# Dapto Camera Club Magazine.

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# Anew day, In a new year,

Please wear a MASK when you leave your home.



# Controlling Light in Photography. Control the Light and You Control the Shot!



Controlling light in Photography – The term "photography" comes from the Greek "phos", meaning light, and "graphis", which means to draw or write. Photography can be defined as "the art and science of altering images on a sensitive surface through action of light". We see that there is at least in principle, some understanding of the nature of light and how to control. Which is fundamental to one's success as a photographer.

#### The Behaviour of Light

In Part 1 of this article, the behaviour of light which concerns the portrait photographer is addressed. We shall begin to explore methods used by portrait photographers to control the behaviour of light. Espe-

#### Links of Interest:

Viewbug - <u>http://www.viewbug.com/</u> ePHOTOzine - <u>http://www.ephotozine.com/</u> Federation of Camera Clubs [NSW] - <u>http://www.photographynsw.org.au/</u> Australian Photographic Society - <u>http://www.a-p-s.org.au/</u> Gurushots - <u>https://gurushots.com/</u> Free Lessons with Serge Ramelli - <u>http://photoserge.com/free-lessons/all</u>



Norm Blake

cially when rendering artistic interpretations of their subject, living or otherwise. There are many aspects involved when manipulating light for the purpose of portrait photography.

One fundamental aspect is always exposure. The degree of sensitivity of light (photo-sensitivity) on the surface to which an image is to be fixed. Whether film or digital, it dictates the required intensity and length of exposure.

#### The Aperture

The aperture of most lenses is designed to allow control over the intensity of light falling onto the film or sensor. The aperture is basically a hole or opening through which all light reflected by the subject is admitted into cameras.

The intensity of the reflected light being allowed to expose the film or sensor is mostly controlled by the size of this opening.

The size of the aperture opening or hole is commonly regarded in f/stops. F/stops can seem confusing at first. The f/stop numerical value represents a fractional opening of the aperture in the lens. So a decrease of one f/stop actually results in the intensity of light being admitted or allowed into the camera to approximately double. So an increase by one f/stop will result in the intensity of light being cut by half.

One may prematurely conclude that proper exposure is simply obtained by adjusting the size of the opening or aperture. Until the intensity of light admitted in is just right.

However, the depth of field or DOF is also a useful function of the size of the aperture opening. DOF is the range of distance both in front of and behind the subject which is in focus.

In general, depth of field or DOF increases as the size of the aperture opening decreases and vice versa.

#### Shutter Speeds

Controlling the exposure is also achieved by adjusting the duration of the light hitting the film (or image sensor). To control the length of the exposure, most modern cameras employ a shutter. The shutter may be thought of as a metal curtain with an opening. A slit that passes in front of the film (or image sensor) at a pre-controlled duration or speed.

Shutter speeds are expressed in minutes, seconds and fractions of a second.

So, a shutter speed of 1/100th of a second allows twice the duration of exposure as a shutter speed of 1/200th. The resolution of an image is in part, determined by the length of exposure in capturing the image. A standard approach in portrait photography is to set the aperture size to give the desired depth of field. Then to set the shutter speed to obtain an acceptable exposure level.

#### The ISO

The third fundamental parameter that is adjustable when controlling exposure of an image is the film speed (or ISO/ASA number). Film speed is a quantitative description given to the "chemically derived" photosensitivity of any material used in the film.

The higher the ISO or ASA number, the more photosensitive the film or sensor is. Faster film speeds will enable quick action shots and low light images to be more easily captured.

However, faster film speeds normally also result in increased graininess or "noise" in an image with decreased sharpness and detail. Similarly, the ISO or ASA number on most modern digital cameras can be adjusted to manually control the sensitivity of the digital image sensor, with a similar effect.

All light is controlled from within the camera by manipulating the duration and intensity of exposure, and by choosing an appropriate film speed for the light conditions at hand, or by adjusting the sensitivity of the digital image sensor.

These methods will work very well to control the overall or average exposure of the composition.

For a finer degree of controlling light in photography to enhance spectacular highlights, falloff, and softness of shadows, this is best achieved from outside the camera.

There are many methods used to accomplish this. In Part 3 of this article, several such methods will be discussed. Until then, have a good day and happy clicking.

#### Related Products for Controlling Light in Photography

Breakthrough ND Filters - Great for reducing light from 1 to 6.6 stops in one filter! Breakthroughs are the best you can get for image quality and accurate colour representation. I use them all the time. Circular Polarizer Filters - A must have for photographers of all levels!

# How to Use a Frame Within a Frame in Photo Composition

By Josh Dunlop

Using a frame within a frame is a great way to lead your viewers' eyes into a photo. This can add depth and context, as well as drawing their attention to the subject.

The technique of using a frame within a frame in composition is somewhat underused. As a method of drawing attention to a particular focal point in an image, it can be remarkably effective. So, how do you frame within a frame in your shots? Keep reading to find out!

# What Is Foreground Framing?

Foreground frames are the simplest way of using a frame within a frame in the photo. A photo of a scene with a foreground feature makes for a much more interesting build-up to the subject. In some cases, it can even carry equal weight to the rest of the photo.

Here is one of the many composition tips: choose a part of your scene to be the subject. Then, find a shape within the photo in the foreground that will 'hold' it. Below is a simple demonstration of this.





# What Is Background Framing?

Foreground framing is an easy and obvious method of using a frame within a frame. However, there are other subtler, more imaginative ways to make this happen. One such technique is background framing. The most important thing is what I always suggest: think before you shoot.

Have a good look around at what you can and can't use. Decide how you want to compose your shot. The more you do this, the faster you'll

be and the better your shots will come out.

Below is an example of using a building that forms part of the background. Framing from the background reinforces the subject and leads the eyes in an obvious order.

# Leading The Eye

Using a frame within a frame is a great composition tool to lead the eye in a particular direction or towards the subject.

In the image below, the lines along the left upper and right bottom corners encourage the viewer to look towards the centre of the image. The eye is drawn towards the centre of the image before moving outwards. It isn't only full frames that do the trick, though. Half frames can be just as effective if done right.



# Adding Depth

One of the best reasons to use a frame within a frame is to pro-

vide depth. This can be encouraged and accentuated by the use of a shallow depth of field.

Another method to reinforce a sense of depth is by using multiple frames within a photo. You can see this clearly in the image below. It's easy to create depth in a photo by using two or more objects (like the door frame below). In addition to the stone ring, the trees along the pathway also serve as a natural, less obvious way of photography framing.



# Paths

So you've worked out how to lead the eye using framing in photography and understand a frame's effect on depth.

It's now easy to create a path for your eye to be led down, as shown in the image below.

The repeating frames within the frame start to diminish the farther away they get. This is one great way of drawing your eye to a single point.

# Finding the Perfect Exposure

From our post on metering modes, you'll understand how a cam-

era looks at a scene. If it sees a single bright point in the centre, it's likely to try and expose for that. So, when you use the frame within a frame technique, the frame can be underexposed.

This can have its creative uses but be careful if it's not the look you're trying to achieve.

There's a distinct difference between the overexposed and underexposed areas of the photo. There's very little which you can do without going into complicated Photoshop techniques.

So, put your camera into manual mode and find an exposure that you're comfortable with.



This provides the photo with a sense of location and interest, rather than just a scenic view. It leads the viewer's eyes to look through the frame of the window, something people are used to doing.

# Conclusion

Adding a frame within a frame is an easy way to add depth and interest in your image.

Framing photography is a great composition technique as you can use it to guide the viewer's eye to the subject, following a certain path. If you practice enough, you will soon see frames everywhere!

# Making the Frame an Equal Part of the Photo

If the frame is particularly interesting, don't neglect it. Use it!

I found this run-down old building in Greece. The window frame was so knackered and full of character that I considered it just as important to the composition as the view through it.





# Make Your Photo Subject Really Stand Out

by Andrew Goodall

Great photography subjects are all around us. You don't have to go far to find interesting people, flowers, or wildlife. The real test is to use your skills to create a photo with genuine impact.

How do you make your subject really stand out in a photograph? It is tempting—but quite wrong—to blame the camera when your photo doesn't work out the way you want. You need to know right now that a more expensive camera will not automatically make you a better photographer. In truth, the techniques in this article will work for almost any camera. All you need are manual aperture and shutter speed settings, and a decent zoom lens.



Photo by Māris Pehlaks; ISO 80, f/5.6, 1/100 exposure.
Here are a few simple tips for adding impact to your subject.
1. Highlight a Brightly Lit Subject Against a Dark Background
If you're shooting a subject in full sunlight, with a shady background, the subject is always going to stand



out. This is a simple principle to understand, but it is a little easier said than done.

When your photograph has two very different levels of light, the light meter in your camera can be confused. It may expose for the dark background, causing your subject to be overexposed. The trick is to expose for the subject. You can't do this on automatic. What you need to do is switch your camera to manual, and adjust the aperture and/or shutter speed settings until the photo is underexposed by one or two stops (according to the light meter). When you get the balance right, you should have a dark background and a perfectly exposed subject.

Photo by Michael Levine-Clark; ISO 100, f/5, 1/500 exposure.2. Use a Small Depth of Field to Blur the BackgroundYou've seen plenty of photos where the subject is sharp and clear, but the rest of the picture is completely



out of focus. You will find this an easy way to add impact to the subject and a three-dimensional effect to your whole photo. To achieve this, use a combination of a large lens and a wide aperture. First, zoom in on the subject with your largest magnification. This will naturally reduce the depth of field. Then adjust the aperture to its widest setting. A wide aperture will reduce the depth of field even further.

The closer you are to the subject the more pronounced the effect becomes.

3. Use a Wide Angle Lens to Exaggerate Perspective This technique is almost the opposite of Tip #2. A wide angle lens makes everything in your photo appear much smaller, so objects in the distance seem much further away than they really are. Meanwhile, you can stand very close to a subject in the foreground (a person, animal, etc.) and still fit it in the frame.

Photo by Flickr user tifotter.

As a result, your close-up subject will appear to tower over a background in which everything else seems very small and distant. Although the surroundings will be mostly in focus (the wide angle lens has a much larger depth of field), they will seem relatively small and insignificant, making your subject seem larger and more domi-

nant by comparison.

So there you have three fairly simple ways to add impact to the subject in your photos. Because my background is in nature, I usually think in terms of wildlife, but you can probably think of many subjects that will benefit from these techniques.

The great thing is that you don't need a professional camera to try these ideas out. As I said earlier, if you have a zoom lens and manual control of your aperture and shutter speed, you can add impact to your photos with just a little practice.

Even better, in the age of digital photography, practice costs nothing...so get out there and start snapping!

#### TUTORIALS

<u>Photomatix Pro 5 – Review of the new features</u> – this well produced video tutorial by Klaus Herrmann shows us some of the new features and improvements in the latest version of HDRsoft's world-class merging and tone mapping tool, Photomatix.

<u>Amazingly In-Depth Video Tutorial on Product Lighting</u> – Karl Taylor produces a 16 minute video tutorial that breaks down the entire process used to create a stunning product photograph. Each step and technique is explained to give the viewer a deeper understanding of how to create that next epic image.

<u>Photoshop Tutorial: Retouching Shiny Skin</u> – a highly interesting 25 minute video tutorial takes you through the process of improving the appearance of shiny skin in portrait photography. This unique approach produces great results and the tutorial takes you through the entire process.



Last Light of the Day by Infomastern, on Flickr

#### **GREAT PHOTOGRAPHY**

<u>Ian's Coffee Stop</u> – our work here at Toad Hollow tends to focus on heritage architecture and things of interest to those who love Vancouver Island. Our recent project involving an abandoned city landmark has been a source of wonder and delight for us as we find ourselves amidst an outpouring of support that finally culminated in me being interviewed by CTV news and featured on TV last week. If you would like to see what all the hullabaloo is all about, pop by our blog to see the story for yourself.

<u>Sleepy Hollow Farm</u> – one of the best pastoral scenes I've seen recently, a shot that features rustic buildings sitting nestled in the beautiful countryside. Steven Perlmutter's breathtaking shot takes you right into the frame by following the meandering road and crooked fence, creating a fabulous natural leading line. <u>burnt out car in derelict army barracks tunnel</u> – David Stoddart finds the most interesting things. He then captures them, forever immortalizing things that many of us would not see without David's art. This incredible photograph finds him encountering a burnt out shell of a car in a pitch-dark tunnel.

<u>rust and decay</u> – for the fan of rust and texture, a picture to delight one and all. Oneowner finds a classic Chevrolet pickup truck and delivers a detail shot featuring a badge on a worn and weathered paint job. This picture speaks to the character of the truck, once a dependable companion to someone.

<u>Above the Fray</u> – a beautiful landscape shot from Curt Fleenor that features a wonderful waterfall scene captured in the heart of the forest. Curt's silky smooth running waters contrast against the lush greens and natural details in the surroundings.

<u>Shooting for the Stars</u> – the beauty of a night sky under the watchful eye of the Milky Way galaxy, captured by Chris Nitz. The foreground of this shot features silhouettes of the landscape adding a great dimension.



Seewind I by liebeslakritze, on Flickr

<u>The Crabapple Garden</u> – a lovely pastoral scene from the studio of Jim Denham finds us in a sun drenched crabapple garden. Terrific details in the landscape and beautiful natural colors fill the screen with a scene that also has a wonderful bench for an added element.

<u>Wilson Peak Sunset</u> – Rick Louie shares a rolling landscape with incredible beauty and snow covered peaks in the distance. Long shadows and dappled light criss-cross across the vista, producing great drama. <u>Boathouse at night</u> – this is a wonderful long exposure piece from the studio of Dave Van de Laar that features simply incredible colors and tones. A shaky reflection in the water mirrors a character-filled boathouse back to the viewer as it finds itself surrounded by vibrant colored trees.

10 things I love about Halloween – Spencer McDonald shares a pair of wonderfully themed photographs, just in time for Halloween. His musings to detail a list of candy bars adds a dash of humor to the recipe, but the real star of this post is the wonderful and detailed images.

<u>Totem Morning: A Sneak Preview</u> – this is a really terrific concept piece by Laurie MacBride that features a super-still reflection in the mornings waters, creating an abstract image with the two halves of the perfectly composed image. As Laurie notes in her post, as you spend some time observing the piece, certain details and visions begin to appear to those with an open mind.

<u>Mountains Shadow</u> – one of my favorite things about autumn is always the photography it produces. No other time of the year produces vivid colors and beautiful landscapes quite like we see during this

time. This terrific shot by Andy Gimino is a wonderful example of this, full of wonderful tones and details. <u>Autumn Colors</u> – another gorgeous autumn scene, this one produced and shared here by David. This shot features the quintessential trees that we all look forward to and finds further interest in how the scene is perfectly reflected back by the mirror produced from the surrounding waters.

<u>driving in the park</u> – this wonderful fall picture finds us enjoying a lovely ribbon of roadway that leads the viewer right into the heart of the frame. Once again the gorgeous fall colors work with the surrounding landscape to produce a special piece in this picture, one the benefits greatly from the natural leading line. A fabulous shot by Nathan Brisk.

<u>Amsterdam by night</u> – terrific details in the architecture plays with the soft lights from the fading light of day to create a stunning photograph of Amsterdam architecture. Old stone bridges form natural leading lines, accented by the lights of the city in this wonderful image by Ming Han.

<u>Mangart</u> – a line of rowboats sits under the watchful eye of majestic mountains in the distance in this piece from Paolo Fanti. As we look across the fog covered lake, we find snow covered mountains in the distance adding interest and drama to the natural setting.

<u>Red Mill, Clinton NJ. #3</u> – lovely colors and details emerge in this scene that finds an old wood mill sitting beside a pristine flowing river. Bill T's shot features terrific details in the mill's architecture and wood and stonework, set off wonderfully by the vibrant colors of the trees that surround it.

<u>A Short Eared Owl out hunting...</u> – an incredibly shallow depth-of-focus works to completely isolate this terrific short eared owl as it soars through the air in this shot by Austin Thomas. The spirit and personality of the bird is really perfectly captured in this shot that features simply awesome details.

<u>Into the Mist</u> – fog, mist, a fast moving waterfall and epic autumn colors all converge in this fabulous picture from Brian Donovan. This is one of those shots that reveals more to the viewer as you spend time with it, including a wooden walkway far below that adds great context and scale to the scene.



Illuminate my dark soul by j-dub1980(THANK YOU FOR 100k+ Views), on Flickr

<u>Moraine Magic</u> – as advertised, the majestic beauty and magic of the Canadian Rockies is really second to none when it comes to striking imagery. Philip Kuntz's shot features the wonderful beauty of the lake and it's stunning reflection, and the epic drama of the mountain looming overhead, draped in wonderful natural light.

<u>A walk around Markree</u> – the incredible architecture and landscapes of natural Ireland are explored in this wonderful post that features a series of pictures by magnumlady. The beautiful rich greens of the country-side truly pop out of the screen at the viewer, accented by the wonderful elements and details found in this part of the world.

<u>Chateau de procureur</u> – the fan of natural decay and weathering will love this post that features a series of shots of the inside of a long abandoned house. Mother Nature herself has been busy dismantling this place over time, and this collection of photographs documents this all in a profound and mesmerizing way. <u>Pfeiffer's Closed Door</u> – Mark Gvazdinskas' epically dramatic shot features a natural formation that defies

the will of man. An opening in a huge rock wall that leads to the ocean is pounded by relentless waves as a kayaker tries to make his way through, adding a ton of artistic tension and drama to the beautiful surrounding landscape.

<u>Check Mate</u> – colors and lines come together in this photograph by Joe @Plasmatico. An underground subway station is empty as Joe visits, creating the perfect photo opportunity to create this stellar picture that features all sorts of wonderful elements, brought together by the terrific vanishing point that the viewer encounters by following natural leading lines.

<u>Soaring with Intent</u> – the incredible majesty and drama of the bald eagle is forever immortalized in this stunning piece by Phoo (mallardg500) Chan. The incredible details in the bird are accented by the shallow depth-of-focus, and the composition lends itself perfectly to artistic tension.

<u>Stag</u> – a stag standing tall and proud in the golden hour is the main focus of this wonderful photograph by James Morris. As the glorious creature stares back at the camera, we find ourselves mesmerized by it's steely gaze, wondering what it is thinking and feeling at this precise moment.

<u>Tombs at Al Ayn</u> – David A Lockwood captures a stunning image in the heart of Oman featuring what I believe to be very old tombs sitting amidst the incredible natural landscapes of the area. David's wonderful composition features both great colors and details from the foliage as well as dramatic visions of the majestic mountains around it all.

#### **INTERESTING BLOGS**

<u>Amazing Miniature Scenes Shot with Model Cars, Forced Perspective and a \$250 P&S</u> – a terrific concept married with exquisite details converges for artist Michael Paul Smith as he creates something truly unique and rather spellbinding. Based on the premise of forced perspective, this series of shots by Michael will have you taking a second and third look to make sure what you're seeing isn't really real.

# 5 Black and White Photography Tips

A Post By: Darren Rowse



Continuing the Black and White Photography theme we've been on lately in the latest forum assignment (where the photos featured in this post were submitted) I thought I'd share five pretty random Black and White Photography Tips.

#### Black and White Photography Tips

1. Shoot in RAW

I know many readers of DPS can't shoot in RAW (because their camera doesn't offer it) or don't shoot in RAW (because they either don't know how or don't like to) but for the most control in the

post production phase of converting your color images into black and white ones – you'll want to shoot in RAW if your camera does allow it. Of course shooting in JPEG doesn't stop you shooting in black and white – but if it's an option, give RAW a go, you might be surprised by what it offers you in post production. More on RAW vs JPEG here.

#### 2. Shoot in Color

If your camera doesn't allow you to shoot in RAW (or you choose not to) - shoot in color and do your conversion to black and white later on your computer.

While most digital cameras offer you the option to shoot in Black and White (and can produce some reasonable results) you have more control over your end results if you have the color data to work with in your conversion on your computer. (read more on the choice between shooting in black and white or post production conversion).



Update: There is an exception to shooting in Color and it's when you're taking note of point 1 above (shooting in RAW). When shooting in RAW and switching to Black and White mode you see your results in the LCD in black and white but the camera actually records all of the information (including color) – the best of both worlds. But if you're shooting in JPEG – shoot in color and do the conversion later. Thanks to Joost (in comments) for the reminder to include this.

#### 3. Low ISO

Shoot with the lowest possible ISO possible. While this is something that most of us do in color photography it is particularly important when it comes to black and white where noise created by ISO can become even more obvious. If you're after this 'noise' (or grain) you can always add it later in your post production – but it's harder to go the other way and take noise out.

#### 4. When to Shoot

Many digital photographers actually prefer to shoot images for Black and White in low contrast situations. So an dark or overcast day can be a great time to shoot out door shots.

Ironically these are the days that those who shoot only in color sit at home complaining about the 'poor light'. So next time you find yourself with a dark and gloomy day – shoot some black and white shots. 5. Composition

Most of the general tips on how to compose or frame a good shot apply just as well to black and white photography as they do when shooting in color – however the main obvious difference is that you're unable to use color to lead the eye into or around your shot. This means you need to train yourself to look at shapes, tones and textures in your frame as points of interest. Pay particularly attention to shadows and highlights which will become a feature of your shot.

# How to Capture Motion Blur in Photography (6 Tips)

A Post By: Darren Rowse

Are you looking to capture motion blur in your photography?

While photographing motion blur might seem difficult, it's actually pretty easy; with a bit of camera knowhow, you'll be taking stunning photos like a pro.

And that's what this article is all about: giving you the tools and techniques you need to get beautiful results!

Note that motion blur can look great in any photography genre, so don't try to limit yourself. Instead, embrace the power of the blur!

## 1. Slow down your shutter speed



Here's the *fundamental* motion blur tip: Use a slow shutter speed.

You see, the reason for motion blur is simply that your camera's shutter remains open for a significant period of time. In other words: you get motion blur when your shutter speed is long, whereas you freeze the action when your shutter speed is short. So the number one tip for capturing movement is to select a longer shutter speed.

If your shutter speed is too fast (e.g., 1/4000s), you're not going to capture much movement. But if you dial in a lengthy shutter speed (e.g., five seconds) you won't need your subject to move much at all before

you start to see blur.

How long should your shutter speed be? Here, the speed of your *subject* comes into play. A moving snail and a moving race car will give you very different results at the same shutter speed. The slower your subject, the slower the shutter speed needs to be to create blur.

The other factor that comes into play when determining shutter speed is how much light exists in the scene. A longer shutter speed lets more light into your camera and runs the risk of blowing out or overexposing your image. Below, we'll cover some ways to let less light in (so you can use long shutter speeds *without* 

overexposure concerns). Bottom line:

There's no *one-size-fits-all* shutter speed for motion blur. It'll depend on the speed of your subject, the brightness of the scene, and how much motion blur you want to capture. The key is to experiment!

#### 2. Stabilize your camera

There are two ways to get a feeling of motion in your images:

1. Have your subject move.

Have your camera move.



But for the type of photo we're after today, it'll be the *subject* that's moving. In such cases, you need to do everything you can to keep your camera perfectly still. Otherwise, you'll capture a blurry subject – but you'll also end up with a blurry background. How do you stabilize your camera?



A tripod is ideal, but you can also place your camera on some other steady object (e.g., a table or a bench). I'd recommend using a remote shutter release or a self-timer mechanism; that way, you can trigger the shutter *without* touching your camera (because the more you touch your camera, the more likely it is that you'll introduce blur).

# 3. Try Shutter Priority mode

As you know, the shutter speed is crucial to achieving a beautiful blurred look. Even small changes will have a big impact upon your shot – so you should use a camera mode that gives you full control over your camera's shutter.

You have two options. First, you can switch your camera to full Manual mode. It'll work well, and it's a good idea for more experienced photographers – but in Manual mode, you'll also need to select your aperture and ISO (and you'll need to make sure that the shutter speed, aperture, and ISO interact to create a perfect exposure). So if you don't yet feel confident working in Manual mode, you have another option:

#### Shutter Priority mode.

With Shutter Priority, *you* set the shutter speed (and the ISO, if you so choose), but your camera will set the aperture to ensure the shot is well exposed. It's a very handy mode for motion blur photography because it ensures you get the movement effect you're after while *also* capturing generally well-exposed images.

## How to compensate for long shutter speeds when there is too much light

Remember what I said about a long shutter speed? The longer the speed, the more light that will get into your camera, and the brighter your photos will be.

So unless you compensate for this, whenever you try to capture motion blur, you'll end up with overexposed shots.

Below, I'll suggest three easy methods for preventing this overexposure.

(Note: A fourth method is to simply wait for the light to change - i.e., for it to get darker. Many shots that incorporate blur are taken at night or at



#### dawn/dusk for this reason.) 1. Use a small aperture



Here's the first, and simplest, method of preventing overexposure: Narrow the aperture.

Because the narrower the aperture, the less light that will hit the camera sensor.

If you're shooting in Shutter Priority, your camera will actually narrow the aperture for you. As soon as it detects a slow shutter speed,

it'll close down the aperture and deliver a well-exposed shot. But if you're shooting in Manual mode or Aperture Priority, the aperture can generally be changed via a dial on your camera. One thing to bear in mind: Adjusting the aperture won't *just* affect your photo's exposure. Aperture also affects the *depth of field*, which refers to the amount of the scene that's sharp. A wide aperture creates a limited depth of field, like this:



Whereas a narrow aperture ensures the entire scene is sharp throughout:

So while it's easy to combine a deep depth of field with a well-exposed motion blur image, working with a shallow depth of field while *also* ensuring well-exposed motion blur can be tough. If you're after a shallow depth of field effect, you'll need to counteract overexposure another way, as I explain in the next section: 2. Decrease your ISO

If you've tried narrowing your aperture and still aren't getting you the results you need, or if you're after a shallow depth of field, here's an alternative method for preventing overexposure: Drop your ISO.

ISO impacts the sensitivity of your digital camera's sensor to light, where a higher number will induce *greater* sensitivity (and therefore a brighter exposure) and a lower number will induce *less* sensitivity (and therefore a darker exposure).

You can adjust your ISO in Manual mode or Shutter Priority mode, so simply dial in a low ISO (such as 100) and watch as your exposure decreases. Of course, there's a limit to how low you can drop your ISO; once you get to ISO 100 or ISO 50, your camera won't allow you to go any further. But it's always worth checking whether a lower ISO is an option because it's a simple way to prevent overexposure. 3. Try a neutral density filter



Say you're after a motion blur photo, but you just can't get the exposure dark enough. You've narrowed the aperture, you've dropped the ISO, but your shots keep coming out overexposed.

You still have another, more dedicated option: A neutral density filter. It's a piece of glass that blocks light from passing through your lens – sort of like sunglasses – and lets you use a *long* shutter speed while preventing overexposure.

For example, if you're shooting a seascape in bright sunlight and you want to blur the water, you'll end up with a blown-out, overexposed scene – even with a narrow aperture and low ISO. But pop a neutral density filter over your lens, and you can slow the shutter speed right down while keeping a perfect exposure.

(By the way, a *polarizing filter* can have a similar effect, though it'll also impact the look of your images by cutting out reflections.)

Note that neutral density filters come in many strengths. You can get a basic, subtle ND filter, one that'll slightly darken the scene. Or you can buy an ultra-powerful, 10-stop ND filter, which will allow you to dramatically lengthen your shutter speed in bright sunlight.

# A quick note: two more creative techniques to try

If you want to capture images with motion blur but you're looking to come away with uniquely artistic results, here are two other techniques to consider:

Slow sync flash. This lets you capture a relatively sharp subject while creating a moving, blurry background, and it's a great way to create in-your-face shots.

Panning. Here, you simply follow a moving subject with your camera; the subject will generally come out nice and sharp, while the background stretches and blurs.



Well, there you have it! Six easy tips to capture motion blur in photography.

So remember these tips. And the next time you're after some creative motion blur photos, you'll get stunning results!

Now over to you:

# Ultimate Guide to Understanding Focus in Photography

By Leonardo Papèra

Focus has been one of the biggest pillars of photography since the very first day someone used a camera to capture an image. We could spend days talking about composition, settings, HDR, bracketing and plenty of other photographic techniques but without a decent knowledge about focus, none of these arguments will make any sense.

To some of you, focus at a first glance might even seem like a trivial argument – something that is so obvious and easy that there is no need to write a whole article about it. However, you'll never have been so wrong! It can take photographers quite some time to really master the focus and to have a great understanding about it.

In this article, we'll talk about all the different ways that you can use focus for more successful photography, ranging from practical applications to more complex techniques. You'll have so much information about focus that you'll eventually learn how to master it yourself!

## What is Focus?

Technically speaking, focus is the result of a combination of your lens aperture and light. To make it easy, think of it like this: Depending on how light rays are converging into your lens and what kind of aperture you have selected, different parts of your image will be in focus.

Smaller apertures, such as f/8 to f/16, will "force" all the light coming from outside to pass through a tiny hole and concentrate on the image sensor. As a result, a bigger part of the image will be in focus. On the



other hand, wider apertures, such as f/1.4 to f/4, will spread all the light rays on a bigger part of the image sensor. Since the hole that I mentioned a few lines above will now be much bigger, you'll end up with an image that has a smaller "depth of field" (we'll talk more about this later).

Practically speaking, you can check whether a picture is in focus or not by its sharpness. The sharper that it looks, the more it will be in focus. Be careful though, as sometimes photographers choose to highlight or hide some parts of the image through the use of focus. As such, it may be normal to see some out of focus areas as they visually enhance more of the sharp parts. I guess that's what we call "the artistic side of photography"!

# Focus Settings on the Camera

Now that you know what focus is, it's time to put that information to good use by taking your camera into your hands and experimenting! In this chapter, we'll take a look at how different focusing methods work and which one of them is most suitable in different kinds of situations.

#### Camera Focus Modes

On pretty much every camera model available on the market, you should have at least three choices when it comes to the focusing method: AF-S, AF-C and manual focus. In other words, you'll have two different options (actually, more than two, but we'll talk more about that later) for the autofocus, with the remaining one being the good old manual focus.

#### AF-S (Single Shot)

AF-S is an autofocus mode which allows you to lock the focus on the subject you've chosen. From there, you can move and recompose the photo as you wish.

The single shot autofocus is an ideal way to capture still and slow moving scenes. It is a faster way to focus on a subject, making it inherently quicker to capture a shot. AF-S works perfectly with street photography, portraits and event photography, just to name a few genres. It's a good choice for scenes where you have the time to refocus between one shot and the next.

However, it is not ideal for fast moving subjects, which is where AF-C comes in handy. *AF-C (Continuous Autofocus)* 

AF-C fills the gaps of the single shot autofocus. By choosing the continuous autofocus mode, your camera will automatically refocus on your subject each time it moves, as long as you keep the shutter button half-way pressed.

This focusing method works well with fast moving subjects. Given that you'll never lose the focus on your subject, you can follow and track it without having to refocus every time you take a shot. Sports photography, action photography and wildlife photography are just a few of the genres where continuous mode is a really popular choice for focusing and can make a huge difference to the sharpness of your final images. *Manual Focus* 

The last focusing method of this list happens to be also the oldest one of them all: the manual focus. In this case, there are no camera processors, no autofocusing motors or any other external help. It will be just you and your ability to achieve the right focus in order to capture a perfectly sharp subject.

Still life scenes are generally the situations that suit the use of manual focus. It works even better if you are able to use a tripod. Landscape, studio and macro photography are some of the genres where manual focus shines. What do they have in common? These are all photography genres where you will have the time to check if you've managed to achieve the right focus and, if not, to re-focus again.

#### Autofocus Area Modes

Now that we've had an overview about the various focusing methods, it's time to talk about the different areas that you can select when using the autofocus. All of the most recent cameras on the market will give you at least three choices when it comes to autofocus areas: the single point autofocus, the dynamic area and the auto area autofocus.

#### Single-Point Autofocus

Take a look through your viewfinder. When the single-point mode is chosen, you'll be able to select just one small rectangle out of the many that are present within the focus area. This is generally the most precise way to focus on your subject, especially if it covers a small part of the frame or if you want to focus on a particular part of it (for example, the eyes).

#### Dynamic-Area Autofocus

By selecting the dynamic area mode instead of the single-point mode, when you look at the scene through the viewfinder, you'll see multiple focus points selected at the same time – not just one. The number of the selected points will mostly depend on your camera's autofocus capabilities. Some cameras will give you more than one option for selecting how big that area is, ranging from 8-focus points to 21-focus points and so on.

This autofocus mode works well when you are shooting big subjects or if you want to have wide areas of

the frame in focus. It's not the best option when precision is required. The single-point AF will work better in those situations.

Auto-Area Autofocus

As the name suggests, this is the most automated way to autofocus, since the camera will not just limit itself to focus but it will also choose where to peak the focus! This may sound super cool and easy but the truth is that it has a few annoying limitations.

In low-light situations, the autofocus function on your camera will struggle. When it has to also choose the area on which to focus, it may not be able to locate a focus point at all. In low contrast conditions, where the main subject does not stand out from the background, your camera may have some problems choosing the right focus.

Personally, I'd recommend using this auto-area autofocus only with fast moving subjects in good lighting conditions, where you won't have the time to select the autofocus point (or area) by yourself and will instead have to rely on your camera.

#### When to Use Manual Focus vs. Autofocus

Each focus method will best suit just a few photographic genres. Generally, we use manual focus for static scenes – the ones where you have time to settle down and refocus if there's the need. Meanwhile, we use the single-shot autofocus for slow moving scenes and the continuous autofocus for fast moving situations. As you may have understood by now, the main variable when it comes to choosing the right autofocus mode is the time that you will have at your disposal when taking a picture.

How to Combine Camera Focus Modes with Autofocus Area Modes

Could you imagine shooting an automotive race with manual focus? I think we can all agree that it would be close to impossible to peak on the right focus. On the other hand, think about doing a focus stack in macro photography with the continuous autofocus. You might go crazy having to select the exact focus point each time. Most likely, the autofocus wouldn't peak on the right spot by itself.

Read on for a few tips about which focus mode and autofocus area will be better to use in certain situations. *Landscapes/Architecture* 

The last time that I checked, landscapes and buildings don't move. Even when there are dynamic elements in your frame such as clouds and waves, you'll usually have enough time between one shot and the next to refocus in case something has gone wrong with the previous image. That's why in landscape and architecture photography, manual mode or AF-S is generally recommended.

Still People

This relates to portraits and a few street photography situations. Which focus mode you'll have to use will mostly depend on how much control you have over the situation.

If you are shooting in a static environment with your own model, then you may as well use the manual focus to peak the best point in the frame. If you don't have much control over what you are shooting, then you'd better choose the AF-S mode with the single point or dynamic area modes selected, depending on where your subject will stand in the photo and how big it will be. *Sports* 

Most of the time when you're shooting any type of sport or action scenes, you'll have to use the AF-C (continuous autofocus mode) with the dynamic area or auto area modes, depending on how fast your subject is moving. That's the best way to shoot sports!

#### Back Button Focus

The back button focus is a smart trick underestimated by many photographers. You'll generally find this button near the viewfinder on your camera, as in the photo above.

How do you generally autofocus? By half-pressing the shutter button, right? Then, if you get the focus right, you press a bit more and take the shot. The back focus button basically does the first part of the aforementioned process: you'll be able to separate the focus and capture operations. This way, if you want to maintain the focus locked on the subject, you won't have to change the focus points every time you recompose the shot. All you'll need to do is to press the back button once to block the focus.

# Depth of Field

Depth of field is one of the major concepts that you'll need to understand within the universe of photography. Knowing what it is will allow you to improve your skills and to produce better photographs. To understand what the depth of field is, we'll need to talk first about the "focal plane". This is the point of focus within your frame. Imagine your picture in three dimensions: you'll be able to select many different focal planes in there.

Now, let's talk about the aperture of your lens. At wider apertures, since the light rays are spread all over

the sensor, you won't be able to put many focal planes in focus. The opposite will happen when you use smaller apertures.

In photography terms, using a wider aperture will result in a narrow depth of field, while small apertures will result in a big depth of field. It may feel counterintuitive at first but after a while, you'll get used to it! Put simply, depth of field refers to the amount of focal planes that you can get in focus given a specific aperture.

## Hyperfocal Distance

The hyperfocal is a specific focusing distance where you'll have all the objects from half that distance to the background appear to be sharp enough. This distance changes every time that you modify the aperture of your lens and/or change the focal length at which you are shooting. If this sounds tricky, there's no need to worry. There are plenty of hyperfocal calculators both online and in app stores, so you won't have to do the maths each time. You can simply refocus at the distance given by the calculator.

Hyperfocal distance can be useful when you are shooting in low light conditions but still need a big depth of field (e.g. night photography). Some photographers believe that the hyperfocal distance is some kind of magical technique that will give them the "power" of having everything in focus, from the close foreground all the way to far-off things in the distance – in every possible situation and at all times.

Let me give you the bad news: it doesn't work like that, unfortunately. Don't get me wrong, hyperfocal distance can come in handy when focusing but to give you an idea of how often you might use it – I have not used this technique once within the last 5 or 6 years and I've taken quite a few pictures in this window of time!

# Focus Stacking

In case you aren't able to get everything in focus with the hyperfocal distance (or you don't feel that it's sharp enough), focus stacking could be the solution to your problem. It's a more complex but helpful technique that consists of taking multiple exposures with different focus points, which you then merge together in post production.

## Focus vs. Depth of Field vs. Sharpness

To sum up what we've learned so far: the three main subjects of the article are focus (obviously!), depth of field and sharpness. We've talked quite a lot about the first two, while I've barely mentioned sharpness so far, so let me explain why.

Focus is an objective measurement. Whether a picture is in focus or not, there is no such a thing as "it's in focus, in my opinion". Focus refers to the spot within the frame that is of maximum sharpness.

Depth of field too, even if it's a bit more complicated that the focus itself, is still an objective measure. You can calculate it in terms of numbers, even though it may be difficult to do in-field while being easier to naturally perceive where it starts and where it ends.

Sharpness is the least objective measurement out of the three. That's because while we may perceive a photo as sharp or not, there is no actual way to precisely measure the sharpness of an image. Let me give you an example to explain myself better.

When observing a photo with a large depth of field (e.g. a landscape), our eyes instantly look for sharpness throughout the frame. We wouldn't be pleased to see the foreground slightly blurred or to have the background not be razor-sharp. In a case like this, we generally look for an equal degree of sharpness everywhere in the frame.

On the other hand, try looking at a portrait photo taken with a really wide aperture. Only the most important part of the frame (e.g. the eyes) are usually in focus, while the rest is often blurred. We might still find this image to be aesthetically pleasing and consider it to be razor-sharp, even though 95% of the image might be out of focus. In fact, the out of focus parts of the picture may even give us the feeling that the area where the focus point falls looks sharper than it actually is. As you can see, sharpness is mostly subject to our own perception.

A very general and somewhat inaccurate statement can be that the more a picture is in focus, the sharper it will look. When you gradually move out of focus, it will become less sharp. The larger the depth of field a picture has, the less sharp it will look, while the opposite will happen with a narrow depth of field. Again, take this as a brief and simple way to explain the correlation between these variables!

# How to Use Focus Creatively in Photography

At this point of the article, you should have a decent idea of what focus is and the different ways of focusing with your camera. You will also have a basic knowledge of how depth of field and hyperfocal distance work.

Now, it's time to put all of these ideas to good use in practice! So let's take a look at some ways that you

can use focus creatively in different photography genres.

Where to Focus

No matter what type of photographs you like to shoot, stop and think about the huge power you hold when you choose where to peak the focus in the frame. It is not just a matter of sharpness. When choosing the focus point, you will also choose where you want the viewer's attention to fall. It's like saying, "Hi, I want you to look here!"

Alternatively, it's also a good way to hide unwanted parts or objects within the frame. By selecting a certain focus point, you can concentrate the viewer's attention on something else.

This is actually the most important thing about focus in photography: the ability to direct where you want the viewer's attention to fall, simply by highlighting and blurring parts of the image.

#### Landscape Photography

One of the very first notions you'll learn when you first immerse yourself in the world of landscape photography is that using small apertures will allow you to get everything in focus. A few examples would be f/8, f/11 or f/16.

While this may be true, it's not the only way to shoot landscapes. Take a look at the image below. In order to create that soft bokeh in the foreground with the flowers, I had to use f/4, which is a quite wide aperture. Now take a look at the picture below. Even with a small aperture, I couldn't achieve the full depth of field in a single shot, so I had to use the focus stacking technique.

These two examples are just a couple of artistic ways that you can use focus in landscape photography! *Portrait Photography* 

If one of the first things you learn in landscape photography is to use small apertures, with portrait photography it's generally the exact opposite.

To achieve the bokeh effect, you'll have to use very wide apertures. Unfortunately for us, the best lenses for bokeh happen to also be the most expensive ones on the market! You'll see a huge difference between a shot taken at f/4 (or f/3.5) and one taken at f/1.8 (or even f/1.4). The classic way to focus on your subject is to select the focal plane of their eyes. If you want to try something different, then perhaps give some attention to other parts of your model's body, such as their nose or their ear.

Another way to shoot portraits is to place your subject in a wider context, such as a landscape, and capture everything in focus. You won't get the bokeh effect but you'll be able to give the sense of scale in an otherwise "empty" landscape.

#### Wildlife Photography

Bokeh plays quite an important role in wildlife photography, such as it does in portraits. The only difference here is that wide apertures are, more often than not, the only possible way to capture the shot and not just an artistic choice.

Wide apertures will let more light hit your camera's sensor. As such, you'll be able to use faster shutter speeds. That means not having to deal with blurry or shaking pictures. When you get bored with focusing on an animal's eyes, you can try refocusing on different parts of its body or even the area around it. Use this technique with care though to ensure that the shot will still have a meaningful and visually pleasant composition.

Another focusing technique that you can use for wildlife photography is to get down low at ground level, placing some kind of foreground between you and your subject in order to give more sense of depth of field, such as in the image below.

#### Reportage

Reportage is one of the trickiest genres when it comes to choosing the right place to focus; there's not a right or wrong way to focus like in some of the more "conventional" types of photography, nor is there a more artistic way of focusing. The only thing you need to concentrate on when you are doing reportage is the narration of the story. Think about what kind of story you would like to tell with that picture. This will help you to decide who or what should be the main subject, so that you can work out what should be blurred and what to have in focus. There may be times when you'll want to have equal sharpness throughout the scene, to attribute all of the elements with the same level of importance.

Focusing in reportage photography is like recording a movie. You'll have to create (or find) a story and narrate it through the focus points in your pictures.

#### Still Life

A couple of the things that matter the most in still life photography are textures and patterns. By placing emphasis on these, you can create strong visual impact and attract the viewer's attention. Capturing still life images is all about focusing on the right point and using the bokeh effect to your advantage. This way, you'll be able to enhance the patterns and textures to improve your compositions.

With still life scenes, your subject doesn't move, so you'll have all the time in the world to try shooting with both small and wide apertures. This will give you a better understanding of which ones work better with

certain compositions and subjects.

## Common Problems with Focusing and Solutions

Sometimes, focusing will give you a hard time. I'm not just referring to the autofocus but also manual focus, which is difficult to achieve under certain conditions. So here are a couple of tips for when you can't manage to get the focus right!

#### Low Light Conditions

One of the most common situations where focusing isn't easy is when you are shooting with low light. Some cameras and lenses will perform better than others but they will all fail below a certain degree of light. Cameras just aren't able to autofocus in darkness and neither can you!

Live view comes in handy in these situations. You'll be able to zoom into the scene when focusing. If it's too dark and you can't see a thing in the Live View of your camera, then you might want to light up some of the subjects with a headlight, torch or lamp. You can then check the Live View again to see if you are able to properly focus.

Fast Moving Subjects

We already spoke about this earlier but fast moving subjects are often a pain in the back to focus. The best possible way to frame them while getting the focus right is to use the continuous autofocus with the autoarea mode selected. If you are standing still with your camera, then choose the dynamic area mode so that you can track and follow the subject by moving your camera.

## Conclusion

Many of the mistakes that we all make while shooting in-field are able to be corrected. This includes when we get the exposure slightly wrong or if we end up with noise from using a higher ISO. However, focus is not one of those things that we can fix in post-production. You'll either have a good focus or you won't – there's no such thing as being able to correct it later. If you get the focus wrong, then you'll either have to take the photo again or you'll be done. As such, understanding how to properly focus and which focus mode is the best to use in each situation is very important.

I hope that I've given you enough information about focus in photography so that you'll be able to improve your ratio of capturing images in focus from now on!

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