Discovery Center

Rules & Elements of Composition

Constructing the essential photograph

Aleksys Paat

ABOUT THE DISCOVERY CENTER

The Discovery Center is a comprehensive learning resource. It aims to teach and to inspire a wide range of creative projects - from digital painting to night-time photography. Our diverse offerings are intended to appeal to a wide range of skill levels and learning styles. We have a library of video tutorials, a huge collection of short photography tips, and now this series of eBooks! If you would like to keep up-to date with the newest learning content, sign up for our Weekly Alerts email to get tips and tutorials that you'll be sure to love.

ABOUT THIS SERIES

This book is part of the Getting Started with Photography series from Robert Patterson and the Corel Discovery Center. The series is directed to photography beginners and those who need a refresher on using their DSLR. Each book in the series covers a different foundation of photography - from The Basics of Color and Light to Night Photography to An Introduction to the Rules of Composition. Altogether, they are a great resource that will get you well on your way to thinking and shooting like an expert photographer.

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For best experience with this e-book, please use Adobe Reader.

About this book

This eBook is intended to help you learn how to think about photography. Photography is an art form; like painting or drawing, photography involves creating aesthetically pleasing images. If you are just getting started, understanding what makes an image attractive can be one of the most challenging aspects of taking good photos. And all the more so, because without a language for talking about composition, it can be hard to even say what is wrong with a photo.

The good news is that there are actually some fairly simple principles that govern how we think and talk about images. In this book, we are going to cover three: the Rule of Thirds, Lines, and Negative Space. It's a safe bet that if you compose a photo so that it utilizes the rule of thirds, makes effective use of lines, and has good negative space, it is going to be an attractive photo, no matter the subject!

Because photography is a visual medium, we've included lots of examples to illustrate the principles we're describing. We've also included a few exercises for you to try, and some videos that cover the principles as we teach them. This eBook is a great way to quickly pick up new skills and elevate your photography beyond the amateur by understanding some of the essential theories of composition.

Niclas Hartz

Introduction to Composition

BEFORE we dive into the three key principles, let's take a step back for a second and ask a very important question: what is composition? Simply put, composition is the arrangement of visual elements in a work of art. A visual element can be an object, or a pattern, or an empty space. The way that these different elements are arranged is one of the most important determinants of what a photograph means and how it will effect the viewer. Effective composition can transform a scene that is dull in real life into a two-dimensional masterpiece. But equally, ineffective composition can undermine the effect of any photo; something as simple as a photograph of you in front of the Eiffel tower will enormously benefit from having some understanding of the rules of composition and how to apply them.

Composition can be extraordinarily complex. After all, composition can include literally everything that goes in to making a photo a work of art. Fortunately, photographers have identified a few key elements and rules of composition to serve as starting points. These rules can be learned quite easily and with a little practice will drastically improve your images. Over time, these rules become second nature; you will apply them by habit, and be able to judge when to break them.

And break them you will; no rule of composition is set in stone and rarely will you find a photo that is in perfect harmony with all of the rules of composition.

Part One: The Rule of Thirds

In this section you will learn what may be the only “rule” in photography: the rule of thirds. Of course even this isn’t really a rule so much as a suggestion for how to think about images. Really, the rule of thirds gives us a good way to think about some of the most general things that affect every image, like “balance” and “focus”. It gives a kind of framework in which to make your specific photographic elements (like trees and people) work together.

The Golden Ratio

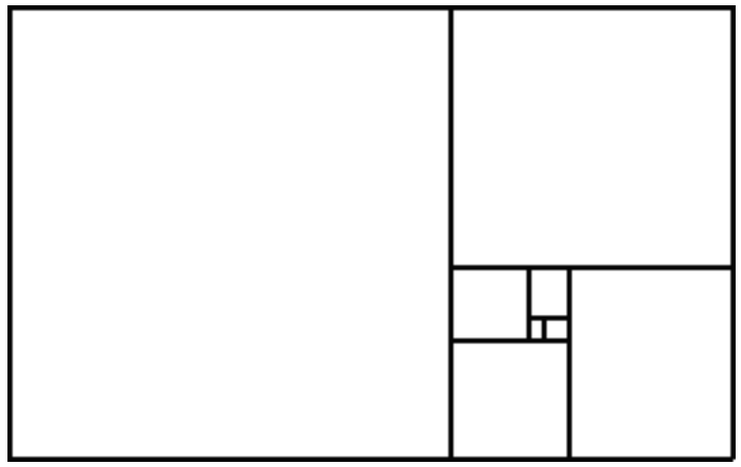
The golden ratio is not a photography tip per se. It's more of a natural phenomenon that will also help improve your photography, forming the foundation of the rule of thirds. Like the name says, the golden ratio is a ratio; specifically, 1:1.618. When the relationship between two objects is described by this ratio, we can say they are "in the Golden Mean."

This line segment is divided according to the golden mean. That means that line segments ab and ac are form a golden ratio: if ab is one unit long, ac is 1.618 units long. But that's not all! Line segment "bc" is in the golden mean with "ab". The longer section (ab) divided by the smaller section (bc) is equal to the entire length (ac) divided by the longer section (ab).

$$ab \div bc = 1.618 \quad \text{and} \quad ac \div ab = 1.618$$

So what is so fascinating about this relationship? Well it turns out nature is obsessed with it. Things naturally form this pattern all over, from the classic example of a Nautilus shell to the formation of galaxies, from the relative size and arrangement of bones in your arms and hands to the growth and shape of trees and forests. It is also used in complex economic equations and scientists claim that it is even found in the very structure of your DNA. Our own minds seem hardwired to recognize this pattern, at least subconsciously, and as a result, images that conform to this pattern are perceived of as pleasing to the eye.

So how does this help you take better photographs? Well, in visual art this is applied by subdividing your frame by this ratio. The resulting image can look like this.



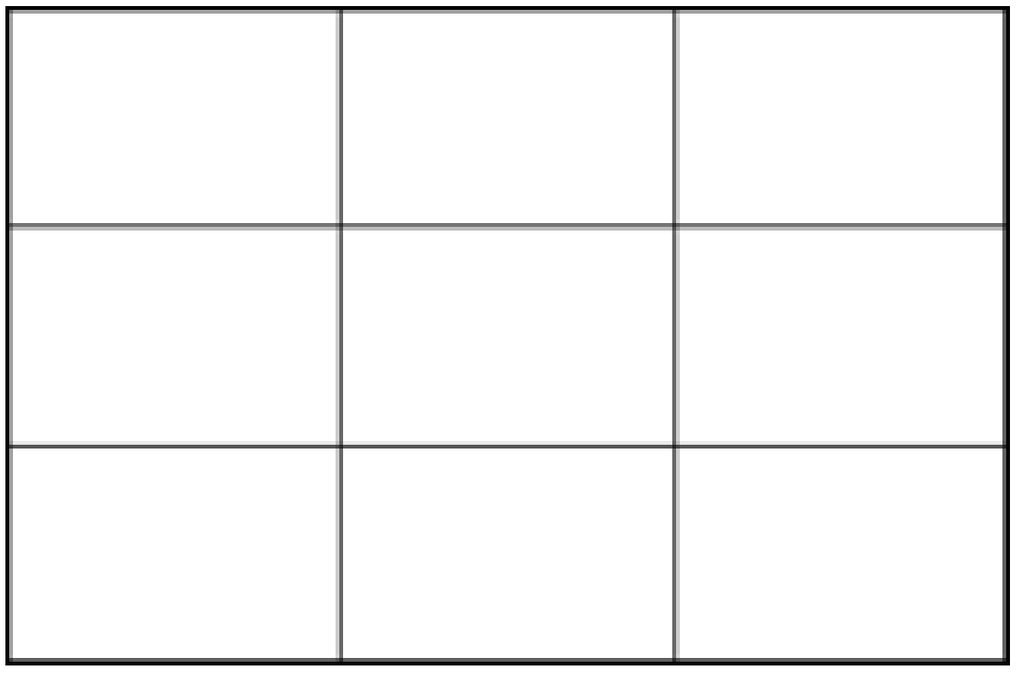
Notice that even without any subject matter the image clearly focuses the eye to the lower right section of the image, creating a point of interest. You would in this instance place important subject matter around that area. This arrangement also creates a sense of balance in the image. The larger number of smaller rectangles on the right balances out the overall larger, yet empty left side of the picture. Arranging your composition around these lines with help to give your picture better balance.

This is all relatively straightforward to apply if you are a painter or artist: place your subject matter at the focal point and you're off to the races. To simplify this process, what we need is some simple and easy-to-apply way to take advantage of this ratio that fits the needs of the modern photographer-on-the-go. Enter the "Rule of Thirds"...

The Rule of Thirds

The Rule of Thirds is basically a simplification of the Golden Rule. It doesn't quite divide your photograph according to a ratio of 1:1.618, but its proper implementation in composition will give you roughly the same effect. And it is way easier to envision and implement.

Here's how it works: divide your image into nine equal parts, three vertically and three horizontally (like a tic-tac-toe). Using these lines as guides, place objects of interest at the intersections of the lines. This keeps the eye within the picture. Notice how these locations more or less align with the point of interest in the Golden Ratio example.



You will often hear photographers talk about weight or balance in an image. These lines make it easier to see what they are talking about. If you place the elements of your photo

two thirds to the right or left, it again generally becomes more pleasing to the eye. Try placing your horizon two thirds of the way up or down!

(Of course you can't usually physically re-arrange the elements of your photo unless you're doing studio or still life photography. So "place elements" really means "place yourself" so that the elements are arranged in the frame).

One of the most important implications of the rule of thirds is that you should not locate your subject in the center of your image. Similarly, you don't want a line cutting right along the center of your photo – so try to place the horizon one-third or two-thirds of the way up the photo. On the other hand, there may be times when you may wish to convey strong symmetry, or when you want to center your subject. Remember these rules are meant to be flexible and are by no means going to always apply. There will always be elements in any photo that will conflict, it's just a matter of finding the right combination and balance of these elements to best suit each situation.

Don’t overthink it.

The Rule of Thirds is essentially very simple but can become quite complex in its implementation... Don’t over think it; elements in your photo will often conflict. Placing one object two thirds to the left may cause another element to be in a place that doesn’t conform with the rule of thirds, that is almost inevitable. You will often need to find a compromise between the conflicting elements, or simply decide which one is the strongest most important one and place the emphasis on it.

See the world in thirds

The Rule of Thirds is, first and foremost, a way of thinking about images. Really knowing the Rule of Thirds means seeing the balance, focus, and possible compositions of a photograph everywhere. So in order to develop this habit of mind, here are a couple suggestions of exercises you can do without a camera to get you thinking like a photographer:

1. An easy way to experiment with spacing, composition and the Rule of Thirds is to spend some time cropping images in your photo editing software. It's a great way to see different results from the same picture.

2. Divide your TV or computer screen into thirds and just watch anything. I recommend good visual documentaries or animation. You will immediately see how photographers arrange the elements in their shots to comply with the rule of thirds.

3. Some tape and string will do the trick... This used to be very easy on old TV sets that would collect dust on the screen; you could just draw an X and O board in the dust and it worked perfectly... not so much with flat screens as they don't gather as much dust)

4. Throughout your day, look around you and try to compose shots based on what you see. Picture the borders of the photo and figure out how you would arrange the lines and subjects inside that frame. After you've been shooting for a while, you may find yourself doing this automatically all the time.

5. Many cameras now will superimpose the thirds graph over their viewfinders. This is an excellent tool to use to learn the rule of thirds. However, be careful not to become too dependent on it; it's easy to become a little obsessed with arranging your photo on the grid, and this prevents you from seeing when its time to break the rules. Turn the grid off sometimes to avoid developing bad habits.

ABOVE: Interesting objects can seem to have natural prominence in a well-composed shot. In the LEFT shot, the tree in the foreground is aligned with the left third of the photo and the background sillouette is placed on the right and middle two thirds.

The Rule of Thirds in Conclusion

And there you have it – the Rule of Thirds and the Golden Ratio. These are the easiest, more useful ways of thinking about the composition of a photograph. Lots of nebulous concepts like balance & focus in an image can be sorted out if you just remember the basics of applying the Rule of Thirds. Put your horizon at the 2/3 or 1/3 line; place the subject of your photo at one of the intersection points; or balance a busy left third with an empty right two-thirds. If you master these basic techniques, you'll be well on your way to taking great, professional-looking photographs.

VIDEO The Rule of Thirds

Check out more videos from the Composition Series below!

Niclas Hartz

© Robert Patterson

LINES in photography are an immensely powerful element. Properly arranged lines will guide the eye around the image, placing emphasis on the subject matter or conveying an appropriate sense of movement. Improper arrangement of lines, on the other hand, can draw the eye out of the photo or take away from the strength of the subject matter. What's more, with a really strong balance of compositional elements, lines can themselves become the subject matter.

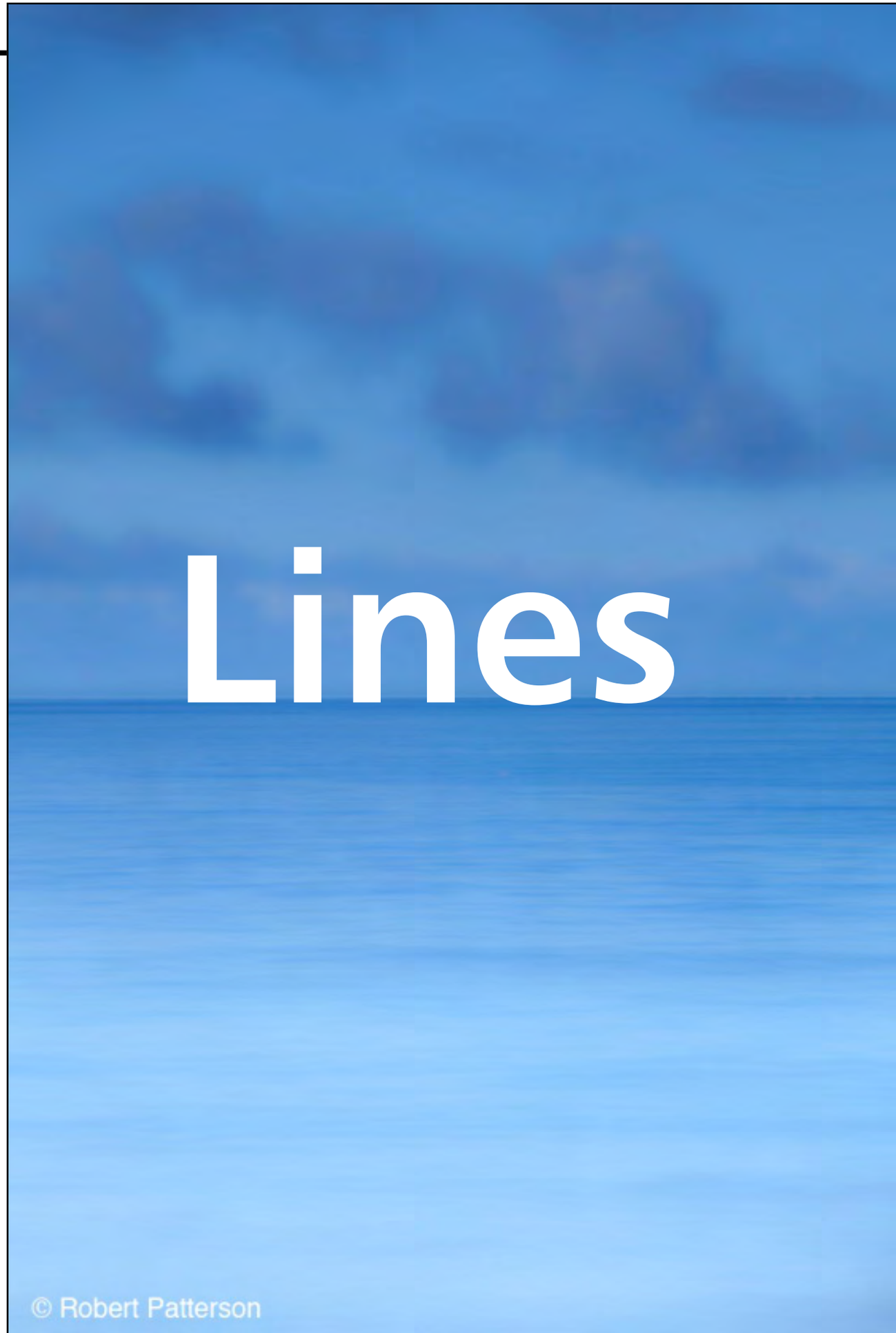
Certain types of lines may convey calm or chaos or other emotional states. A certain line's meaning will change depending on the photo and who is looking at it.

Part Two: Lines

But while the interpretation of line and shape is somewhat subjective, it is certainly true that effective use of lines can dramatically increase the emotional impact of a photo.

When looking for lines, remember that a line in a photo need not be a literal line like a railroad track or road markings. A line can be the division between light and dark, between different colors or the edge of a object. In real life, there are more implied lines like this than there are actual lines.

There are five kinds of lines that we will discuss: vertical, horizontal, diagonal, converging, and curved. Each kind of line can be used to create different and distinct effects in a photo, and bears careful consideration when composing your shot.

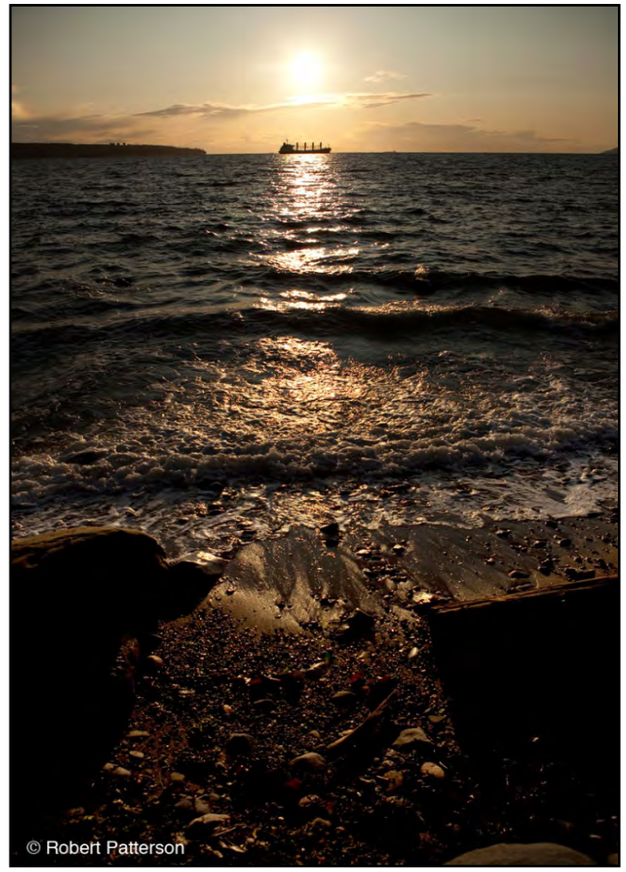


Vertical Lines

When shooting tall buildings, vertical lines become converging lines. The convergence in this photo (ABOVE) was corrected in photo editing software (RIGHT).

When shooting strong vertical lines, the first decision you have to make is whether to orient your camera vertically or horizontally. A vertical framing can convey strength and size. Skyscrapers and pillars for example will usually have an appearance of immense strength and scale if shot vertically (especially from a low angle). On the other hand, vertical lines in a horizontal image can strongly divide the photo. This is a fairly dramatic visual effect, and if used correctly can make for a powerful photo.

When dealing with strong lines, it is especially important to apply the Rule of Thirds. Dividing a photo in half with a vertical line can be visually unsettling, especially if done unintentionally. Look for repetition of lines like fence slats or telephone poles. Contrasting strong straight lines with curvy more organic elements is also pleasing to the eye. Very tall vertical lines will start to converge (think looking up at a tall building), if this is not the desired effect, a tilt shift lens can correct this or photo editing software can fix the problem.



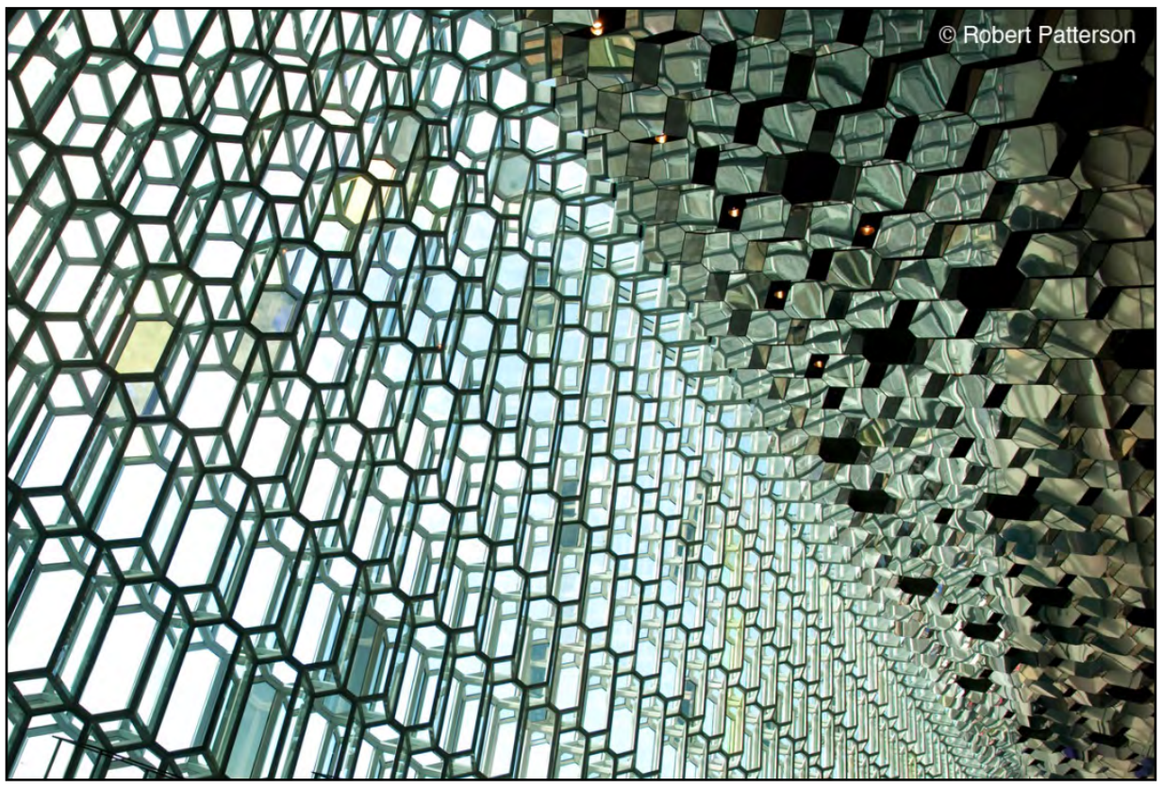
A crooked horizon line (RIGHT) and corrected horizon (ABOVE). Repition & interplay of vertical and horizontal lines are powerful tools of composition (LEFT).

Horizontal Lines

The guidelines for vertical lines also apply to horizontal lines. Look for repetition, follow the Rule of Thirds and decide which way you will orient your camera (vertically or horizontally) to best achieve your vision. The most common horizontal line is the horizon line. It is very important that the horizon in a photo be perfectly level. The slightest angle is glaringly obvious and very unsettling. This is particularly true for the horizon in a shot of an ocean or lake. It is strangely easy to make this mistake, but there are a few tools you can use to ensure straight horizon lines. If your camera overlays the Rule of Thirds graph, simply align it with one of the horizontal lines. Most SLR cameras have focus points marked inside the viewfinder - these can be used as guides to align your horizon with. Some tripods have spirit levels built in and small attachable ones are also available at most camera shops. Some cameras have a digital level built in that is viewable on the LCD screen. If all else fails, the problem can be fixed in photo editing software.

Diagonal Lines

Diagonal lines are great for conveying movement in a photo and work very well at drawing the eye to the subject matter. Numerous conflicting diagonal lines can create a sense of chaos or action; be careful to ensure the effect is desirable and not just confusing! Try to avoid diagonal lines going directly to the corners of the frame as this draws the eye out of the photo.



Converging Lines

The symmetry of this (ABOVE LEFT) photo gives it a sense of comfort and familiarity. The road in the bottom half sets off the sky along the top, and the house to the right adds a little bit of interest to an otherwise fairly uniform scene. The spiderweb (ABOVE RIGHT) is another example of nature lending itself to good composition.

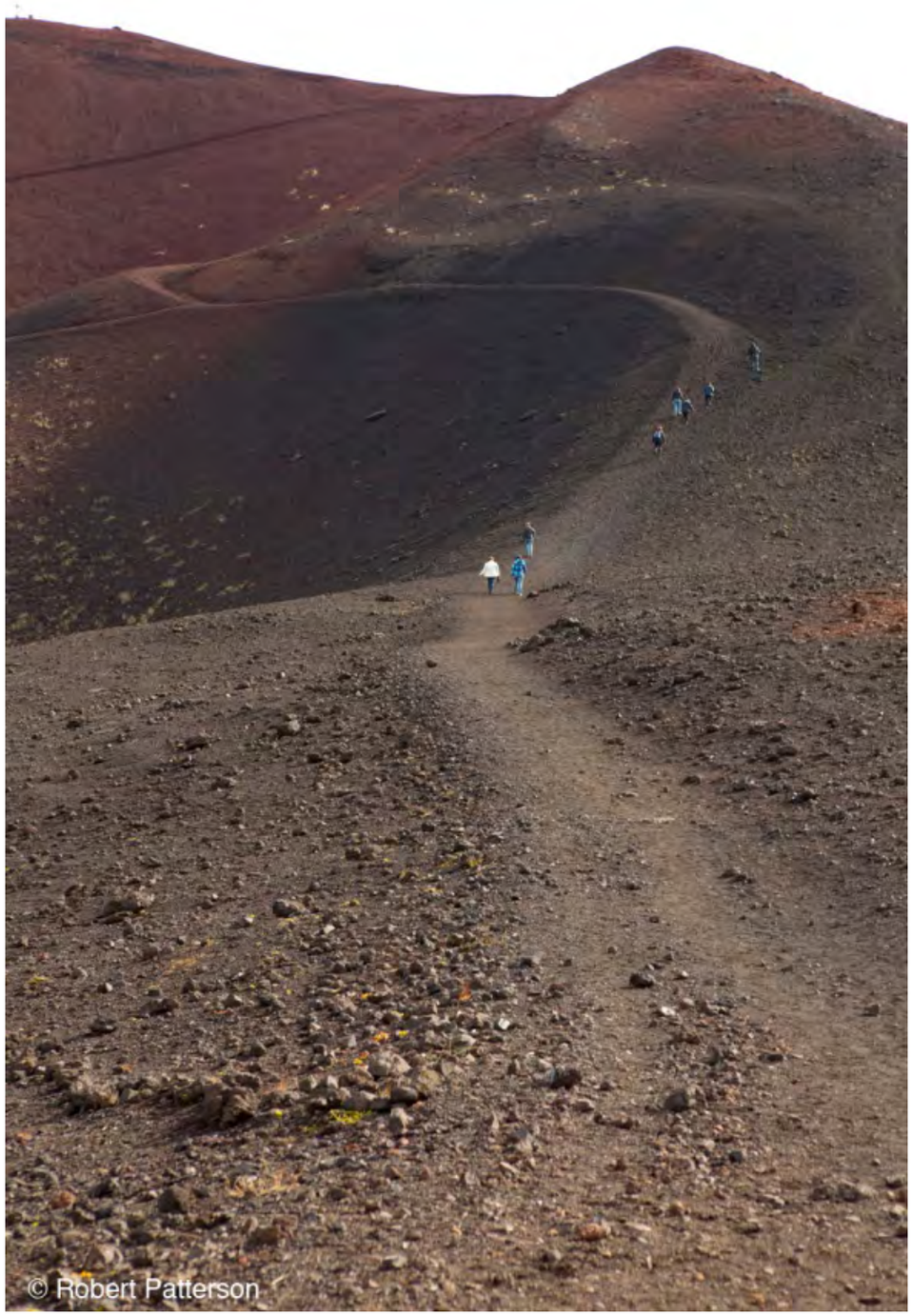
Lines that converge in a photo give an excellent sense of depth and perspective. A common example would be a shot of railroad tracks. Be deliberate in deciding where you place the point of convergence. Again apply the Rule of Thirds and place that point at the intersection that best accomplishes what you are trying to achieve with your photo. Converging lines toward the upper right or left third might create a sense of depth, motion or distance, while lines converging in the bottom half of the photo may create a sense of closeness or the impression that something is approaching. All of that said, this is a situation where centering the image works great... Again, try to avoid letting the diverging ends of these lines go directly to the corners.

Curved Lines

Curved lines can suggest movement, depth and playfulness. They can also be difficult to compose. Rainbows, for example, are tricky; they will often lead directly to a corner in your photo (drawing the viewer out of the frame), but with a little attention the correct composition can be found.

One fantastic common use of curves is known as Hogarth's Line or the S-Curve of Beauty. Starting on the lower part of the frame and winding its path through the photo, an S-Curve gives a great sense of depth, motion and perspective, while keeping the viewer's eye in the frame. This doesn't have to literally be an S shape, but generally refers to any curving line winding its way through a photo.

As with other lines try to avoid it entering or exiting the frame directly at the corners. This is a much harder element to capture than one might think. It is often easier to achieve from slightly higher angles.



Lines in Conclusion

When you begin to recognize the geometry of both nature and architecture, you'll have reached an important point in developing as a photographer. Lines are an essential piece of composition, converging into shapes, patterns and objects while also conveying movement, direction and balance in an image. Experimenting with lines is a good way to develop as a photographer: symmetry, asymmetry, and convergence can help lead your audiences' eyes to what or where you want to. You can hide, exaggerate or enhance objects, all through clever manipulation of the basic lines and geometry of our surroundings. Give it a try....

Part Three: Negative Space

NEGATIVE Space can be a difficult concept to grasp. It is somewhat nebulous and for this reason is an often overlooked element of composition. With negative space you stop talking about the positioning of particular elements and start thinking about the overall effect of spacing in the photo.

Claire Hsu

Introduction to Negative Space

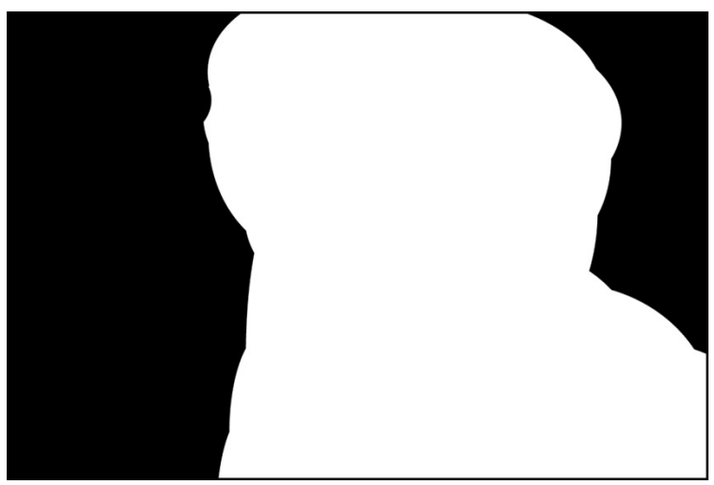
(ABOVE) This shot of the underground sign is touching the clock tower. This lack of negative space takes away from the sense of depth in this photo. (BELOW) The slight separation of the sign and the tower give a better sense of depth.

Simply put, negative space is the area of an image where your subject(s) isn't. It is the space that surrounds and provides context for your subject. Because negative space is defined by the positioning of the subject, it is easy to disregard. But the space around the subject in a photo is very important to the overall picture. Too little and there can be a cramped feeling; too much and the strength of the subject is reduced.

If you are having trouble visualizing this, look to the diagrams to the right. Notice how too much head room is just empty space that doesn't help to emphasize the people in the photo. Conversely, leaving too little head room gives a cramped feeling. Similarly a sense of motion can be emphasized or lost by the negative space in a photo.

Once you've decided where to position your subject matter, try changing your camera angle slightly (tilt left, right, up or down) then recompose the shot to place your subject where you originally wanted it. This will change the relationship between your subject and the negative space that surrounds it.

Here you can see how look space is actually a function of negative space. The black areas are the negative space, the white, positive space or the subject.



Depth-of-Field & Negative Space

Learning to control depth of field can be a very powerful tool in creating a strong negative/positive space relationship. By properly using depth of field it is possible to have your subject in very sharp focus and the background completely out of focus. This places all of the emphasis on the subject and not on miscellaneous background objects.

A somewhat easier use of negative space to grasp comes into play when you have two subjects in an image. The space between these objects no matter how subtle, can have a huge effect. A great example of this can be seen in Michaelangelo's painting of God and David in the Sistine Chapel. The tiny space between God's and David's fingertips creates tension and implies a sense of motion by capturing the movement neither at its beginning or ending. Paying attention to the division of subjects in a photo can create great emotional appeal.

VIDEO Depth of Field

Check out more videos from the Composition Series below!

Conclusion

And that completes your introduction to the theory and principles of composition! If you want some more concrete suggestions, check out our companion eBook "13 Dos and Don'ts for Taking Great Photos".

To keep the learning going, check out our collection of video tutorials. Submit your own photographic masterpiece to one of our contests. Winners will have their work featured by Corel -- not to mention the prizes!

To stay up to date with the latest on Corel's learning offerings, subscribe to our newsletter. It's packed full of content – photo tips, video tutorials, promotions on new e-books, and more! It's so good, we read it ourselves!

About the Author

Robert Patterson has been a photographer and television camera man for more than 20 years. His career has allowed him to cover a wide range of fascinating subjects from Queen Elizabeth II to Jane Goodall to The Dali Lama as well as many different and fascinating locales. While his preferred subject matter is landscape photography, he is well versed in a wide variety of photographic styles and loves them all. Robert is currently working with Corel as a contributor to the Discovery Center still photography course. When not taking photographs, Robert enjoys playing and listening to music and is usually found behind a piano or guitar and sometimes a microphone. His other interests include a love of science and reading, and he is often found in the kitchen creating something delectable. Take a look at Rob's website here: http://pattersonimagery.com/

Glossary of Terms

APERTURE measures the size of the lens opening. If the lens opening is wider, more light will get into the camera, and the image will be more exposed. Aperture also affects depth of field; a smaller aperture results in a deeper depth of field, which means that more of the scene from near to far appears sharp. Aperture is measured in f-stops, which usually range from f/1 (widest) to f/32 (smallest).

BALANCE refers to the distribution of elements in a photo. An image is "balanced" when each section (left, right, top, bottom) is given relatively equal 'weight'. Balance does not mean that your images are symmetrical - effective use of negative space, repetition, and curves can all create balance without symmetry.

DEPTH OF FIELD is dependent on aperture, focal length, and focal distance. Wider apertures, longer focal length s, and closer subjects result in a shorter depth of field, increasing the apparent unfocused blur in the foreground and background. Conversely, smaller apertures, shorter focal lengths, and more distant subjects result in a larger depth of field, increasing the visible detail in the foreground, subject, and background.

F-NUMBER also called the F-Stop, the is the number dictating the relative aperture opening size at that setting. Moving an F-number (or F-stop) up or down causes the amount of light passing through to double or halve, respectively.

FOCAL DISTANCE is the distance from your lens and its focal point. While individual lenses have a fixed distance, cameras use a set of lenses which move closer or farther apart as you zoom in and out slightly, which in turn moves the focal point of the lens set. This allows you to use a single lens on subjects a variety of distances away.

THE GOLDEN RATIO is a relationship of 1:1.618. For some reason, this ratio crops up all over nature and art, and is especially aesthetically pleasing. The Golden Ratio forms the basis for the Rule of Thirds

HEAD ROOM refers to the space above your subjects. Especially useful when shooting groups of people.

HOGARTH'S LINE is a particularly desirable s-shaped curve that winds its way through the foreground, middle, and background of the photo. If used effectively, it brings balance, dynamism, and visual unity to an image. The phase "Hogarth's Line" is sometimes use to refer to any s-curve winding through a photo.

ISO measures your film's (or digital sensor's) sensitivity to light. Higher ISO values mean more sensitivity to light. A high ISO value allows you to get better exposure with less light, but it can also increase the amount of noise in your image. In general, try to avoid ISO values above 800. Remember that aperture and shutter speed also affect the amount of light that hits your camera's sensor, so it may be possible to reduce your ISO value by increasing aperture or shutter speed.

LIGHT METER, also known as an Exposure Meter, is a light sensitive instrument that measures the amount of light arriving at the camera sensor, to help adjust exposure settings.

LOOK SPACE refers to the area in front of a subject. Too little look space can lead to crowded or static photos

NEGATIVE SPACE is space in the photo where your subject or other objects are not. Good use of negative space is key to creating balance in an image.

THE RULE OF THIRDS is not really a rule, but rather a suggestion that dividing your image into thirds, and placing your subject at the intersection point of these lines, can help create balanced and visually pleasing images.

THE SENSOR, or image sensor, it is the device within digital cameras that converts an image into an electronic signal.

THE SHUTTER is the movable cover which controls how long the sensor is exposed to light.

SHUTTER SPEED determines the amount of time that the lens will be open. Faster shutter speeds means less light will reach the camera's sensor. This can affect exposure, but it is most important when shooting a moving object. A fast shutter speed, for example, 1/250 of a second, is required to shoot fast moving objects. Otherwise, the object will blur.