

the Photographers' Formulary



Grand Canyon , 2013

©Silke Laetz

SILKE LAETZ: "THE GRAND CIRCLE" IN HDR

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Overlook, Zion National Park
©Silke Laetz

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SILKE LAETZ: THE GRAND CIRCLE IN HDR

During an interview with author [Jim Hughes](#) for an article to be published in the January 1980 issue of *Popular Photography*, Ansel Adams remarked, "I've always said that the negative is the score, and the print the performance." Many have tried to duplicate Ansel's "score," few have been successful.

After an early stint at becoming a concert pianist (he was good, but not *that* good at the piano,) Adams went on to become the world's best known photographer. He and Fred R. Archer developed

the Zone System, incomprehensible to many, but perhaps as close to a perfect explanation of photographic exposure as we can ever expect to see.

Within the Zone System lies an explanation of what the human eye can see in terms of *luminance* as tonal and textural range, as well as what lies outside the human's

Editor's Note:

This is an interactive newsletter. To view larger versions of photographs, *please click on the thumbnail* and a larger image will automatically load.

ability to see as the scene darkens into shadow, or explodes into the brilliance of bright sunlight.

Adams divided darkness and light into eleven areas which he called *Zones*. At the low end, Zone 0, for example, is the absence of light which we call black. There's no light, so we can see no detail. As Adams moved up his Zone system into Zone 2, he described it as textured black; the darkest part of the image in which slight detail is recorded. At the upper end of the Zone system, Zone 10 represents pure white, or light sources and specular reflections.



Moonrise Over Bryce Canyon
©Silke Laetz

Using the eleven Zones, Adams created the explanation of how to manipulate photographic exposure on a negative to achieve the lighting effect he wanted, before he ever opened the shutter. Adams understood his Zone system so well he could decide before he opened the shutter where shadows would "fall" in his image, or how he could achieve the most dramatic effect from a bank of roiling storm clouds clearing over Half Dome near his childhood home in Yosemite Valley, California.

Using Adams' Zone system it's possible to take a series of photographs of the same scene, using the same aperture, changing only the amount of time for the exposure. Each of the exposures will have a different amount of darkness, lightness, or *luminance*, and each will have a different amount of detail in the exposed image.



Mediterranean Sea at Sète
Gustave Le Gray (1857)

Courtesy: J.Paul Getty Museum, Common Use

As a practical matter, we can usually ignore Zones 0, 1 and 2 at the low end, and Zones 9 and 10 at the high end. Ordinary photographic emulsions on film can effectively capture more of the Zones, but we won't see them in the print.

So what do we do with a series of negatives in Zones 3-8 of an identical scene? What good are they to us in producing a photographic print with the greatest amount of detail from the lowest useful levels of light in Zone 3, to the almost blinding white of Zone 8?

By combining the best details of each negative into a single image we can increase the shadow detail at the low end, and the apparent detail at the high end. We extend the tonal range of the image. We can achieve a final image with overall detail which is impossible to record and reproduce with a single sheet of ordinary film or photographic emulsion.

One term for this is High Dynamic Range (HDR) printing. In today's Digital Age, using computer software such as Lightroom



When the Day's Work is Done
Henry Peach Robinson (1877)
Courtesy: Google Art Project

or Adobe Photoshop, we can "stack" the images taken at various exposures, and in combining them make a print which far exceeds our best efforts using a single exposure on a single negative.

You might think HDR printing is something only recently discovered or developed in the age of computers. You would not be correct. HDR has been around nearly as long as the photographic print has been possible. In 1857 a French photographer, *Gustave Le Gray*, dazzled the world with his print, "*Mediterranean Sea at Sète*." Le Gray combined two images,



Bryce Canyon, Sunrise
©Silke Laetz

one of the Mediterranean Sea at sunset, with a second image of clouds backlit by a setting sun. The effect was one which had been impossible to achieve using the photographic emulsions then available. It brought Le Gray instant recognition and worldwide fame.

Le Gray did it by taking two photographs at widely different exposures, then carefully printing each onto a single piece of paper. He recognized the limitations of the "*dynamic range*" of the photographic emulsion and used the two separate exposures to increase the dynamic range beyond that normally possible.

As photographic skills grew and techniques changed, photographers realized they could use multiple glass plate negatives, and later, multiple "film" negatives, to produce an image such as the



Dead Horse Point, Dead Horse State Park
©Silke Laetz

remarkable "*When the Day's Work is Done*," by Henry Peach Robinson in 1877. Robinson combined elements from six different negatives to create a single image of a man and woman resting at the end of day in a room lit only by light from a small window. Robinson called his method, "*Combination Printing*."

Le Gray's innovation, and Robinson's efforts were precursors to what Ansel Adams later acknowledged as extensive "dodging and burning" in printing the famous New Mexico graveyard image "*Moonrise, Hernandez, New Mexico*." Ansel did use a single negative to produce what is widely regarded as one of the finest photographs of all time, and he did it by varying the amount of light playing on different areas of the print.

All three methods, then, illustrate what we now call High Dynamic Range photography and printing techniques. All three are at least equalled or eclipsed by the modern version of HDR using a digital camera, taking multiple images at a single aperture setting with different exposure times, then combining them using digital



Antelope House, Canyon de Chelly
©Silke Laetz

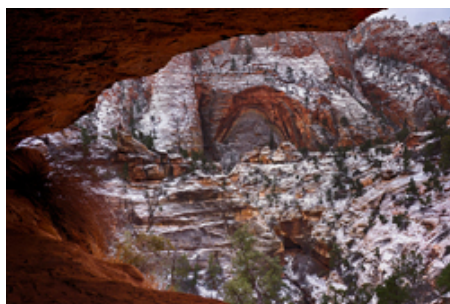
imaging software such as Lightroom or Adobe Photoshop.

That brings us to the illuminating work of Silke Laetz of Monterey, California.

Laetz, a native of Bremen, Germany, worked in the hotel hospitality industry for more than twenty five years. She traveled the world, but with time the hotel industry lost its luster and she retired. Preparing to retire, Laetz cast about for something new to give her life purpose.

Her job at the time was at the Highland Inn in Carmel, California where the Ansel Adams Galleries has a rotating show each month in the Grand Lobby, and photography of Big Sur by [Helmut Horn](#) hung on hotel walls.

Laetz decided to try photography



Winter Cave, Zion
©Silke Laetz

as something new she could do for herself, and as an outlet for her nascent artistic expression. She began a self-designed three year apprenticeship, taking classes at [Monterey Peninsula College](#), attending workshops with local photographers and taking even more classes at [Pacific Grove Adult School](#), where she met food and wine photographers, Fernando Batista and Barbara Moon Batista.

To expand her knowledge of photography she joined the [Center for Photographic Art](#) and attended every local photography exhibit and lecture. As a new member of the Padre Trails Camera Club, a vibrant organization of talented and accomplished photographers,



Park Avenue of the Arches National Park
©Silke Laetz

Laetz began showing her work, and received positive feedback for her composition and technical expertise.

At the end of her "apprenticeship" Laetz found herself surrounded by new friends and says her life had never been more enjoyable or satisfying. Laetz had found a passion and says she has finally made some images she likes enough to hang on her own walls.

Combining new skills with decades of business experience, Laetz became Managing Director at the studio of golf landscape photographer, [Joann Dost](#). Working with the [Batista Moon Studio](#), Silke learned how to create portfolios of her work. Images from two of them, "*Spicescapes*," and "*First Sight of Death Valley*," are included here, as well as her latest series from a recent trip to eight National Parks of the American Southwest, "*The Grand Circle*." The portfolios can be viewed by clicking on the titles above.

It was photographs from the Grand Circle series Laetz used to experiment with High Dynamic



Winter Morning in Bryce Canyon
©Silke Laetz



Castle Rock, Capitol Reef
©Silke Laetz

Range imagery. She had read about HDR; she had seen examples of it in exhibitions, but did not understand how to make it happen. The National Parks tour rewarded Laetz with eye-popping images, ready to be massaged with HDR software.

With a friend, Laetz planned a sixteen day Round Robin of eight national parks in the American Southwest. Using notes and maps loaned to her by a fellow member of the Padre Trails Camera Club, she worked out a route which would, like J.R.R. Tolkien's, *The Hobbit*, take her "There and Back Again."

All that remained was to find the best places to photograph in the heart of winter, and to conquer the mysteries of HDR. With Google to the rescue, Laetz found a three volume set by Laurent Martres, *Photographing the Southwest*. She marked the chapters on each of the parks she planned to visit, then did a speed read of the appropriate chapter the night before she arrived at the parks.

There was no need to reinvent the wheel. Laurent's books are a treasure of detailed descriptions of rewarding sites, complete with



Monument Valley
©Silke Laetz

driving directions, as well as sunrise and sunset vantage points.

What Laetz discovered for herself was the beauty of each spot in the depth of winter. National parks are flooded with tourists during summer, but almost deserted in winter, leaving vantage points uncrowded and lines of sight unobstructed.

Laetz went to work, and by the end of the trip had a trove of HDR images ready for processing. As with any new skill, there's a learning curve, and HDR image processing is no exception. High Dynamic Range digital photography records almost too much information. Combining three images, each with information discrete to a specific Zone, can create an overload in the finished image.



Little House in Fruita, Capitol Reef
©Silke Laetz

Similar to Photoshop tools and filters, using the HDR tools requires a delicate balance between what is possible, and what is artistic. The photographer has to keep a light foot on the gas to avoid overpowering the viewer with too much detail.

In film based photography, there's a loss of detail in the negative. Whether color or black and white, the film's response is limited, so the negative does not contain the whole picture. Then, when printed on photographic paper, there's significant additional loss of tone, texture and separation, resulting in further loss of detail and contrast.

As you look through Laetz' HDR images from her tour of the



Island in the Sky, Canyonlands
©Silke Laetz

Grand Circle, keep in mind these are her first attempts using a technique and technology. They are part of her learning curve, and if reprocessed a year from now would likely be as different as your print or mine of a negative reprinted after a year of contemplation and additional printing experience.

The landscapes and locales are well chosen. Winter weather dusted many of the images with patches of snow, giving them an elegance not possible in warmer weather. The photograph overlooking Canyon de Chelly, for example, lights up with detail, showing jeep trails in the sandy bottom winding through the Russian Olives which have invaded almost to the extent of choking out native vegetation.

The Southwest, affectionately known as Red Rock Country because of its reddish soil colored by rich mineral deposits, is fertile



Canyon de Chelly
©Silke Laetz

THE PHOTOGRAPHERS' FORMULARY, INC.
P.O. Box 950, 7079 Hwy 83 North
Condon, Montana, USA 59826-0950
E-Mail: [Anthony Mournian, editor](mailto:Anthony.Mournian@photoformulary.com)
Website: Photoformulary.com
Tel: (800) 922-5255 or (406) 754-2891

ground for a landscape photographer. For Laetz, Red Rock Country was all new, and she couldn't get enough of it. Red Rock splashed with snow here and there made for dramatic images. Photographing these scenes in HDR almost overpowers the senses. Beautiful as they are, I wonder what they would look like with a little less detail!

Acquiring the images was not without a price. Temperatures hovered between zero and 32° Fahrenheit. Wind chill added to the misery, and blowing snow did little to help with keeping Laetz' lens clear. It must have felt good at the end of a day of shooting to check into a hotel and luxuriate in a warm room after a day in the cold!

Laetz' earlier portfolios show

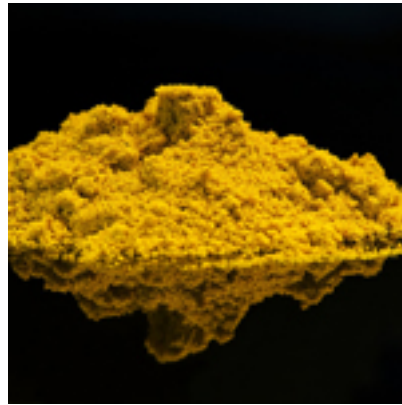


Traversing the Valley
©Silke Laetz

her keen eye and sense of drama. "*First Sight of Death Valley*" (2011) begins with a descent below sea level down a ribbon of asphalt bordered by sand and sagebrush. Looking left and right there's an immediate sense of barren waste, and an intuitive sense of foreboding as a counterpoint to the natural but strange beauty of the place.

Here's what Laetz had to say about a twenty-four hour taste of Death Valley:

"I come from the green flat lands of Northern Germany, where one can see far into the distance, however, the unhindered views in Death Valley truly give a new understanding of what it is like to be able to see into the distance, where spatial awareness seems to



Turmeric
©Silke Laetz

be redefined by the expansive salt flats, undulating sand dunes, and soaring mountain ranges. I was simply bedazzled by tracking the line of a highway as it snakes across the valley floor, climbs up and over lofty mountain ranges, and simply vanishes on a distant horizon."

One view of a desert is as a vast wasteland. But seen through the lens of Silke Laetz' camera it's a world of vast spaces with dramatic lighting and intriguing forms. With only twenty-four hours to experience [Death Valley National Park](#) area, Laetz covered a lot of ground. From salt flats and sand dunes to barren peaks, she caught the spirit - and the danger of the place. It's unfortunate she didn't have more time to photograph the valley because she scarcely touches the surface of one of America's relatively unspoiled



Salt
©Silke Laetz

open spaces, all 5,219 square miles of it!

Interested in macrophotography, Laetz took a class with [Fernando Batista and Barbara Moon](#). Batista and Moon, experts in food photography and the special lighting problems associated with it, guided Laetz as she photographed common kitchen spices. Laetz' choices of spices, from [turmeric](#) to [table salt](#), take on unexpected beauty with skillful lighting and a carefully focused macro lens.

The "foodies" among us will recognize the tastes and smells of Laetz' "*MySpice*" 2010 portfolio, though they may find the closeups



Cinnamon
©Silke Laetz *Traversing the*

harder to visualize. Whether at the mercy of an unseen chef behind the swinging door to the restaurant kitchen, or across the countertop in our own home, we are more accustomed to spices in their ground or granulated form rather than as spices in bulk. Laetz' photography gives a "visual" of each spice, delighting the eye as well as the tastebuds.



Undulating Waves
©Silke Laetz



Descending onto an Ancient Sea Bed
©Silke Laetz



Bad Water Reflections
©Silke Laetz



Zabriskie Point
©Silke Laetz



California Peppers
©Silke Laetz



Paprika
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Cinnamon
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California Peppercorns
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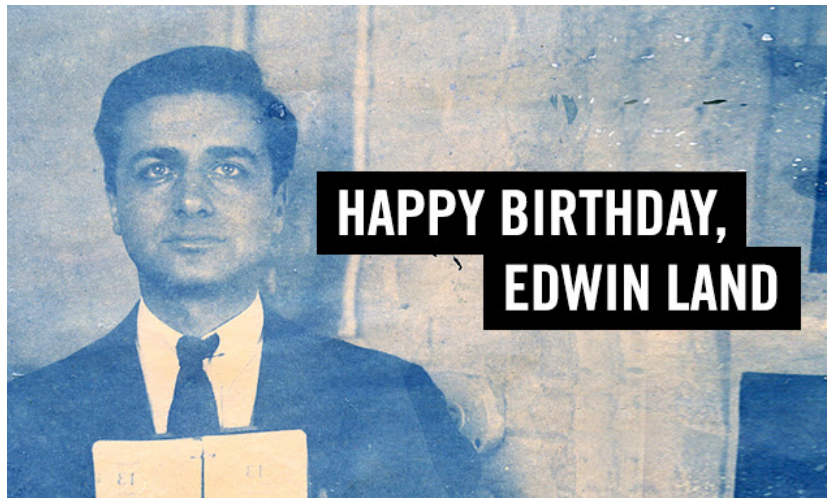
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Celebrating Polaroid's Extraordinary Pioneer

Edwin Herbert Land, the inventor of Polaroid cameras and film, was born 105 years ago today in Bridgeport Connecticut. Until his death, in 1991, he was a dominant figure in American science, invention and business.

Land's achievements are too numerous to describe in detail here - it's little known, for example, that he played a key role in America's U2 spy plane program - but he was second only to Thomas Edison in the number of patents he held and was as well-known to the public in his time as the late Steve Jobs, of Apple, is today.

Extraordinarily, Land held no university degree in science. The 'Dr.' which preceded his name was an honorific title bestowed by his employees, friends, and the press. Only *The Wall Street Journal* refused to use it during his lifetime.

On February 21st, 1947, Land demonstrated a camera with an instant film, the Land Camera. Two years later, 57 of first 60 production units were offered for sale in Boston, just before Christmas. They sold out on the first day and signalled the start of a transformation of consumer and industrial photography that would continue until the 1990s and the advent of digital photography.

In 1972, Land unveiled the SX-70 folding SLR camera and an integral instant film which ejected automatically and developed in 60 seconds without chemical residue. Within two years, Polaroid sold 700,000 SX-70s. Among the buyers were artists such as Andy Warhol, Chuck Close and Dash Snow, and photographers such as Walker Evans, Ansel Adams, Helmut Newton, Peter Beard and Robert Frank.

At Impossible, the most direct connection to Dr. Edwin Land is through Stephen Herchen, the company's Chief Operating and Technology Officer, who oversees R&D and production at our plants in Monheim, Germany, and the former Polaroid assembly plant in Enschede, in The Netherlands. Stephen was Polaroid's Chief Technology Officer and worked directly with Land.

Stephen writes, "*My strongest impression of Dr. Land is of his unquenchable optimism (which was contagious and motivating) and persistence when it came to achieving some nearly impossible technical objective.*"


More of Stephen's recollections can be found on Impossible's blog today. [Learn more](#)

Happy Birthday, Dr. Land!

Image courtesy of Anne Bowerman.

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Impossible Camera GmbH Potsdamer Strasse 87 Berlin 10785 Germany

NEW**	April & May Introductory	Our Introductory Workshop Series Film Photography - April 25-27 Printing From Film Negatives- May 2-4 Alt Process Printing from Digital Negatives - May 9-11 With Ray Nelson All inclusive on site costs \$495.00		NEW**	August 3-8 2014	Daguerreotype A Contemporary Approach With Jerry Spagnoli	Photography Beyond Technique With Tom Persinger	
	Week 1 June 8-13 2014	Amazing Tri-Color Gum & Casein With Christina Z Anderson			Week 7	August 10-15 2014	iPhone iPad and iR Art With Theresa Airey	
	Week 2 June 15-20 2014	Everything Albumen With Zoe Zimmerman	Gum Plat Print & Making Digital Negs Using QTR With Kerik Kouklis		Week 8	August 17-22 2014	Carbon Printing Using QTR Digital Negatives With Sandy King	Tin Types & Ambrotypes in Montana With Sean Kochel
	Week 3 June 22-27 2014	Alternative Process Printing with Digital Negatives With Ray Nelson			Week 9	September 28 Oct 3, 2014	Photography And Lightroom workshop With Rick Sheremeta	
	Week 4 July 13-18 2014				Week 10	Oct Introductory	Our Introductory Workshop Series Large Format Photography Oct 3-5 Printing From Film Negs- Oct 10-12 Alt Process Printing from Digital Negatives – Oct 17-19 With Ray Nelson All inclusive on site costs \$495.00	
	Week 5 July 20-25 2014	Making a Personal Album or Journal, Start to Finish A Women's Retreat With Laura Blacklow			NEW**	Register and attend two classes consecutively and receive one night of your B&B stay free also receive a 10% Discount off the second weeks tuition Enjoy our women's retreats with Laura Blacklow and Jane Goffe. Renew yourself and restore your creativity. A spa is nearby and available for an extra cost.		
Week 6 July 27 -August 1 2014	Bookmaking With Anna Tomczak	Gumoil Printing With Michelle Pritzl		Remember our bring a friend Discount 10% is available when you both sign up for the same workshop				



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How did you hear of our Workshops? _____

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Years in Photography ___ Camera Formats used _____

I would like to stay on site at the B&B for 5 nights (NON-SMOKING) all amenities.

___ \$250.00 per person, Double Occupancy (+ Tax) ___ \$450.00 Single Occupancy (+ Tax)

___ I will find my own housing ___ Camping (\$50.00 includes showers + Tax)

Prefer to share a room with a friend in a workshop? ___ Yes ___ No Friend's name _____

Do you require a vegetarian lunch and dinner? ___ Yes ___ No

Do you request the roundtrip shuttle from Missoula A/P ___ Yes ___ No

WORKSHOP TITLE & INSTRUCTOR	DATE	TUITION	HOUSING	Total
Subject to change		\$100.00 ROUNDTRIP SHUTTLE from Missoula Airport =		
Subject to change		** MEALS Required \$275.00 x	(number of workshops) =	
LAB FEE (Determined by the chemistry used during the week and the amount of students) =				

Alternate Workshops:	Application Fee (required) ** \$20.00	
	Subtotal	
___ Visa ___ MasterCard ___ Discover ___ AMEX ___ Check or Money Order enclosed payable in US dollars Exp. Date: _____ Security Code _____ Credit Card No.: _____ I have read the terms applicable to my workshop concerning payment, liability and Cancellations. Signature for deposit _____ Date: _____	7% Lodging Tax** Total Due	
	Less Deposit Enclosed	-\$220.00
Signature for remaining balance: _____	Balance due 30 days Prior to start of workshop	