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The Unlimited Potential for More Creativity in Today's Photography

A. Introduction

Having had dual professions in music and photography, I have been involved with creative people for much of my life. What I have always found most interesting is the range of creativity among these individuals, with some being so much more creative than others. These observations eventually led me to begin an in-depth study of the subject. My interest accelerated with the introduction of digital photography and editing because this new era opened the doors to more creativity. As I began to focus more on photography and less on music, I reached out to more books, research papers and websites, and this led to numerous discussions and debates with some of my most admired creative photographers. I even delved into neuroscience (research into brain waves) as it relates to creativity.

As I continued my studies, I was fascinated by the diverse and inconsistent opinions and conclusions from the writings of creative people, scientists and researchers, but most importantly, I was energized by the one conclusion upon which virtually everyone agreed: When it comes to creativity, we all have unlimited potential. That's what I wanted to hear, because over the years I have found creativity to be a thrilling phenomenon. This thrill of creating is explained so very well by psychology professor and author Mihaly Csikszentmihalyi:

When we are involved in it, we feel that we are living more fully than during the rest of our life. The excitement of the artist at the easel or the scientist in the lab comes

close to the ideal fulfillment we all hope to get from life, and rarely do (Creativity 2).

There is a wealth of material available on the subject of creativity, but very little is specifically related to photography. This motivated me to extract, evaluate, and analyze the portions of the information that I believed could be used effectively by photographers. In the process of doing this, I addressed the many contradictory conclusions of the researchers. In most cases, I found answers or explanations for their differences, often by melding their findings with my own experiences and with those of other creative photographers. Eventually, the goal of this thesis became clear to me. It is to inform, inspire and energize those of us who are photographers about the exciting, rich potential for more creativity in our work.

From a broad viewpoint, the available information and research can be grouped into three categories:

Studies of creative people - their psychological profiles and upbringing. While I find this sort of information interesting, it's a little late for any of us to go back and relive or redesign our childhoods or to make substantive changes to our psychological makeup.

Photography books offering specific suggestions and examples. While more than a handful of these books exist, they tend to focus on specific examples and exercises. Seeing the creative work of other photographers can be useful, but my goal is to help photographers think more creatively so that, as they approach any photographic challenge, whether it be in the field or in front of the computer, they will have a more creative outlook.

This brings us to the third and, in my opinion, most important category of research:

Research studies and opinions that focus on the very core of creativity, including the way our brains work. This research analyzes the origins of creativity, why some of us have more of it than others, and most importantly, what we can do to expand it. These are the studies that

interested me the most. Accordingly, my thesis focuses on the core of creativity, while drilling down to the elements that I believe can help us as photographers.

I find it curious that the terms “creative and creativity” are used so frequently, and yet few people can actually define them (unless to simply say they mean “something new or different”). The definitions of creativity are countless. From my viewpoint as a photographer, I find this one to be most meaningful:

Creativity is the act of formulating and visualizing new and imaginative ideas and turning them into reality. Creativity is characterized by the ability to perceive the world in new ways, to find hidden patterns, to make connections between seemingly unrelated phenomena, and to generate solutions. Creativity involves two processes: thinking, then producing (Naiman).

To discuss this subject, we need to distinguish between what researchers call “spontaneous” and “deliberate” creativity. If you are driving down a country road and you notice a nice weathered shack and a couple of miles later you see an old windmill, and suddenly you imagine the two of them together with a mountain scene that you photographed years ago, this would be an example of spontaneous creativity. It is effortless. On the other hand, if you have accepted an assignment to produce photos and to design a new advertisement for an art gallery client, and the deadline is in a week, you must use the deliberate approach. In this situation you don’t have the luxury of waiting until some creative thought “just happens,” so you sit down at your computer and start hammering out the assignment.

It is also worthwhile to understand “divergent” versus “convergent” thinking. If you accept a photoshoot for a client who wants to include herself, her horse, and her dog, and she wants it to include a mountain stream, you will employ divergent thinking to conjure up all the creative

possibilities you can imagine. Your goal is to come away from the photoshoot with an assortment of creative photos. There is no single solution and no “correct answer” to the problem. “Divergent thinking is one of the hallmarks of a creative mind” (Carson 125).

Even though convergent thinking applies mostly to science and industry as opposed to the arts, I believe an understanding of it is important in order to distinguish it from divergent thinking. I like to describe convergent thinking as being like a funnel, with creative ideas being poured into the top of the funnel to come up with one solution that comes out of the bottom. A good example of convergent thinking is the Apollo 13 crisis in 1970 involving an explosion on the way to the moon. The astronauts were faced with having only two hours of clean oxygen. The engineers in Houston had this amount of time to solve a specific problem and save three lives – how to use the limited resources on board the spacecraft to come up with a system to filter the carbon dioxide out of the used air to make it breathable. There could have been more than one approach, but in this case there was only one solution and it included, among other things, duct tape (Yanes).

Creativity in science and engineering can involve either divergent or convergent thinking, whereas making art almost always involves divergent thinking. Convergent thinking limits your thought process because it is assumed that there is only one correct answer (Carson 126)

Next, let’s address some persistent misconceptions about creativity:

B. Four Common Myths About Creativity

Myth 1. Some people are creative “types” and the rest are not. This misconception has been dispelled by virtually every source I have found, with my favorite explanation being this one:

“You need look no further than children to see that creativity is endowed upon all of us. However, because of an unfortunate and nasty little condition called

adulthood that inescapably inflicts everyone, our creativity is slowly sapped from us” (Gasca).

Myth 2. Creativity is limited to the field of art. If you look around your house, you will realize creativity is everywhere – from the microwave to the toaster, from the garage door opener to the air conditioning system. Creativity tends to be found (and often valued) more in science and industry than in art. Notable inventions like the movable metal type used in the Gutenberg printing press come to mind, and look at what happened when Henry Ford perfected the use of the assembly line. Imagine all the individual inventions needed to accomplish President Kennedy’s goal in 1961 of landing a man on the moon before the end of the decade. And think about all the inventions and the improvements to existing products accomplished by Steve Jobs at Apple. “Business experts polled in 2011 from around the globe agreed that creativity is one of the most influential forces driving today’s global economy” (Carson 7).

Myth 3. Being under time pressure can spark creativity. Researchers consistently conclude that the opposite is true. Virtually every creative person I know disagrees with this conclusion, and yet the researchers remain steadfast. I believe this polarity has to do with the definition of “time pressure.” Given a year to do a moderately complex project, most of us would wait until a month or so before the deadline to before starting. Most of us need some kind of deadline. But what if you were suddenly given a creative project with a deadline of, say an hour from now? The resulting pressure is, for most people, a hindrance to creative thinking.

I believe the operative word is “anxiety.” Most people react to pressure with anxiety, and it is the anxiety that is a hindrance to creativity. While some lucky individuals can work under extreme pressure with no anxiety, they are the exceptions.

I can remember many times when I have worked frantically on refinements to my

photographic competition images up until the very last second, and I felt I was working quite well under the pressure. But my *creative* work had been done much earlier. I was focusing in these last minutes on the craft, and the technicalities – not creativity.

Research shows that creativity is normally enhanced when the brain is unfocused or at least broadly focused, and anxiety creates the opposite kind of mind state. Accordingly, when time pressure creates anxiety, creativity becomes more difficult (Amabile). “When creativity is under the gun, it usually ends up getting killed” (Amabile).

Myth 4. Creative types are usually moody and depressed. Actually, most studies have found that creativity is less likely to occur in the presence of sadness, anger and fear, and that it is more likely to occur with positive emotions, such as joy and love.

Still, the impression persists that moodiness and depression go hand-in-hand with creativity. The mental struggles of Brian Wilson, leader of the Beach Boys and one of history’s most creative songwriters, come to mind. It is interesting to review the opinions of psychologists, especially concerning the tormented mind of Vincent Van Gogh (Panter 1). Over fifty different diagnoses have been given to Van Gogh, including manic-depressive psychosis and schizophrenia (Panter 10). In my opinion the creative arts, which involve emotions, should be analyzed separately from other creativity (in science and industry) when we address moodiness and depression. Emotional ups and downs seem to me to go hand in hand with the lives of many good artists, and yet I can understand that these emotions would be a negative in most other creative endeavors. And in contrast with Brian Wilson, consider Paul McCartney, one of the most upbeat and creative songwriters of all time.

Perhaps what the researchers are really trying to say is that negative moods steal your attention and energy, and that makes creativity more difficult.

I think we photographers can learn from this by looking inward. We can take advantage of our mood swings by recognizing that the uplifting effect of coming out of a somber mood could be a good time to jump on a creative project. And we can also benefit from sadness under certain situations but we need to recognize the differences between deep anxiety, and mellow moodiness. Suppose you have had a significant argument with your spouse. As you walk away, there is almost nothing that can take your mind off the disagreement. This is the most difficult state of mind for creativity because you are totally focused on one negative thought. On the other hand, imagine ducking into a cozy, corner bookstore or neighborhood coffee shop on a dreary, rainy afternoon. Yes, it's a melancholy day but it can put you into a mellow, reflective mood which might be ideal for creativity.

C. Understanding the Mindsets of Creativity

Recognizing and understanding the “mindsets” of creativity can be a real advantage for creative photographers. Studying this subject has allowed me to recognize and make the most use of the particular mindsets in which I might find myself. These mindsets are often referred to as “brainsets” or “states of mind.” In Your Creative Brain, Harvard creativity researcher and scholar Shelley Carson has identified seven mindsets, five of which are in my opinion most relevant to photographers:

The Absorb Mindset. Absorbing information gives us the resources for creativity. It helps to be a hunter and gatherer of knowledge, memories, and mental images. Since a basic premise of creative ideas is that they are combinations of seemingly unrelated visions or bits of information, it stands to reason that the more information you have stored in your brain, the more raw material you have to combine into original ideas (Carson 63). Those of us who find almost everything in

life interesting are going to accumulate more bits of stored information, which facilitates creativity.

Attraction to novelty is a characteristic of the Absorb mindset. “Perceiving what others do not see in the world around you -- and associating these perceptions with already-attained knowledge or skills -- allows you to make innovative leaps, whether in art, science, business, or your personal life” (Carson 77).

Suspension of judgment is also important in the Absorb mind set. Ideas float across the wide screen of your mind, and you find them intensely interesting without the need or desire to censor them or judge them (Carson 79).

This very appropriate quote sums it up: “Your knowledge provides the fuel for your imagination, and your imagination is the catalyst for the transformation of knowledge into new ideas” (Seelig 15).

The Envision Mindset. If the Absorb mindset provides the fuel for your imagination, then the Envision mindset is the engine. One thing that separates humans from other species is the ability to “see” what is likely to happen if we choose a course of action, without actually having to experience the consequences of that action (Carson 104). The envision mindset allows photographers to assemble (in their minds) creative photo scenes. In the earlier example of a photography client who wanted to be photographed with her horse and her dog by a mountain stream, the envision mindset is the state of mind you are using as you put together and imagine various alternatives. Highly creative people are able to form clear mental images and manipulate those images both to envision creative dilemmas and to come up with creative solutions to problems (Carson 107).

The Connect Mindset. When you are in the Connect mindset you instinctively combine bits

of information obtained from the absorb mindset. You generate multiple ideas, and at this stage of the process you are not concerned with whether or not they will work (Carson 123). This most often involves divergent thinking (Carson 123). Since one of my favorite activities is driving alone on two-lane roads at sunrise, let's imagine I am doing that. As the sun starts to break the plane of the horizon up ahead, the idea comes to me to photograph the scene so I can combine it with previous photos I happen to have of an old Route 66 sign and a Gulf gas station, using Photoshop. This would be an example of the Connect mindset, working in tandem with the Envision mindset.

The Stream or "Flow" Mindset. When you are in this euphoric state of mind, your sense of time becomes distorted (Csikszentmihalyi, Creativity 113). Self-awareness disappears, there is no worry about failure, and distractions are excluded from your consciousness as you build a set of spontaneously and skillfully executed responses to the challenge (Csikszentmihalyi, Creativity 112). An example is the improvisational jazz musician, creating music without being consciously aware of it. The spontaneous style of comedy that Jonathan Winters and Robin Williams perfected, creating the monolog on the spot, is another example. Some might define it as "being in the zone." It is a state in which you are so involved in an activity that nothing else seems to matter (Csikszentmihalyi, Flow 4).

Flow can occur in just about any activity. It involves a balance between challenge and skill—the task is not so easy that you get bored, but you have enough mastery to be engaged and successful. You are so absorbed in what you are doing that the activity becomes spontaneous, almost automatic. You stop being aware of yourself as being separate from the actions you are performing (Csikszentmihalyi, Flow 53).

You know what to do and you "just do it." You are not thinking about yourself or protecting your ego because you're too wrapped up in the task at hand. The activity is meaningful and

enjoyable for its own sake, rather than as a means to an end (Csikszentmihalyi, Creativity 112).

When you find yourself working on a project with wild abandonment and you aren't aware of time or any distractions, you are in the state of flow. You ride with it the way an eagle soars with the thermals.

The Evaluate Mindset. Not all photographic ideas will work out. During the preliminary creative processes, it is important to ignore any self-conscious, judgmental tendencies. There comes a time, however, when decisions have to be made and the next step has to be taken in order to progress (Carson 185). Now it's time to enter the Evaluate mindset, which means both self-evaluation and opening your work up to the criticisms of others (Carson 185).

Psychologists talk about distancing yourself from your work while evaluating it, and this works well for me. I can best evaluate my work the next morning, after a night's absence. In other words, for me, the best way to access my Evaluate mindset is to "sleep on it" and take a look the next morning. I have had so many photographic projects that have progressed in a wonderfully frantic euphoria late into the night, which is an example of the Flow mind state. I've gone to bed barely able to sleep because I believe I have created the photographic masterpiece of the year. Awakening in the morning I rush breathlessly to my computer to find that it is... absolutely dreadful! This is how the evaluate mindset works, and it is critical to our creative development.

Timing is especially important for the Evaluate mindset because it is the opposite of the mindsets you want to be using when generating creative ideas. Entering this mindset will cut off further generation of ideas, at least temporarily. The Evaluate mindset is where you want to be when you are deciding whether your photograph or Photoshop creation really works. Is it finished, or does it need more tweaking? Should you start over? Should you give up and move on to another photo? The Evaluate mindset is not conducive to generating new ideas or sustaining work on a

complex project, so use it in small doses.

When it comes to receiving criticism from others, the obvious example is photographic competition. The best tip from psychologists for receiving criticisms from others is to view criticism as a badge of courage (Carson 195). Congratulate yourself for having that courage. Be hard on your work, not on yourself (Carson 190).

In seeking out feedback from others, watch out for what I call the “reality police.” These are the photographers who focus on minute details of your creation, seemingly unmoved by the rich emotions of your artwork! You need them, but only on *your* terms. In other words, seek them only when you are ready for them. It is best to be almost finished with your work before initiating feedback. We are fortunate in our profession, because with digital photography, making last-minute changes are rarely too difficult.

Getting into the Right Mindset at the Right Time. Many creative people happen to be in the Absorb mindset almost all of the time because they find practically everything interesting. It is their default state of mind. The Flow mindset also happens naturally, as we become excited about our projects. The Connect and Envision mindsets, by contrast, have a lot to do with whether we are in the Spontaneous or Deliberate states of mind described earlier. Finally, most creative people are able to get themselves into the Evaluate mindset when needed, but they also realize it is important to avoid it until later in the creative process.

D. Observations of Psychologists, Scientists, Researchers and Creative People

Knowledge of the Domain Gives you the Creative Advantage. (Seelig 185). An artist cannot make a creative contribution without looking over and over at previous art, to learn what other artists and critics consider good art and bad art (Csikszentmihalyi, Creativity 47). Early in my photography career I joined the Professional Photographers of America, a large, international

organization of professional photographers. This gave me the opportunity to see the work of countless accomplished photographers, and to associate with them. This is just one of many approaches that photographers can use to gain knowledge of their domain, the key being that without a good grasp of what has been done before you, and what makes an excellent photograph, it will be extremely challenging to enhance your photographic creativity.

Break the Rules. Certainly, great photographers break the rules. They *know* the rules, most often from an abundance of practice, and that facilitates more creativity than not knowing the rules to begin with.

In the domain of photography, one of the best resources for learning the rules is photographic competition. Yet some of the most creative, expressive, and compelling photography would do poorly in competition. Two of my favorite creative photographers, Julianne Kost and Laurie Klein, once suggested that I study the work of creative photographer Keith Carter. Upon obtaining a collection of his books I sat down to take a look, and I was captivated and emotionally involved in almost every photograph. The composition of many of the photos was unorthodox. In some photos the parts I would have expected to be in focus were blurry, and the seemingly unimportant parts were sharp. This style created intrigue and mystery, giving me a longing to see more clearly those things that were out of focus. I wondered if these photographs were so compelling *because* they were breaking the rules, or *in spite* of breaking them? My expectations were thrown off balance, and my normal standards for judging the quality of the photography were suspended. What remained was simply the raw emotions that Carter was wanting to convey. This seemed to me to be a provocative example of a photographer who has learned the rules and is now comfortable in departing from them. In summary, a solid foundation of the basic rules is of great importance. But once you know those rules, you can sometimes create tremendous impact by

breaking them.

Being Wrong is Right for Creativity (Arden 54). Conversely, being right all the time stifles your creativity. Comedian Stephen Colbert says he owes much of his success to “learning to love the bomb,” or “embracing his failures” (Lovell). In photography, failure could be an idea for a photo shoot that seemed wonderful in concept but ended up falling flat, or simply looking silly. Or it could be a new creative Photoshop idea that made you proud, until it received an embarrassing score in competition.

Too often the fear of failure (of being wrong, of missing the mark, or of embarrassing ourselves) prevents us from uncovering creative ideas, even when the likelihood of insight is high and the result of discovering that insight could be important to us. Thomas Edison understood failure when he explained “I have not failed. I’ve just found 10,000 ways that won’t work” (Pinola).

We play it safe as a result of fearing a negative outcome from our actions or explorations. But the best creative insights come when we embrace the possibility of failure and view our actions not as something with a right or wrong, but as an experiment. As James Joyce said in Ulysses, “A man’s errors are his portals of discovery” (94). Tina Seelig says, “Genius is the ability to make the most mistakes in the shortest period of time” (154). And finally, Winston Churchill said, “Success is going from failure to failure with no loss of enthusiasm” (Arden 122).

Generate Ideas in Abundance. This is related to the concept of making lots of mistakes. “If you aren’t throwing away a large percentage of your ideas, you aren’t trying enough options” (Seelig 154). And consider this valuable insight: “The function of the overwhelming majority of your artwork is simply to teach you how to make the small fraction of your artwork that soars” (Bayles 5).

Imperfection is an Essential Ingredient in Artwork. Ansel Adams said it so well: “To require perfection is to invite paralysis” (Bayles 30). Imperfection is not only a common ingredient in creative art, but very likely an essential ingredient (Bayles 30).

Dissatisfaction Breeds Creativity. Conversely, contentment is often the enemy of creative effort. Creativity is predicated on a certain amount of dissatisfaction with the present state of things; otherwise the impetus for creativity -- the drive to improve -- is absent (Carson 215).

I find that looking at the work of other outstanding photographers can be both inspiring and sobering. I consistently review my assortment of the Professional Photographers of America Loan Collection books. These are published annually, and each one contains the most highly acclaimed photographs for that particular year as submitted for judging by members of that organization. Without question, this is a good way to add to my dissatisfaction with my current work, and reviewing these wonderful photos energizes my desire to improve both my camera craftsmanship and my photographic creativity.

The Curious Benefits of a Glass of Wine. I approach this sensitive topic with caution, partly because my family has a history of alcoholism. Studies consistently find that a minor amount of alcohol can give subjects a creative advantage because it subdues the part of the brain that governs inhibitions and evaluates the appropriateness of ideas and behavior. This resulting state of “disinhibition” allows ideas to flow into your conscious awareness that would otherwise be filtered out by the logical parts of your brain (Carson 219).

While little information is available on this subject as it relates to photographers, there is an abundance of research involving other types of artists, including writers. Among writers and other artists, alcohol is often considered to be a creativity enhancer. For example, about half of the American winners of the Nobel Prize for Literature, including William Faulkner and Ernest

Hemingway, have been alcoholics (Dardis 3). Some writers believe that alcohol provides enlightenment and an altered state of consciousness that gives them a freedom that they don't possess in sobriety (Dardis 44). Others think, probably correctly, that the use of alcohol produces fuzzy thinking and a distorted view of the world, and that large amounts of alcohol are fatal for creativity (Dardis 44).

I believe the key here is to distinguish between "disinhibition" and "disorientation." From my personal experience I agree with the findings that losing (or decreasing) one's inhibitions is a good thing when it comes to creativity. I also agree that taking the effects of alcohol too far, and reaching the state of disorientation, has a negative effect on creativity.

Having been a part-time professional musician for most of my life, I can offer a true-life case study about the effects of a minor amount of alcohol on inhibitions. Many of my performances involve playing solo guitar with a singer, and when playing solo, there is no margin for error. In other words, any mistake is painfully obvious. The fear and anxiety of making mistakes was affecting my enjoyment during the first part of engagements. Eventually I found a solution to this anxiety, and it involved a half glass of red wine ten minutes or so before starting to perform. The amazing result was that, as I started playing, I no longer worried. It really didn't make me play any better, but it made me think "If I make a mistake, *I don't care!*" This is a great example of the disinhibition to which the researchers refer. I knew from experience that drinking the full glass would adversely affect my playing, so I saved the other half of the glass until later.

The World's Most Creative People Often Have Serious Interests in Multiple Domains.
"Albert Einstein the physicist also played the violin. Benjamin Franklin was both a writer and inventor. Leonardo da Vinci was an inventor and an artist, and Michael Crichton was both a medical doctor and a fiction writer" (Carson 271). This is sometimes referred to as a "right brain,

left brain balance” and it is surprisingly common.

E. Suggestions from Creative People, Researchers, and Psychologists

As you can imagine, there are countless suggestions for creativity. The suggestions below have been repeated by a multitude of sources and are therefore in my opinion the most credible and meaningful. Most importantly, these are the ideas that I consider most relevant to photography.

Take Advantage of Boredom. Boredom is a good thing when it comes to creativity. “Creative people need time to just sit around and do nothing” (Kleon 67). Ideas often come to people during a board meeting, or (God forgive me) during a Sunday sermon. It’s common to get great ideas when you’re in the shower, or walking the dog. Boredom often results in daydreaming, and that is good for creativity.

Get into a Cozy Place. Surround yourself with bookcases or things on the wall that you love. It’s the perfect setting for the 1960’s song by the Beach Boys: “In My Room” (Kleon 90). This is a great place to be when you are working on new photographic concepts.

Get out of the House. This seems inconsistent with “get into a cozy place” but varying your time between each of these can be effective. Spending time in areas of beautiful scenery, such as the ocean, the woods, or in the presence of a beautiful sunset, releases opioids that increase positive mood and decrease cognitive inhibition, making the Connect mindset (described earlier) easier to utilize (Carson 140). Immerse yourself in nature and colors. If you are anxious or stressed, go to a space where the colors are blue or green (or both), since these have a calming effect (Price). For creativity, find more vibrant colors since they are known to stimulate the senses. Purple enhances creativity while red inspires passion, power and energy (Price).

Combining all three of these suggestions (boredom, a cozy place and getting out of the

house) can result in utopia, as I can demonstrate with a personal story. For many years I used to backpack solo in Colorado for several days at a time. On one of my first trips I was camped well above the timberline and a thunderstorm started late in the afternoon, as it often does. After the storm, light rain continued for a couple of hours and with the rapid tapping on my tent, I had never felt so cozy. There was absolutely nothing to do except think and daydream. My mind started to race, effortlessly spewing forth new songs, new ideas for photoshoots, and plots for short stories and novels. I was writing all this as fast as I could, but it was difficult to keep up. Subsequent backpacking trips often duplicated this wonderfully creative experience.

Multiple Projects are Good. This is a common pattern among creative individuals, and it produces unexpected cross-fertilization of ideas (Csikszentmihalyi, *Creativity* (272). I always have several photographic projects (ideas, works in progress, and concepts) going on at the same time and I have found that this allows me to move from one to the other based upon my mood.

A Clean (Organized) Work Area Facilitates Creativity Because it Reduces Distractions. Researchers are essentially united on this one, and I must admit I hated to hear it. Solving difficult tasks and generating creative ideas becomes easier when you have a clean desk in front of you, because you are better able to concentrate on the issue at hand when the surroundings aren't cluttered (Belyh). Having an organized workspace is last on the list of priorities for most of the creative people I know, and I will admit that I only straighten my room about once a year. But when I do take the time to organize it, I can feel a positive difference.

White Noise Facilitates Creativity. As is most often the case, research on this subject is mixed. "Finding the right space to do creative work can be difficult. Sometimes at home or in the office, there are constant interruptions, and sometimes an unbearable amount of noise. On the other hand, locking yourself away in quiet isolation can sometimes be just as counterproductive.

For most creatives there is a ‘Goldilocks’ zone of just the right amount of noise, but not too much” (Burkus). This study and others often show that a certain level of noise (such as in a coffee shop) increases creativity. “A moderate level of background noise creates just enough distraction to break people out of their patterns of thinking and nudge them to let their imagination wander, while still keeping them from losing their focus on the project all together. This *distracted focus* helps enhance your creativity” (Burkus).

Assemble a Playlist of Music that Inspires You. For photographers, this suggestion relates to photo editing, the work that you typically would perform alone while sitting at your computer. Studies are mixed as to whether or not listening to music is good for creativity, and I have many creative friends who prefer total silence. But indications are that for divergent thinking (as in the creative arts), it is usually beneficial (Heid). I believe this is especially true if the music fits the mood you are trying to accomplish in your art work. In my case I have assembled a listing of music that puts me into that special zone. My listing would mean nothing to other photographers and artists. It is up to you to assemble your own list.

Living the Double Life. Many people feel they are living a double life. I have known several physicians who played rock music in the evenings, and CPA’s who were artists. If you have a double life, try to embrace the situation rather than being concerned about it. “Be utterly schizoid about it all – using each personality for a refuge from the other” (Steele).

F. Conclusion

I hope in reading this thesis photographers will see themselves in some of the observations, examples and illustrations, because when it comes to using the information of these scientists and researchers it is important to “know thyself.” Some of their findings will be applicable to your psyche and your personality, but certainly not all of them. A good example would be the possible

benefits of white noise. Does the comfort of the white noise in a coffee shop stir your imagination and creativity? I must say that the very thought of it makes me tingle, but it's not for everyone.

For me, the points that have been most important in expanding my creativity are:

1. Learn to accept, or even embrace, failure. Focus on the knowledge you have gained by failing.
2. Learn to seek and savor criticism. Remember that it is a piece of work being evaluated, not you as a person.
3. Learn to recognize your creative mind states. For example, when you are on a creative roll, such as being in a state of flow, don't waste those moments on precise photo editing adjustments. And use your Evaluate mindset to your best advantage. Learn when to ignore it and when to embrace it.
4. Work multiple projects, moving back and forth as your mood changes.
5. Make use of your boring moments. Let your mind wander, and jot down your ideas.

In the midst of my research, it occurred to me that one thing seemed to be missing, and that missing link was illustrated to me during a personal interview. Sometimes in the quest for knowledge there is no substitute for live interviews, and I was fortunate enough to spend a day with Adobe Evangelist Julianne Kost to discuss her creativity. She told me that early in her life her father had given her some great advice about the importance of learning the tools of your trade (Chamberlain). For photographers this advice means developing a thorough knowledge of the mechanics and special features of your particular camera, and learning the extensive software tools for digital editing. Not only does this knowledge help you accomplish your creative goals, but it can also work the other way: knowing what the tools can do might inspire you with creative ideas

about how to use them.

From studying the subject of creativity, I now have much more confidence in my creative potential. Now, when I approach a photography assignment – be it a landscape situation or an outdoor portrait session or a Photoshop challenge on my computer – I am comfortable that I will end up with something original and imaginative. There is also another benefit from this research that is perhaps of even greater value. This heightened knowledge about creativity has made my work more enjoyable, and more fulfilling, than I ever would have imagined. At the age of seventy-three, the excitement continues to build!

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