

## The First Pillar of Photography

Think of how it would be if every image we shoot has the same level of sharpness without any variation? How unglamorous would that be! Thankfully, photographers have the power to vary sharpness levels, selectively focus on the subject and induce compelling blurs in their photographs, using "Aperture."

Every photographer strives to get the right exposure in a photograph. In order to record the correct amount of light, the camera has three exposure controls - the Aperture, the Shutter speed and ISO. Aperture is one of the three foundations of photography.



Hide and Seek © Hema Narayan EFIP, AFIAP, cMOL, QPSA

f/1.8, 1/1000, ISO 200

### Size of Aperture: Large vs Small Aperture



diaphragm' through which light passes to enter the camera. Put most simply - it is the way our eyes work. The iris in our eyes expands or shrinks based on the amount of light around us, controlling the size of our pupil. In photography, the 'pupil' of our lens is called, the Aperture.

### The First Pillar: Aperture

'Focused to Blur' - a quote that made me think when I read it the first time. But this seems most pertinent in photography as we can 'blur' images that are actually 'in focus.'

Ever noticed an opening at the back of your lens? This is the adjustable 'hole or

When we hit the shutter release button of the camera, the shutter opens up allowing the camera's image sensor to catch a glimpse of the scene we're capturing. The aperture we set impacts the size of that opening - the larger the opening more of the light gets in - the smaller the opening less light reaches the camera sensor.



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f/4.5, 1/2000 sec, ISO 400

### The Math of the Aperture

There's a catch in the math of aperture numbers, that confuses beginners more than anything else. Let's demystify it...

Aperture is measured in 'F-stop' or 'F-number' and written as F/2.8 or F4 (without the /). Given this premise, things important to understand are as follows:

- We understand that the larger diaphragm lets in more light than the smaller. So logically we think that smaller numbers mean smaller openings. But, it's just the opposite - smaller the numbers, larger the aperture openings, while large numbers represent small apertures.

A typical aperture scale would involve f-stops like f/1.2, f/4, f/8, f/13, f/22.

So here, a f/2.8 is > f/4.5 and much > F/16. It seems the wrong way around when we first hear it, nevertheless this is a basic fact of photography.

- As the numbers increase from a smaller to a bigger value, the aperture of the lens decreases in size with every stop, allowing lesser light through the lens.
- The language can get tricky too; since some refer to it as, 'wide or narrow aperture', while others as a 'large or small aperture'. What is the difference?

- Wide aperture = wide opening in the lens → achieved with small aperture numbers, like f/1.2, f/1.8 or f/2.8



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f7.1, 1/100 sec, ISO 400

- Narrow aperture = Narrow opening in the lens → achieved with larger aperture numbers, like f/8, f/13 or f/22

### Aperture and Depth of Field - Brothers in Arms

Aperture is prominently used to highlight a subject, but then does the change in aperture number each time really impact the outcome of the image? Well, it does.

Changing apertures changes what is called the Depth of Field (DOF) apart from the 'brightness of the image.' Depth of Field is that amount of the image that will be in sharp focus. A photographer can achieve three types of DOF in any image:

1. Shallow DOF: here the main subject will be in sharp focus while the rest will be

fuzzy- achieved with smaller F-number like f/1.4 or f/2.8. Ex: Peeping Ganesh is in focus while the context is fuzzy.

2. Moderate DOF: here the main subject is in focus while the rest has details enough to show the context - achieved using mid numbers, like f/4, f/5.6

3. High DOF: here most of the image will be in focus whether it's close to your camera or far away - achieved using higher f/number. Ex: f/9, f/13. Ex: Both the foreground and background in the landscape photo are in focus.

Overall the aperture combined with the focal length of the lens determines the depth of field of an image in addition to the distance from the subject and the angle of composition.

That is Aperture, the power tool that helps us create sensational blurs while keeping our main subject in focus. The math is always confusing to understand or memorize in the initial years of anyone's photography journey. With time and practice, we come up with our own versions of how to remember aperture and its magical functioning. For me, my favourite Mantra for relation between the diameter and the DOF is, 'Lesser the number, lesser in focus and more the blur' and vice versa.

Having said these, have you wondered how else the aperture affects your photographs? Want to list a few of your thoughts?

(To be continued)

### Did you know?

Most portrait photographers capturing people and their facial expressions might know the fact that the left side of our faces looks better than the right side in photographs. This is based on an interesting study by Kelsey Blackburn and James Schrilto, conducted on 'Emotive hemispheric differences measured in real-life portraits using pupil diameter and subjective aesthetic preferences'. The study revealed that the left side of our face exhibits a greater 'intensity of emotion' and thus we perceive it as being more attractive.



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## Street Photography Session at SJCC

YPS Street Photography subcommittee worked with St. Joseph's College of Commerce (SJCC), Bengaluru, to conduct a webinar on Facebook Live on 7th August, for the Travel and Tourism students of the college. There were around 120 participants in the webinar, including some staff members. The session was focussed on sharing the know-how of street photography, global trends, do's and don'ts, references and such useful information and tips. Speakers from YPS Bengaluru for the session were Sri Subash Rao, Sri Madhusudhan Srinivasan and Sri Thejas Rajaram. Session was mentored by Sri Srinath Narayan and facilitated by Sri Manju Vikas Sastry and Sri Hardik P Shah.

Overall feedback from the participants and the college was good, with 65% of the participants rating the session as very helpful, while remaining 35% rating it as helpful. 70% of the respondents rated 8 or above in the scale of 10 on how enjoyable the session was. YPS is glad to have partnered with SJCC in meeting the objective of the session.



**Madhusudhan Srinivasan** AFIAP, AFIP, cMOL, Lead, Street Photography Subcommittee

"It was nice working with Mr. Vikas on this collaboration. He brought in the best minds for the workshop and went out of the way to make it international by bringing in Mr. Thejas from the US. All the sessions were well appreciated by the participants. On the whole it was a great experience, wishing YPS all the very best in their future endeavours."

**Dr Rathil David**, Program Coordinator, (Travel and Tourism) Program, St. Joseph's College of Commerce, Bengaluru.



Street Photography