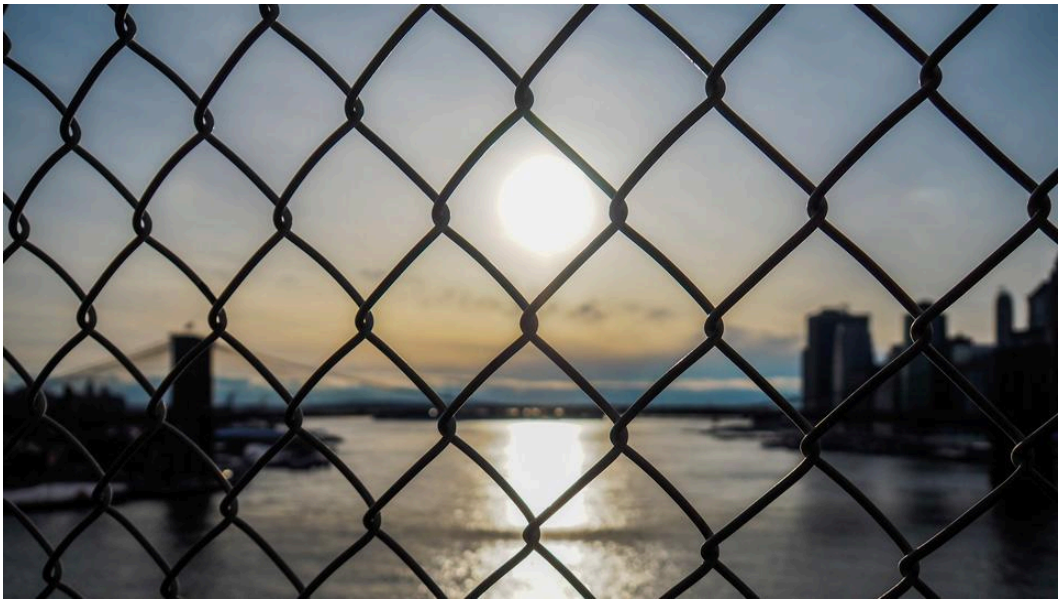
Viewpoint and Perspective in Photographic Composition

By Todd Vorenkamp | Wed, 03/30/2016



Today's cameras can do almost everything automatically. The one thing they cannot do is tell you where to stand and where to point the lens and when to take the photograph. These are the sole responsibilities of the photographer, and it is the photographer who determines the viewpoint and perspective of the image he or she chooses to create.

Photographs © Todd Vorenkamp

Viewpoint

viewpoint 1 a way of looking at or thinking about something (Definition from Merriam-Webster)

All photographs contain one or more subjects. (With an abstract photograph, the abstraction may be the subject.) As a photographer, when you see a subject or scene that you wish to photograph, you point the camera in that general direction, compose, and release the shutter. A great many of us are standing when we do this, and we raise the camera to our eye and take the photograph.

Not all photographs need to be taken from our eye level (or from the top of a fully-extended tripod)—nor should they. Changing your viewpoint is not only a great way to enhance a composition; it might make your photograph stand out from all of the other eye-level views made of a similar subject.

What happens when you change your viewpoint? The background and foreground change with it.

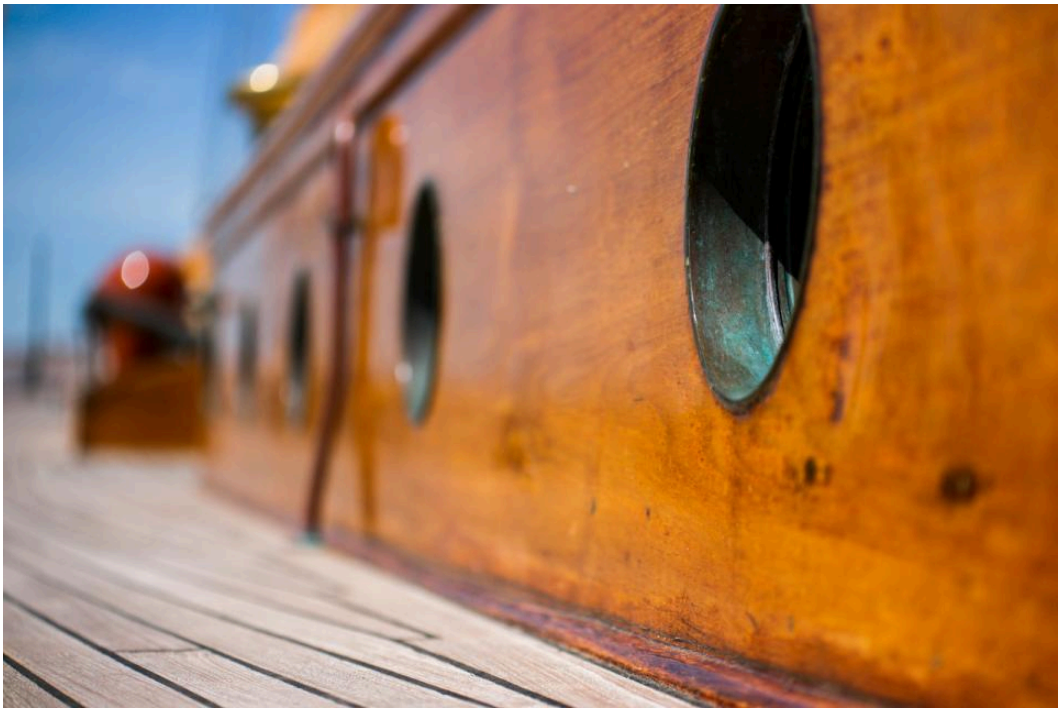


Photo of a sailboat, taken from the eye level of a creature shorter than I

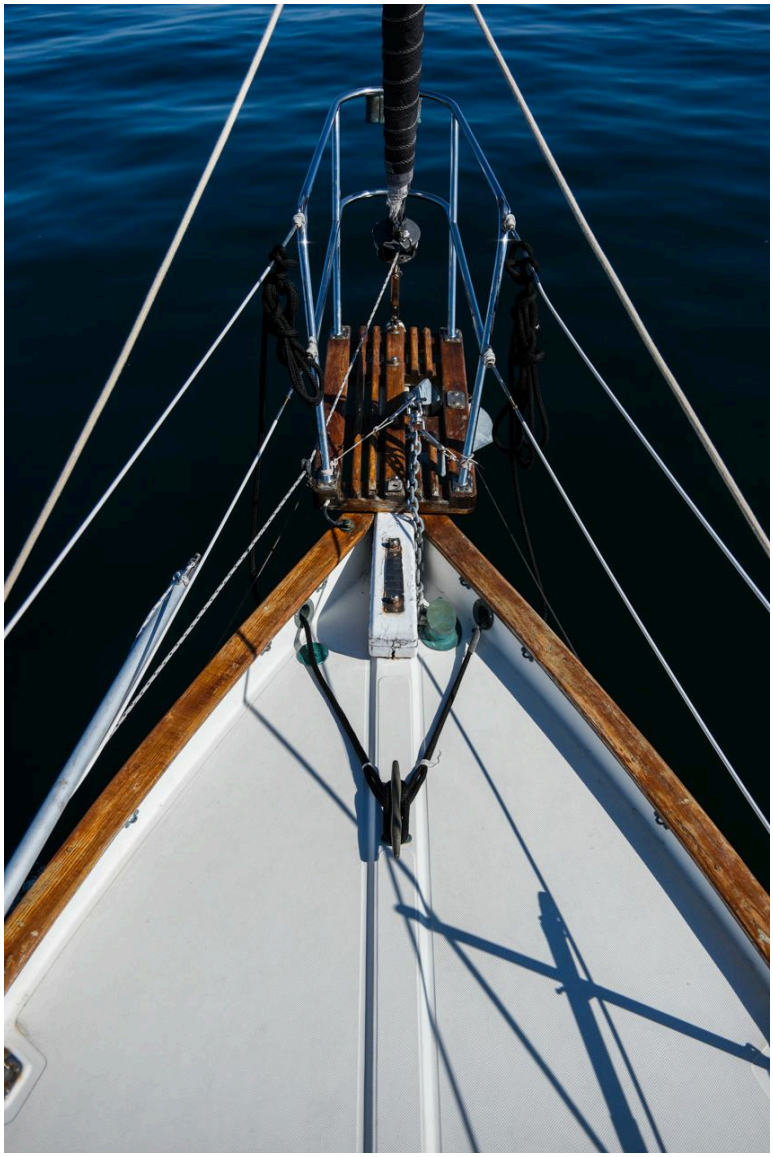
Picture a simple scene with a person standing before a landscape. If you photograph them from your eye level, the photograph looks exactly like what a passerby would see with their own eyes as they walk past you, the photographer, capturing an image of your friend. Now, this photograph can be fine—depending on the execution—but think about how you can change the composition by altering your viewpoint.

You can change your elevation. Kneel down and take a photo. Or, hold the camera above your head and shoot down on your subject. Move right. Move left. Go aside your subject or behind them. Get closer. Get further away. Roll diagonally right or left. Notice how the background shifts. Notice how things are added to or eliminated from the foreground. Most importantly, notice how the photograph you capture is no longer something that a casual passerby would see.

Subtle changes in viewpoint can add a deeper meaning or feeling to an image. When is the last time you saw a photograph of the President of the United States seated behind the Resolute desk in the Oval Office, taken from above his or her head? By shooting lower, the photographer emphasizes an iconic vantage point, signifying the power of the office. You will be hard pressed to find a photograph of the Oval Office where the camera is positioned higher than the President. On the contrary, if you were to photograph a young student being scolded at his desk, you would likely shoot the image from a higher viewpoint—from the vantage point of the dean or principal about to assign punishment—or you would chose

the lower perspective from the student's point of view with the towering power figure looming overhead.

Changing your viewpoint is a photographer's great advantage. We see the world from eye level—be it walking around the city, driving down a country road while seated in a car, or bicycling through a village—and that level is relatively the same for all adults. The photographer, however, can give us a child's eye view of a scene, a bird's eye view, or even a viewpoint that is literally unique to the camera, as the human eye cannot physically reach the position. Use this freedom to your aesthetic advantage and make images from creative viewpoints.



Looking down

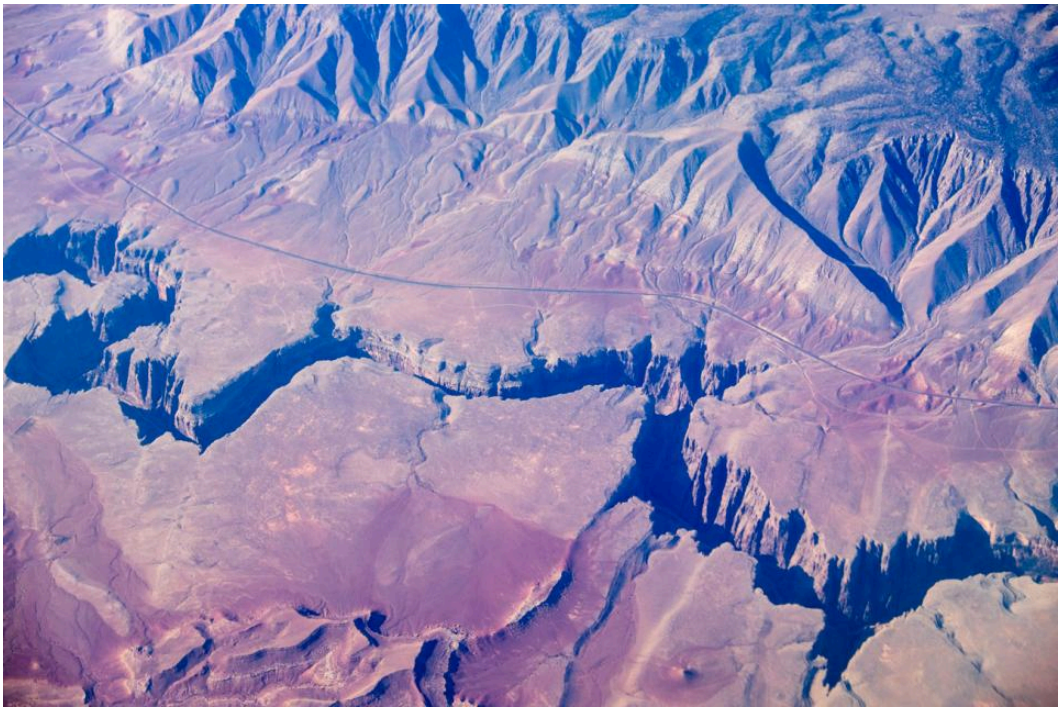
Perspective

perspective 1 a: the technique or process of representing on a plane or curved surface the spatial relation of objects as they might appear to the eye; specifically: representation in a drawing or painting of parallel lines as converging in order to give the illusion of depth and distance; b: a picture in perspective; 2 a: the interrelation in which a subject or its parts are mentally viewed places the issues in proper perspective; also: point of view; b: the capacity to view things in their true relations or relative importance trying to maintain my perspective; 3 a: a visible scene; especially: one giving a distinctive impression of distance: vista; b: a

mental view or prospect to gain a broader perspective on the international scene — Current Biography; 4: the appearance to the eye of objects in respect to their relative distance and positions (Definition from Merriam-Webster)

Perspective has several different meanings—several applicable in some way to photography. For the photographer, perspective is a summation of the relationship between objects in a photograph.

We live in a three-dimensional world and we are designed to have stereoscopic (or 3D) vision, with which we can determine the relative distance of the various objects in our view. The photograph is a two-dimensional representation of that three-dimensional world and, therefore, our stereovision does not see the photograph in the same way we see what is before us. When we look at a photograph, we determine spatial relationships by analyzing the objects in the frame.



Road and canyon

The camera, by means of its magical transition of a three-dimensional scene into a two-dimensional one, creates perspective. This is an automatic function of the camera—built in at no extra cost.

For the photographer, awareness of perspective can be a beneficial tool when searching for an engaging composition; so let's look at different aspects of perspective.

[This topic overlaps with the subject of lens perspective distortion. For more reading, please see my article, *Perspective Distortion in Photographic Composition*.]

Linear Perspective

The easiest way to illustrate linear perspective is to imagine a photograph taken on a road that vanishes into the distant horizon or a photograph taken down a set of train tracks. Even though the sides of the road, or the train tracks, are parallel,

as they move farther from the eye, they seem to converge. Both the eye and the camera register this. This is sometimes called *vanishing point perspective*.

The path narrows and turns.

With linear perspective, both the subject-to-lens distance and the lens's focal length influence how the linear perspective is made apparent in an image. You may have heard how telephoto lenses "compress" a scene. This is linear perspective. Place yourself back on the road, vanishing into the horizon. If you photograph the image with a telephoto lens, you will see a relatively shorter section of road tapering off to a point on the horizon. If you create a photograph from the same position using a wide-angle lens, the image will provide the scene with a different sense of depth and scale.

Rectilinear Perspective

Most camera lenses produce a rectilinear perspective. Our eyes do the same. Straight lines appear as straight lines to our eyes and in the photograph. The exception is curvilinear lenses—a fisheye lens. With the fisheye lens, straight lines will intentionally curve in the image. Dedicated panoramic lenses can produce a *cylindrical perspective* in which the horizon line remains straight, but horizontal lines above and below the horizon become distorted.

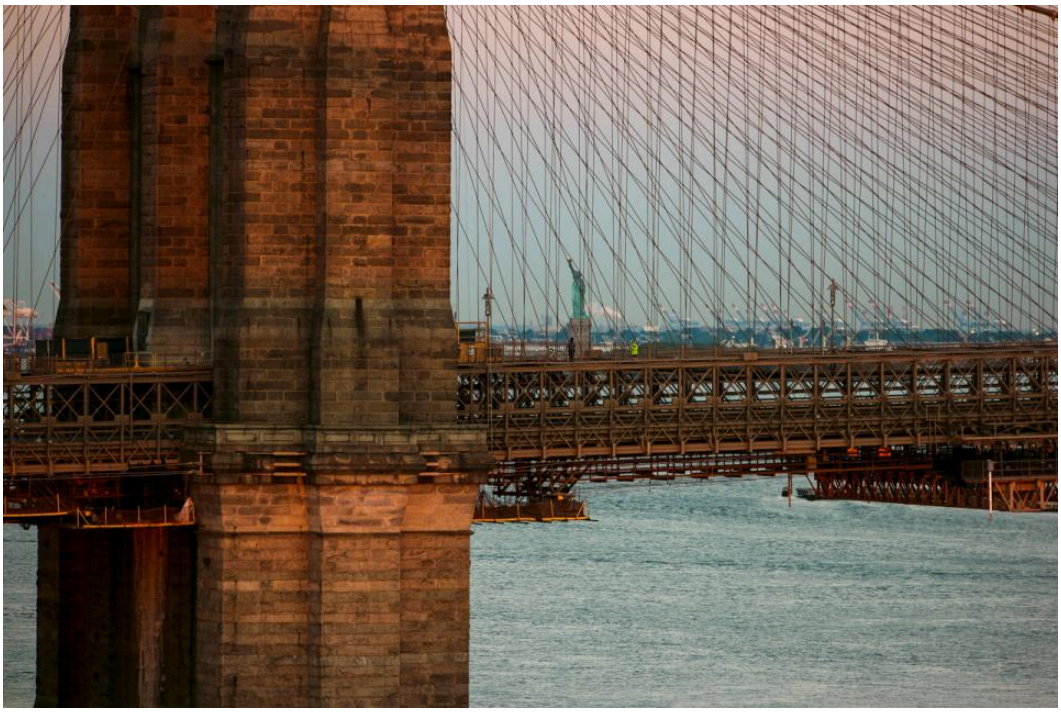
Straight lines (mostly)

Height Perspective

This is a bit obvious, but I would be remiss not to mention it. In a two-dimensional image, the closer an object is to the horizon line, the farther away it is. Envision a simple landscape scene where we have a photograph of a field of grass extending to the horizon. Above, there are cumulous clouds. The grass in the foreground, farthest from the horizon, is closest to the photographer, just as the clouds near the top of the frame are closer to the photographer than those near the horizon. This is yet another form of perspective that conveys depth in a two-dimensional image.

Overlap Perspective

Overlap perspective is another of the more obvious types of perspective. When one object is closer than another object, it may overlap the more distant object in the frame. The obstructed object is farther away. Regardless of relative size, or position in the frame, overlap is one sure way to see that one object is closer to the lens than another.



Overlap

Size Perspective

If objects of identical size are placed in a scene and they appear to be the same relative size in the photograph, the distance from those objects to the photographer is the same. Move one or more of those objects closer or farther from the camera and the objects' relative size will change in the image. Again, this is a visual clue to gauge depth in a photograph.

You might consider positioning similar objects of different sizes in an image as an exercise to confuse the viewer about the relative distances of these objects.

Volume Perspective

When an object casts a shadow, the size and shape of the shadow not only gives the photograph depth, the shadow can also emphasize the three-dimensional qualities of that object in the frame. The shadow gives the viewer information about the shape and size of any object in the image.

More evidence of depth in a photograph may occur when one part of an object is lit and the rest disappears into shadow. Everyday examples of this effect include the crescent moon with a faint penumbra or a portrait with side-lighting that highlights a small portion of the face.

Atmospheric Perspective

Unless you are fortunate to be photographing in a vacuum or on an insanely clear day, the greater the distance from the camera to an object, the more air the light from that object must pass through to get to the lens. Therefore, distant objects may start to lack sharpness, contrast, color, and definition the farther they are from the camera. This is another clue to depth in the image.

Greater distance equals more air (and snow) through which light must travel.

Conclusion

So, now that you are giving some thought to perspective of varied types, you can consider ways in which to change your perspective, or preserve it. The simplest ways to alter perspective are to change to a different focal length lens (zoom in and out if you have a zoom lens), or change your viewpoint. If you feel there is a photograph to be had, but the scene is just not working for you, a simple change of viewpoint may be all that is required. Or, swap lenses and see what a new field of view, in the form of perspective, adds to or subtracts from the scene before you.

All this perspective and viewpoint stuff is fairly simple, right? In some cases, it is so obvious that we don't give it much thought. Thinking about the obvious and being conscious of the value perspective and viewpoint bring to the practice of image making can be very important to crafting a striking composition.

We would love to read your own thoughts on perspective and how you use it to strengthen your photographs. Post your ideas in the Comments section, below.

25 Comments

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Hagio Pang 6 years ago

This website gave me knowledge on how to o perspective. Worm's eye view and Bird's eye view as well as overlapping are examples of perspective.

0 Reply

Todd V. 6 years ago

I am glad you enjoyed the article, Hagio!

0 Reply

Damon Pratt 6 years ago

I think that these photos are really good and these really help me learn what perspective is.

0 Reply

Todd V. 6 years ago

Thanks, Damon! Glad to help!

0 Reply

bgfg 6 years ago

cat moew [edited for brevity]

0 Reply

Todd V. 6 years ago

Thanks!

0 Reply

Vinnie Oakes 8 years ago

Congratulations and Thank You for very clearly articulating one of the most over-looked and least-understood aspects of photography.

0 Reply

Todd V. 8 years ago

Thank you for reading, Vinnie!

0 Reply

DAD 8 years ago

This is a very informative article. Often, experienced photographers put all or most of these advises into practice instinctively. However, a systematic study such as this gives better insight into what one is already doing - also lets one pick a few previosly overlooked aspects. The key is to put all these into practice every time you take a photograph, and do it consciously every time..

0 Reply

Todd V. 8 years ago

Hey DAD,

Thanks for your comments. I totally agree, these things often escape conscious thought, but having some awareness of them allows you to make the knowledge conscious, when needed.

Thanks for reading!

0 Reply

Marcus Krause 8 years ago

II think your article will be very helpful to aspiring photographers, however I would make a clarification where you stated that you can change perspective by changing lenses and zooming. Perspective is changed by the photographer moving the camera, not zooming.

To illustrate this you can shoot a scene zoomed out then without moving the camera shoot again zoomed in. Use the zoomed out shot and crop it to match the zoomed in shot. The perspective has not changed at all.

0 Reply

Fountain 8 years ago

Marcus-

I understand what you're saying about perspective and zooming in/out. However if you use the deffinition that perspective is the relationship of the objects in the frame than a change in lenses (or a zoom lens) will have an effect on that. Think about a the type of image you could make with a wide angle lens versus the same image with a tele or zoom lens. With the longer lens the objects in the image would be compressed and appear closer together. Their relationship to each other would be very different with the wide angle. It's a change inrelative perspective.

0 Reply

Marcus Krause 8 years ago

The relationship between objects in the frame does not change by zooming. This is a common misconception and understandably so.

A wide angle lens allows you to focus very closely on foreground objects while including a lot of background which makes closer objects look muck larger than distant ones but this is because you are viewing the foreground object from such a short distance. it is due to where you have placed the camera. it is not a function of lens focal length.

Here is an article that explain it better Than I do. Be sure to read the entire copy under "linear perspective"

http://photoinf.com/General/NAVY/Perspective.htm

0 Reply

Todd V. 8 years ago

Great discussion, Marcus and Fountain!

I am familiar with that old US Navy photographer's manual—great stuff!

The Navy manual does make a distinction between actual and apparent viewpoint. In my article, I attempted to illustrate the same point, with different wording.

This is one area where it is dangerous to get a bit lost in the weeds, so I intentionally tried to keep it simple.

Thanks for reading, discussing, and sharing the link with our readers!

0 Reply

Jeremy 8 years ago

http://www.tamron-usa.com/lenses/assets/images/technology/fund_chart.jpg

0 Reply

Todd V. 8 years ago

Thanks for sharing the link, Jeremy!

0 Reply

Jimmy47 8 years ago

Marcus,

If your definition of perspective is just the relative position of subjects, what you say is true that zooming does not change that. But a subject 'isolated' by viewing through a long lens would not provide the same information about the environment and surrounding captured by a wide lens, hence some linear, volume, size, perspectives would be filtered differently. Would that be a different perspective in a broader sense? Furthermore, due the physics of optics, depths of focus will be different for zoom-in and zoom-out shots. If you crop to the same size, the apparent relative appearances of subjects will be different too. Would that be a perspective change beyond simple geometry? Please enlight further.

0 Reply

Dee Jay 8 years ago

I am an AGAIN newbie. I not only enjoyed this article, I needed it. The triangle, DOF, etc. is important to take the picture BUT composition determines how the picture captures the subject(s). Thanks for adding opportunities for me to learn how to take interesting pictures ... from different perspectives.

0 Reply

Todd V. 8 years ago

Hey Dee Jay,

Thanks for the kind words and thank you for reading! I am glad you enjoyed the piece!

0 Reply

jean pierre (p... 8 years ago

Over the years, I've tried to help a number of amateur photographers to improve their photos. The basics of shutter/aperture/ISO of course, and some understanding of focal point & DOF. But one of their most common "fails" is trying to get everything in.

What they need, of course, is an understanding of composition. And practically ANY tips or info or knowledge that you chuck across to them is a great help, for them to improve their photography.

While it's easy to have "too little" knowledge, Todd, I don't believe there's any concept of "too much" knowledge. And I read your articles & appreciate the suggestions you are putting out there.

Your final paragraph says a great deal - "thought" is usually essential, and thought & planning improves photos enormously. we do occasionally land on our feet & find the "perfect shot" staring in our face, begging us to bag it !!!! But FAR more often, it's work - work - work. And your articles provide excellent guidance, to get stuck into it, and create our own "perfect shots".

0 Reply

Todd V. 8 years ago

Hi jean pierre!

Thank you for the kind words, sir. I very much appreciate it.

In my thought process, there are two aspects to photography: 1) the technical side and 2) the artistic side.

Anyone can learn how to use a camera and know how it operates. They can even explain pixel pitch and camera wiring diagrams to you ad nauseam. But, not everyone can take a great photo, and that is where composition comes in. The cool thing about photography is that, even though you can have one without the other, having knowledge of both is often beneficial.

Happy shooting!

0 Reply

Craig Carlson 8 years ago

Your photo lesson just dropped into my emai and I understand why you carry on the narrative about photographic compositon and all the examples showing what it is and why (you get the space because people think it will help them sell something). But, you need to understand that none of which you profess is true. What you decide to point your camera at determines what the picture will look like in time and space. The decisions you make before you lift the camera to the eye (where do I go), determines where you will put your body (vantage point) and the frame decides what's not in the picture and the search for a moment unseen pushes the button. Think about it.

0 Reply

Todd V. 8 years ago

Hello Craig,

I think you reiterated the opening of my article with your comments, but I may be misunderstanding your post.

Thanks for reading!

0 Reply

Jimmy47 8 years ago

Craig,

I have hard time understanding what you want to way. My simple understanding is that Perspective is what optics and physics got processed in the brain; Viewpoint is how a position of the camera (including the lens effects) may change the perspective, and Composition is how to put those things into a frame to become somethign interesting or compelling. Todd nicely put this subject together in an organized way for people, not only easy to understand but also easy to remember the type of perspectives coming to play that both the photographer and the reader may perceive. Optics and physics don't lie. So why do you say "none of which..... is 'true'." ?

0 Reply

Todd V. 8 years ago

Thank you for reading and commenting, Jimmy47! I appreciate the kind words and support!

0 Reply

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