

The Great Triumvirate: Exposure Triangle

During our last lesson, we discussed everything we needed to know about ISO. The ISO is responsible for adjusting the sensitivity of your sensor to the light entering in your camera.

The ISO traces its roots from the age of traditional film photography. Back in the day, films were made out of crystals and the smaller the ISO number is, the finer the grains in the films are whereas while you increase your ISO number, you will start to notice that your image starts to grain more.

We also discussed the implications of ISO where the smaller number is, the more suitable it is for brighter situations. Consequently, as the ISO number increases, the more sensitive it is to light thus making it better for low-light situations.

ISO, together with the previously discussed shutter speed and aperture, are critical in photography. These three comprise a triangle that should be embedded in every photographer's minds - the exposure triangle.

Today we will further define the exposure triangle and how to apply it in every shooting situation you can think of.

The Importance

For the past few lessons, we have given importance to the ISO, shutter speed, and the aperture as individual concepts and we mentioned how critical they are in every situation. However, what we will be tackling today is their relationship and how important it is to find harmony between the three.

The exposure triangle is not just your usual triangle, it is THE triangle - a shape that determines every shot whether you are a beginner or a professional photographer.

The Exposure Triangle

Being a triangle, the exposure triangle has three sides and each side represents a critical element in photography.

Side 1: Shutter Speed

The shutter speed, as we discussed, is the one responsible for managing the light coming inside your camera by controlling the long you will be opening your shutter for exposing.

A fast shutter speed equates to lesser light coming inside your camera. With that said, without the effects of ISO or aperture, a picture taken at a relatively fast shutter speed will render to a darker image.

Furthermore, we also discussed before that a fast shutter speed will be able to capture moments mid-action better than a relatively slower shutter speed which is more suitable for lower-light situations.

Side 2: Aperture

The next side of the triangle is aperture. Aperture is likened to the human's iris which dilates in order to let in more light.

We discussed in the previous lessons the math behind the aperture and hopefully you got the jist of that already. What the math of aperture is saying is that as the number in your f-stop increases, your aperture size decreases.

Naturally, a wider aperture and a smaller number in your f-stop will give you more light while the opposite happens when you have a large number in your f-stop.

Side 3: ISO

Last, but not the least, is the ISO. The ISO is the latest element of the exposure triangle that we discussed in this series of lessons so if you've been reading them this should be easy for you.

The ISO is responsible for the sensitivity of your sensors to light. The smaller your ISO number is, the less sensitive your sensors will be which means that as you increase the number of your ISO, you are allowing more light to affect your sensor.

Now we mentioned that using the exposure triangle is all about finding the harmony between all of these three elements. Although shutter speed, ISO, and aperture are equally important, the real skill is using all three at the same time to create the perfect shot.

For starting photographers, finding the right balance between those three elements involves a lot of trial and error. Unlike experienced photographers who have been through many situations already, starting photographers may not be well-equipped yet to judge a situation's light setting in one glance.

Right Balance

Throughout this lesson we've been talking about balance among the three sides of the exposure triangle, but how do we exactly do that?

In order to find the balance, you have to start from somewhere first. As a pro tip, I recommend you starting from the shutter speed first.

Blurry images are almost unusable. These images are the first ones you delete on your camera since they are not editable anymore. If you remember, the shutter speed is the one that determines the time frame of your shots so if you want to avoid unusable blurry shots, you have to start from the shutter speed.

Once you have adjusted your shutter speed to the situation and ensured that you will be taking minimal blurry shots, you may now proceed to either the aperture or the ISO. Choosing which one between the ISO and the aperture will you be adjusting will depend on the situation.

My personal recommendation is to adjust the aperture first because the ISO's effects can simply be edited through your editing software.

If you remember, the aperture is also responsible for the element of **depth of field** - an element that is very useful for portrait photos. With that said, adjusting the aperture can be a matter of balancing your preference or need in regard to the shutter speed.

Lastly, adjusting the ISO or the whatever you saved for the last is a way of "completing" your image in terms of exposure. Remember that the relationship between the three elements is interdependent where they complete each other by complimenting.

In order to adjust the last element, simply take a sample photo with your set shutter speed and aperture. After that, adjust your ISO accordingly - increasing the value if it's dark and decreasing if it's too dark.

However, you also have to realize that adjustment through the exposure triangle is not linear. In line with this, in the event that your last element somehow does not complete your adjustment, you can simply adjust the others minimally as well.

Conclusion

Today we dwelled on the topic of the exposure triangle which is considered as the most important triumvirate in photography. The exposure triangle is comprised of the shutter speed, aperture, and the ISO.

The exposure triangle is all about finding the right balance between these three elements to produce the perfect image. You can start from the shutter speed, make your way to adjusting the aperture, and then complete it by adjusting the ISO.

You can also do it the other way around because the exposure triangle is not linear in nature.

To further visualize the exposure triangle, we will dwell on diagrams and examples during the next lesson. Be sure to share these articles to your friends to help them improve their skills as well.