THE PORTRAIT PHOTOGRAPHER'S GUIDE TO

DEPTH OF FIELD

BY AUSTEN HUNTER PHOTOGRAPHY

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Portrait photography is a fun and popular genre of photography. Portraits typically involve interesting compositions featuring a person or a group of people. From models that pose in front of bright studio lights, to families getting their annual family photo captured at the park - all these and more are forms of portrait photography (sometimes called **portraiture**). For every image captured, the photographer is presented with a series of creative decisions they must make when capturing a portrait. Of these decisions, choosing the right **depth of field (DoF)** is one of the most important. This guide will help you understand the function of depth of field; what it does, how it works, and how to properly incorporate it into your portrait photography.

Have you ever captured what you thought was a perfect portrait, only to discover after the session that your subject was out of focus? I've been there before - and it is such a disappointing feeling! If you're wondering why you aren't nailing focus in your portrait photoshoots, you may find this guide helpful.

In every portrait session, the photographer is faced with a series of creative choices they must make when capturing a portrait. Of these many creative decisions, I have found that photographers consistently underutilize and misunderstand their depth of field, resulting in captures that are either out of focus or have too much in focus to the point of detracting from the subject. This guide will help you understand the function of depth of field and how to decisively apply it to your portrait masterpieces.

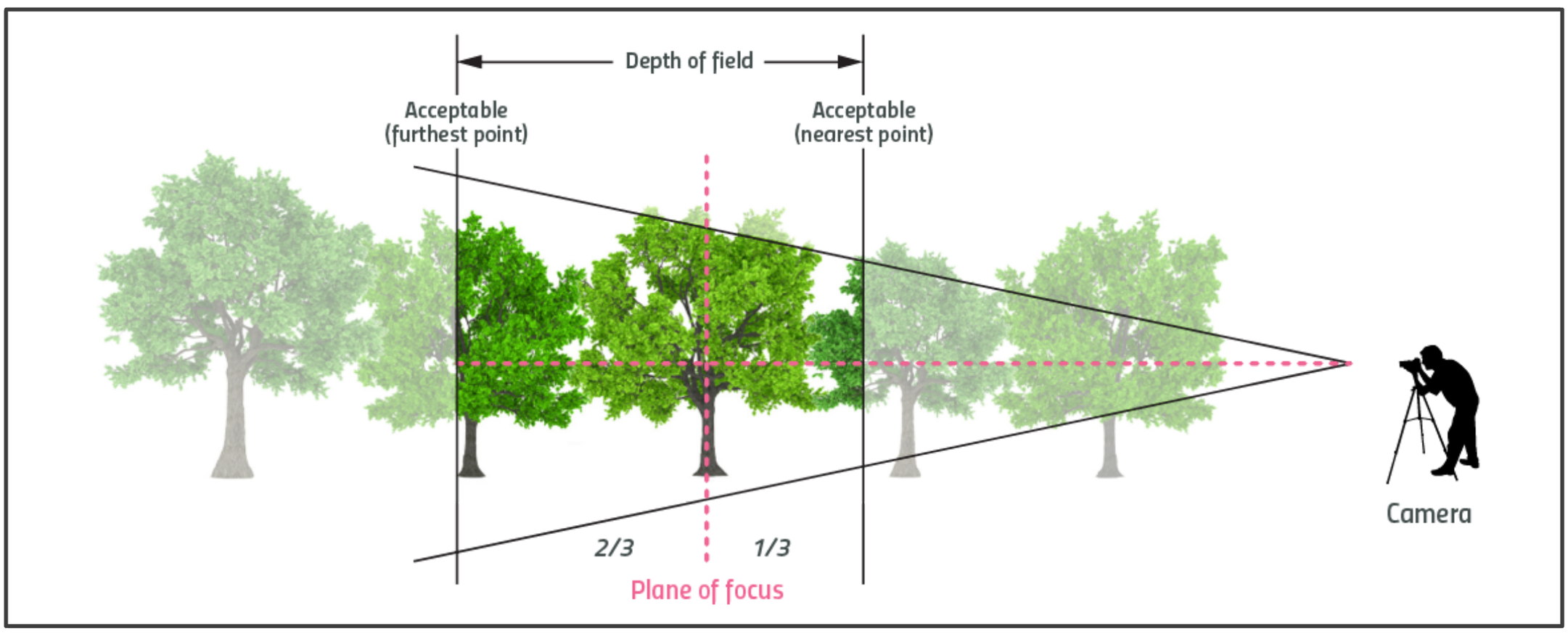
If you're anything like me, you're inspired by portraits featuring sharp, crisp subjects that stand out against creamy, blurry backgrounds that seem to melt away any distractions. This blurriness, also known as **bokeh**, is what results when depth of field is decisively applied to your composition.

Are you ready to get started? Before we get into how depth of field can be used in portraits, let's first understand what depth of field is and how it works in camera.

What is Depth of Field?

In its simplest definition, **depth of field is the zone around your focus point that appears acceptably sharp**. A camera's lens can only focus on a single plane in space, which is why choosing the right focus point is so important to capturing a properly-focused image. However, the space before and behind this plane will also appear in focus to an acceptable extent. This is your depth of field.

It's important to remember that the **depth of field in an image will be the area in front and behind your point/plane of critical focus**. Additionally, the area behind your plane of critical focus is about twice as long as the area in front of it.



What is Bokeh?

We briefly touched on it, but "bokeh" is a term of Japanese origin. It literally means "blur", but it refers more to the aesthetic related to the effect than the blurriness itself. The bokeh aesthetic has existed even before cameras, as you can find paintings created before the invention of the camera that feature detailed subjects contrasted against soft, less-detailed backgrounds.

The bokeh effect is achieved when our subject is captured with an extremely shallow depth of field. Much like those aforementioned paintings, our subject will appear crisp, detailed, and in-focus while everything behind them appears soft and featureless, creating an appealing contrast in our image. For this reason, it's very popular with portrait photographers. Bokeh can appear swirly, coarse, heptagonal, or circular, and the effect is influenced by a variety of factors which we will discuss on the next page.

How does Depth of Field affect Portraits?

Unlike landscape images where greater/deep depth of field is usually desired, portrait photographers often prefer small/shallow depth of field to minimize distracting elements and make subjects "pop out" at the viewer. Since portrait photography emphasizes the person, it's important to remove any elements of the composition that *detract* from the subject by setting the right depth of field. At the very core of it all, depth of field is a tool in your compositional toolbox that helps you convey your artistic vision to your viewer.

> Depth of field can be a **storytelling tool**, a **distraction remover**, and a way to **add depth and dimension** to your image.

➢ Storytelling Tool

Depth of field allows us to decide what's in focus within the image. We can use this ability to obscure subjects or bring them into full focus. With the proper depth of field, you can even create a sense of mystique or curiosity for your viewer.

In this image for example, the gentleman in the background is completely out of focus. He clearly has a connection to our subject, but as the viewer, we aren't sure who he is or what that may be yet. This adds a little bit of tension and mystery to our image. We achieved this effect by positioning him outside of our plane of critical focus.

➢ Distraction Remover

Depth of field allows us to minimize distracting elements in our background. A shallow depth of field will help us render these distractions behind our subject into bokeh.

Take the following image for example:

These images were taken at different aperture values (also known as f-stops). The image on the left has a deep depth of field that makes the identifiable objects in the background distracting. On the other hand, the image on the right has a very shallow depth of field that obscures the busy scene in the background and thus allows the model/subject to be the clear focus.

➢ Adding Dimension

Depth of field mimics the way our eyes perceive depth by creating a zone in which things appear sharp and focused. The contrast between sharp and dull points in an image creates an illusion of dimension or depth, making images feel less flat and more visually appealing.

This image, captured at f/1.8, makes an otherwise flat image appear to have depth. Notice how there is no foreground in our shot, yet it still appears to have depth. This is achieved through the use of a very shallow depth of field.

Controlling Depth of Field

Now that we know what depth of field is and how it functions, how do we make it work for us?

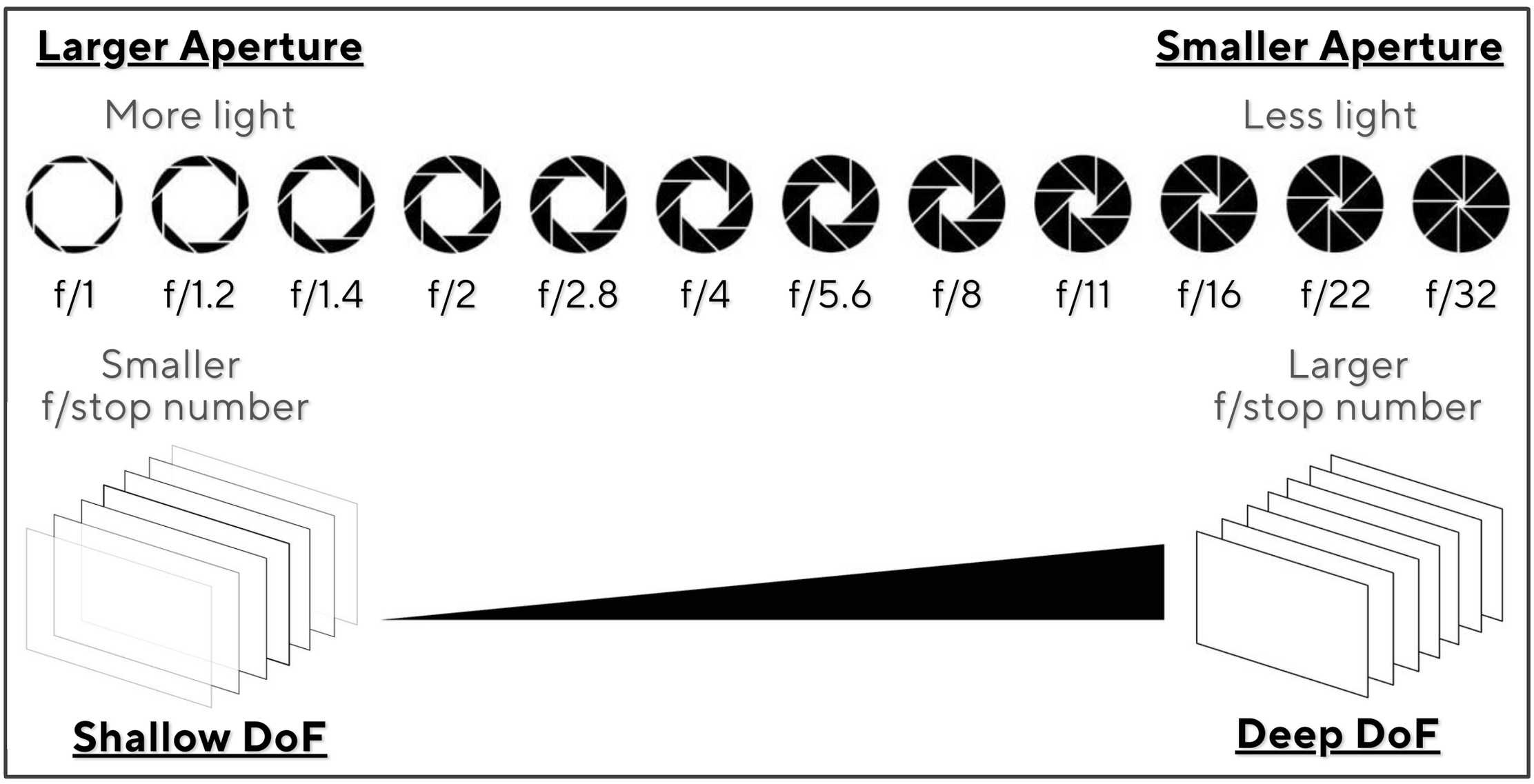
Four important inputs that can affect depth of field:

1. The **Aperture Value** of your Lens
2. The **Focal Distance** between Camera and Subject
3. The **Focal Length** of the Lens you are using
4. The **Sensor Size** of your Camera

➢ Aperture Value (AV)

Aperture, or the opening of the lens, can control light exposure and depth of field captured in an image. Aperture value is denoted in a camera as f/stops. Now, it's important to mention that **aperture level correlates to light** but is ***inverse* to f/stop number and depth of field**. The larger the aperture (large lens opening = brighter), the lower the f/stop number and smaller/shallow depth of field. In contrast, the smaller the aperture (small lens opening = darker), the higher f/stop number and larger/deeper depth of field. Another helpful way to think about depth of field, in relation to f/stop number, is to think of the number of layers in focus. A low f/stop number would mean less layers in focus. Whereas, a high f/stop number would mean more layers/planes in focus.

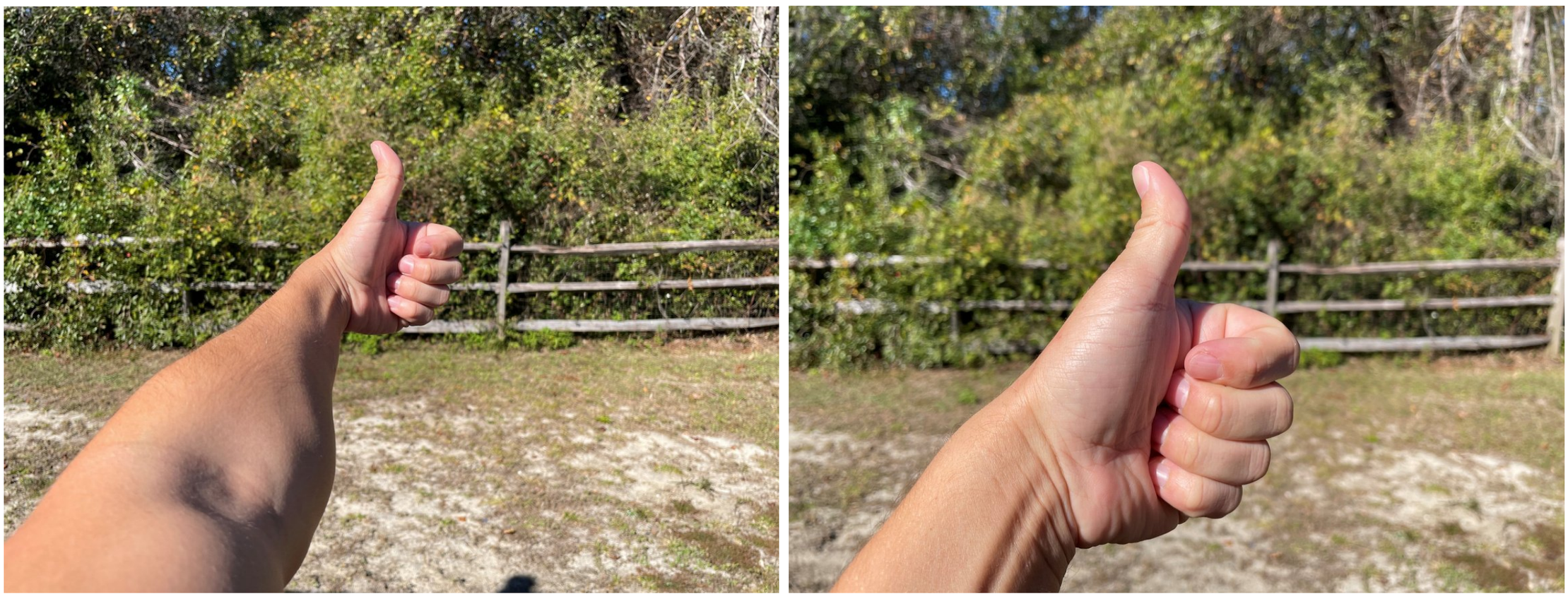
As I mentioned previously, portraits are sometimes captured with a very shallow depth of field (which means a low f-stop number), however, this is highly variable and can depend on the photographer's creative vision or the number of subjects within the frame. See the Situational Factors to Consider section below for more information when determining the aperture value of your composition.



➢ Focal Distance

The distance between your camera and the subject will also affect the image's depth of field. The further away your camera is from the subject, the deeper the depth of field. This means that when you are focusing on a subject from a distance, your depth of field will extend much deeper into the scene than it would if your subject was closer.

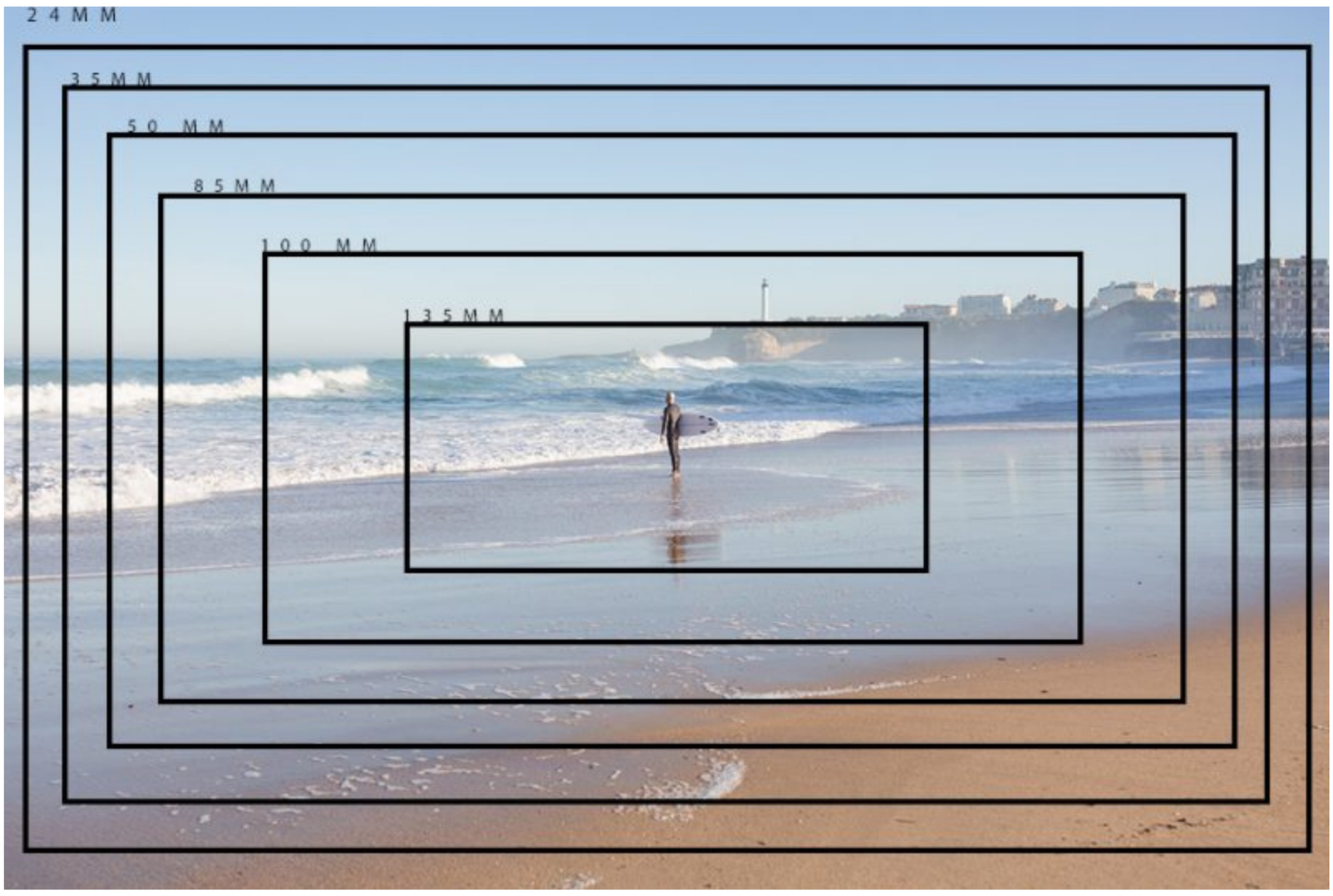
You can easily try this on your cell phone's camera to see the effect yourself. Hold your hand close to the lens and take a picture. Then, extend your arm away from the lens and take another. You'll be able to observe a difference in the bokeh right away. This is an example of how focal distance affects depth of field.



Here is how it looked on my phone's camera. The only thing that changed was the distance my hand was to the camera. You can see the noticeable difference in bokeh.

➢ Lens Focal Length

Lens focal length is also important to your decision-making considerations. The focal length of your lens will impact how deep or shallow your depth of field is. Longer lenses have more shallow depth of field, while shorter lenses have deeper depth of field.



"Long" and "short" refers to the field of view of your lens. A "short lens" like an 18mm has a very wide field of view. Conversely, a "long lens" has a more narrow field of view and would be any lens 85mm and up.

The focal length also has an optical effect on your image. Shorter focal lengths make subjects appear further away from their background, while longer focal lengths make the background appear closer to your subject.

These two images were taken with the same settings, but two different lenses. One was a 35mm, the other was an 85mm. Notice how the background has more bokeh on the image shot with the 85mm. The subject also looks more proportional. Lens choice is important for depth of field.

➢ Sensor Size

Lastly, the sensor size of your camera will also influence your depth of field. How this happens can be quite nuanced, but generally you can expect that smaller sensors will have deeper depth of field than larger ones. Unlike the other inputs here, there isn't a way you can change your camera's sensor size. It is important for you to know that the bigger the sensor, the better the camera's ability to isolate subjects and thus, the more bokeh you can achieve with a shallow depth of field. This is why most professional photographers elect to use full-frame cameras.

If a full-frame camera isn't in the cards for you right now - don't worry. You can still capture great portraits on your crop-frame camera, or even your smart phone by properly using the other depth of field inputs such as aperture, focal distance, and lens focal length.

Situational Factors to Consider

Sometimes, managing your depth of field can be challenging, especially if you are shooting in dynamic environments. There are many situational factors that will influence your depth of field decision. These factors include the number of people you are shooting, distracting composition elements, and the available light. Let's discuss how we can best apply our depth of field knowledge to portraits.

Depth of field will vary in different settings, such as when capturing **single subjects**, **multiple subjects**, and **moving subjects**.

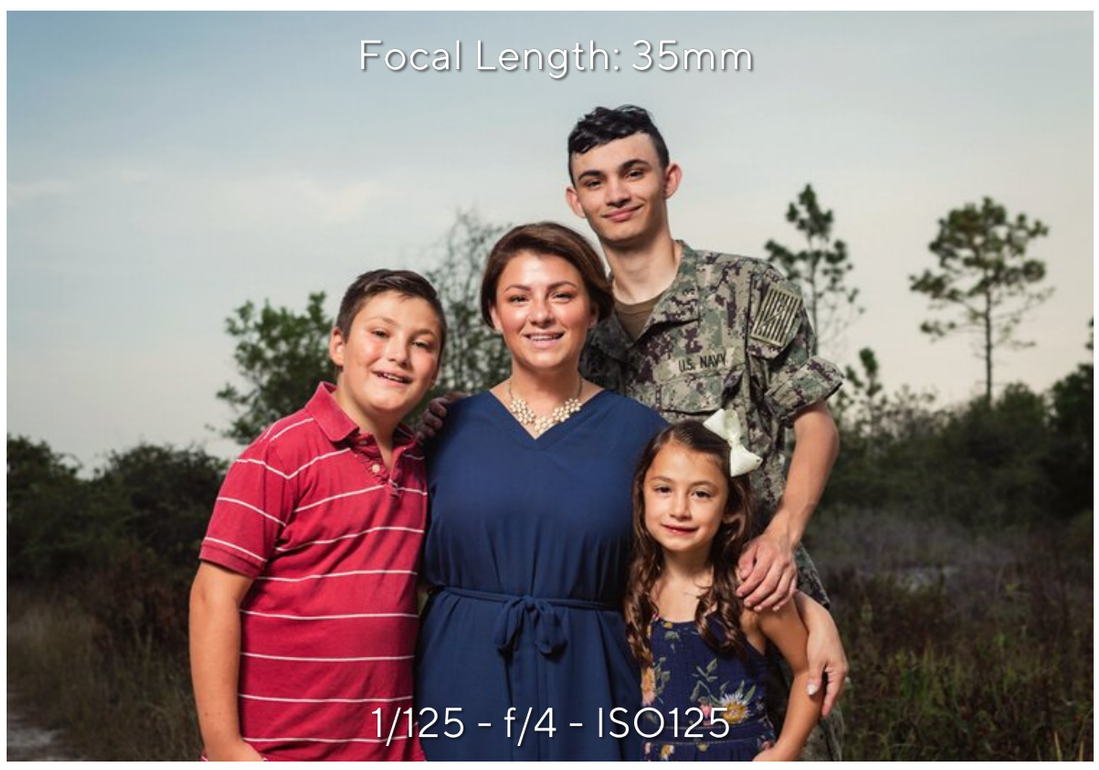
➢ Capturing Single Subjects

It's a popular trend in portraiture these days to capture subjects at the largest aperture possible. Generally, anything in the f/1.4 to f/2.5 range will really make your subject pop out. However, it's important to be aware of how shallow your depth of field is at this aperture value - the slightest shift of your camera's angle or distance from the subject can alter your focal plane, resulting in a loss of sharpness in the image. It's for this reason that I recommend avoiding the focus & recompose technique when shooting at shallow apertures. For those who aren't familiar with focus & recompose, it is a very useful technique of setting your focus point and then readjusting your camera into the composition that you want to capture. Because of the shallowness of your focal plane at wide apertures, I advise you use this technique sparingly if you want crisp focus on your subject, unless your camera has an automatic eye-focusing feature.

➢ Capturing Couples, Families, and large Groups

In portraiture, the general rule of thumb for capturing group or family portraits is that your aperture value should be equal to the number of people in your frame + 1. So for a family of four you'd set your aperture value to f/5. Now of course, we know that your depth of field depends on a number of factors, and you could get away with wider apertures if the family was posed on the same focal plane. Still, it's good general wisdom to follow especially if you're new to photography and depth of field is still a new challenge for you.

Typically when I capture families, I bring a lens with a longer focal length to compensate for the higher f-stop number I will be using (and thus, the less bokeh I will have in my image). With time and experience, you'll get a feel for which aperture value will provide you the desired depth of field for your composition.



For these images, I used different lenses and different aperture settings. With longer focal length lenses, you'll notice that the bokeh is acceptable even at higher apertures, while shorter focal length lenses have less bokeh even at the same aperture as the longer lenses. Also, take care to remember that the distance between camera and focus point also affect depth of field. After repetition, you will get a feel for what f-stop value will get everyone in focus.

➢ Capturing Moving Subjects

Your depth of field will be an important consideration for any shots that include movement. Walking shots are very common compositions in portrait photography, and it will be very challenging to get a sharp subject in motion using a wider aperture. Again, this is because of the shallow depth of field that wide apertures create. Generally, I raise my aperture to a *minimum* of f/4.0 or f/5.0 for movement shots, and I compensate for the loss in compression with a longer lens if possible.

For the set of images below, it took a few tries to get them in focus. The image on the left was the easiest, as it had the least movement. For the image on the right, I set my focus point at the subject's feet and shot continuously as she walked. For the image on the bottom, I "stopped-up" my aperture to f/4.0 so I could get her whole body in focus. Moving shots can be a bit tricky, but practice makes perfect. Remember, using a higher aperture for those shots is not a hard rule - all of these depth of field decisions depend on your overall vision for the shot.

Summary

As you continue in your photography journey, depth of field will play an important part in your portrait storytelling. With repetition and an understanding of the fundamentals behind depth of field, you'll be able to capture beautiful portraits in no time. Once you are familiar with the "rules" of depth of field, don't be afraid to break or bend them in your creative endeavors. Now, let's go over what we learned:

- Depth of field governs what is in focus and what is out of focus in your shot.

- Shallow depth of field gives you bokeh: that creamy blur that photographers and viewers love.

- Depth of field is a storytelling tool, a distraction remover, and a way to add depth & dimension to our image.

- Depth of field is affected by your aperture value (f-stop), focal distance, focal length, and camera sensor size.

- Aperture value correlates to light but is inverse to f/stop number and depth of field. The lower the f-stop number, the lower/shallow the depth of field. The higher the f-stop number, the higher/deeper the depth of field.

- If you're unsure about how to choose the right depth of field for your image, a good rule of thumb is to set the f-stop value equal to the number of people in frame + 1.
  E.G.: You would set your f-stop to f/5.0 for a group of 4 people in frame.

- Subjects really close to the camera, large groups of people, or moving subjects may require deeper depth of field.

Test your Knowledge:

Take this short quiz to see how well you understand the depth of field information you just learned. You'll find the answer key at the bottom of this page.

1. A shallow depth of field will have more bokeh than a deep one.
   A. True
   B. False

2. Depth of field can be used as a _____.
   A. Storytelling Tool
   B. Distraction Remover
   C. Way to add depth to your image
   D. All of the Above

3. The distance between your camera and your point/plane of critical focus does NOT affect your depth of field.
   A. True
   B. False

4. When photographing a large group of people, you should use a _____ f-stop if you want the group to be in focus.
   A. Lower
   B. Higher
   C. Wider
   D. Shallow

5. The depth of field of your image starts just before your point/plane of critical focus and extends behind it .
   A. True
   B. False

6. Which of these does NOT affect depth of field?
   A. The Focal Distance between camera and subject
   B. The Aperture Value of your lens
   C. The Focal Length of the lens
   D. The Shutter Speed of your camera

7. You capture two images with the same camera, one with an 85mm lens, and one on a 24mm lens. All settings and distances to subjects being equal, which image will have more bokeh?
   A. Neither
   B. The 24mm lens
   C. The 85mm lens
   D. Impossible to know with the information given

8. Sensor size does NOT affect depth of field.
   A. True
   B. False

Answer Key:

1. A, 2. D, 3. B, 4. B, 5. A, 6. D, 7. C, 8. B

About the Author

I'm Austen Hunter. I'm a portrait photographer located in the United States, originally from Los Angeles. I'm known for creating vibrant, posed, traditional photographs that tell beautiful stories and celebrate emotional connections.

I also strive to be a resource and mentor to others, which is why I made this free guide to help distill what I've learned to a new generation of photographers. If you're still eager to learn more, be on the lookout for my ***Posing Guide*** and ***Off-Camera Flash Guide for Photographers***!

I hope you'll consider connecting with me on *Instagram*, where I most actively engage with my audience. My username is **@austenhunter.photography**. Be sure to stop by and say hi! Alternatively, you can get in touch with me at my website: **www.austenhunter.com**.

Thank you for reading this guide! I really hope you enjoyed it and, even more importantly, learned something new from it.

Sincerely,