Session 1. Camera operation II

13 September 2016

Due dates for this week

- Deadline to submit Individual Assignment #1a was 12pm today.
  - Those of you who did not submit the assignment on time will not get points for this submission. No exceptions.
- I asked you to form groups for the final project.
  - Those of you without a group by the end of the class today, will be randomly assigned to a group.

The importance of light

- The secret to good photography (and videography) is the light. The better the lighting conditions, the better your picture.
- Sometimes you can control the light in your set (particularly indoors), but sometimes you can’t.
- DSLR cameras allow you partial control over how to handle different lighting conditions.

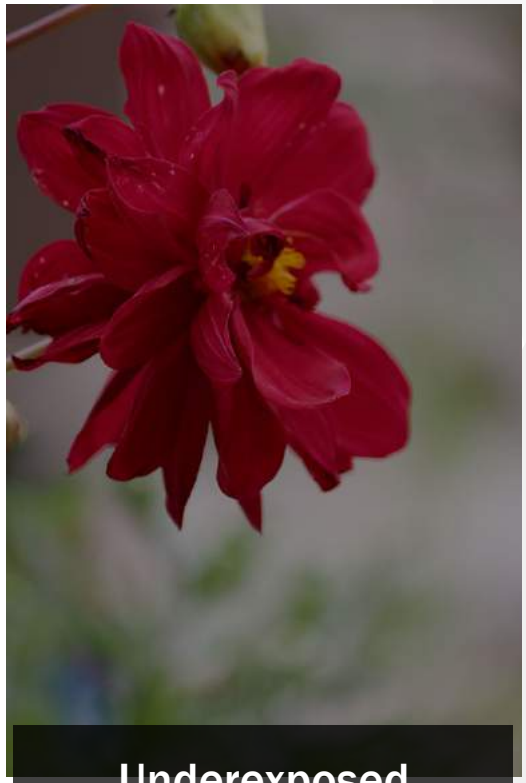
Exposure - Problems

- Exposure refers to the amount of light that we let through the lens.
  - Overexposure – when you let too much light come through the lens. You risk having large very bright wide elements in your picture.
  - Underexposure – when you do not let enough light come through the lens. You risk having blurred objects in your picture.

Exposure - Problems

Overexposed

“Normal” exposure



Underexposed

Exposure – How to control it

- We can find out if our image is overexposed by using the viewer of the camera.

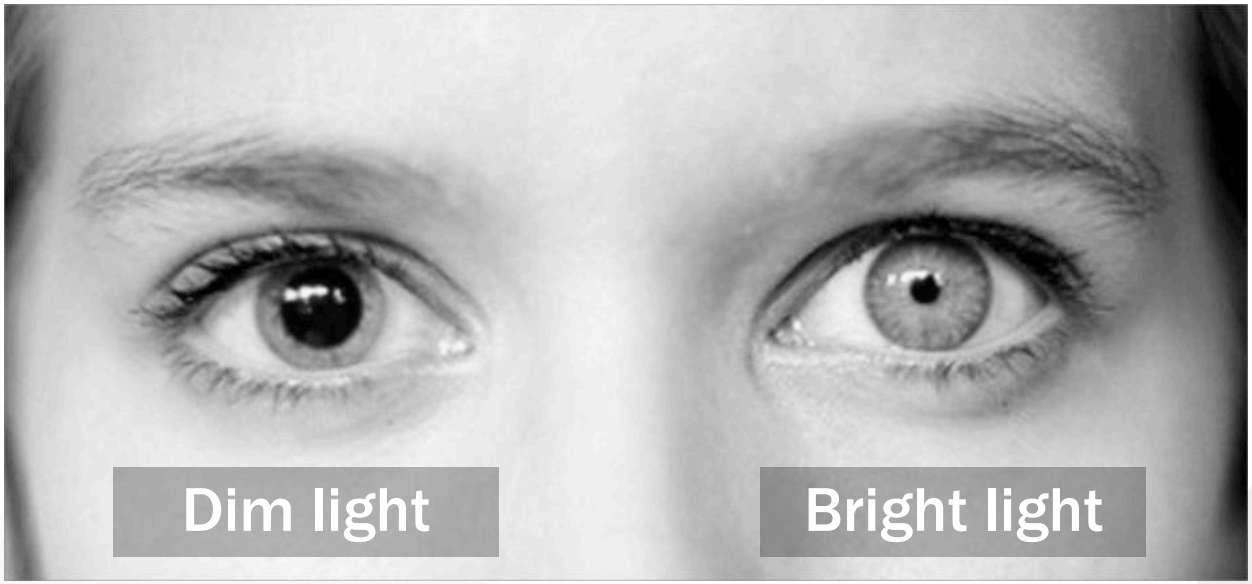
- There are three ways to change the exposure:
  - Manually changing the shutter speed.
  - Manually changing the exposure (ISO).
  - Manually changing the aperture (*f*-stop).

Exposure - Sensitivity

- When you are not able to alter the lighting for a shot, you will need to adjust the sensitivity to light of the camera.
- In DSLRs we adjust the sensitivity by changing the ISO level.
  - The higher the ISO level, the more sensitivity
  - The lower the ISO level, the less sensitivity.
  - Higher ISO levels come with a loss of video quality (the so-called noise).

Aperture or *f*-stop

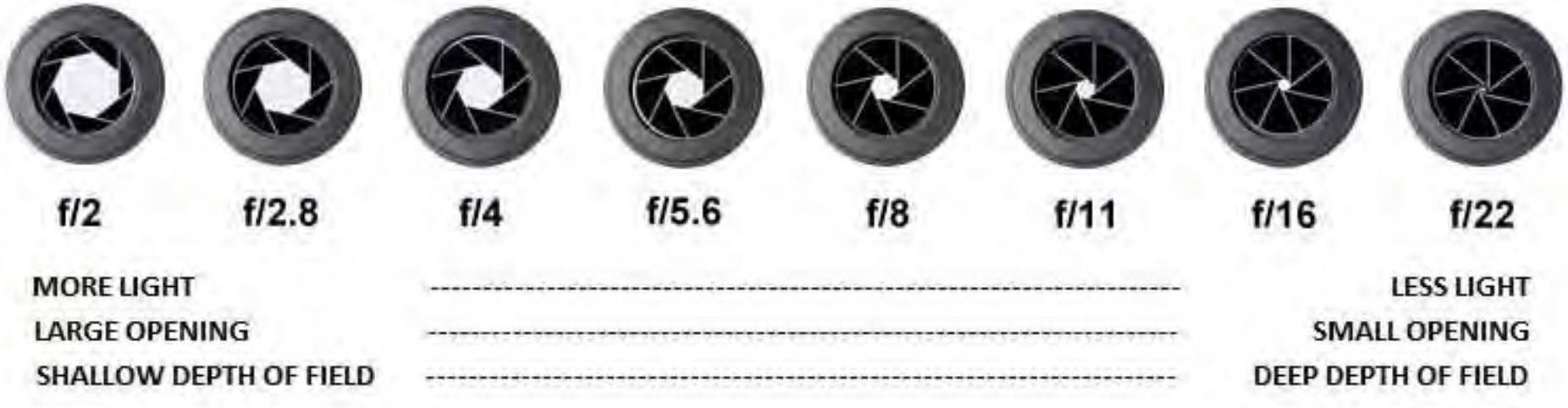
- It refers to the opening at the back of the camera to control the amount of light that goes in–often referred to as the *iris*.



Source: http://www.mcleishoptometrists.com

Aperture or *f*-stop

- The aperture is expressed as a fraction (the *f*-stop). The LARGER the *f*-stop, the LESS light we allow into the camera.



Source: http://www.nobadfoto.com/lenses.html

Aperture or *f*-stop

- Changing the aperture affects to elements of a picture:
  - Exposure
    - A larger aperture, allows more light in and can overexpose your subject.
    - A smaller aperture, allows less light in and might underexpose your subject.
  - The depth of field
    - A larger aperture gives us a shallow depth of field.
    - A smaller aperture gives us a deep depth of field.

How to adjust these features?

https://www.youtube.com/watch?v=equzhV9Aq2E

Focal length

- Focal length is an optical measurement – “it is the distance between the optical centre of the lens and the image sensor when you are focused at a great distance” (Owens & Millerson, 2011, p. 104)

- In simpler terms, “it measures how much the lens can see in a given area or how much of the world will be in the shot” (Anderson & Geyen, 2012, p. 17)

Focal length

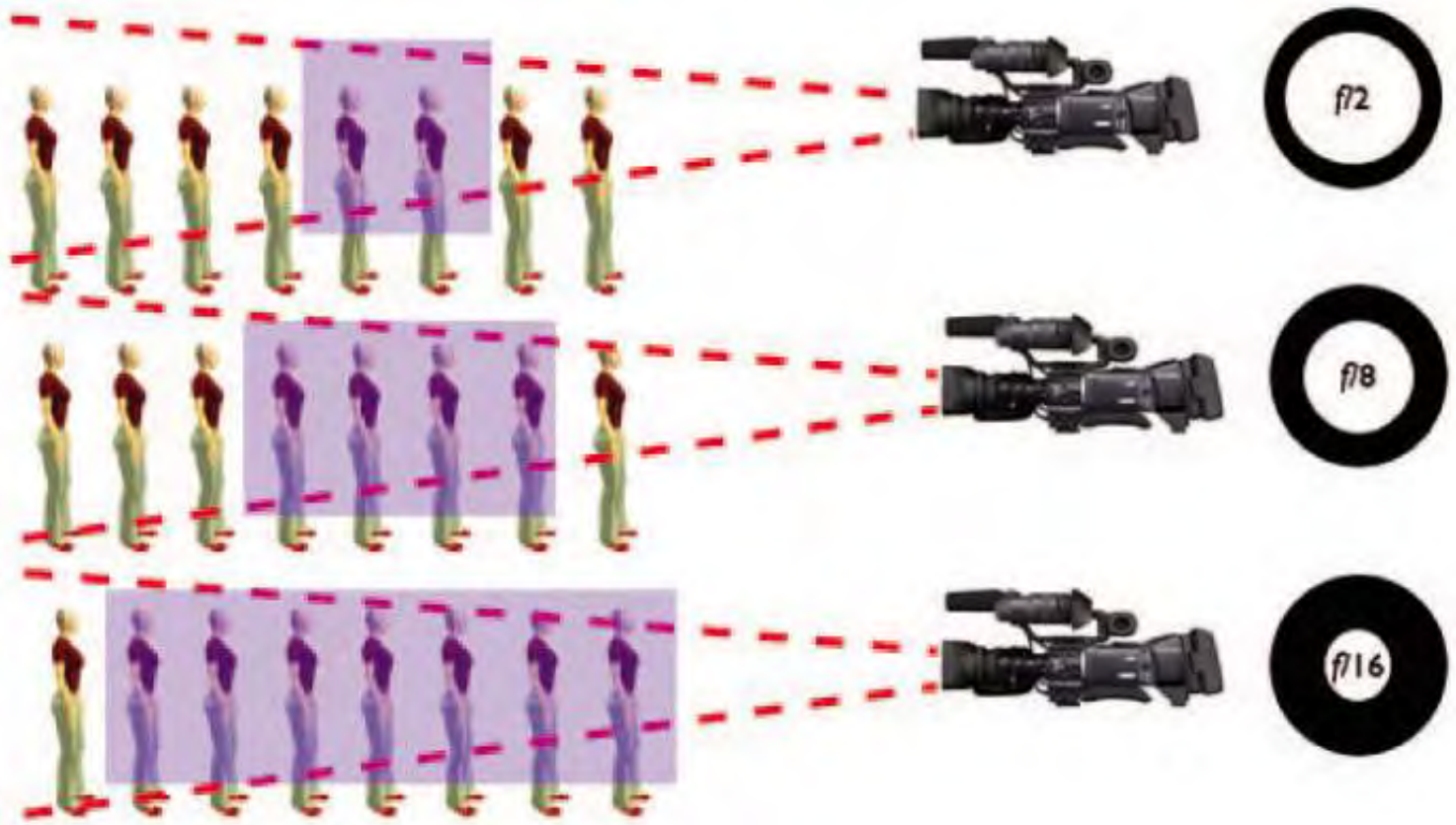
	Telephoto	Wide-angle
Focal length	Long	Short
Angle of vision	Narrow	Wide
Scene framing	Takes less of a scene	Takes more of a scene
Distance to the subject	Appears to be closer	Appears to be further away
Distance between objects	Appears to be shorter	Appears to be longer
Range	80mm to 200mm	16mm to 35mm
Focus	“Difficult” to focus	Easier to focus
Depth of field	Shallow	Deep

Depth of field

- The distance range between the closest and furthest objects that you are able to sharply capture from a given location.
  - **Large depth** of field will render an image were foreground, subject and background are all focused.
  - **Shallow depth** of field will render an image were the foreground and background are out of focus.

- Depth of field (or focused zone) is determined by the lens you use and the aperture (and the sensor size).

Depth of field



Source: Owens & Millerson 2013, p. 110

DSLR checklist

1. Check the AWB function is on.
2. Set focus to manual (MF).
3. Set the resolution to 1920 and 25fps.
4. Select shutter speed of 1/50 or above.
5. Set aperture to manual.
6. Pick a lens that provides your desired depth of field.

Quiz (a real one!)

Session 2. Video composition

13 September 2016

So many choices…

- When you set out to make a video, you have an overwhelming number of choices:
  - Do I use a telephoto or a normal lens?
  - What aperture is best?
  - Do I want a wide shot or a close-up?
  - Should I move the camera or not?
  - Should I go for shallow or long depth of field?
  - Am I providing a subjective or objective view?
  - Do I place the camera above or below?

… for such an easy task

- If you have done your homework, most of these choices will have been made during preproduction.
- Composing your shots, telling a story and combining all the elements is a craft—it takes practice but it can be learnt.
- Watch what other video producers are doing and learn from them, that's your best tool.

Video production & reality

- A good video production creates the illusion of mirroring reality: it minimizes cuts, it transitions naturally between shots and gives the impression that it is being watched live.

- However, in any video production we are highly selective and all the choices we make have an impact on the message we are telling.

Video composition

- A good composition is **visually attractive**, captures and keeps the **audience's attention** and **effectively communicates** a message.
- There are **rules or guidelines** for "good" video composition, knowing them and playing around with them is a useful start.
- Before you begin **breaking rules**, you first need to master them. You can be creative, but creativity comes from knowing the basics.

Background

- Avoid shooting in front of distracting/noisy backgrounds.

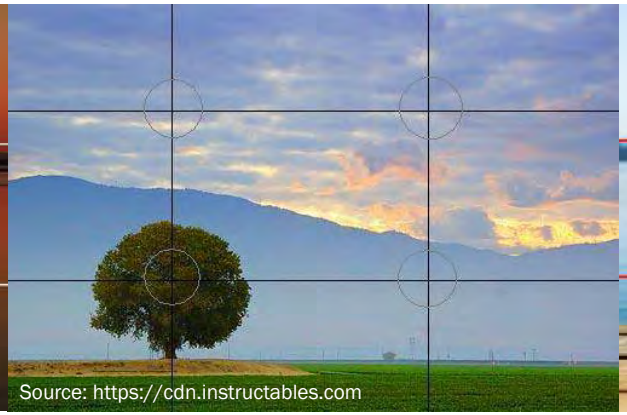
Framing

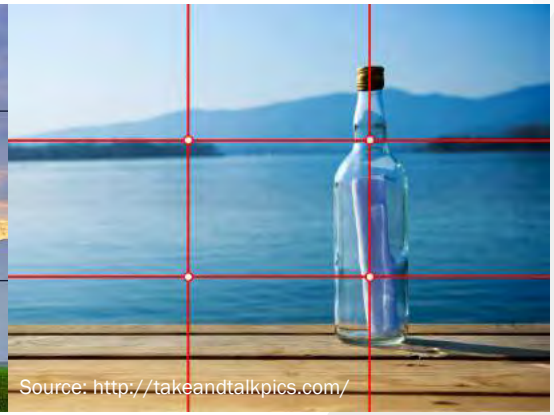
- Keep your shots within the “safe area”.

Source: http://tvforum.uk/

Rule of thirds

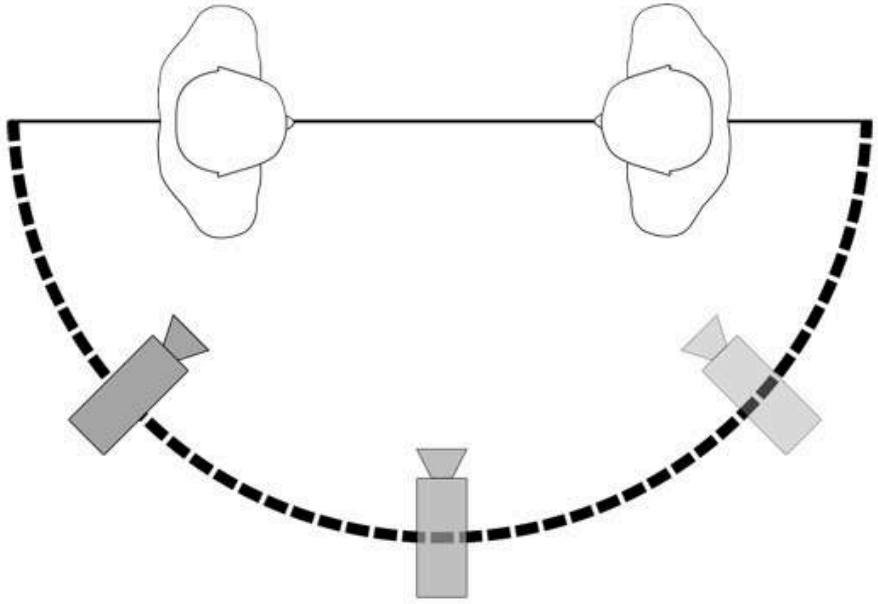
- The rule of thirds says that the main subject in a picture should not be placed exactly in the centre of the image





180° rule (or the line of action)

- When two characters are in a scene, they need to maintain the same spacial relationship (left-right) to one another.



Noseroom

- When framing a conversation or a moving subject, you must leave enough space in the direction the subject is facing.

Source: http://i.stack.imgur.com/

Headroom

- When framing a person, you must leave enough space between the top of a person's head and the top of the picture.

Source: http://blog.magisto.com/

The camera as an eye

- **Objective** – the camera behaves like an onlooker who is watching the action from the best angle at every point in time. More informative.

- **Subjective** – the camera provides the point of view (POV) of the talent and allows the audience to see through its eyes as it moves. More dramatic, not to be overused.

Camera moves

Tripod does not move

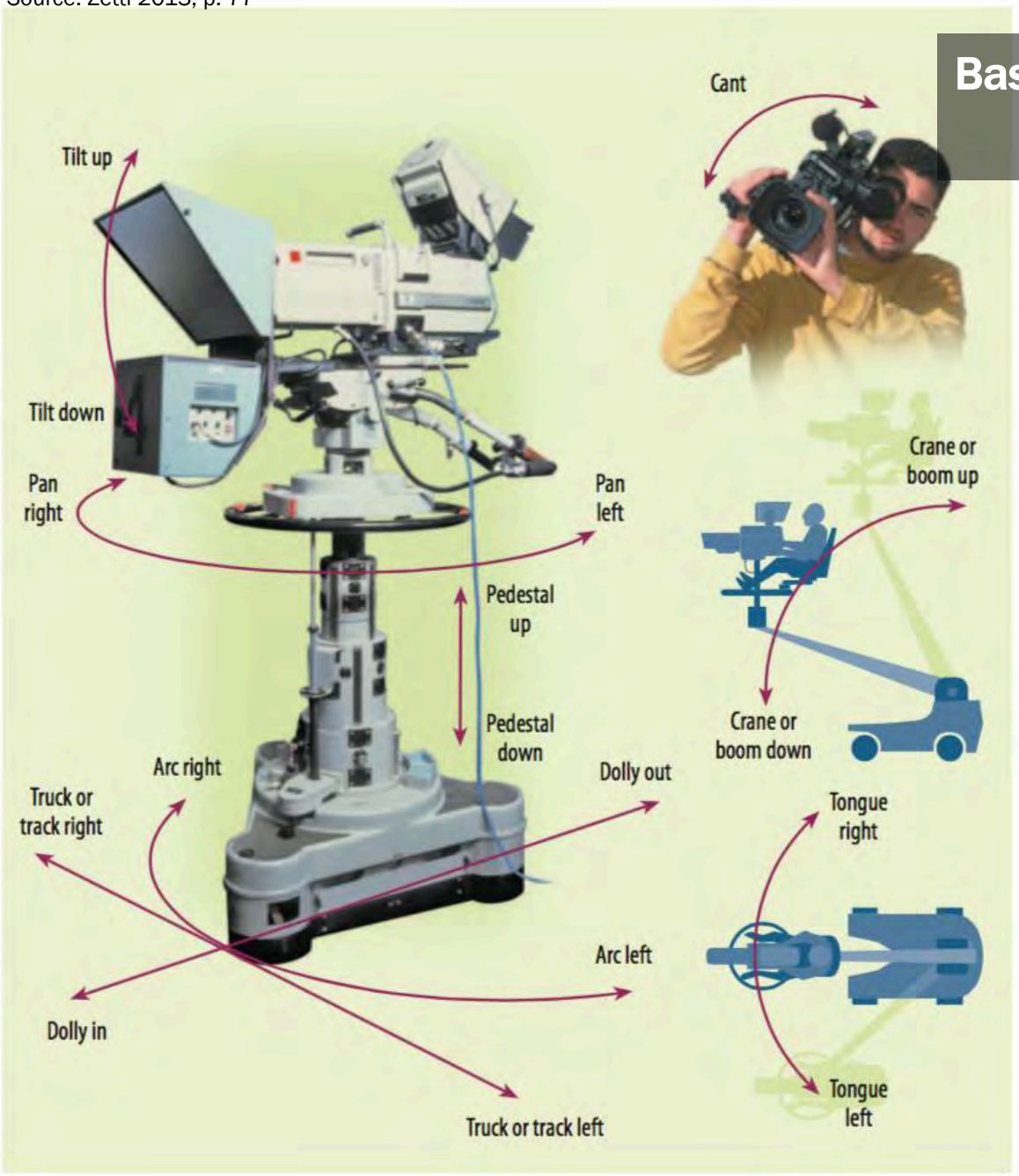
- Pan
- Tilt
- Cant
- Pedestal
- (Zoom)

Tripod moves

- Dolly
- Crane
- Arc
- Tongue
- Truck or track
- Handhold

Source: Zettl 2013, p. 77

Basic camera moves



Camera moves techniques

1. You must hold the beginning and end of any camera move for at least **4 to 6 seconds.**
2. Start and end should point to **something interesting or relevant** to the story.
3. Test out the move before you actually begin recording so your moves are **smooth**.
4. If using a tripod, lock any handles that you are not going to use.
5. If not using a tripod, bend your knees and use your **upper body** only when moving.

Walking shots

- It is very difficult to get steady walking shots on a handheld camera. If you must…
  - Check your surroundings before you start moving
  - Walking backwards “is better” than walking forward.
  - Walk on your toes.
  - Turn on the image stabilizer on your camera.
  - Use a handheld mount if possible.

Camera shots

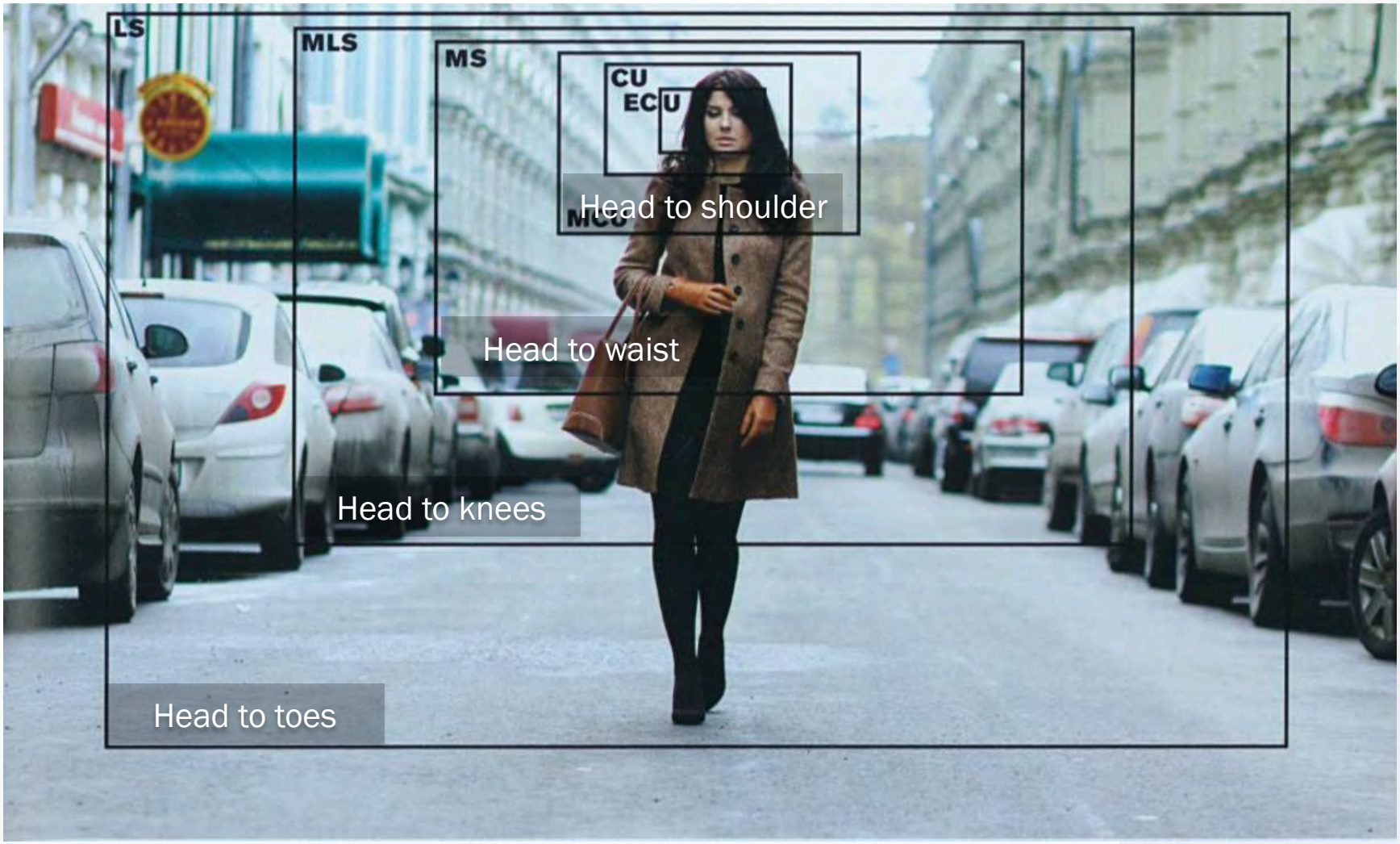
Most frequent shots

- Wide shot (WS), long shot (LS) or full shot (FS)
- Medium long shot (MLS)
- Medium shot or midshot (MS)
- Medium close-up (MCU) or “head and shoulders shot”
- Close-up (CU)
- Extreme close-up (ECU)

Other frequent shots

- Over-the-shoulder shot (O/S)
- Cross-shot (X/S)
- Two-shot
- Three-shot
- Extreme long shot or very long shot (ELS o VLS)
- Overhead (high-angle) shot
- Low-angle shot

Basic types of shots



Meaning of shots

- Long or wide shots are good introductory shots. They provide a sense of the location and the relationship between subjects. They give the audience power to choose what they focus on.
- Close-ups and extreme close-ups convey ideas of intimacy, provide emotion and add drama. It also helps focus the attention of the audience.

Video shooting process

1. Start with the storyboard and the shot list.
2. Double check **continuity** in each shot.
3. Ask for silence. Start recording (Action!). Do not talk while recording. Stop recording (Cut!).
4. For longer productions consider using a clapboard or slate (there are Apps for this - DigiSlate)
5. Check the recording. If it is good, move to the next shot. If it is not, reshoot.
6. Do not leave things for postproduction.

Continuity

- We secure continuity by making sure than, when editing two shots, the audience will not perceive that they were shot at different times.
  - The angle of different shots should match.
  - The direction of the action is always the same.
  - Props, lighting or clothes do not match.

Checklist for camera use

- Don’t leave the camera under the sun (rain).
- Use the lens cap all the time.
- Make sure the memory card works.
- Test the camera (video and audio).
- Set all basic presets (resolution, white balance, shutter speed).
- Make sure the tripod is properly levelled.

Keep editing in mind

- Leave extra footage at each side of your shot (head and tails) to provide flexibility when editing.
- Always add a few (just a few) more shots than you plan to use – JUST IN CASE.
- If possible, shoot the same shot twice to leave yourself margin to choose later on.
- Start with a EWS to record the surroundings.

Session 3. In-class exercise

13 September 2016

Assignment - “How to use … ”

- Use the storyboard you drew on week 1 and shoot the 12 shots you planned.
  - If any of the shots is not technically possible, make amendments to your storyboard (and resubmit it).
- Come back to class 15 minutes before the end of the class and upload all clips to GApps Drive.
  - Follow the instructions on Canvas to share the folder and post the link on Canvas.

Next week

- There will be **no class on Tuesday next week.** Instead you can come to one of the following two sessions:
  - Wednesday, 7pm to 10pm.
  - Saturday 12pm to 3pm.

- We will meet in room M5055. All in-class exercises group members **must come to the same session.**