

The equilibrium has been punctuated.

Photography provides us all with a rich petri dish for artistic and scientific experimentation. With any discipline that encourages multidisciplinary tinkering, evolutionary principles are at work. We can see examples of how biology, industry, language, and more evolve, and this template for change also holds domain over photography.

The eleemosynary nature of the Internet and the artist has driven the evolution of photography forward faster than



ever before. Artists love to share their work with others. As the economy evolves, it can be argued that attention is the new currency. Not since the Salons of Paris during the Impressionist movement have artists been able to engage in a global competition and cooperation in the endless quest to define the beautiful.

Is it possible to look at the world of photography from another vantage point, perhaps from another order of magnitude? We get caught up in the daily logistics of just getting through our lives and can miss major trends that are right under our noses. As we move throughout the frenetic Brownian motion of distraction of our immediate world, the human sense of near-term memory has trouble seeing much beyond the status quo. We stand in the middle of a confluence of the rich experimentation in the artistic side of photography with the ever-increasing advancement of the hardware. If we can learn to navigate these waters, we can use the rich tapestry of photography's past to create the incredible possibilities of the future.

Excerpted from A World in HDR by Trey Ratcliff

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# HAPPENSTANCE EXAMPLES OF EVOLVING SYSTEMS

Evolution is often a series of small improvements interrupted with major events that can be seen, in perspective, as punctuated equilibrium. A good example known worldwide is the

evolution of music. Culture, as well as biology and technology, are subject to these Darwinian forces. Previous centuries and decades had shown steady changes in music. Once Elvis appeared on



the scene and introduced a super genre that came to be known as Rock & Roll, the entire music industry was transformed. People did not even know they had a taste for this new style of music until it magically appeared. Since then thousands of bands (pick your favorite) have taken the roots of these artistic rhythms into a broad array of new subspecies of music.

In a biological example, simple organisms had tubes (a series, if you will) and muscles. At one point, a muscle lay across a tube, electrically fired, and sent blood flowing downstream. This was the creation of the heart, and it enabled a broad new range of central-circulation species that were remarkably more efficient at growing complex bodies that needed blood and nutrients

to be delivered to remote parts of the organism. It's hard to imagine the diaspora of wonderful creatures on the planet without this watershed event.

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> I asked Matt Ridley, the best-selling science writer and clever connector of disparate disciplines, for another unexpected evolution. He gave the visually stunning example of birds of paradise, which perhaps you have seen on *Planet Earth* or another documentary where vainglorious birds prance about in the forests of Papua New Guinea. The color, shape, and texture of the plumage in the male bird that gets exaggerated are completely random. The female, who prefers extravagant ornaments, then selects from those males. Ridley continues, "Rerun the tape of evolution and you would never get the Raggiana bird of paradise again, but you would get something just as bizarre (like Elvis!)."

# THE SOFT MANIPULATION OF BITS

Photography is going through its most violent evolutionary cycle ever. Note that I am not talking about the evolution of hardware. Yes, cameras get more megapixels, better light sensitivity, more features, and the like. But I am referring to the evolution of *photography*.

For about 100 years, we have come to know photography through the coincidental mechanisms that have coalesced to create the "state of the art." Shutter speed,

Marching into the second decade of the 2000s, the question is, why are we still holding up this Da Vinci-esque mechanical device to our eye to capture the world around us?

> ISO, aperture, and such were the accidental apparatus of photography. The beginning of photography could have started in a much different way. It could have started with backlit plates or stereo dioramas, or perhaps even camera obscuras could have been the main trunk of evolution. However, none of that matters because today

we have a photography industry that is fundamentally tied to the mechanical operations of shutters, apertures, ISO, and the like.

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> In my humble opinion, after sharing HDR photography with a wide variety of photographers and photography lovers from various cultures all around the world, I am sure that the HDR style of visualization will constitute a major step forward in

evolution. Remember that the evolution of a new species does not mean the previous iteration will die out. There will be competition for resources, as in any ecosystem, but the market will expand to enable older and newer forms of photography to coexist peacefully.

# A TREASURE MAP TO YOUR FUTURE

An important point to you, the reader, is the fundamental concept that you are helping to drive this evolution forward. HDR will splinter into over a dozen subspecies, each with its own style for a variety of tastes. Do not look at the existing state of photography and assume there is no room for you to develop your unique style. There will always be room for something new, and the rapid change in the industry will help give you

the tools you need to take your photography in whatever direction you desire. Think of The Beatles, The Go-Gos, or The Eagles: They took what Elvis made popular into wonderful and unexpected new directions.

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This chapter includes the first third of the HDR portfolio, complete with descriptions, tips, and various thoughts about science, philosophy, and art. My goal is to get your right brain to release and start thinking differently

Antonia Strate at

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about the "state of the art," a term that bristles with ever-new sensations in today's world.

Ultimately, I believe we are traversing the most exciting period in the history of photography. The use of emerging visualization tools combined with your creative spirit can make something that is singularly beautiful and uniquely *yours*.

There will always be room for something new, and the rapid change in the industry will help give you the tools you need to take your photography in whatever direction you desire.



# HONG KONG FROM THE PEAK ON A SUMMER'S NIGHT

I had a long day, waking up at 5:00 AM to take a series of subways and trains up to Shenzen for some meetings. I had a Chinese VISA, which you don't need to get into Hong Kong, but I had to use it to cross the official Chinese border after getting off the train. I failed to realize that it was a one-time use VISA, and I was scheduled to go to Shanghai the next day. This caused a lot of problems with the Chinese officials, a body of government with which I do not enjoy causing problems.

After returning to Hong Kong from a day in Shenzen, I was hot and sweaty and in the sort of meeting clothes that aren't great for being hot and sweaty. But everything about Hong Kong was awesome, and I had to look hard for something to complain about. The sun was setting, and I made it up to The Peak just in time for a shot.

This is a 5-exposure HDR shot taken at 100 ISO with a sturdy tripod to get all the lights as steady as possible. Don't fret if you don't know what "5-exposure HDR" means. All will be revealed in the tutorial in Chapter 5, which I suggest you read after you go through the first part of the book to get a good idea of why and when to use HDR.

There were a few people milling around nearby, which always makes me nervous because I fear they might kick one of the tripod legs. So I sometimes spread out my biped legs like a dork to provide a human shield while the shutters go about their merry way.



## A NEO-ROCKWELLIAN CHRISTMAS

Now that we're getting to know one another, I might as well show you a family picture, eh? Here are my three kids in our home on a recent Christmas.

When dad is a photographer, there is a major degree of pressure to deliver photos on all the requisite holidays and celebrations! So, I decided to try and reinvent the family Christmas photo with HDR. Note that many of my inventions go down in flames, but as Winston Churchill said, "Success is the ability to go from one failure to the next with no loss of enthusiasm." Christmas scenes have many light levels—the lights on the tree, the deep greens within the branches, a roaring fire, lights in the room, reflections off the ornaments, and so on. It's wild! I'm pretty sure this is why people like Christmas scenes so much—a wonderful treat for the eyes that is rich in texture and light. Traditionally, it's been very difficult to capture so much richness in a single photo, save for a lucky and heroic combination of shutter speed, aperture, ISO, and lenses.

The tree lights made the faces of my three stunt children (who are also my real children) glow perfectly. No flash could have achieved this unless you are the kind of Rambo-flash guy who would bury one inside the tree to light their faces from the left. But let's face it; that's hard.

This is also a 5-exposure HDR. You will notice that I often use 5 exposures, but I could have done it with three exposures at -2, 0, and +2. Some silly Nikon cameras, like the D3X I use, will not let you step by twos, so I had to take five at -2, -1, 0, +1, and +2. The middle exposure, from which the kids' faces were masked in and perfectly lit, was shot at f/4 aperture, a shutter speed of 1/250, 100 ISO, and at 28mm.



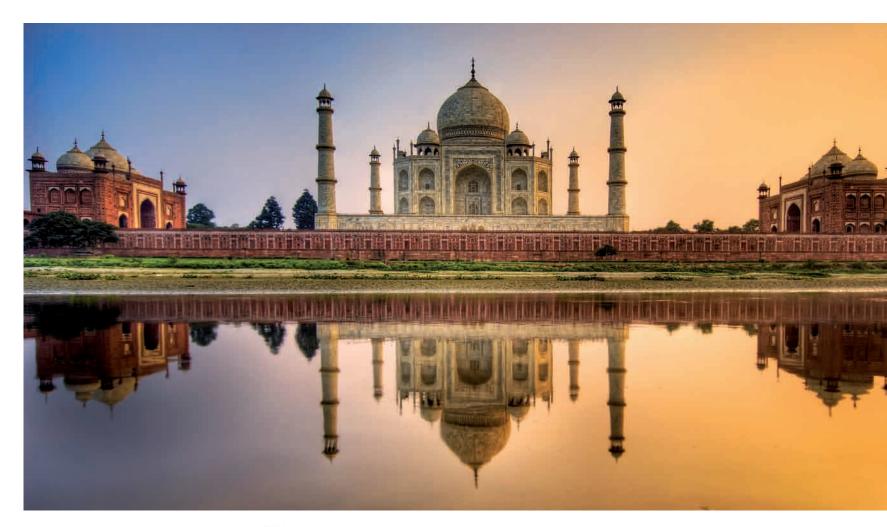
#### FAREWELL, INDIA

India is a beautiful and magical place. I wish I could say my journey getting to this exact vantage point was just as beautiful and magical, but it wasn't.

I really wanted a unique viewing angle, and I was reticent to set up inside the complex with the teeming crowds. So, I talked my driver into taking me to the back side of the Taj Mahal because I had noticed a river running behind the complex on Google Maps. We started circumnavigating the place and came to an old trestle bridge. It was quite a long stretch to get across the river. The bridge was just barely standing, and everything about the dilapidated structure was sketchy. We were the only car on it, and it was hard to get around all the oxcarts, donkeys, and bicycles.

Looking out the window at the rusting girders, I asked our driver, "When was this built?" He wobbled his head and said, "Eighty-three." Well, I thought for a moment. That doesn't sound so old. Then he turned back to me and said, "Eighteen eighty-three."

When shooting something epic, why not make it double-epic with a reflection? Reflections are always romantic, and good composition can double the punch of whatever aspect you are trying to grab. When shooting a reflection, it's sometimes best to get as close to water level as possible. In this case, even my tripod was too high. The mud bank was soft. I asked my camera for forgiveness before I buried it bracket deep in the mud to keep it steady for the exposures.





## THE GRASSY ROOF

While driving from one side of Iceland to the other in what was supposed to be winter, I spent a fair amount of time in the grassy inlands where some sort of heat inversion kept the ground green and fertile. I came across a few homes with thick, peat, grassy rooftops on the edge of a farm.

I've always wanted to live in a house with a grass roof. I don't know where this desire has come from, but it remains unsated.

This is a 5-exposure HDR shot at f/5.6 and 100 ISO at 14mm. During the HDR process, you may find that it over amplifies the grass and makes it look a bit radioactive. I always reduce the saturation in the grass to bring it back to its original color. Something that is counterintuitive here is that the electric color actually comes from the yellow in the grass, not the green. Most of the color you see in vibrant grass is actually yellow. I realize you might find this unbelievable, so next time you take a photo of a grassy area, jump into Photoshop, open the Hue/Saturation dialog, change the drop-down menu to Yellow, and drag down the saturation. The grass will turn almost all gray with very little green remaining.

Also, notice what it is like to process grass when the sun is hitting it versus during cloudy or dusky conditions. Grass is translucent and reflective, so it can bleed a yellow glow. Depending on the time of day, you may find yourself doing slightly different maneuvers with the HDR adjustments.



### **ADVENTURING DEEPER INTO PATAGONIA**

After a four-hour plane ride deep into the Andes, we started to get farther into the wilds of Patagonia. Perhaps I should explain that I was on this trip with a very good Russian friend named Dima, who is also a photographer. He brought four other Russian friends with him. Despite our friendship, he paired me with a non-English-speaking roommate named Yuri who never ceased to amaze. Within five minutes of dropping him off in my room, Yuri was in his underwear and I noticed his approximate overall size was that of a smallish beluga whale. This ended up propagating many other problems. For example, on the flight to El Calafate, our small plane had a bit of a hard landing because I was not sure the pilot was fully informed of Yuri's weight. After setting up camp in El Calafate, we went out to the edge of Lago Argentino that night to shoot the sunset and the Perito Moreno glacier. Every few minutes you could hear giant shards of ice calve and drop into the lake below.

The photo shows dark bits of ice floating in the water. Those are actually the clear bottoms that were once underwater but recently flipped over. In the midst of all this, and from out of nowhere, Yuri produced a giant bottle of cognac, which seemed to keep the Russians happy in the freezing cold. When I posted this photo on the blog and across the various social networks, many of my Facebook and Twitter friends requested a photo of Yuri. That night, while he slumbered, I endeavored to take a panorama of him. I considered the glacier as practice since it was also big, white, and cracked.

This image was shot with the Nikon 14–24mm 2.8 lens. The second of the five exposures (the -1 EV shot) was at f/8.0 with a shutter speed of 0.033 secs and a 250 ISO. As for the coal length, I think I had it cranked all the way to 14mm to take this shot. I'm always flummoxed as to whether or not I should take a panorama of these places, which essentially means I'd have to map out an invisible grid and then take a photo in each cell for later stitching using postprocessing software. For this photo, I did use a Nikon D3X, which already has a 24-megapixel sensor, making the final product a fairly detailed 6000 pixels across or so. There is some invisible point when enough is enough, and I never quite know what it is. One limiting factor is time of processing. Panos take a long time to shoot and postprocess, so that comes into the decision-making tree fairly early on.





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# MILAN TRAIN STATION AT MIDNIGHT

The day running around Milan never seemed to end. So much to shoot and so little daylight! It turned out that my best shot of the day had absolutely no daylight at all.

I was tired and just wanted to go back to the hotel to have a cappuccino in the bar and edit photography on my laptop. But I remembered the really pretty train station and how I wanted to get a shot with nobody around. I went in around midnight, found the perfect spot, and then shot away.

The HDR process always takes that slick concrete and makes it extra reflective. Reflective ground is great for photography. People often think that I "colored" the lights at the top, but there is none of that going on. In fact, I never "paint" on my photos. Colors that you see in them are actually there except in the cases when I apply a texture treatment.

Dare I give composition advice? I never know what to say in these cases because I am frankly confused about whether or not composition can be taught or it just comes naturally to some people. Since this book will attract people who have a native understanding and appreciation for art and composition, there is probably no need. However, on occasion I do run into people who are confounded on how best to compose a scene. I have extreme empathy for teachers who are forced to teach composition all day long. My three best pieces of advice are as follows:

- Make the interesting bit off center. Did you know Hitler was also a painter? His work was constantly criticized because he always put the subject of his painting in the exact center. Don't be like Hitler.

- If you want to really nail the scene, make the interesting bit 1.61:1 from an edge. This is a magical number, and it comes from phi, the golden ratio. You can Google this and watch videos, and everything will become clear over time.

- Be prepared to break the previous two rules and center the subject in cases where the symmetry of the subject is perhaps more interesting than the actual subject. You can see this for example in a few other photos in this book like Humayun's Tomb and The Open Road. But even in those cases, points of interest should either gravitate to the 1.61:1 spot vertically, or the shapes of interest and contrast should conform compositionally to a Fibonacci spiral.

# A SUNSET ON A TEXAS FARM

In Texas, we get quite spoiled by the sunsets.

I grew up here, so I've been able to see thousands of them. This has inadvertently resulted in the ability to predict a good sunset a few hours before it happens. Then I have no excuse not to gather my rig and go set up for some shots. In fact, I have seen so many sunsets, I have a whole secret vocabulary to describe them, so I feel like the Eskimos who have 100 types of snow, the French who have 365 kinds of cheese, or the Seattleites who have 100 curse terms for rain. I'd love to combine these into a perfect storm and be at a sunset with a light snow, sitting beside an Eskimo, talking with a Frenchman who has brought the perfect cheese for the occasion, and drinking a coffee.

This is a 5-exposure HDR shot at f/16. This setup kept everything in focus and kept the shutter open long enough to let the clouds drag across the sensor. In these conditions, you don't have a lot of time to fool around with settings because the sun is bookin' it toward the horizon.



# THE ICY PIT TO HELL

This is Gulfoss, the frozen waterfall in Iceland. Dark Age theologians used to believe this was the entrance to hell, which was originally a cold place; the innermost circle of Dante's version was frozen. True believers would come here and cast themselves down into the chasm to try to rescue souls they were told had gone to hell. It's hard to describe how slippery this place is. I guess I could say it's slippery as hell. The ground is already solid ice, and then there is a fine mist from the waterfall that forms tiny little perfect spheres on top that somehow take friction into a negative physics impossibility.

My advice to other photographers in such a situation is simply to be very careful. No shot is worth dying for, and getting a few steps closer for a shot that would only be 2 percent better does not fall within the margins of error inside our bang-for-the-buck actuarial tables.



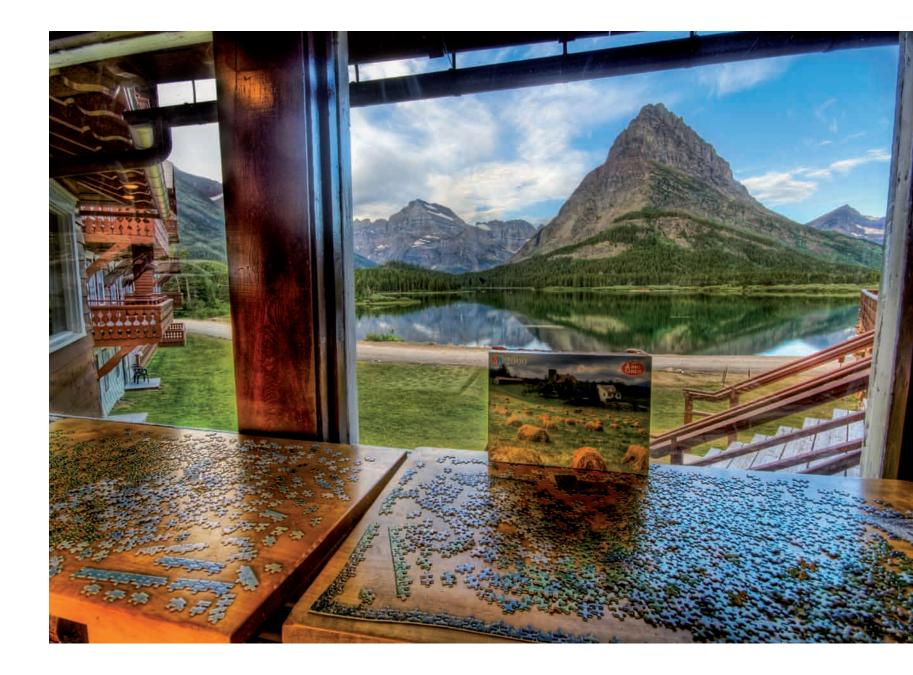
#### **PUZZLING OVER BEAUTY**

I was captivated by this scene for some reason, and I spent a good deal of time thinking of how best to shoot it. On the final day of my trip to Glacier National Park, I decided on this treatment. There are many interesting details in this scene, and you can probably be thankful you were not beside me to hear me go off on a theoretic (a new Neal Stephenson word).

We enjoy beauty and puzzle over beauty at the same time. In a world of entropy, it is calming to take beauty, break it apart into what makes it so, and then piece it back together to bring order to the chaos. But I could not bring myself to work on the puzzle at all. I just drank in everything I was there to be with for the moment. I thought a little about the nature of wanting to create a puzzle, just to solve it, a notion that is meta-puzzling in itself. Other guests that come into this view no doubt sit down and work on the puzzle, possibly thinking they might finish it but with a sneaking suspicion that they are just putting a few pieces together for the next guest who comes to visit. It seemed to be sort of an altruistic long-term battle against entropy. So I chose not to mess with the puzzle and simply to focus on the beauty aspects as I held them in my mind's eye. Puzzles tend to work themselves out on their own, which is a comforting thought, I suppose.

Shooting this photo is an exercise in frustration for traditional photography. There is just no good way to get the brilliant bright light from outside and all the warm light and textures from the inside at once. Even if you were to set up artificial flashes and lighting inside, it would be tough to get the reflections to "look" natural. See how the light streaming in casts appropriate shadows on the table, how the warm lights of the inn reflect on the column, and how other small details of light and shadows appear. Think about all we go through with fake lighting to get things to appear natural: It's kind of crazy. The light is already there, so use it.

Let the HDR process accomplish what your eye does on the scene. First, your rods and cones capture a lot more data than the best camera sensors on the market. Second, your autonomic reflexes can adjust the amount of light getting into your eye by flexing the pupil and contracting your eye muscles. Next time you go from looking at something dark to light, think about how your eye muscles flex to adjust for the new light. The HDR process does all of this for you, albeit in a series of software steps that you've taken for granted all your life.



## **FLUX CAPACITOR**

It's great fun to use the HDR technique to take shots of motorcycles. They tend to have a high chrome-to-anything-else ratio. Chrome is already reflective, but HDR makes it even more so. Austin has a big rally every year called ROT, and Harleys from all over the state come in to park and hang out. These guys love having photos taken of their bikes, and they are always very proud of them.

When shooting motorcycles (and this applies to many other subjects too), it is sometimes better to get in tight on the most interesting bit. The default impulse is to try to take a photo of the entire bike. However, if you focus on the most eye-catching place, the viewer's mind can fill in the rest. If the part you focused on is mesmerizing, the viewer will assume the rest of the bike is equally mesmerizing. This is the same reason that photos of women are often more alluring when they are just wearing a few clothes rather than none. We love filling in the gaps.

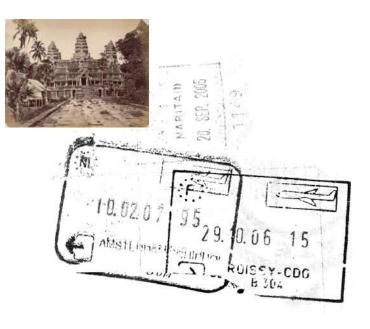
As you start shooting more HDR images, pay special attention to chrome and reflective surfaces. Your photos will come alive like never before.



## THE ZEN PEACE IN YOUR MIND

Photography is a solitary exercise. I know, sometimes there are other people around, but in the end, many of us do it so we can find a peaceful place and make sense of the world.

This is the main temple of Angkor Wat in Cambodia. I remember seeing an old sepia photo of it from 1866 by Emile Gsell. Cameras have made a steady progress in those 150 years but Angkor Wat remains the same. The old stained and faded nature of Gsell's photograph has a timeless feel to it, as does the temple in person. It was a nice challenge to see if I could take 150 years of technology and software evolution and still give this place the shape of timelessness. It was my goal to accomplish what those amazing time-lapse videos do in a single shot. While waiting in these ancient spots for the light, the clouds, and the monks to be in the right place, it gives you time to reflect. Sometimes it's the moments between the photos that are the most memorable. Having a chance encounter with your right brain as it releases and begins to intuit the Zen of the scene is a glimpse of nirvana.





## **MY KINDA TOWN**

This is the first shot I took with my Nikon D2X. I've since upgraded, but I'll never forget that camera. I was already a serious photographer, but that beast made it official.

As you can plainly see, this effect delivers a "painterly" style. I often have my work printed on canvas, which accentuates this effect even more. If you are reading this book, you are probably somewhere within the delightful sphere of "photographer," so you understand a bit about what is going on here. This is one of the photos that hangs at galleries and always draws a lot of attention from people who have never seen HDR. They continually come over to it and start scratching the surface to figure out what the heck it is. The general public still has no idea what HDR is, and when people first see a printed canvas, they are always wonderfully perplexed as to how such a thing can exist on this mortal coil.

This was shot from the top of the John Hancock around sunset on a summer night. I had to catch a flight to Malaysia the next morning, and I was anxious to get the shot back to the hotel, processed, and uploaded before I left. I remember that the D2X let me take 9 bracketed exposures, so I decided to really blow out this HDR. I did all 9 exposures from -4 to +4 with 1 step betwixt. Honestly, that was pretty much overkill and the HDR processing just about melted my CPU, but it did turn out nice.





## HORSES IN THE FJORD

I consider myself very lucky to have a network of great photographers worldwide. I met most of them through the Intertubes where we are constantly commenting and giving feedback on one another's photos. This has enabled me to meet up with master photographers wherever I travel. They are wonderful people to hang out with because they already know the prettiest places and the best shots around where they live!

One of the people I was lucky to have a photo adventure with was Rebekka in Iceland. If you

are not familiar with her, Google "Rebekka." We met at a coffee shop in Reykjavik and talked about where to shoot. We jumped in her car and drove a while until we reached a fjord. Nearby were horses running around like wild beasts. They have no fear of humans, so we were able to get close to them. The horses have long hair that reminds me of the shag carpets in our house when I was growing up. I'm sure the thick layers of hair evolved from the hypercold winds whipping around the edges of the sea.

I don't shoot (take photos of) many animals, because I find it hard to improve upon what other great animal photographers have done in the past. However, here is a tip for shooting animals. It's kind of a lame trick, but it always works. Use a wide-angle lens and get in close. It makes the animal's head look really big and cute. Humans love big-headed animals; they always make people smile. Why this is, I have no idea. Note that this trick also kinda works with babies.



## THE MAGIC OF DISNEY

This was taken in the evening at MGM Studios in Disney World before we went to the big fireworks show. The only problem with making your family and 6-year-old son (he is now 8) stand around while you set up your tripod and take a bunch of shots is that it gives them ample opportunity to find little toys they cannot live without. I took so long to nail this shot that we ended up buying two toys that lit up in garish colors and made a lot of racket.

This is another great example of an image that was impossible to create before the evolution of HDR. I suppose the argumentative, know-it-all photographer (you know the ones at photo clubs who like to stand up and make pedantic points) could say that there was always something called "compositing" in which you take several photographs and frankenstein them together. That's fine, but that is quite different than HDR because it does not get down to the pixel-by-pixel level of image adjustment. As you can see in this photo, a variety of light levels are under the hat, on the hat, and above the hat. Each of those areas would need hundreds of mini-compositions to look right. That would have been a near impossibility with traditional film, and it's even still painstaking with digital. But the HDR process makes it all a heck of a lot easier.

This is a 5-exposure HDR shot at 100 ISO. Whenever there is anything like streaming lights, sun rays, search lights, and the like, the HDR process always makes them pop a bit. If you don't want the meandering masses of Mickey ears to get in the way of your shot, be sure to use a high f stop, like f/10 or higher, to ensure that the shutter stays open long enough so that the photons they reflect are inconsequential.





# MORNING MIST ON THE LAGOON

This shot was taken one morning in Stanley Park in Vancouver, BC. Vancouver always seems to be somewhat cloudy, so the colorful trees around the park stand out nicely. A giant swan was floating nearby while I was walking around, so I took this single RAW and converted it to HDR to ensure that I'd get all the numerous colors in the trees and the various shades in the sky and water.

One of the most common questions asked online about my photos is: "How do you take an HDR of a moving subject?" While it is true that most HDRs are taken with multiple exposures, that need not always be the case. The single RAW photo method of HDR is described in detail in Chapter 5. One important point I can add here, however, is to make sure that if you take a single RAW, keep the ISO as low as possible. A lot of noise can turn into a real problem when you're trying to convert a single RAW file to an HDR.

# FOURTH ON LAKE AUSTIN

This has always been a special photo in my portfolio for a variety of reasons.

It's the first HDR photo ever to hang in the Smithsonian. This made my mom very proud of course, and it resulted in her sending off more emails than the average Nigerian. It also helped to bring much notoriety to StuckInCustoms.com and did quite a bit to establish HDR as a mainstream art form. As for the process, it was a tough night because I was up on the edge of a bridge that was rumbling as cars crossed it. I was on the edge of the bridge because I wanted to get the full vertical reflection while still capturing the scope of the lake. The evening was very windy, and there was a light driving rain flying into my lens. I had to wipe it down after every few exposures and try to cup my hands over the top during the shot.

This was shot at f/4 with a 28–70mm lens. There were 3 exposures at +2, 0, and -2 in aperture priority mode. I was happy the fireworks were shot off when there was still some ambient light from the sunset illuminating the storm clouds.

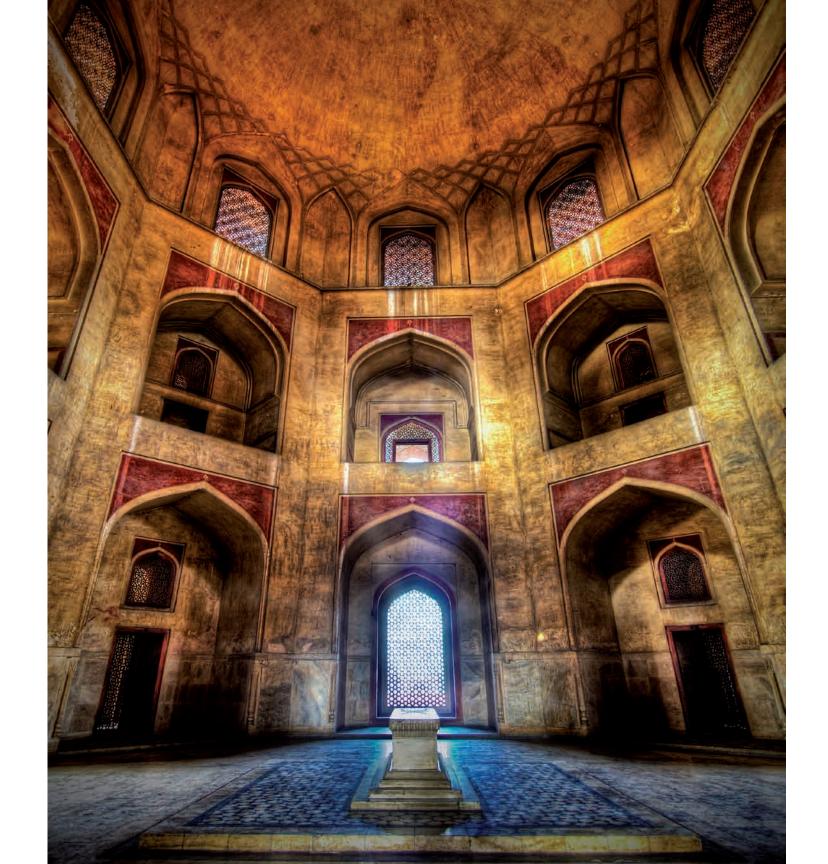


### HUMAYUN'S TOMB

This is the Tomb of Humayun in Delhi. I arrived during Diwali, the biggest annual festival that involves burning lots of flammable religious memorabilia. Most of the tombs, mausoleums, temples, and the like were surprisingly empty, giving me clean access to cool places like this without tourists getting in the way of sweet photography. I know, I know, we are all tourists, but we don't really like other tourists, right? It's a strange phenomenon. However, I can say with ontological certainty that I don't like tourists in my photos unless it is absolutely unavoidable. The TV news broadcasts were filled with families celebrating Diwali along with nonstop, live, on-the-scene action reporting from the grand opening of *Om Shanti Om*, the Bollywood film of the year starring the incomparable Shahrukh Khan. From the previews I saw, the movie seemed to involve a lot of Shahrukh with his shirt off in huge musical numbers and copious amounts of slow-mo water exploding off his coppered abs.

The air in Delhi during Diwali was covered with smoke from the festivities. There was an acrid smell of stale carbon that was not exactly like a trip to Sedona. Luckily, my hosts got me a private car so I could get out of the city and head north to clearer climates near Agra.

The setup here was vertical because I felt the height of the tomb was more interesting than the width. Also, and this is a bit of a strange reason, vertical shots often look better in a blog! Yes, this is actually part of my reasoning. I think a lot about the way 90 percent of the people in the world will consume the image. If it is vertical and 900 pixels across, I can get 1200 or more pixels high, which will give viewers a nearly full-screen display.



# MERRY CHRISTMAS FROM NOTRE DAME

The French-powers-that-be erected a giant Christmas tree in front of Notre Dame. It seemed like a perfect place to be at dusk, so I made it so. This is one of those places I visit every time I am in Paris, because it always has a soothing feeling about it. I've always wanted to get up on the roof at sunset, but those same powers-that-be won't let me do that. This ends up posing a bit of a problem (albeit only in my mind), because all I can think about are the shots I didn't get.

This was shot at f/4 and 100 ISO on a tripod. I wanted a little bit of blur of the people moving but not too much. Recall that I just said I don't like tourists in the photo. Well, forget I said that. Obviously, sometimes it's cool to capture a little hive of activity around an exciting place. If I were to crank it up to f/16 or higher, all the people would have disappeared. The focus was set at infinity, so I didn't have to worry about a thin focal plane obscuring the important bits of the photo.

