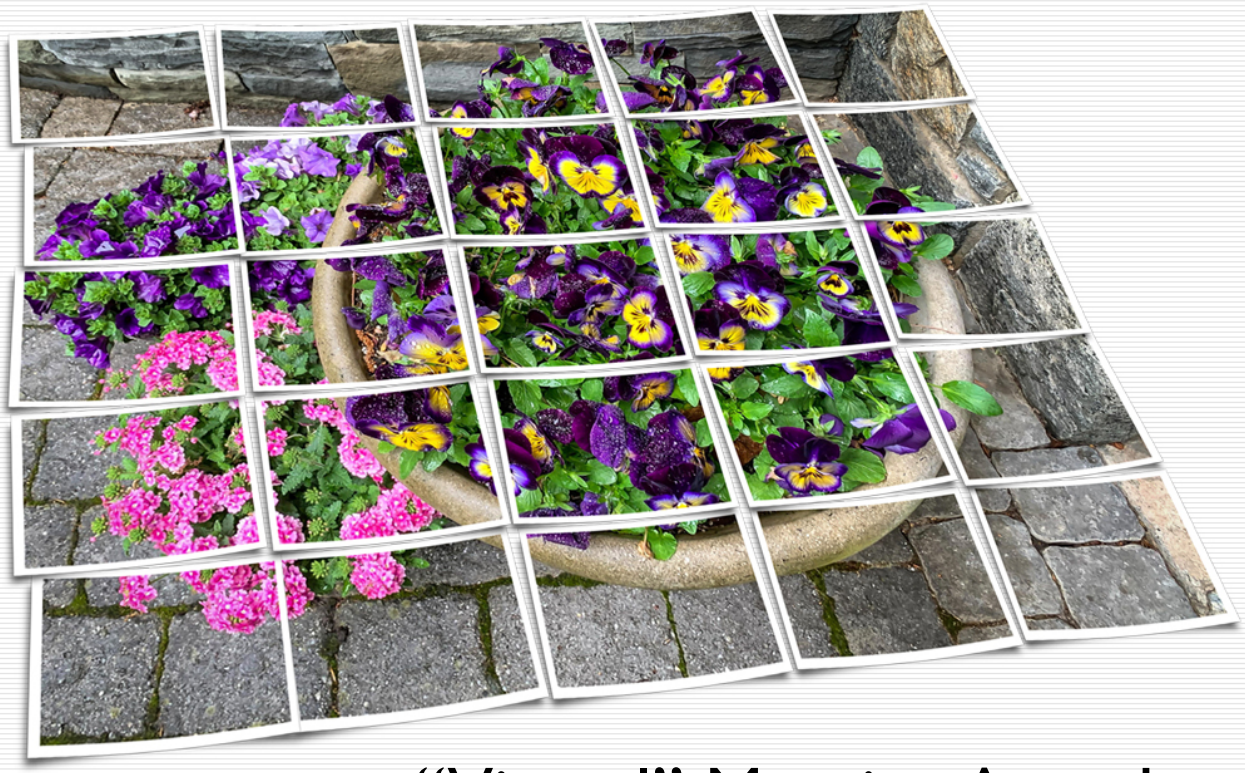


"Virtual" Meeting Agenda

June 4, 2020

Meeting Agenda

- Welcome
- Monthly Assignment slideshow
- Reasons to turn off the Autofocus
- Lens Distortion how to fix it
- Photographer's worst habits
- Photographing Flowers
- Photography in Quarantine (*video*)
- Monthly Assignment

Monthly Assignment Slideshow

View slideshow at
https://youtu.be/nNy8_k_kew4

Reasons to turn off the Autofocus

Reasons to turn off your Autofocus

- The Autofocus capabilities in today's digital cameras are quite remarkable and in most occasions the AF works extremely well with both stationary and moving subjects.
- There are situations though when you are better off disabling the autofocus in order to obtain better, sharper images.
- I am listing some of these situations where you simply focus on your subject manually.

Turn off your Autofocus If

- **There's not enough light**
  In low light, contrast is also low, and the autofocus relies on light and contrast to latch on to things.
  Your camera may have an AF assist lamp built in, but in low light, it can be easily confused.
- **There's not enough contrast**
  If you focus on something like a plain colored wall the AF will find it impossible to focus, no matter how bright the light.
  You can re-frame your shot temporarily so the spot is on something with detail and press the shutter half down to activate the AF. Then keep the shutter button half-pressed to lock the focus, and go back to your original composition.

Turn off your Autofocus If

- **Shooting wildlife**
  Most wild animals have excellent hearing and, no matter how good your lens autofocus is, it will make a noise. Even the slightest whirr is likely to spook wildlife.
- **With landscapes**
  When shooting landscapes you usually want things in focus from the foreground to the infinite.
  This means closing down the aperture to increase the depth of field and focusing about a third of the way into the scene.

Turn off your Autofocus If

- **Shooting Macro**
  With macro photography autofocus has a hard time. The depth of field is so tiny that the camera has no idea what you want to focus on and the lens is likely to hunt wildly. You definitely must take control.
- **You are shooting for HDR**
  HDR photography involves taking several shots of the same scene, with different exposures, then blending them on the computer. It's important to have identical focus in each shot to ensure success.
  With AF on, the autofocus may choose a slightly different focus point for each shot.

Turn off your Autofocus If

- **Shooting through glass**
  Taking photographs through glass is generally not a good idea. Avoid it if you can. But sometimes it's unavoidable, e.g. if you're in a plane, or photographing fish in an aquarium. The trouble is, the AF may home in on reflections, or marks on the glass.
- **With portraits**
  The golden rule of portraiture is to focus on your subject's eyes. What's more, you often use a wide aperture to throw the background out of focus. But if your autofocus picks up your subject's eyebrows or the tip of the nose then, because you've got such a narrow depth of field, the eyes will be blurred.

Turn off your Autofocus If

- **Fast Action**
  Sometimes you are better off focusing on where the subject "will be" rather than chasing it (even with burst mode).

Hobbyists Camera Club

Lens Distortion

Lens Distortion

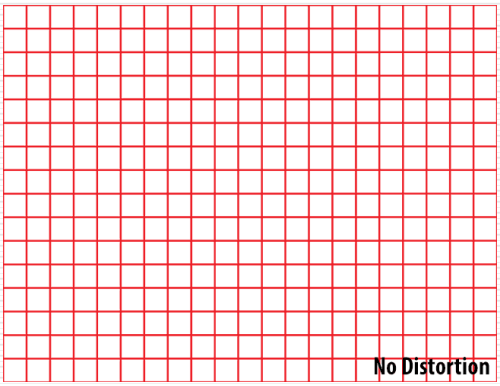
- In many occasions, the subject on your photo look distorted and different from reality.
- In photography, there are two types of distortions: **optical** and **perspective**.
  Both result in some kind of deformation of images - some lightly and others very noticeably.
- While optical distortion is caused by the optical design of lenses (and is therefore often called "lens distortion"), perspective distortion is caused by the position of the camera relative to the subject or by the position of the subject within the image frame.

Optical Distortion

- With lenses, distortion is generally referred to an optical aberration that deforms and bends physically straight lines and makes them appear curvy in images, which is why such distortion is also commonly referred to as "curvilinear".
- Optical distortion occurs as a result of the lens optical design, when special lens elements are used to reduce spherical and other aberrations.
  In short, optical distortion is a lens error.
- There are three known types of optical distortion: barrel, pincushion and mustache (also known as wavy and complex).

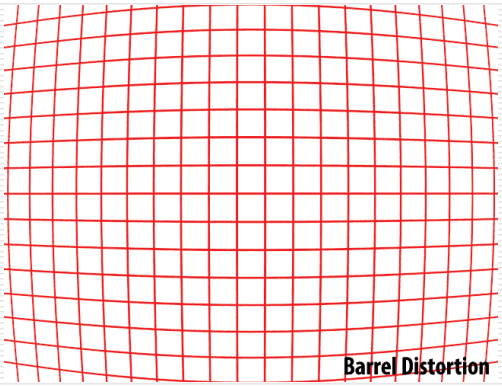
Optical Distortion

- A non distortion "perfect" lens is quite rare since most lenses suffer from at least one kind of distortion.
- Many zoom lenses, especially super zooms like a Tamron 18-300mm suffer from multiple types of distortion such as barrel and pincushion at different focal lengths.



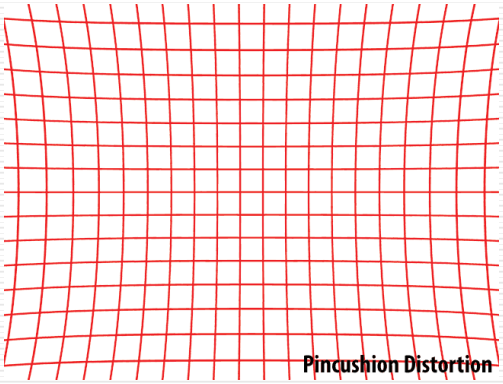
Optical Distortion

- Barrel Distortion:
  when straight lines are curved inwards in a shape of a barrel. Commonly seen on wide angle lenses, barrel distortion happens because the field of view of the lens is much wider than the size of the image sensor and hence it needs to be "squeezed" to fit.



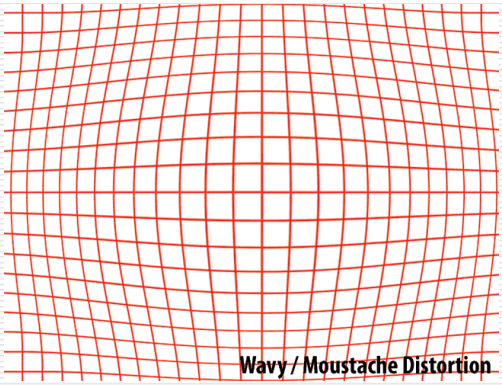
Optical Distortion

- Pincushion Distortion:
  when straight lines are curved outwards from the center. Commonly seen on telephoto lenses, and it occurs due to image magnification increasing towards the edges of the frame from the optical axis. This time, the field of view is smaller than the size of the image sensor and it thus needs to be "stretched" to fit.



Optical Distortion

- Mustache Distortion:
  the nastiest of the radial distortion types is mustache distortion, which is sometimes called "wavy" distortion. It is basically a combination of the barrel distortion and pincushion distortion. Straight lines appear curved inwards towards the center of the frame, then curve outwards at the extreme corners.



Perspective Distortion

- The Perspective Distortion is caused by the position of the camera relative to the subject or by the position of the subject within the image frame.
- Unlike optical distortion, it has nothing to do with lens optics and thus, it is not a lens error or issue.
  When projecting three dimensional space into a two dimensional image, if the subject is too close to the camera, it can appear disproportionately large or distorted when compared to the objects in the background.

Perspective Distortion

- For example, if you photograph a person with an ultra wide angle lens up close, their nose, eyes and lips can appear unrealistically large, while their ears can look extremely small or even completely disappear from the image. Take a look at the following photos of a subject captured with a wide-angle lens at very close distance.

Perspective Distortion

- Lastly, there is also the case of converging lines (Keystoning).
  When the camera sensor is not perfectly parallel to the photographed object such as a tall building, it produces an image that at first might seem unnatural, due to its "leaning" effect.

How to fix Distortion?

- To correct the Optical Distortion in a photo (especially the Barrel and Pincushion one) you can use any of the modern Image Processing program.
  In just a few clicks, these distortions will disappear.
- The same applies to correct the Keystoning.
- To correct some of the Perspective Distortion, you need to change the lens (or focal length of your zoom) and/or change the position of your subject.
- The following short videos will demonstrate how to do it.

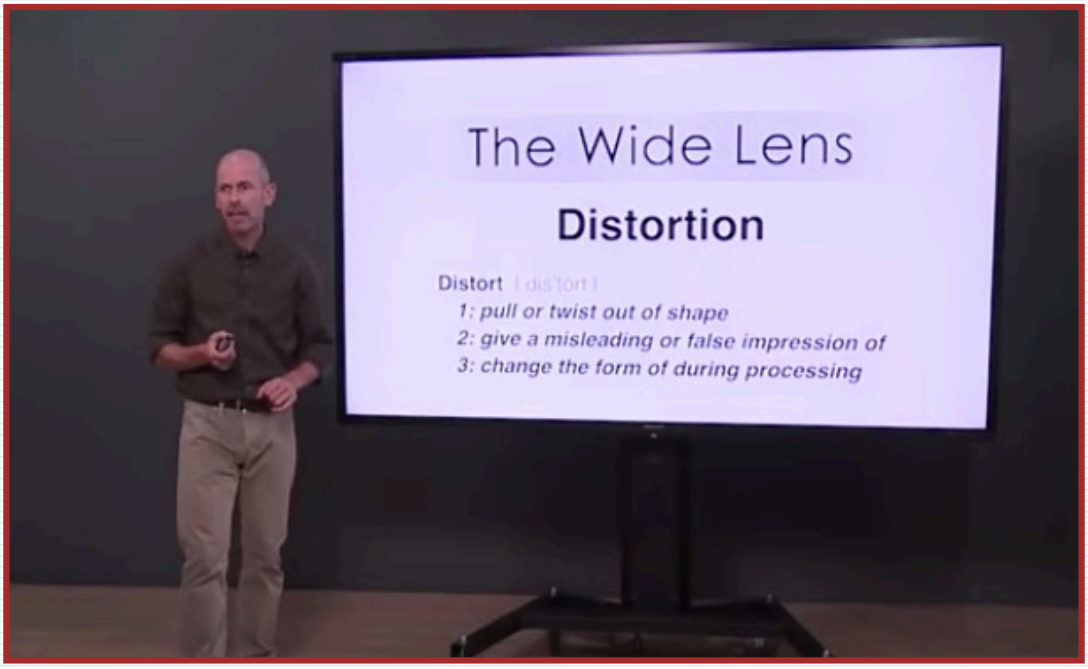
Lightroom - How to Correct Lens Distortion in 30 Seconds

View video at
https://www.youtube.com/watch?v=k_NoXrStlRY

How to STRAIGHTEN YOUR PHOTOS in Lightroom/Photoshop

View video at
https://www.youtube.com/watch?v=ftM1zOwcGXE&t=42s

Wide Angle Lenses: Tips for Dealing with Distortion



View video at
https://www.youtube.com/watch?v=q0FdW4qzxD4&t=20s

Photographer's Worst Habits

Photographer's worst habits

- When talking about photography, even professionals are guilty of some (or all) of these bad habits that prevent them to take great photos:
  - **Not taking your camera with you**
    Not always we have the camera with us but remember that smart phones are now very good cameras (especially if equipped with additional apps) so don't hesitate to take photos with them.
  - **Sleeping late and missing the good early light**
    Try motivating yourself with commitments such as meeting other photographers early in the day.
  - **Letting dust get on the sensor**
    Remember to turn off the camera when changing lenses and to point the camera body down protected from the wind.

Photographer's worst habits

- **Settling for the good shot and not looking for more**
  You got the shot you came for? Great!
  Now work the scene: look behind you, try other angles, get the camera off the tripod and lay on the ground with it.
- **Composing poorly or too quickly**
  Train yourself to always do BCBP (Background Check: look for foreign elements in the background, Border Patrol: scan the edges of the frame). Move a few steps closer or zoom in a bit tighter.
  Remember that the best time to shoot a vertical shot is right after you shoot a horizontal shot.

Photographer's worst habits

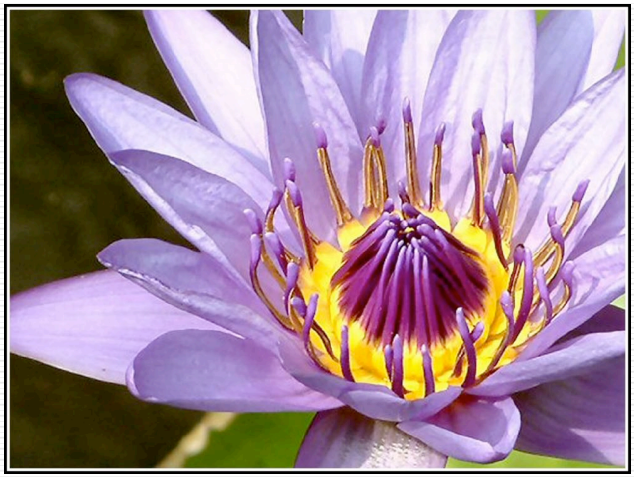
- **Chimping**
  Chimping is a common photography term to describe the action of reviewing pictures on the LCD.
  How many shots do you miss because you are busy chimping? Focus on taking photos and review them later.

- The worst habit:
  - **RUSHING THINGS**
    Remember the three key elements to get a great shoot: Patience, Patience, Patience.

Photographing Flowers

Photographing Flowers

- Spring is here and therefore flowers are one of the photographer favorite subjects.
- Before going out and start shooting, please remember these tips on how to get great flower photos.



Photographing Flower Tips

- **Use a tripod**
  Using a tripod will help you get sharper photos by ensuring your camera doesn't move. But, the tripod helps in another way too: it forces you to be more careful about your composition.
- **Wait for an overcast/cloudy day or use a diffuser**
  Direct sunlight will cast harsh shadows and create bright highlights on wildflowers. So, the best time to photograph wildflowers is on an overcast day, because the clouds act as the perfect light diffuser, creating the most perfectly balanced light you can get.
  If you can't wait for an overcast day, use a light diffuser.

Diffused light vs. sunlight

Direct sunlight

Diffused light

Photographing Flower Tips

- **Position the camera sensor parallel to the flower plane**
  With every photo, you only get one geometrical plane of complete sharpness. So, to maximize sharpness in your wildflower photos, make sure your sensor is parallel to the flower's most important plane, and carefully focus your lens on this plane
- **Watch out for wind**
  The most annoying problem you'll face when photographing flowers is battling the wind. So, to help freeze the action of a flower, use a fast shutter of at least 1/250 sec. You may need to increase your ISO to get this fast of a shutter. Do your photography early in the morning when there is less chance of wind.

Photographing Flower Tips

- **Find a flower/flowers with a good background**
  When photographing wildflowers, it's easy to focus all your attention on the beautiful flowers and forget about the background. But, a good background will help your image by drawing more attention to your subject. So, take the time to find a flower with a good background: one that's far away (to help get it out of focus), contrasts well with the flower, and has no distracting elements.
- **Backlight will make your flowers glow**
  Because flower petals are translucent, backlight makes flowers appear to glow. Try to capture backlit flowers late in the day when the sun is close to the horizon which will cast nice warm light on the rest of your image too.

Backlit Flowers

Check the Background

"Busy" Background

Check the Background

"Neutral" Background

Photographing Flower Tips

- **Find a flower that's in good shape**
  Closely inspect each flower before photographing it, to ensure it's not missing petals or has poor color. Some individual flowers of the same species will be more saturated in color than other individuals, so take some time to find that "perfect flower."
- **Use a telephoto or a macro lens**
  A long lens will help you isolate a sharp flower against an out-of-focus background. But, make sure you use one with a short minimum focus distance (5 ft or less), to ensure you can fill the frame with the flower.
- **Use the Macro Mode with a point-and-shot camera or smartphone**

Use a telephoto lens

Photography in Quarantine

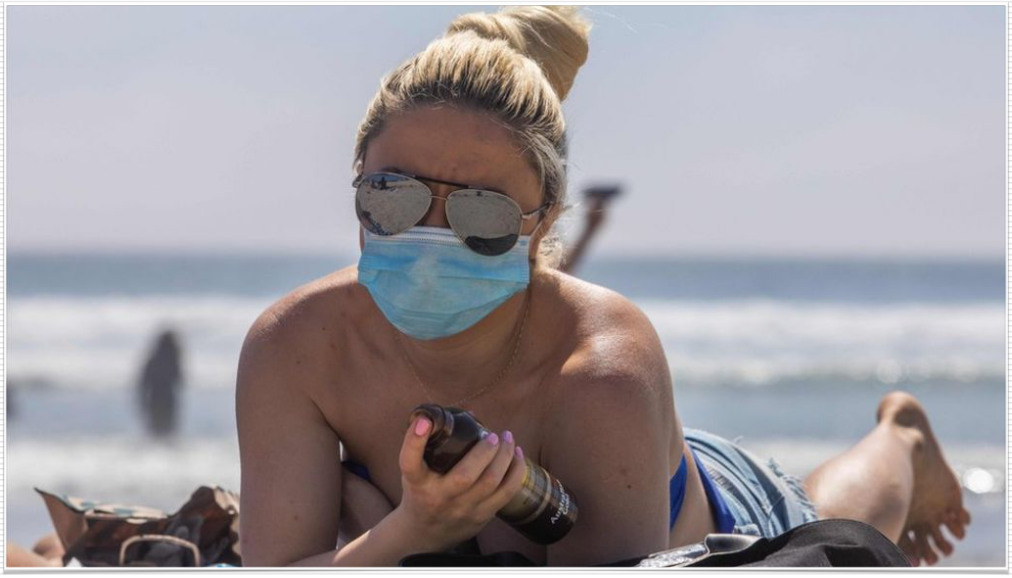
Choosing the Right Lens Length

View video at
https://www.youtube.com/watch?v=zSsaKSJb-H8&t=321s

Summer Assignment

Summer Assignment

A different Summer



Calendar

Wednesday September 2, 2020

Camera Club Meeting

Have a great Summer, stay safe and healthy!

Thanks