Learn How to Create Images,
Set Up a Studio, and Launch
Your Photography Career

LIGHTRIGHT

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Joe Lavine and Brad Bartholomew

For my partner, best friend, wife, and voice of reason—Kathleen.
I could never have completed this project without her.
Also, to my father, who made me the man I am today.

—Joe Lavine

This book is dedicated to my lovely wife, Betsy,
who has supported and loved me for over 30 years.
Anything I have done wouldn't have been possible without her.

—Brad Bartholomew

Acknowledgments

Thank you to the many role models that I've had in my career. Throughout my entire life, my father has been an example of the definition of hard work and determination. My sister Helene, who has proven what you can accomplish when you set a goal. In college, Norman Lerner for never letting me settle for simply doing OK; OK was never good enough, and still isn't. I could have never asked for a better mentor and friend than Jan Oswald; she taught me how to be successful in photography and business.

I must thank all the students who have crossed my path during the last 15 years. Each one forced me to learn more about photography and education than I ever could have on my own.

A giant thank-you must go out to the entire team at the MAC Group, especially Bill Gratton. Bill and the MAC Group have supported me as an educator, lecturer, photographer, and author. Thanks to Dan Cuny and Profoto for letting me borrow some incredible lighting equipment, which I may never return. Beth Hawkins was gracious in offering her amazing food styling skills for multiple images. This book would have never been possible without my coauthor, mentor, studio partner, and friend, Brad. Last, and definitely not least, no acknowledgement would be complete without thanking my wife Kathleen (aka Kiki) for putting up with me, and my loving quirks, every day.

—*Joe*

Let's start at the beginning with my two amazing parents, who taught me the importance of love, patience, and hard work. I love you both. Thanks to all the faculty and fellow classmates at Art Center, especially David Roth, for demanding only the very best work week in and week out. Assisting Richard Noble was a once-in-a-lifetime experience that reinforced my desire to become a commercial photographer. Thanks to Howard Sokol and Frank Varney for being terrific mentors and friends. I appreciate the generosity of all the instructors I have worked with at the Art Institute of Colorado over the years. Trying to emulate them has made me a better teacher.

About the Authors

Joe Lavine

Photography has been part of my life for over 30 years. I remember being given a Pentax K1000 SLR camera for my 13th birthday; that day changed my life forever. Truth is, I wish that I still owned that camera.

I am simply one of those people who love photography. I was told early in my life that if you can make your avocation your vocation, you'll have a happy life. This is the premise I have followed throughout my career; whether it was undergraduate and graduate studies, teaching, lecturing, writing, or working as a photographer, I have always believed in doing what makes one happy.

Two of my passions are food and photography. That and an attention to detail have allowed me to build a commercial studio where I specialize as a food and beverage photographer. Years of focusing on the details, which generally involved much experimentation and problem solving, have made me an expert in understanding my subjects and using lighting techniques to bring them to life. My clients range from small restaurants to Fortune 500 companies. A partial client list includes Coors, Betty Crocker, General Mills, Coca-Cola, Pillsbury, Coleman Foods, JBS Swift, and Celestial Seasonings. With the help of my great clients, I have won local and national honors.

Whether as a student or as a young photographer, if it weren't for a handful of mentors, my career would not have been as fruitful. That's why I became an educator and author. I began teaching photography at the collegiate level in 1998 and have held either an adjunct or full-time position ever since. Along with running a studio, teaching, and writing, I am a frequent guest lecturer at colleges and seminars around the country.

I have learned that there is no single method that works for all photographers. Heck, my wife, Kathleen, is a professional photographer, and our approaches and styles are worlds apart, but that is OK; this is what makes photography great. Whether lecturing or writing, I want to give people the tools to achieve their goals in photography.

Brad Bartholomew

Brad Bartholomew is an award-winning commercial photographer and educator living and working in Denver, Colorado. For over 25 years he has shot a variety of subjects in his studio for a myriad of local and national clients, including Apple Computer, Celestial Seasonings, the Colorado Ballet, JD Edwards, Children's Hospital, Coors Brewing Company, Forest Oil, Head Sports, My Twinn, Pentax, and Qwest.

Brad specializes in not specializing. He photographs products and people both in the studio and on location. Brad works with advertising agencies and design firms as well as directly with clients. Believing in the collaborative nature of commercial photography, he says, "I am pleased when, at the end of the project, the client will say, 'Well, that was fun' as if they are surprised. Pushing to create strong, conceptual, beautiful images can be stressful, but in the end, we're taking pictures. It's supposed to be fun."

Brad has taught a variety of classes at the Colorado Institute of Art for over 25 years. His main emphasis is teaching studio, lighting, portfolio, and advertising photography and the principles classes. He believes it's his obligation to provide students with a challenging and nurturing environment in which they can apply their tremendous energy to reach far and create dynamic, vibrant imagery. Brad encourages students to take risks. Progress cannot be achieved without trying new things, and progress cannot occur without failure. He's come to realize that he gets far more from his students than they get from him. That's one reason he continues to teach.

This book is an extension of the desire to teach more people and give back to a profession that Brad feels passionate about.

Brad has been married for almost 30 years. He and his wife, Betsy, have two wonderful kids, one in college, the other a graduate out in the working world, who are vibrant, interesting individuals. When Brad and Betsy are not gathering with family and friends around the table eating good food and drinking wine, you can find them traveling the West in their 1979 VW camper.

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Introduction

In theory, baking a chocolate cake is a simple process. There are a limited number of ingredients that need to be combined in the right proportions. These are then placed in an oven at the right temperature for a prescribed amount of time, and presto, you have the perfect cake. All you have to do is follow the recipe. Yet sometimes the cake is too dry, sometimes it's a soggy mess, and sometimes it's rock hard. The theory is relatively simple, but in practice it's not always easy to get the results you desire.

Lighting a photograph is very much the same kind of endeavor. The theory is simple, but creating beautifully lit images is not an easy thing to do. In theory, light needs to do only a few things. It should create volume in the subject matter; it should separate objects from one another and the background. The light should create texture and perhaps drama. Simply get the light to do those few things and presto, you have a great image. Just follow the recipe.

Many good books have been written about the subject of lighting. Many of them provide the readers with recipes to follow to achieve specific results. They include diagrams with lighting placement and lighting ratios: If you place your subject here and put this kind of light on it in the following amounts, you'll get the following results. There is nothing inherently wrong with this formula except that it's, by nature, formulaic. Lighting a photograph should be anything but formulaic. Lighting is one of the most important creative components of any image. In fact, we'd go so far as to say that it's the most important component. It's what we do as photographers. Lighting is how we create our images. It must be a creative, not a formulaic endeavor.

Returning to the cake analogy—what if we want to make a lemon cake? Can we just substitute the same amount of lemons for the chocolate we were using? Should we use whole lemons, lemon extract, or lemon juice? What about the peels? Why doesn't my recipe tell me these things? Well, I have a recipe for chocolate cake, not lemon cake. Sure, I can probably find a lemon cake recipe, but then my cake will taste just like the cake made by anyone else who uses this recipe.

You do not want your photographs to look like everyone else's photos. That's why this book will rely on few recipes, few diagrams, and few set-in-stone guidelines. To benefit from reading this text, you'll need to do more than simply follow a set of rigid preset rules. You'll need to be willing to experiment; you'll have to be willing to fail as you learn to create images that reflect your own personal taste and style.

Of course, we have to start with some basic principles, principles that you'll be able to apply to your own subjects. We'll give you many examples to help guide you through the process, but it's imperative that you don't think that the exact lighting used in these examples will work for your specific subjects. It won't be as easy as setting up our lighting schemes to duplicate our results. We are showing how to make a chocolate cake, but you may be trying to make a lemon, strawberry, or vanilla cake. The principles are hugely important, and they will help, but you'll need to do your own experimentation to get the results you desire.

OK, then—this book isn't a collection of lighting recipes. It's not a strictly technical how-to book. So what is it? It will be your guide to fully immerse yourself in the ways you can get light to do what you want it to do. Ultimately, you want light to accentuate the positive aspects of what is in front of your camera while it hides or diminishes lesser attributes. The secret is that no simple solutions to solving these problems exist. There are many ways to get from point A to point B; compelling ways in which each of you will decide to light your subjects. The key idea here is that you are making conscious decisions. You're not taking photographs; you are making them. You are constantly analyzing your subjects, and you make a series of choices and decisions to help portray these subjects in the way you wish them to be portrayed.

The entire process starts by thinking—thinking about each individual subject you shoot. You must know exactly what you want to say about what you are about to photograph. Are you trying to minimize or maximize texture? What's good for one subject might be terrible for another. An old sea captain might look great with a hard cross light that brings out the weathered crags in his face, whereas your grandmother might not appreciate the same lighting treatment.

These are your choices as you start the process of lighting your shots. Nothing drives us crazier than watching students set up lights in exactly the

same spots with the same light modifiers week after week, with no thought to what they're trying to accomplish with those lights. Using the same lighting schemes for all your images is a sure way to run your career right into the ground.

We'll show you how to use specific tools to create unique and cogent lighting. You'll explore the analytical skills necessary to bring your subject to life through lighting that works for that specific subject and for the way you see it, him, or her. We'll concentrate on lighting within a studio environment, but it's important to realize that these thought processes and techniques can be applied to all types of lighting, both within and outside the studio.

In addition to discussions about lighting in the abstract, we'll examine practical tools and techniques to make your image making easier and more effective. We'll begin with simple, inexpensive equipment options. (Yes, there are ways to create fabulous light that don't cost a lot.) As the book progresses, we'll consider more complicated and more expensive alternatives. As your careers progress and your job assignments become more complicated, clients' and other viewers' expectations of you and your abilities will also grow. This can be both exciting and intimidating.

It's important to understand that you won't have all the equipment you need at the very beginning of your career. Almost all photographers start their careers with relatively simple equipment, and then they add to it as needed. We'll help you get the most out of each piece of lighting equipment that you acquire.

One of the major focuses of this book, in addition to lighting effectively, is the goal of growing your business and all that will entail. While hobbyist photographers might enjoy this book, it's really geared toward those individuals who want to take their photography to a level where it can support them over a long and satisfying career. Photography is a wonderful and vexing mixture of art and science, aesthetics and technology, and creative enterprise and business. Being deficient in any of these areas will keep you from being truly successful. It's our hope that this book will help you to create dramatic and appropriately lit images that will entice others to work with you or hire you, enabling you to grow your business over time.

One of the keys to running a successful photography business is understanding that at its core, it's a customer service business. As your business grows,

you'll be using more sophisticated lighting equipment, but you'll also need to use more sophisticated customer service techniques. Fully understanding exactly what your clients want and expect and then being able to deliver on these expectations is an essential part of running a successful commercial photography business—or any other kind of business, for that matter.

The most important thing to remember as you begin reading this book is to keep an open mind. Maintain a willingness to experiment and push yourself outside of your comfort zone, beyond tried-and-true methods, so that you can develop your own unique voice. In the following pages you'll see many different examples of similar subjects lit in various ways. We've done this deliberately to help drive home the point that there is no single solution to any specific lighting problem. There are always multiple approaches, and it'll be up to you to decide on the one that best works for what you're trying to say with each of your images.

After more than 40 years of combined teaching experience, we realize that often students just want to be told the right answer. We also have learned that to do so is not good teaching. The students who are truly successful use fundamental lighting principles as a foundation and then experiment as they build their own unique and compelling images. They light each subject in its own way. In short, they light right.

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chapter three

LIGHTING AS PART OF COMPOSITION

Proper lighting is more than achieving the right exposure. Exposure is easy; today's modern cameras and meters make getting a good exposure almost a foregone conclusion, and when in doubt, you always have the image histogram to confirm whether the exposure is correct. We all know people who claim to be accomplished photographers because their family vacation pictures look good on social media sites or because they captured a pretty sunset while visiting the islands. The lighting might be exposed properly, but what did they do?

ISO 50, 1/60 sec., f/16, 100mm lens

Opening Image: Photographic Equipment

Camera: Sinar 4 × 5 view camera with Leaf Valeo 22 Digital Back

Lens: Nikkor 100mm

Lighting: Profoto Acute2

Light modifiers: Small softbox and custom-built glass set

Simple but effective: One hundred percent of the light for the image on the previous page is coming from below the set and shining through the subject.

NOTES
The softbox is placed directly under the set, which is built from glass and diffused Plexiglass.
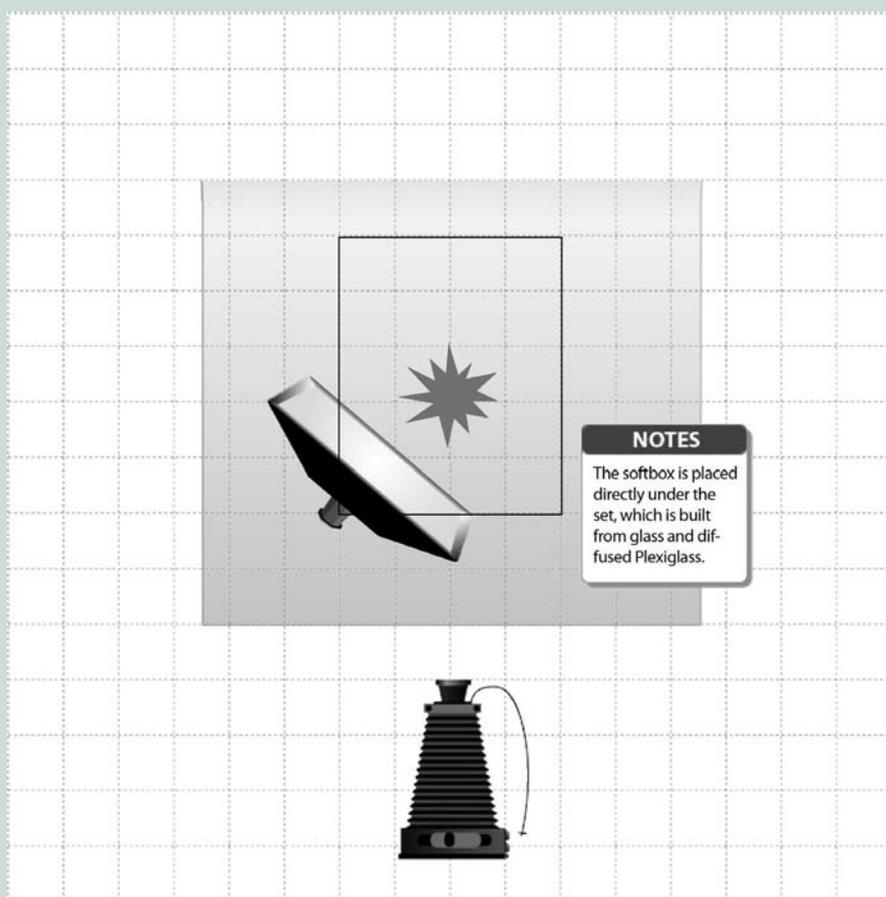
Creating a magnificent image requires the artist to have control over all of his or her tools. Think about Claude Monet's *Water Lilies*, Vincent Van Gogh's *Starry Night*, and Rembrandt's portraits, and consider how your eyes move through the images. It's not merely the subject matter that brings the painting to life but the artist's control over his medium. Just as a painter controls paint and brush, a photographer must control the placement of light.

Lighting helps tell the story. You can have the greatest subject and the best arrangement, but it's the light that brings life to an image. We refer to this as "lighting as part of composition." Your eyes travel through an image with good composition; your gaze lands where the photographer intended and then moves along almost as if you are following a path with arrows. The lighting becomes an element in the image, not merely the means to proper exposure.

Direct the Viewer's Eye

It may sound odd, but a good studio photographer needs to be a puppet master and control the viewer—or at least the viewer's eyes. It's the job of the professional photographer to guide the viewer through an image.

The idea is to give the image a key element that catches the viewer's attention, and then use a supporting cast to move and hold his or her attention in the image. It's important to ask yourself why you find an image interesting. Even the most intriguing subject will warrant only a passing glance unless there is something to hold interest. Light plays a big role in how an image is experienced. Again, we are going beyond proper exposure; we want to see how light becomes part of the composition.

The following still life images of the three wineglasses and cork (FIGURE 3.1A and B) are identical, except for the lighting. The exposure is spot-on in the first image. If we were merely lighting for exposure this would be great; however, a professional photograph requires more; it demands that the subject, exposure, and lighting work together to create the overall composition. The second image has more character. Again, the subjects and camera have not changed, but the lighting has been altered to add greater depth—some would say more soul. No longer does the still life comprise only the glasses and cork but also rose highlights cast by the wine and directional shadows that move your eyes across the scene.

FIGURE 3.1 **a)** The softbox is placed directly above the subject; **b)** the subject is lit with a 10-degree grid, which creates a spotlight effect.

ISO 100, 1/125 sec., f/11, 100mm macro lens

a)

b)

Jan Oswald, Artist with Light

Parts of this section will take a slightly different approach than usual, analyzing the images of the well-known photographer Jan Oswald.

A comfortable use of lighting often mimics how books are read, from left to right. Simply put, it's natural for us to move our vision across a page, and thus across an image. *Zen Tulips* (FIGURE 3.2) is a comfortable image; it's easy on the eyes. There is no incredibly creative or dramatic lighting, but the direction of light begins on the left and then gently moves across the image. The flow travels from the blue vase, along the green stems, and finally comes to rest on the red tulips. The composition and lighting work together.

The lighting in *Single Calla on Painted Background* (FIGURE 3.3) follows a similar path as with *Zen Tulips*, but here we have an image with a completely

TWENTY-PLUS YEARS IN THE MAKING

I feel extremely fortunate to be able to share Jan Oswald's images for this part of the book. As a very young photographer, I moved to Colorado to enjoy the outdoor lifestyle and to pursue my studio photography career. As luck would have it, Jan was one of the first photographers that I called, and one of the first who gave me a shot at working as a photography assistant. Jan taught me a ton about studio lighting, food photography, and how to be a professional photographer. Twenty-plus years later, she still introduces me as her old assistant and tells everyone that she taught me everything that I know. She is probably right.

—JOE LAVINE

different energy. Where the previous image was comfortable, now we have drama. Interestingly, the subjects of the two images are soft, sensual flowers, but it's the photographic treatment that is different. Again, the lighting works with the image and not against it. The background of the image, and the curve of the calla lily, convey motion, almost as if the wind is blowing from left to right. Notice the highlight side and shadow side. The left

FIGURE 3.3 *Single Calla on Painted Background*, by Jan Oswald

ISO 64, 1/250 sec., f/32, 150mm lens

FIGURE 3.4 *Melon on Blue Plate*, by Jan Oswald

ISO 64, 1/250 sec., f/32, 150mm lens

highlight side mirrors the bright area of the background, while the shadow portion tucks behind, mimicking the far right. Everything about the image—subject, background, and lighting—contributes to the composition of the final image.

When is it OK to break the rules? Lighting aside, *Melon on Blue Plate* (FIGURE 3.4) breaks a handful of basic design rules. First, there is a dividing line that splits the image in two, and then the flowers on the right compete for attention with the melon on the left. So, why does the image work? It's the lighting—the lighting connects the two sides. You could say that it creates a bridge spanning the dividing line. The highlights on the melon and flowers are the two brightest areas of the image, telling the viewer of their importance. The connection is solidified by the shadow cast by the melons and ends directly in front of the flowers, leading the viewer across the scene.

There is little doubt in *Watching* (FIGURE 3.5) about where Jan wanted the visual focus to be. Unlike the previous examples, *Watching* provides us with a bulls-eye of light. It's not a spot of light only in the center but rather a pool of light directed from the left that enhances the subject. Whereas the leaves are lit to show texture, the same lighting focuses our gaze on the only part of the image without texture. Other photographic elements that enhance the image are the warm-versus-cool color palette and the geometrical circular pattern.

The common thread so far has been that the lighting is part of the composition and not merely a tool for exposure.

In a departure from floral images, Jan Oswald's *Still Life with Broken Glass* (FIGURE 3.6), from her *Dutch Masters* series, closely resembles the lighting characteristics of the great master painters. The subject is no single object, but rather all the elements as a whole.

Unless done carefully, this approach makes it easy to end up with an image that has no focal point and thus is easy to dismiss. *Still Life with Broken Glass* uses carefully controlled highlights to direct the viewer's attention around the image; we move from element to element, never losing attention.

FIGURE 3.5 *Watching*, by Jan Oswald (following page)

ISO 64, 20 sec., f/32, 150mm lens

FIGURE 3.6 *Still Life with Broken Glass*, by Jan Oswald

ISO 64, 1/250 sec., f/22, 310mm lens

BLURRING VISION

It can often be difficult to understand why we are drawn to certain areas of an image and not others. A simple trick that I learned years ago when viewing images on a monitor or book is to sit back a few feet and blur your vision slightly. Because you can no longer distinguish objects, your mind will focus on elements with the greatest contrast, whether that is based on light versus dark or on colors. These are the areas that you tend to be drawn to.

Try this technique with *Still Life with Broken Glass*. When I do it, I am quickly drawn to the highlights on each element.

—JOE LAVINE

Subject Hierarchy

Along with directing the viewer's eye, lighting also tells us what is important in an image, or its hierarchy. It's common to have multiple objects in a scene, but how does someone know what the main subject is? As photographers we have many tools at our disposal; we have composition, depth of field, and— sometimes overlooked—we have lighting to help control subject hierarchy. One of the more difficult tasks as a professional photographer is to guide the

FIGURE 3.7 These tomatillos demonstrate how simple lighting variance directs viewers.

ISO 100, 1/125 sec., f/5.6, 100mm lens
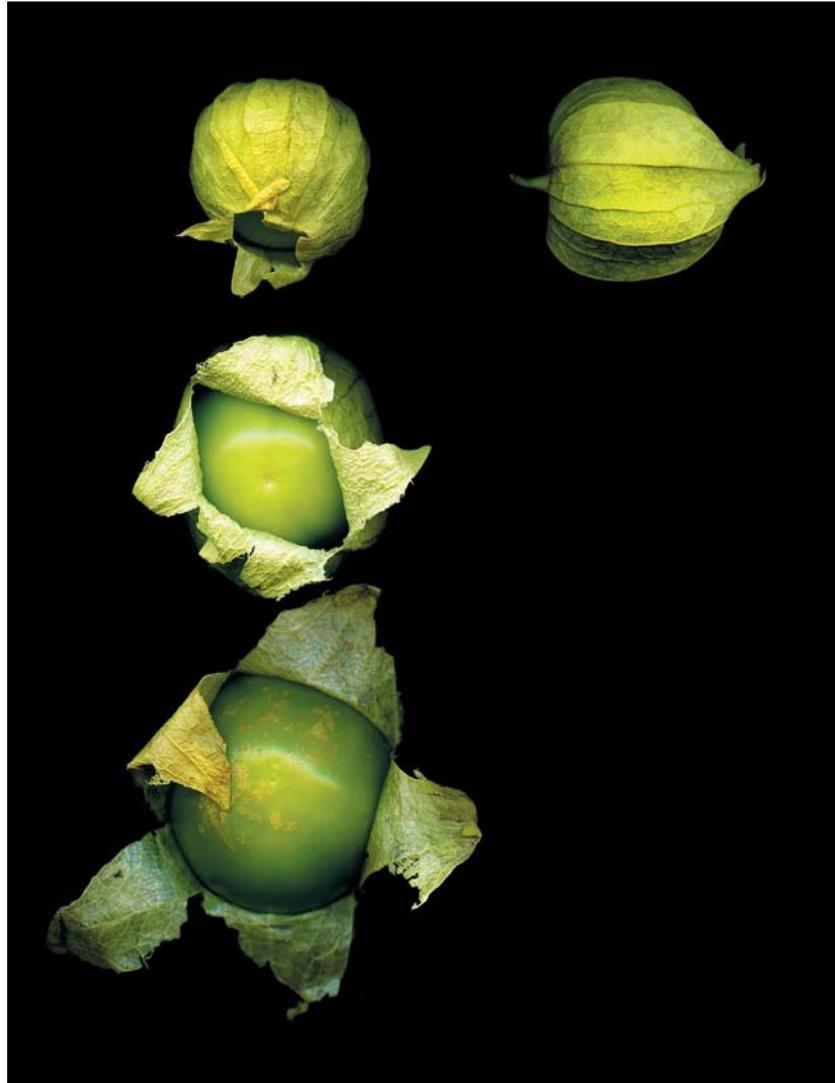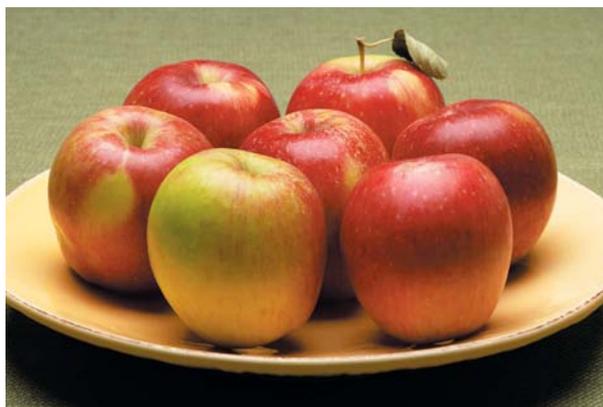
a)

b)

FIGURE 3.8 **a)** A well-exposed still life of apples with no standout; **b)** spotlighting a single apple makes it the hero.

ISO 100, 1/125 sec., f/22, 100mm lens

viewer to where you, as the artist, want that person to look. It's important to use as many techniques as necessary to direct the viewer's gaze.

An easy way to think about this concept is to relate it to contrast control. If everything in an image is neutral gray, then nothing shows dominance. However, if one object is brighter, or sometimes darker, than the rest, it will stand out. The middle tomatillo (FIGURE 3.7) isn't the largest, but because it is slightly brighter it grabs the attention. It's not that one component is under- or overexposed, it's simply that one shows a slight variance from the others.

Similarly to the previous wineglass images (Figure 3.1), these two apple images (FIGURE 3.8A and B) demonstrate two lighting variations. The first image is properly exposed; however, it lacks a focus. Each apple is treated equally; there is no hero. A strobe and softbox are used to illuminate the entire scene equally. The second image takes a different approach in that one apple stands out from the rest.

The lighting directs the viewer to exactly where the photographer intended; the back-right apple is the key subject. This time the same softbox is used to add a base exposure, which is roughly two stops underexposed, and then a second strobe with a grid is added to spotlight one apple and make it the hero.

The series below (FIGURES 3.9A–E) relies on multiple photographic techniques, but lighting adds much of the interest. There is nothing elaborate about the subject matter; it's simply a collection of fruits and vegetables. Each subject was analyzed to determine what was unique, and then controlled lighting high-lighted those specific areas while allowing the other elements to recede.

Although these images were lit using strobes, the next section, *Light Painting*, addresses a specialized lighting technique that can produce similar results with greater control, enabling you to place light wherever you desire.

FIGURE 3.9 In this series—
a) gourd; **b)** kiwi; **c)** mushroom;
d) Pink Lady; **e)** star fruit—unique
lighting is used to focus the
viewer's attention.

ISO 50, 1/60 sec., f/4, 100mm lens

a)

b)

c)

d)

e)

Painting with Light

The previous sections discussed the importance of moving the viewer's eyes through the scene as you intended. Wouldn't it be great if there was a way to place light throughout the image with exact precision? Fortunately, there is a lighting technique that allows you to do just that. *Painting with light* or *light painting* allows you to place light exactly where you desire. As the name implies, you actually paint light onto specific areas of the photo while avoiding other areas.

Different Ways to Light Paint

The term *light painting* is used to refer to two distinct techniques of lighting. In one, the light source itself is directed throughout the scene, creating lines and swirls that move through the image. Think of when you have taken a sparkler or a stick with a red-hot ember and twirled it around in the dark, creating interesting patterns. Leaving the shutter open for a set amount of time allows the light to produce an exposure as it moves through the scene.

In the image below (**FIGURE 3.10**), a stick with a red-hot end was moved to create the two hearts. If you look closely you can see the face and hands of the person creating the hearts as well as the stick that serves as the light

FIGURE 3.10 A light source moved through the scene in this image creates two hearts.

© Shutterstock

source. Anything that creates light can be used to produce these kinds of images. Adding colored gels over the light source can create different colored swirls in endless combinations. This can be fun, but it's not the technique we will be concentrating on.

The other way to light paint is to turn the light source onto the scene itself. Instead of pointing the light into the camera as seen in Figure 3.10, you make sure that the light itself isn't seen; rather, what you record is the light reflecting off the subjects in the image. The reflected light strikes the film or sensor, thereby recording an image.

This technique has been around for decades. It was used by architectural photographers who needed to light huge spaces but didn't have enough lighting to illuminate such large interiors. With the shutter open, they could use a single light and move it across the interior space, leaving the light longer in some areas than in others so that some elements would be brighter. In this way they were able to direct the viewer's eye to the parts of the room that were most important. We've had students who have used this technique to light up things as large as waterfalls, parts of forests, and huge arches in places like Moab and Arches National Monument (FIGURE 3.11).

The image Casey took is beautiful and dramatic and helps to illustrate the diversity and potential that painting with light has. Since this is a book about studio lighting, though, we will concentrate on how this technique can be used in a studio environment.

LIGHTING AND COMPOSITION

I have found that whenever I create a photograph, I'm bouncing back and forth between the composition and the way I light that composition. I'll usually start with the basic layout and a general overall lighting scheme. I'll decide to feature certain items in the shot and make others less prominent. The more important items generally receive more light, and the less important ones receive less light. I go back and forth several times during this process, adding and subtracting light while I move the subject matter within the scene to create the best composition possible.

—BRAD BARTHOLOMEW
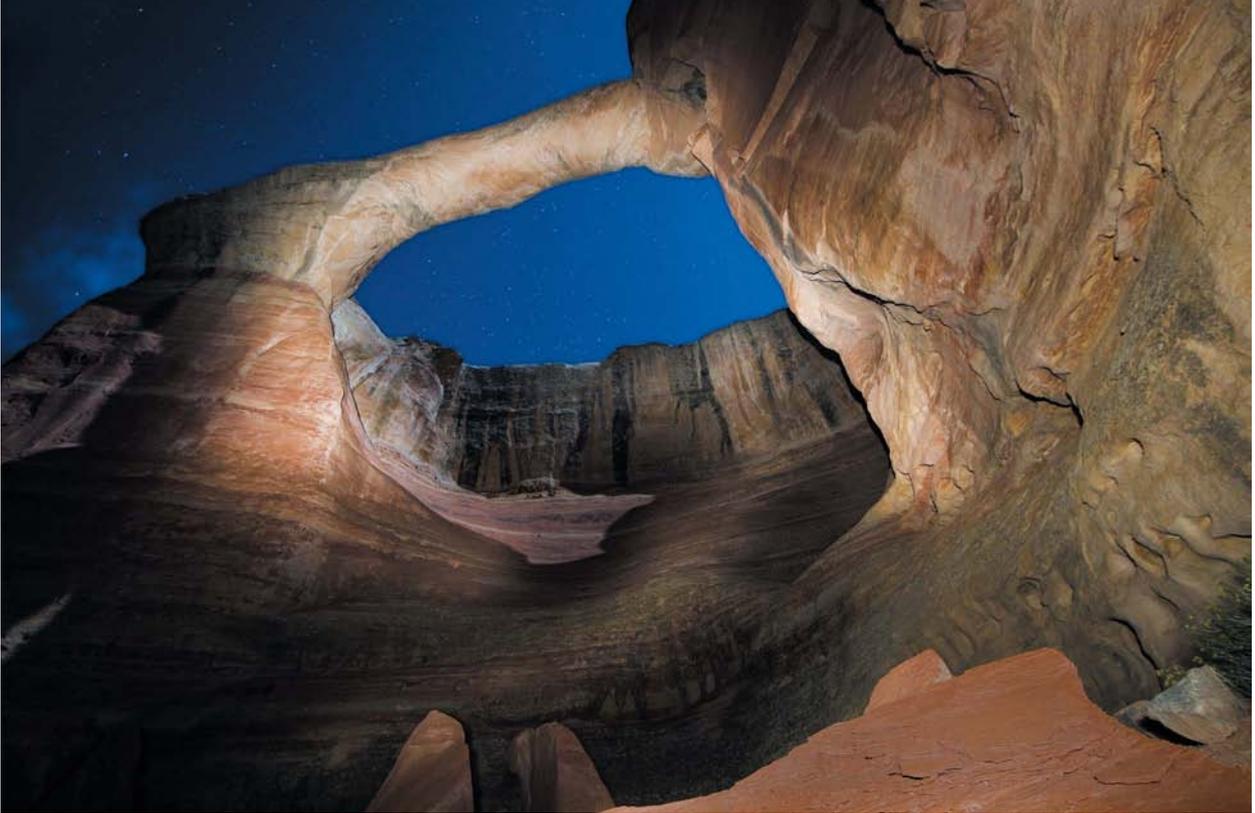
FIGURE 3.11 A light-painting image taken by Casey Bieker of an arch at Arches National Monument.

ISO 100, 30 sec., f/11, 100mm lens

Light Painting in the Studio

In the late 1980s and into the 1990s, a photographer named Aaron Jones helped to popularize light painting by inventing a piece of equipment called the Hosemaster. It used fiber optics and various attachments to produce different qualities of light. It also included a device that could be placed in front of the lens to employ different diffusion filters during exposure, so that parts of the image would be rendered sharp while other parts would be diffused.

His images were stunningly beautiful and had a mysterious painterly quality to them. For a long time no one knew how he created them, but eventually as word got out he started marketing the Hosemaster and graciously taught other photographers how to use it. The Hosemaster was relatively expensive, so many photographers used flashlights to try to achieve similar results. You couldn't get some of the nuanced quality of lighting with the flashlight, but the results could still be interesting and effective.

What is so exciting about this technique is that it really allows you to make lighting a central part of the composition. We'll review the basic technique, which allows you to be extremely precise with where you choose to put your light (FIGURE 3.12).

The Process

Light painting begins much the way any other lighting technique does. First, you set up your shot while deciding what's going to be most important in the image and what you're trying to say about it. Although there are many ways to go about light painting, the following is a good general way to start.

If you're going for a dramatic image with significant contrast between highlights and shadows, you want to set up your overall fill light along the camera axis so that all the shadows will receive some amount of fill. Meter that light, and then, depending on how dark you want your shadows to go, underexpose the light by between one and three stops (FIGURES 3.13A–D). This is just your base exposure; you'll be adding highlights to the image by painting them on using a flashlight.

a)

b)
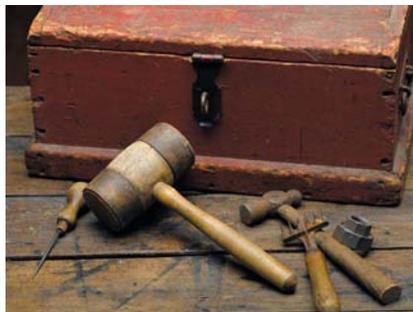
FIGURE 3.13 a) Image exposed per meter reading at f/8; b) one stop underexposed at f/11; c) two stops underexposed at f/16; d) three stops underexposed at f/22.

ISO 50, 1/125 sec., f/8, f/11, f/16, f/22, 150mm lens

c)

d)

a)

b)

c)

FIGURE 3.14 **a)** Too much light was painted onto the hammer; **b)** too little light was added to the hammer; **c)** the correct amount of light was added to the hammer.

ISO 50, 20 sec., f/11, 150mm lens

Goldilocks

The image captions for Figure 3.14 should sound somewhat familiar; a little too bright, a little too dark, just right. One of the wonderful, but also frustrating, things about light painting is that no two images will ever be exactly the same. It's virtually impossible to repeat the movements for exactly the same amount of time from image to image. What's lost in consistency is often made up for with serendipitous accidents that result in even better images.

Now comes the fun part! You get to choose what you want to highlight within the image, both literally and figuratively. The hammer is the main subject, so most of the highlights will be concentrated on it. Texture will be added to the background, and other highlights will be added to some of the secondary props. The lighting used will make it clear what is most important and where we want the viewers to look.

In the last chapter we talked about lighting being a building process, and that's especially true when you light paint. Start by adding light to the hero, analyze the results, and then make the necessary adjustments. Once you're satisfied, you can move on to lighting other parts of the image (**FIGURES 3.14A–C**).

The final image (**FIGURE 3.15**) was created by underexposing a strobe softbox by two stops. The shutter can be set on T or B to keep it open during the entire exposure. Once the shutter was open, we popped the strobe to give the base fill exposure. Then we used the flashlight to add the necessary highlights. The flashlight was at a fairly low angle, to bring out as much texture in the objects as possible. With the shutter open, the flashlight was in constant motion, literally painting highlights onto those areas of the shot that we were trying to call attention to. It's important to not leave the flashlight stationary for too long, as this will create obvious hotspots.

We used a cone made of matte black Cinefoil to limit the size of the light and to help ensure that it didn't shine directly into the lens (**FIGURE 3.16**).

FIGURE 3.15 This image has the right amount of light on the hammer, and light has been added to the background and props for additional interest.

ISO 50, 30 sec., f/11, 150mm lens

FIGURE 3.16 This is the flashlight and cone setup used to create Figure 3.15.

High-Key Shots

The majority of the examples shown have involved pretty dramatic contrast between highlights and shadows. This technique can also be used in high-key shots, where the overall shot is bright but you still want to add some additional highlights to certain areas of the image. It can also be used to add fill to limited areas of an image when using any other kind of fill may be inappropriate because it fills all of the shadows (FIGURE 3.17).

Light Painting and Color Temperature

If you're using both a strobe and a flashlight, you'll be dealing with light sources that have different color temperatures. In most of the preceding examples, the camera's white balance was set to daylight so that it would match the strobes. The light from the flashlight was warm because it's a tungsten light source. This lighting mimics end-of-day sunlight, when the shadows are either a little cool or neutral, whereas the highlights from the sun have warmth. You can always filter the lights so that they match one another if you want an overall neutral color cast.

FIGURE 3.17 A flashlight was used to fill the inside of the cherry and add some specular highlights. The flashlight had a blue gel over it to make it daylight balanced. The red in the shadow was created by using a red fill card to bounce light back into the shadows.

ISO 50, 15 sec., f/5.6, 210mm lens

Exposure

It's impossible to tell you how long each exposure will be. The length of exposure is determined by many factors, including the power of the flashlight, the distance the light is from the subject matter, the amount of area you want to paint with light, and the f-stop you're using. Clearly, the more you stop down the lens, the longer the exposure will be.

Depending on the camera you're using, you may need to be concerned about digital noise appearing, especially in the shadow areas of your image, if you're using long exposures.

This may not be your number one way of lighting, but it's a great way to become more aware of subject hierarchy and ways you can use light to direct the viewer's eye throughout an entire image. All of this will require a certain amount of trial and error and experimentation. Play around with it—the practice will make you better.

Chasing Styles

Joe: Light painting was all the rage for a while, and then new techniques became popular. How do you feel about the need to stay current versus chasing every new lighting style that comes along?

Brad: I think it's important for everyone who's starting out to experiment with a number of different styles until they find a look that resonates with them. It may be a combination of a styles and techniques that they make their own. It will be necessary to adapt and evolve your look over time, but I don't recommend putting every new style into your portfolio. It's important to be true to yourself and the way you see the world, while still being open to new techniques.

interview   JAN OSWALD
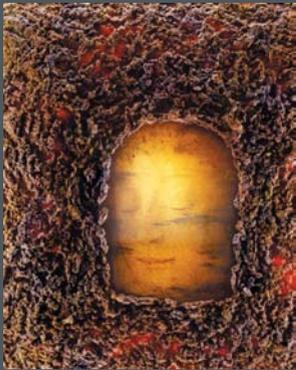
All images © Jan Oswald
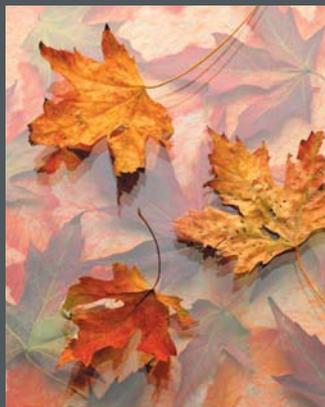
How long have you been a professional photographer?

Since I graduated from school in 1973, it's the only profession I've had.

How did you get started, and why photography?

My uncle took family photos, and as a child I loved watching him take the portraits and then develop them in his darkroom at my grandmother's house.

I got my first camera at age ten. I loved being able to stand back and observe and then record my observations on film.

Do you have formal training or education?

Brooks Institute, where I had an exceptional teacher and mentor, Phil Cohen.

Your images seem to bridge a gap between fine art and commercial advertising. Many photographers talk about doing that; however, most are unable to do so. How were you able to achieve this?

I had a very strong background in art history—my mother took us to museums from a young age. And I wanted to be an artist and even had a museum show while still in school. So it has always been fine art that inspired me. I do a lot of experimental work when not doing commercial work, and that has always guided my approach to commercial jobs.

How would you describe your lighting style?

Based on an understanding of natural light as point (the sun) and broad (the shade) sourced. It has to be natural to gain the viewers' acceptance so they accept the image as a real possibility. Then I like to add luminous aspects for interest.

At what stage of your creative process do you consider lighting?

From the initial stage. I previsualize my final image and work backward to achieve the desired lighting effect I've conceived.

Let's look at your image titled Melon on Blue Plate—*describe how your lighting acts as part of the image composition.*

Highlight and shadow are always part of any composition in photography, as they become part of the abstract tonal range of the image as much as any other element or object in the design. In this image I had become interested in very low early-morning light situations where the sun streaks across objects and creates a lot of contrast. And in this case it holds the image elements together.

What is the first element you wish the viewer to see?

The highlight on the melon slice.

Zen Tulips *and* **Melon on Blue Plate** *use two very different lighting styles. How did you determine the best style for each image?*

When I did *Zen Tulips*, I was inspired by flowers in a vase on my dining room table. They had bent and turned in an evocative manner toward the large glass expanse in the back of my house. I gathered them up and took them to the studio, where I had painted a blue background, and lit them with my broad 6-foot bank light. I aimed them to flow from left to right to enhance that "yearning" effect. I wanted a broad window lighting effect, as that's what I had observed in my house.

In the *Melon* image I had been observing the light from the sun as it just crept in that same glass expanse and skimmed across the floor. And I was doing a series of simple food items on plates on backgrounds I had painted. *Plums on Copper Plate* is also in that series. In this case it was a monochromatic palette, and the strong light was needed to give it some contrast and visual interest.

Over the decades my style has evolved. I began experimenting by imitating the style of others. First it was the Dutch still life compositions. The Dutch masters used window light for their paintings, and I wanted to

explore that style. It is exemplified in my image *Still Life with Broken Glass*.

I admired the purity of the lighting style of Irving Penn, and his work had a strong influence, as seen in *Single Calla* and *Zen Tulips*.

Later I started using the early-morning strong cross-lighting I had observed on my dining room floor. This is seen in *Melon on Blue Plate* and *Plums on Copper Plate*.

Next I combined those elements with luminous lighting elements, as seen in *Watching*.

How do you determine what lights and modifiers you'll use? Do you have any favorites? If so, what are they and why?

I've always used a limited number of lights. The large bank light duplicates the clear sky or foggy day that is so desirable for outdoor photography. When it's placed very close to an object, the light actually wraps around the object.

I use a couple of spotlights, one larger and one with a more focused spot. And I use a light painting tool with a very intense beam in some cases.

Most of the time I have a fill card or mirror or even a small light box of some sort to slightly fill the shadows.

Do you have a favorite of the images selected for this book?

My favorite of these images is *Watching*. Conceptually, to me, it embodies my approach to lighting and composition. I observe, take it all in, then apply it outward to create the final image. ■

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