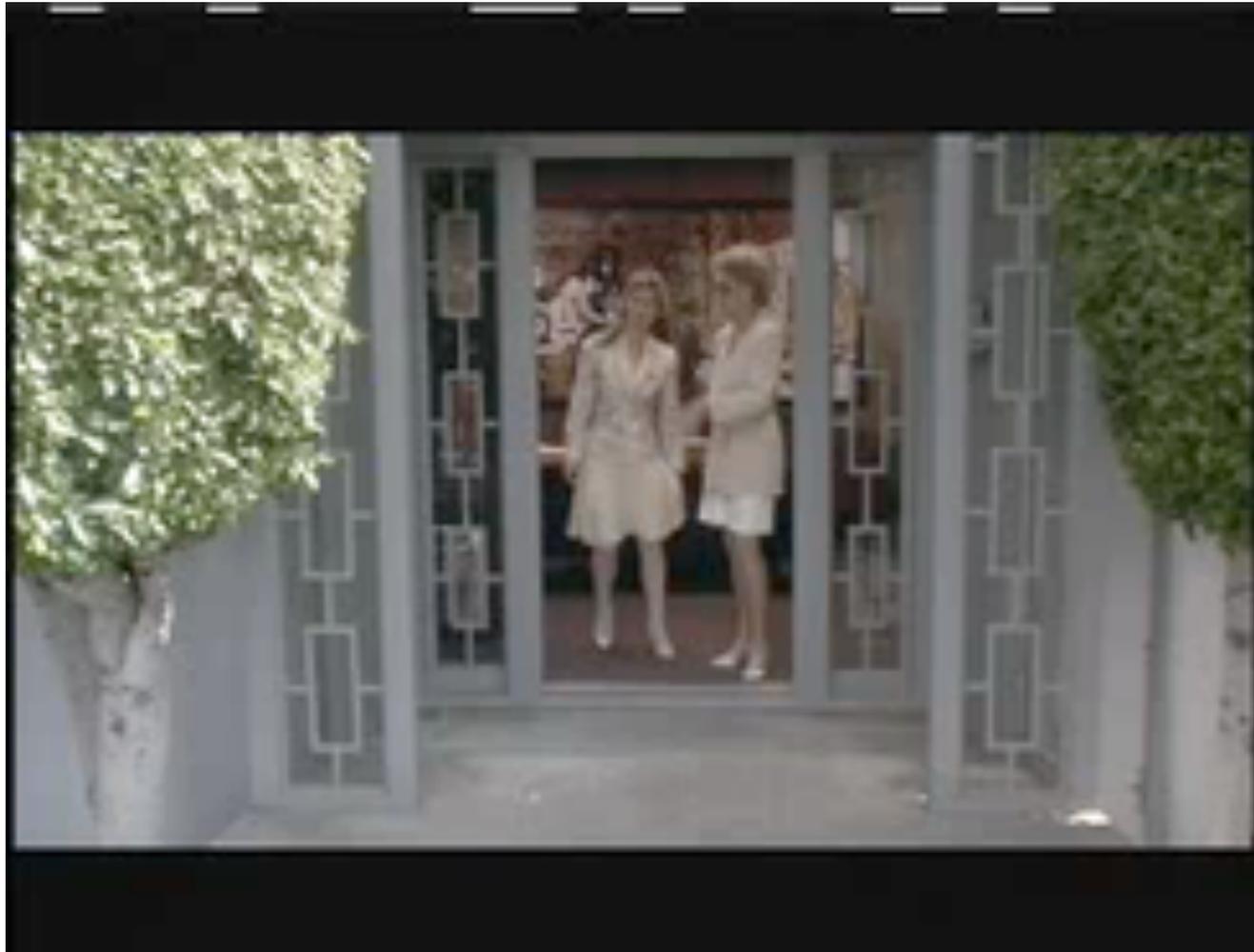
Full pan / low angle shot



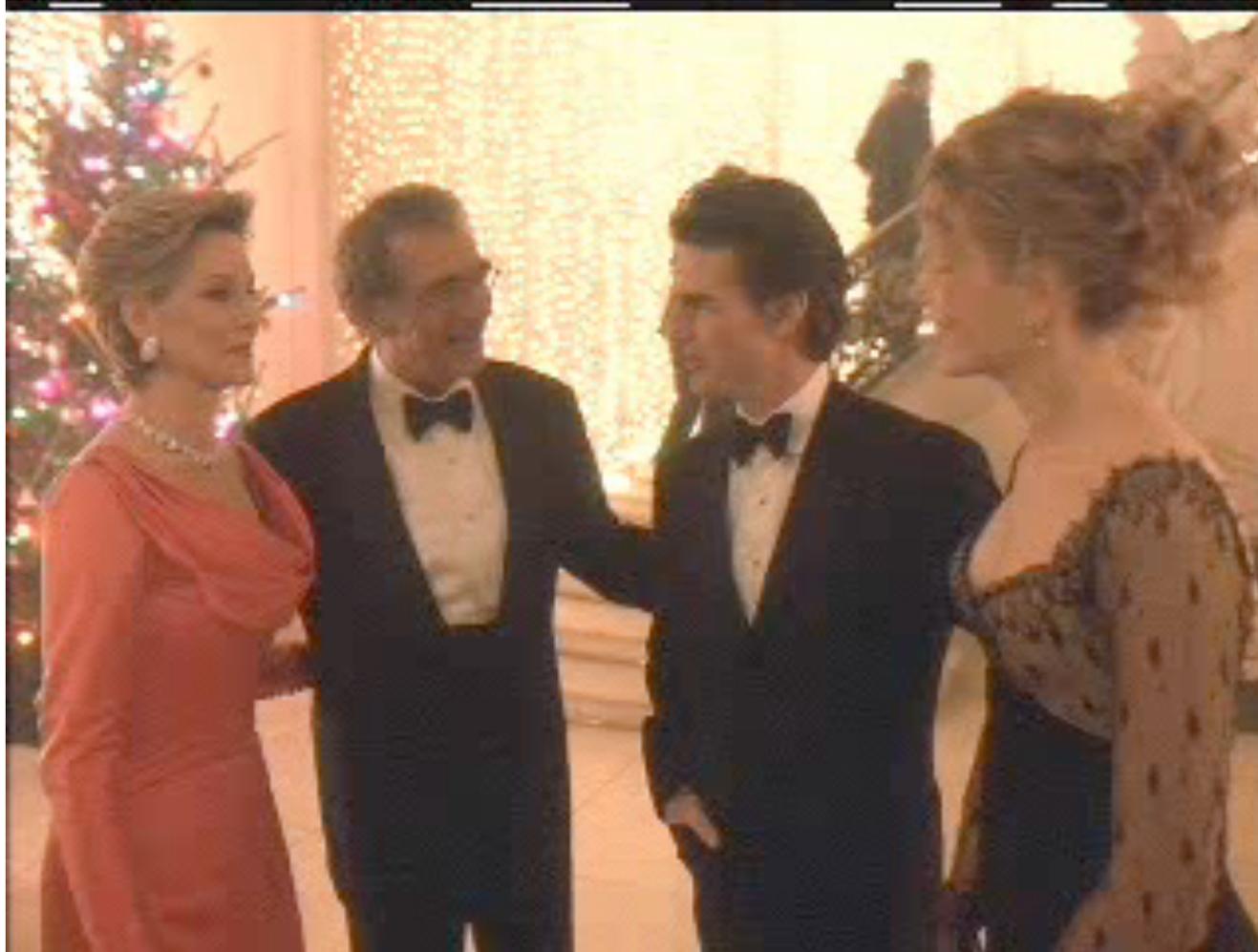
Tilt Up Shot



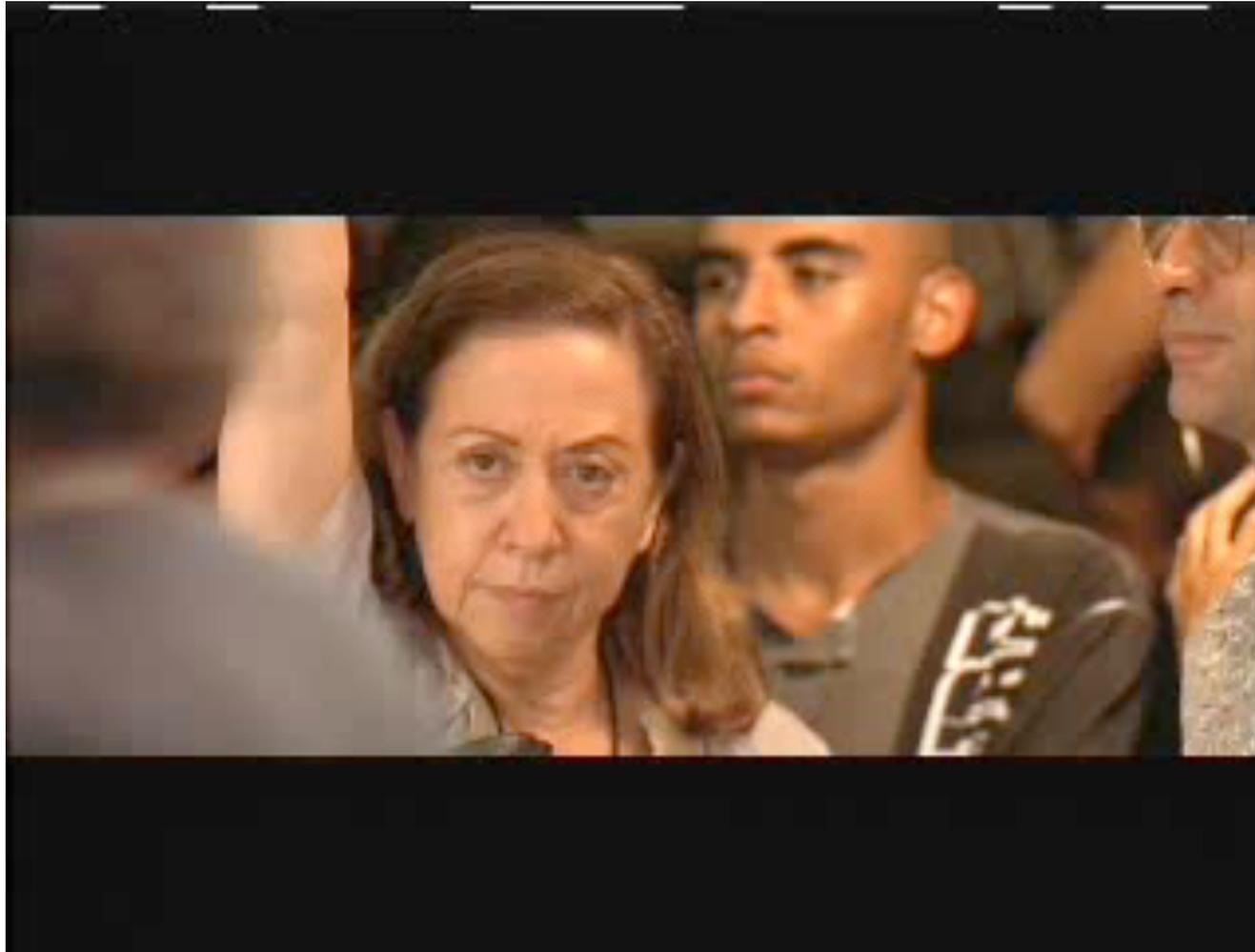
Crane shot



Tracking shot

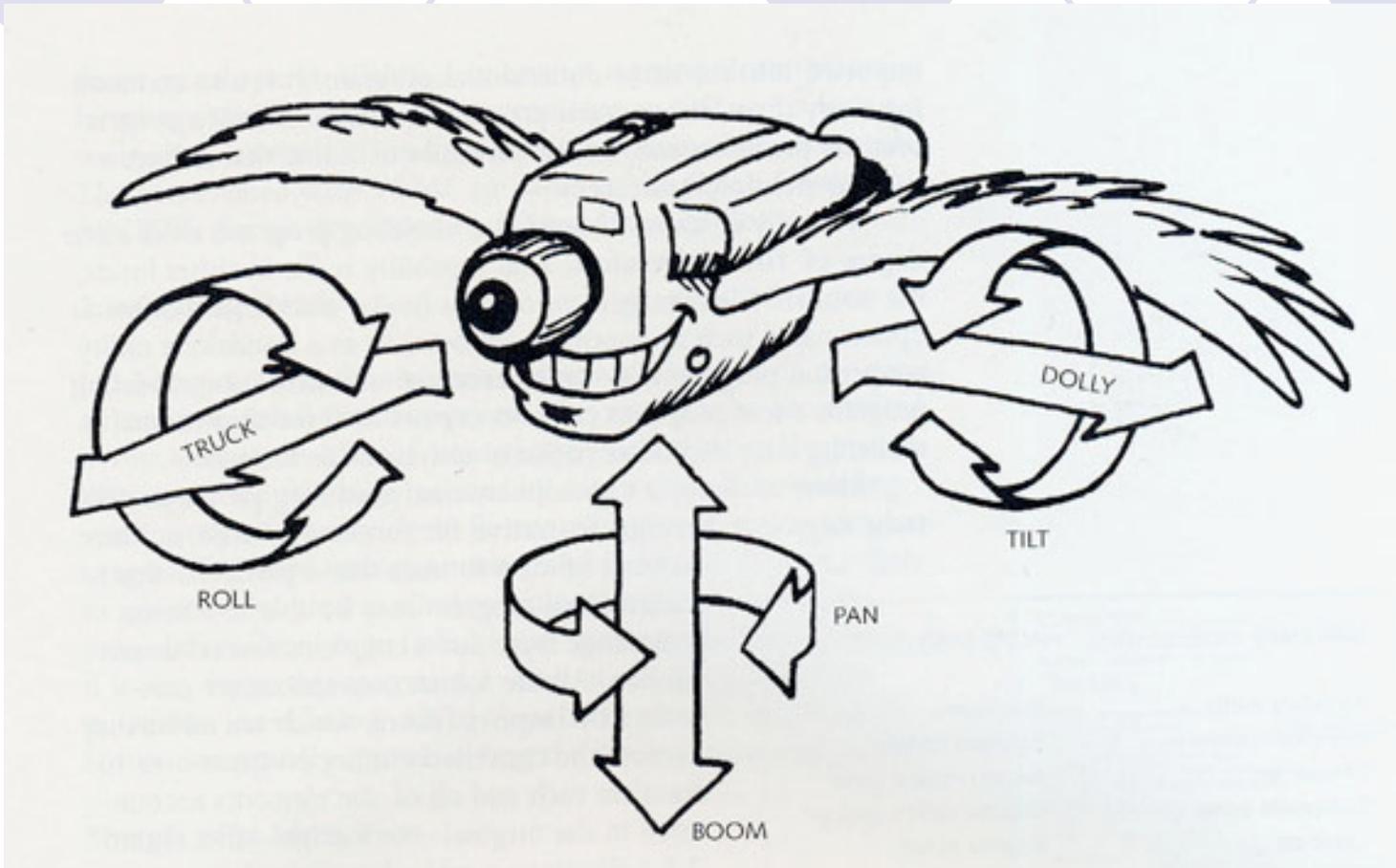


Tracking / Dolly shot



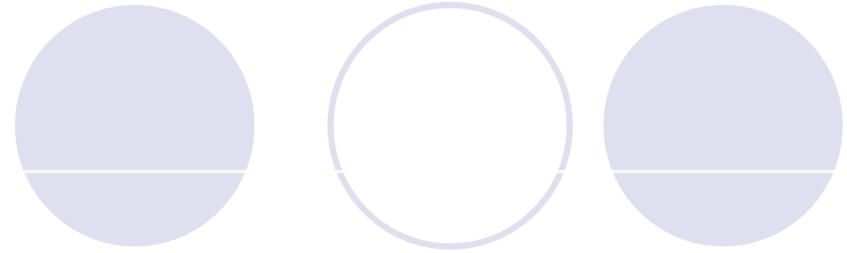
Steadycam shot / Hand held



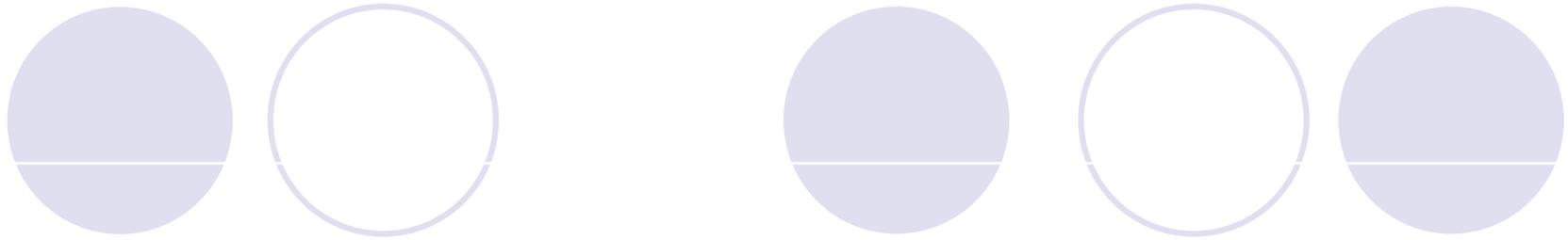


The image is from "The Art of 3-D Computer Animation and Imaging" by Isaac Kerlow.

Dolly vs. Zoom

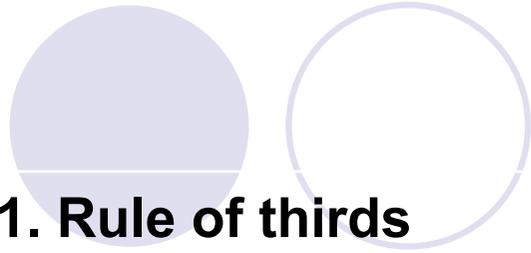


- The difference between dolly and zoom is that when you dolly, you are moving the camera in space, while zoom refers to changing the camera's focal length. When you move the camera, the perspective changes.
- Objects far from the camera change in relative size at a slower rate than objects which are close to the camera.
- That is what you see through your human eyes as you walk around, your perspective changes. On the other hand, when you zoom (i.e., when you change the focal length of your camera), your camera does not move and perspective does not change.



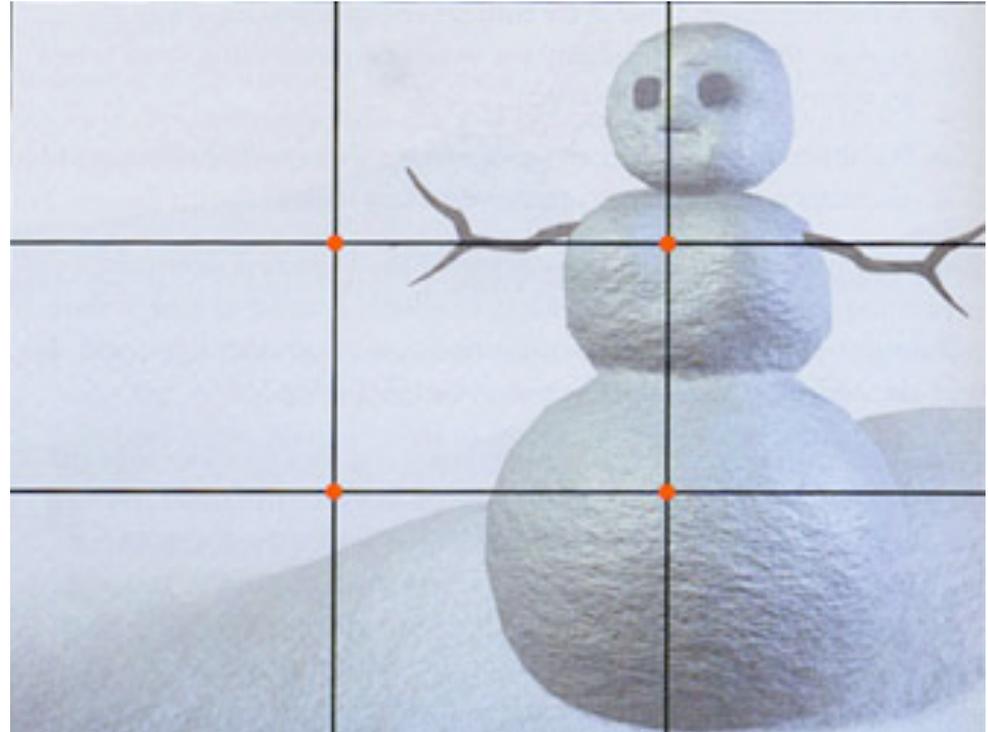
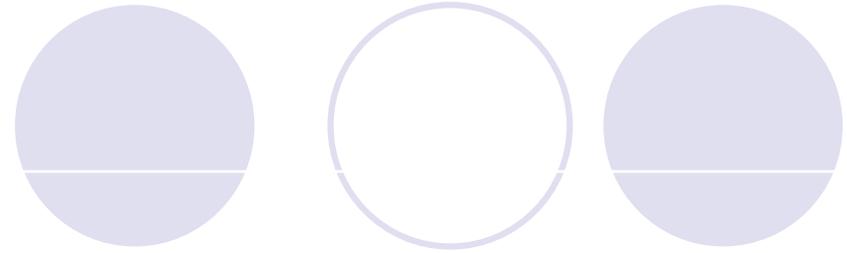
Composition Rules:

The followings are useful guidelines you can use when composing a shot



1. Rule of thirds

Rule of thirds divides the frame into thirds both horizontally and vertically. The points where the vertical and horizontal lines cross are aesthetically pleasing spots to place subjects or to have perspective lines converge. It is usually best to avoid placing horizon lines exactly in the middle of a frame, but to place the horizon either above or below center, approximately one-third or two-thirds up the height of the frame.





2. Teeter-totter rule

Lighter weight can counterbalance a heavier weight if it is placed farther away from the center of the frame.

- **3. Avoid frontal angle**

The frontal angle tends to flatten the three dimensionality of facial features and environments.

- Angling the shot produces more depth and volumes.



Shooting straight against walls produces flat compositions with little sense of depth in frame.



Angling the shot into walls produces receding perspectives and a better sense of depth.



- **Safe Areas**

Text, e.g., the title should be kept in the center 80% of the screen, within a guideline called the **title safe area**.

To make sure that your audience will not miss any important action in your video, the vital parts of your scene should take place within the central 90% of your frame, a guideline called the **action safe area**.

Why? It's because what's outside the action safe area is invisible on most TV sets.

