photography

guide for beginners

A BEGINNER'S GUIDE TO PHOTOGRAPHY

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INTRODUCTION

This guidebook to photography defines and outlines twelve general but crucial concepts and techniques of photography. It includes tips and tricks for each of the twelve concepts, in addition to several example photographs for each to provide clarity and ease to those who are beginning to learn the complex approaches and techniques of photography. With the provided guidelines and examples, photography beginners and amateurs should feel more knowledgeable in approaching various methods and goals of photographing, while example images should produce a clarified and less intimidating approach to mastering the twelve techniques (and thereafter, photography, in general). With time and practice, before you know it, you'll appear just like a professional photographer!

RULE OF THIRDS

FIGURE 1

FIGURE 2

FIGURE 3

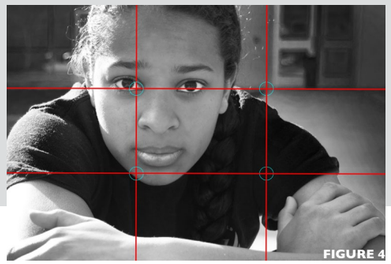

FIGURE 4

When applying the rule of thirds, seen in Figure 4, the points of intersection lie at the subjects of each photo – the person walking in Figure 1, the distant person sitting in the tunnel in Figure 2, and the face (eye) of the person in Figure 3.

RULE OF THIRDS is perhaps the most well-known and essential photography term, where an image is split into nine parts by four crossing lines. Two parallel horizontal and two parallel vertical lines intersect the photo to divide it into thirds in each direction (creating nine pieces). The four points of intersection of these imaginary lines serve as the critical interest points for the subject matter and compositional elements in focus.

TIPS AND TRICKS:

Rule of thirds' four intersecting lines can be viewed through a camera's viewfinder before taking a photo. Use them as a guide for placing the desired focus of your image within one of the interesting points. Cropping can also be a useful tool for improving photo composition by adhering to the rule of thirds. However, when editing your photo, be mindful of how you crop and don't do so until the very end. Once you learn how to recognize the rule of thirds easily, you will know better how to break it properly.

Figures 5, 6, and 7 display various levels of shallow depth of field. While Figures 5 and 7 use shallow DOF to focus attention on the faces of the subjects, Figure 4 uses this effect to a lesser degree to target attention on the reaching hand, but still maintain clarity of the person.

FIGURE 5

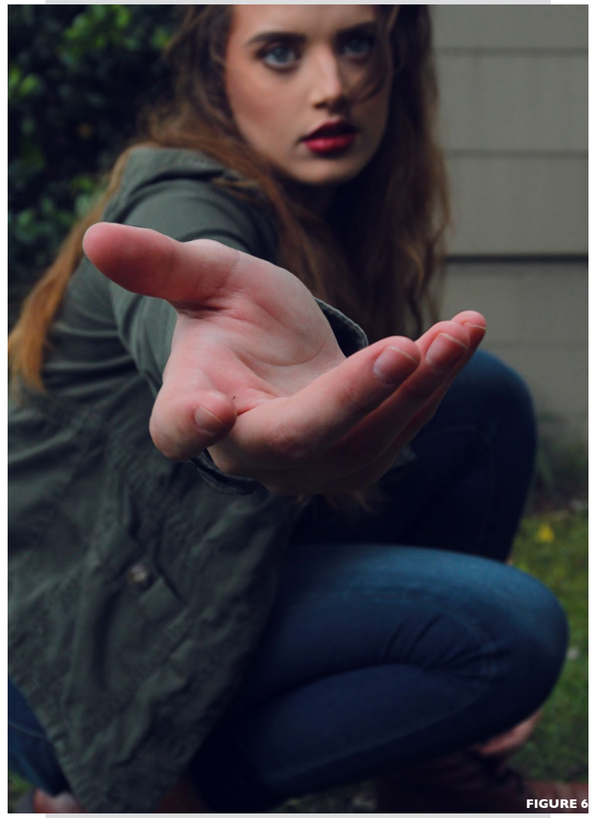

FIGURE 6

FIGURE 7

DEPTH OF FIELD

DEPTH OF FIELD (DOF) refers to the area or range of sharpness around a chosen focal point that appears in focus. It allows the subject/focus of the image to stand out from lesser important surrounding content. A shallow DOF is when the sharply focused subject has a very small range around it in focus while most of the surrounding area is blurred (immediately in front of or behind the subject). A deep DOF is when the surrounding area has a wider range of space in focus, so the background (and foreground) may appear just as sharply focused as the subject.

TIPS AND TRICKS:

Learn how to operate aperture, camera distance from the subject, and lens length to manipulate DOF. Shallow DOF, created with a wider aperture (lower f-stop), is most effective in portrait photography or other photos where the focus should be on a single subject. Deep DOF, created with a narrow aperture (higher f-stop), is essential for most landscape photography, where the entire scene is typically sharply focused.

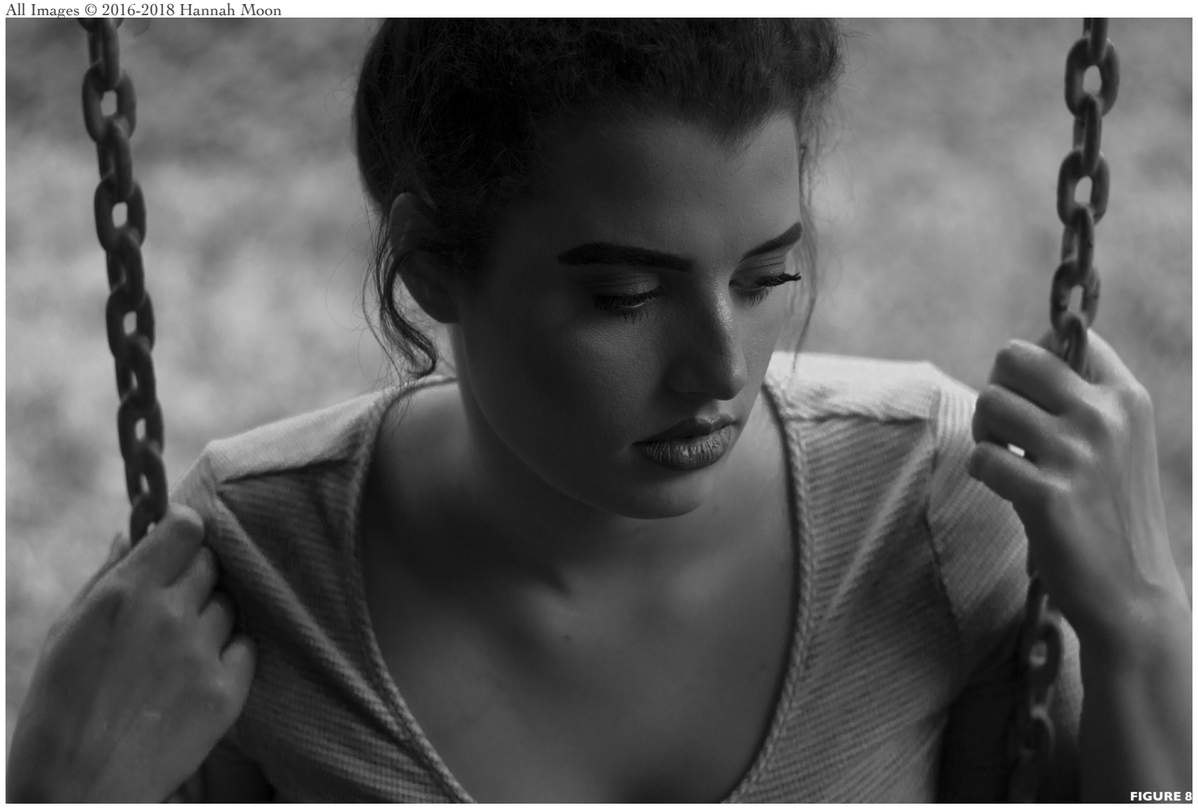

FIGURE 8

LIGHT & SHADOW

LIGHT AND SHADOW establish the core of photography. Together, juxtaposing light and shadow creates dramatic contrast and adds depth to a photo. Both light and shadow help carve shapes and forms in pictures and draw the eye to the intended focus, adding life and focal interest to the image.

TIPS AND TRICKS:

Try placing the primary light source (natural or artificial) on one side of your desired subject matter. This will create depth in your photo by accentuating the curves and forms of the subject, traced by the contrasting highlights and dark shadows. Tools such as reflectors and artificial lights (i.e., lamps, bulbs, flashes, get creative!) can help if the subject matter seems too flatly lit and the image seems too dull. Although camera flashes can be useful at times, beware that this kind of frontal flash can flatten out an image and reduce its captivating light and shadow.

FIGURE 9

Each of these figures uses a light source to naturally (Figures 8 and 10) or artificially (Figure 9) highlight the subject of the photo. The positioning of the light source allows shadows on the opposing or lesser relevant portions of the figure, creating a dramatic contrast that beckons the viewers' attention.

FIGURE 10

While capturing motion, freezing is used in Figure 13 to notice water in the air and the children 's expressive faces, while Figure 11 uses panning to capture the movement of being on a bike. Figure 12 uses light painting to blur the motion of the actual light source and create a new form out of sparkler rays.

FIGURE 11

FIGURE 12

FIGURE 13

MOTION

MOTION can be captured through several techniques when photographing a moving thing. Freezing a moving object captures the details of motion for a still action shot (Fig. 13). Panning involves moving the camera with the moving subject, making it sharp and the background blurred (Fig. 11). Smearing is the opposite of panning, where the camera does not move but the object does, making the subject blurred and everything else sharp.

TIPS AND TRICKS:

If you're trying to freeze something in motion, use a high shutter speed on your camera. This technique is great for action shots like those often seen for sports. When panning, the subject will be more properly in focus (contrasting the blurred background) if you find a stable method of moving the camera at the same speed as the moving subject (imagine, for example, a moving car). Smearing is best used when the action is more important to capture than the subject since the subject will be blurred. A technique outside of the latter is light painting (as seen in Fig. 12), where blurred motion creates something new (no longer just a sparkler but now the shape of a heart). Try this with a very low shutter speed and very steady hand (or tripod).

REPETITION

FIGURE 14

Repetition can be seen in Figure 14 with the series of train cars and in Figure 15 with the rows of books, each of which uses an angled shot and whose pattern draws in the viewer, targeting attention on the break in repetition (i.e., the persons and the single pulled book). Rather than displaying a subject apart from the pattern, Figure 16 uses repetition of its primary subject matter to emphasize characteristics of that object, a polaroid, and its abundance.

FIGURE 15

FIGURE 16

REPETITION is the creation of specific reoccurring patterns in photography that often generates a substantial visual impact on the viewer. It draws attention with patterns and similar shapes for very dynamic imagery. Repetition can be noticed everywhere around us and creates movement and variation in a photograph, leading the eye throughout various parts of the image.

TIPS AND TRICKS:

Search for repetition all around you, and when you find it, choose a central focal point for your image to make the central resting place for the eye amongst the image's prominent elements of repetition. This focal point can be a part of the repetition (like in Figure 3, where the polaroid of the girl is included in the surrounding repetitious polaroids), or the focal point can be entirely separate from the repetition (like the persons in Figures 1 and 2, breaking the repetition of train cars and books).

FIGURE 17

TEXTURE

TEXTURE adds depth and interest to a photo in various ways and methods. Shooting patterns, curves, and forms – especially prominent with added contrast of light – are just a few ways to create texture in an image, making the two-dimensional photograph seemingly tangible and full of visual life. Examples include bricks on a building, leaves on a bush, or even actual fabric patterns and textures.

TIPS AND TRICKS:

When you're trying to capture the texture of an object, the distance between the camera and the (textured) subject matter is very important. Depending on the texture and your goals in photographing it, you want to be at the right distance to see the subject matter's texture but still get an overall compositionally pleasing photo. Try taking several pictures at various distances to see what works best in that case. Sometimes (as with most of the Figures seen here), capturing texture is less about details of an object and more about an overall sense of tangible life in the photo as a whole. Search for such textures everywhere you go (you'll be surprised what you find!).

FIGURE 18

FIGURE 19

Figures 18 and 19 each use nature to create visual texture in a photograph, making the landscapes seem tangible. The multitude of branches and their bark help achieve this is Figure 18, while Figure 19's abundance of leaves and snow does the same. Figure 17 uses texture in a more subtle manner to capture attention, seen with the combination of shapes, forms, and rusty characteristics of the human-made architecture.

FIGURE-GROUND CONTRAST

FIGURE 20

Figure-ground contrast is established with color in Figures 20 and 21. In Figure 20, the person in bright red and the road's yellow stripe stand out tremendously in comparison to the neutral tones of the street and background. The opposite is true for Figure 21, where the smooth, natural tones of the person stand out from the complementary colored and textured blue-green background. Figure 22 displays figure-ground contrast with the darkness of the tunnel against the bright opening that lights up the silhouette of a person.

FIGURE 21

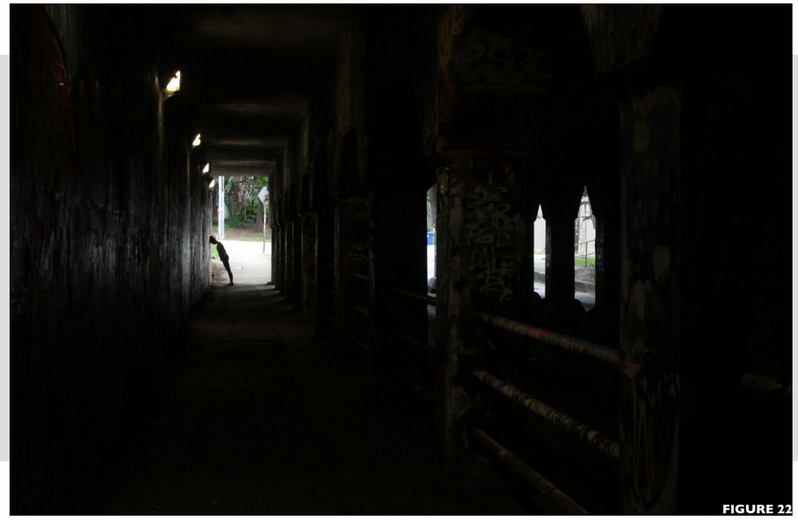

FIGURE 22

FIGURE-GROUND CONTRAST uses light and shadow to add interest and focus attention on the figure as the subject of a photo. The effect is often dramatic and eye-catching, such as a silhouette in front of a light source or a highlighted figure amongst a shadowed, textured, colored, or otherwise different background.

TIPS AND TRICKS:

As mentioned, you can start by shooting silhouettes, where a blacked out figure against a behind bright light source instantly creates figure-ground contrast. Also try an approach that relies almost entirely on a contrast of hue, where the complimentary colors of the figure and the background develop a contrast that allows the figure to stand out. Something as simple as a plain, blurred, or minimally detailed background can create figure-ground contrast by making the main subject stand out from its surroundings.

Converging lines lead to and are interrupted by the main subject in Figures 24 and 25, targeting the subjects as the resting focal point and leading the eye's pathway into the photo. Similarly, Figure 23 uses converging lines with trains and railroad tracks to guide the eye into the image; however, a subject does not interrupt these lines, but instead they lead in the direction of the focal point (the sky and beam of train light).

FIGURE 23

FIGURE 24

FIGURE 25

CONVERGING LINES

CONVERGING LINES comprise of multiple lines coming together or toward each other to add depth to a photo and guide the viewers' eye inside the space of the shot. Examples include railroad tracks, roads, hallways, or other (physical or implied) lines that lead the eye into or out of an image.

TIPS AND TRICKS:

The converging point can serve as the focus of the image, where converging lines like train tracks or a path lead the viewer's eye to the subject placed in the center of the lines. Converging lines can also call attention to the focal point of the image if that main subject interprets the line path, or in other words, the lines stop at the subject.

Try placing your subject in different spots amongst converging lines to determine the most visually exciting composition. Otherwise, a specific subject may not even be needed. Try capturing interesting converging lines that lead together to a distant, unclear point or perhaps trail off of the image (remember to be mindful of composition).

LOW-LIGHT SITUATION

FIGURE 26

FIGURE 27

FIGURE 28

Low lighting is captured in each of the figures with low shutter speed, wide aperture, and high ISO. The low-lighting in Figure 26 characterizes the lost stare of the child and dimly-lit gallery. Reflections play a crucial role in Figure 27, where the low-lighting is supplemented by highlights on the trophies – fitting for the neglected vintage objects. Figure 28 uses a simple artificial flashlight to capture a person on the beach at night amongst otherwise pitch-blackness and small highlights from the moon onto the water.

LOW-LIGHT SITUATION is critical for photographers to learn because it can create beautifully dramatic and/or thoughtful images. Lighting cannot always be changed, and often shouldn't be, so we must learn to adapt to it.

TIPS AND TRICKS:

When capturing low-light, a lens with a wide aperture is ideal to let more light in (especially prime lenses). Long exposure times, with low shutter speeds, also allow more light in to capture low-light situations. Beware that movement and blurring increases as shutter speed decreases; a tripod can be helpful here. Otherwise, you can increase the ISO, but remember to balance it with the shutter speed to reduce blurriness from long exposures and graininess from the high ISO. It's also crucial to keep light sources in mind – natural light should be taken advantage of, and artificial light can be useful (but use carefully and sparingly). In low-light situations, also keep your camera on manual focus because it's often difficult for it to find the subject in darker lighting (when on automatic focus). Additionally, since low-lighting can be so difficult to capture, try shooting in RAW, where the colors and lighting will be more natural and can also be more easily manipulated later, if necessary.

NATURAL FRAME

FIGURE 29

FIGURE 30

FIGURE 31

NATURAL FRAME is a more direct technique to improve the composition of a photo but requires careful application. This technique uses an element within the picture to literally frame its focus, drawing the eye in and emphasizing the subject. Examples include using door frames, tunnels, branches, shadows, and light to surround the border of an image and/or its subject matter.

TIPS AND TRICKS:

Initially, you can start shooting natural frames with things like doorways and windows. Then try delving deeper and find framing structures that are less obvious. Search for shadows, light, tree branches, or any series of shapes and forms that create a framed effect around a focal subject (whether it's in the foreground or background). Additionally, try out various depths of field, where the natural frame could be blurry or sharply focused, to see which works best visually for your particular subject matter.

Natural frames are created in both Figures 29 and 31 by natural tree branches, bordering the image and the figure as the focal point. Figure 30 uses highlights, shadows, and an open hole in a deteriorating building to outline the person of focus.

CLOSE-UP

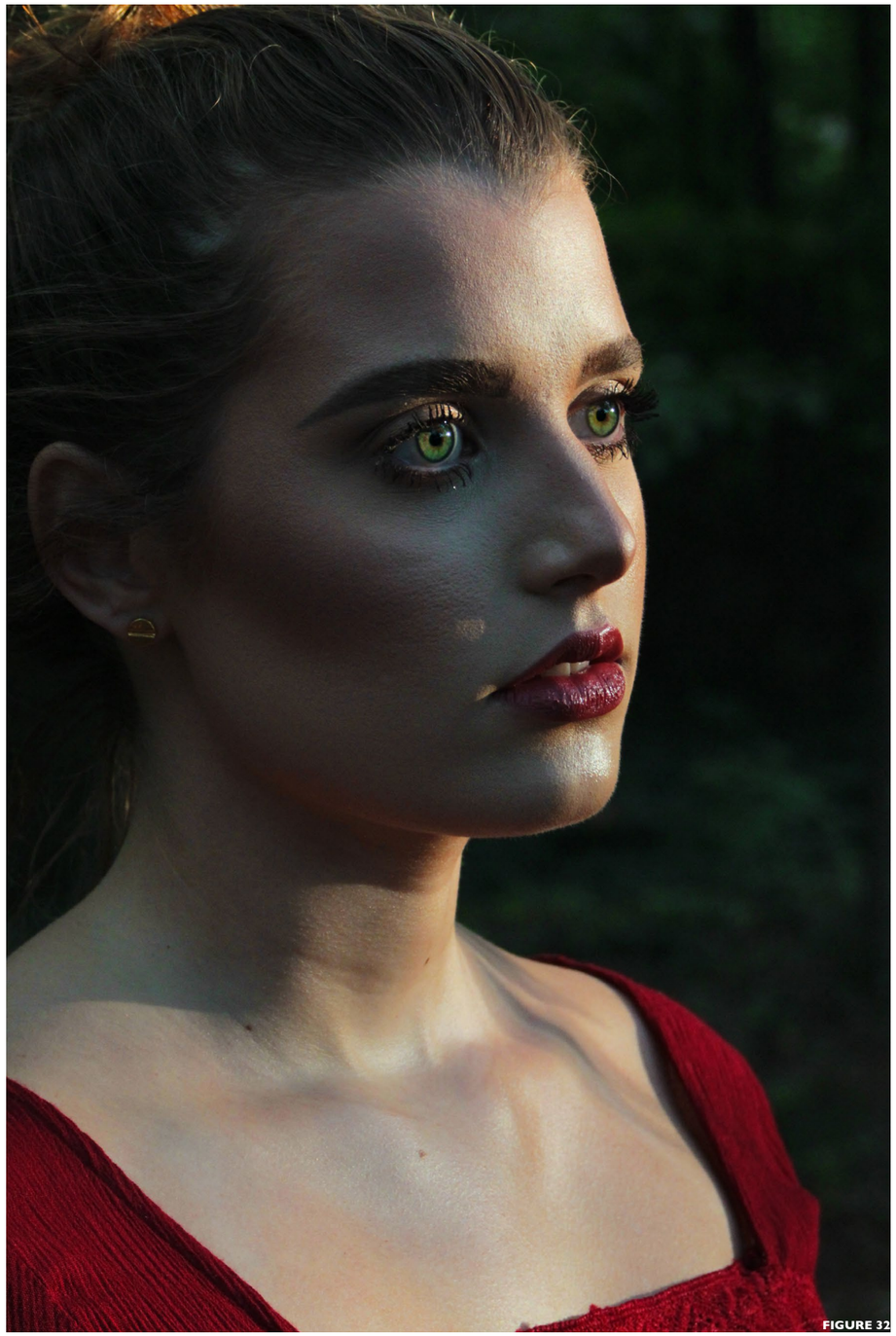

FIGURE 32

FIGURE 33

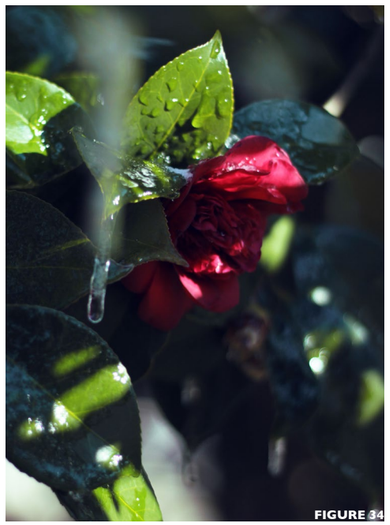

FIGURE 34

CLOSE-UP photographs can include macro-photography, which uses a macro-lens for extremely detailed shots. It can also simply be close-range, detailed images. Close-up photography can create a new perspective often undetected by the human eye. Close, detailed shots can build emotion (especially with portraits) and showcase subject matter that may otherwise be overlooked.

TIPS AND TRICKS:

Close-up photography often benefits from a shallow depth of field (DOF) to encourage sole focus on the desired subject at hand, rather than the small bit of surroundings visible. Macro-photography may not need shallow DOF, because the incredibly close-up, highly detailed shots accentuate the small amount of space pictured (where no present background or foreground needs blurring). Take risks and take many pictures – try burst mode, where multiple shots are taken in a single click. In your efforts, keep in mind that close-up photography can create an unmatched beauty and intimacy that is worth the time and effort of exploring.

Close-up in Figures 33 and 34 uses proximity, along with facial expression and lighting, to provoke emotion and connection. Figure 34 uses close-up to detail the symbolism of the rose and its highlighted water droplets.

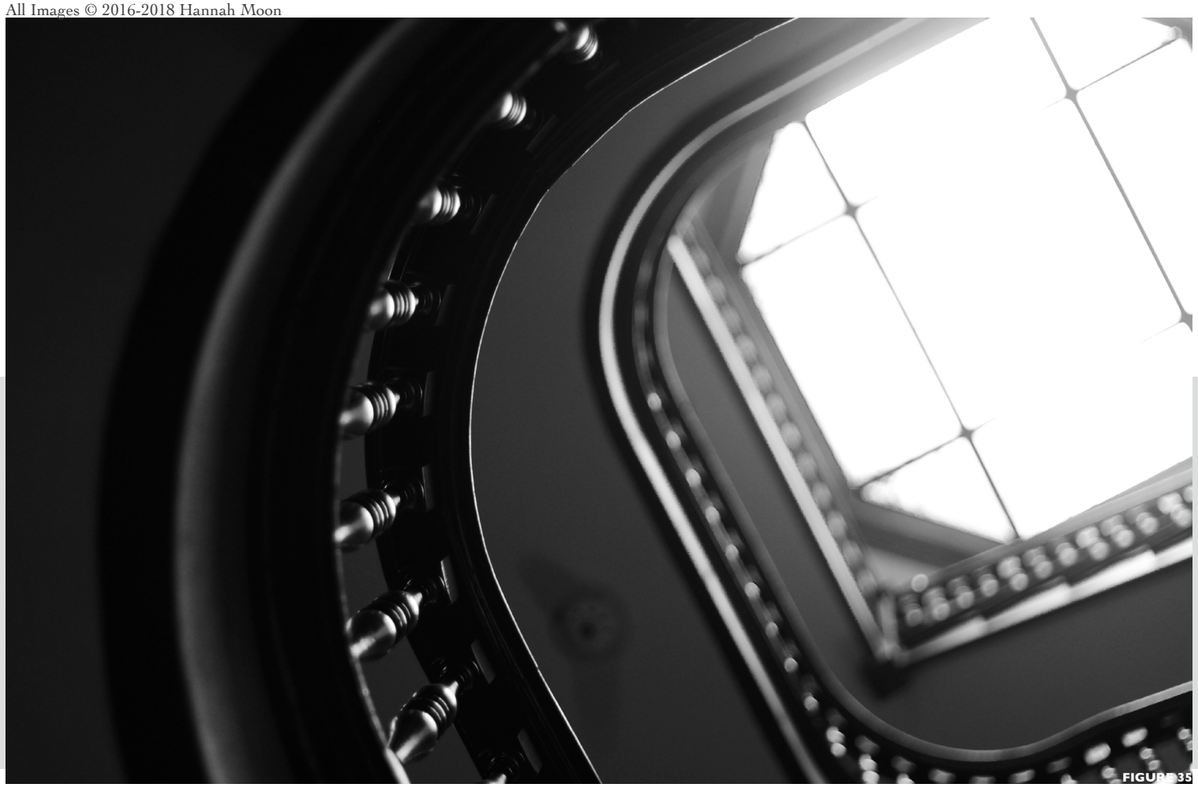

FIGURE 35

ANGLES

ANGLES are a multifaceted concept in photography that impacts the viewer by creating dynamic images. The angle of a shot can look as if the view is either coming from above, below, or to any side of the subject or in a scene. This composition is present in horizontal and vertical orientation. Tilted orientation disorients the view with a slanted camera angle. Angles can also be present in the context of a photo to create similar effects.

TIPS AND TRICKS:

Try creating dynamic angles by positioning the camera in various spots, moving around the image's focus to find the most interesting and fitting angle for the subject matter, rather than a straight-on shot. Pointing the camera at an angle from above makes the subject look small and minuscule, while an angle from below causes the subject to look large, powerful, and in control. Side angles often create movement and interest. If you'd like to instigate confusion or disorientation, try tilting the camera so that the pictured material seems slanted and the viewer seems less grounded. Certain angles within the image can also characterize the subject matter and, therefore, the photo as a whole.

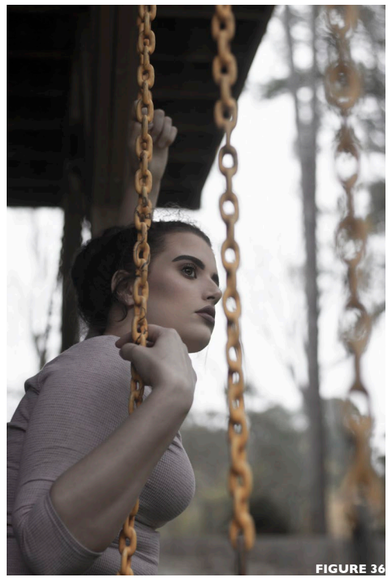

FIGURE 36

While Figure 35 uses a straight upward angle to showcase spiral stairs, Figure 37 uses the same angle downward to display a dramatic emergence from the water. Similarly, Figure 36's slight angle up defines the parallel ropes and contemplative expression.

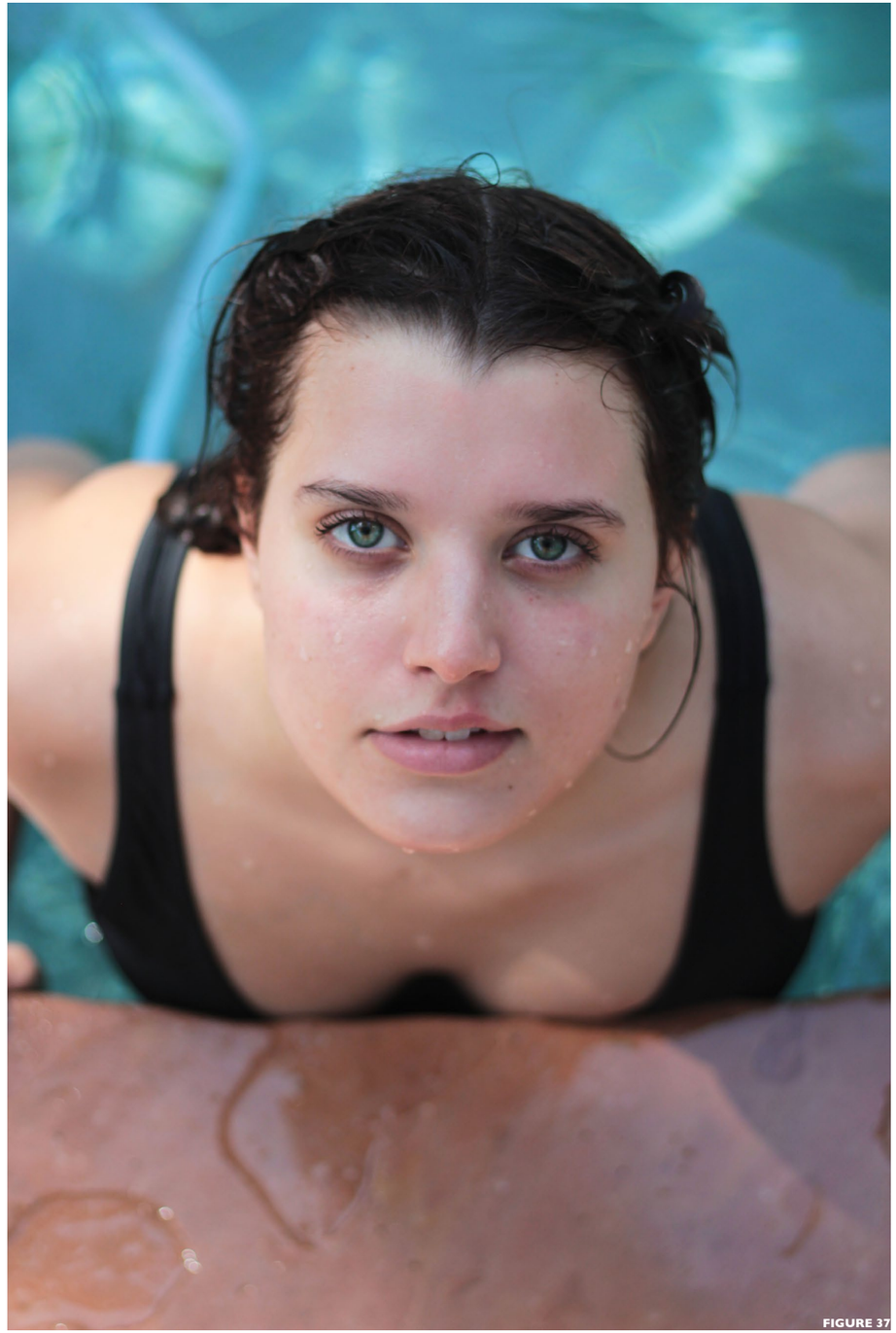

FIGURE 37

GLOSSARY

ANGLES – a multifaceted concept that creates dynamic photos; a camera angle from above makes the subject look small and from below makes the subject look big or powerful; side angles add exciting perspectives, and slanted angles disorient viewers; angles can also be present inside the context of an image for similar effects (p. 24)

CLOSE-UP – include macro-photography or close-range, detailed shots; often creates a new perspective lost or overlooked by the human eye (p. 23)

CONVERGING LINES – when multiple lines meet or come toward each other to add depth and guide the viewers' eye into the image; examples include railroad tracks, roads, and halls; the converging point or object interrupting the converging lines can serve as the focus of an image (p. 16)

DEPTH OF FIELD – the area of sharpness that appears in-focus; when shallow, a smaller amount of space around the subject is in-focus; when deep, a larger amount of space around the subject (or the entire image) is in-focus; affected by aperture, lens length, and distance between camera and subject (p. 5)

FIGURE-GROUND CONTRAST – uses light, shadow, color, and more to add interest and focus attention to the subject of an image; the effect is often dramatic and eye-catching, such as a silhouette in front of a light source or a highlighted figure amongst a contrasting colored or textured background (p. 15)

LIGHT AND SHADOW – the light and dark areas that help define shapes and forms in an image; juxtaposing them creates contrast and depth, often drawing the eye to the intended focus in the image (p. 6)

LOW-LIGHT SITUATION – requires adapting to a situation's lighting for potentially dramatic and thoughtful images; wide aperture, long exposure times (i.e., low shutter speeds), and/or higher ISO allow more light into a camera's lens to capture low-light situations (p. 19)

MOTION – effect achieved through several techniques when photographing a moving thing; freezing captures still details of a moving subject, panning moves the camera with a moving subject to make it sharp and the background blurred, and smearing doesn't move the camera while the object moves so the subject is blurred and everything else sharp (p. 9)

NATURAL FRAME– a technique that uses an element within the photo to frame its focus, drawing the eye in to emphasize the subject and potentially improve composition; examples include using doorframes, tunnels, branches, shadows, and light to frame the border of an image and its subject matter (p. 21)

REPETITION– the creation of specific reoccurring patterns in photography that draws attention for a visual impact on viewers; creates movement and variation (p. 11)

RULE OF THIRDS – method of splitting an image into nine even parts (two sets of thirds, each direction) by two parallel horizontal lines and two parallel vertical lines; the intersections of these imaginary lines are critical points of interest for the primary subject matter (p. 3)

TEXTURE – adds depth and interest to a photo, especially when created through contrast of light, curves, forms, and patterns; examples include bricks on a building, leaves on a bush, and fabric patterns (p. 12)

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ABOUT THE AUTHOR

Hannah Moon is third-year undergraduate student at Georgia Institute of Technology in Atlanta, Georgia. She studies Literature, Media, and Communication, with concentrations in media and interaction design. Based in Atlanta, Moon has a long-time passion for visual arts, photography, and film.

She began extensively exploring photography around the age of 14, practicing with both film and digital cameras. Moon learned the art of manually developing film rolls and printing photographs in a dark room, where enlargers and chemical processes perpetuated a level of respect and background knowledge for the art of photography. Balancing the manual settings of film cameras helped her learn to do the same with digital cameras, with which she has mainly used since then.

Over the years, she has developed several portfolios of various themes, aiming to create connections for a deeply personal relationship between the subject matter and the audience.