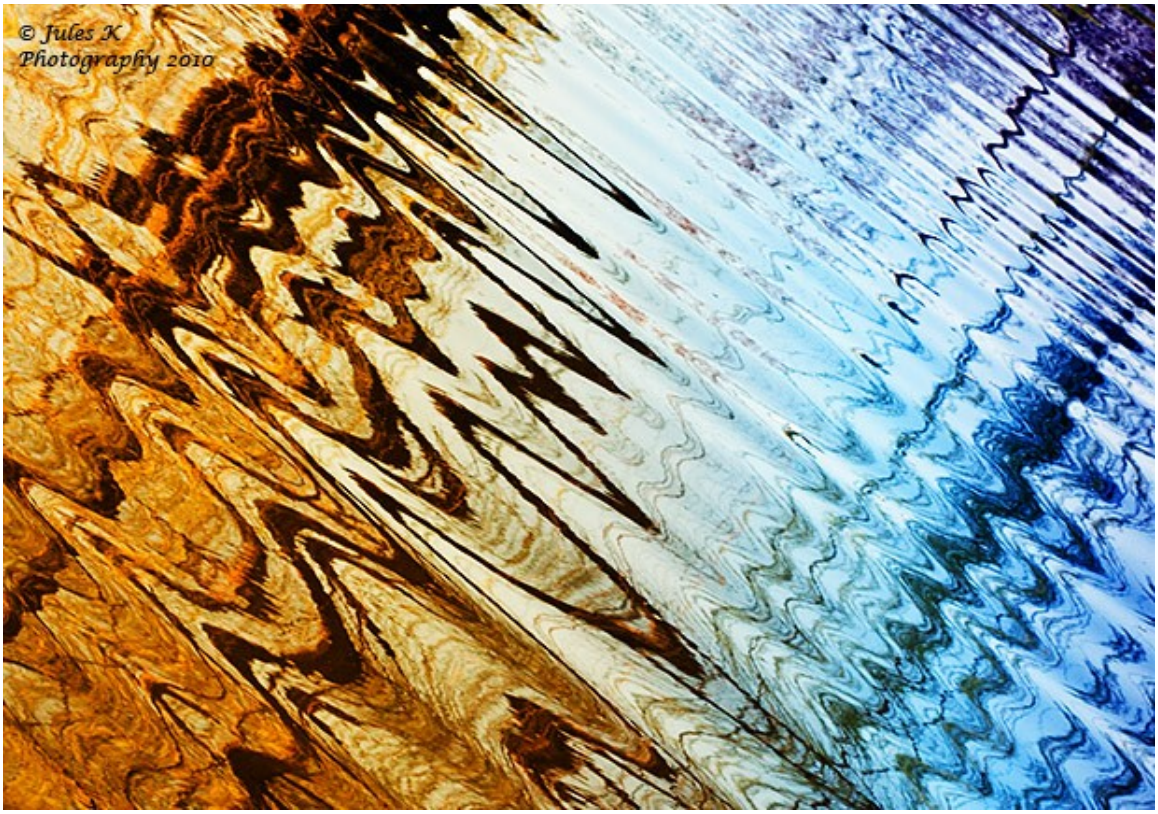
Chapter 5

Standing By a Pond: The Outer and Inner are Inseparable



This was a whole new experience! He hadn't anticipated that an intimate relationship to the world like this was possible. It was as if everything that happened out there was happening in here. The boundaries of self and world had dissolved not into a childlike state of less-consciousness - in fact there was now so much more! Yet, in the experience of more there was also contentment. As if coming home, as if the desire to stay awake and yet experience a unity was not only begging to be the ideal, it was becoming a reality. The reality began with that simple opening of eyes.

-Working together-

In the previous chapter we investigated the multiplicity of conditions that express themselves in the colors that appear under a given set of circumstances. We find that the whole visual field of activity rests on a subtle or gross change of one particular variable present at any time. This led to an understanding of the appearance of color – that it is not simply fixed to an object, but instead is an expression of relationships. The idea of expressed relationships can be taken even further into our experience, and is developed in this and subsequent chapters.

Exercise #5

While the conditions to complete this exercise may appear to be very particular, the likely results are worth the extra effort.

Find a small pond or lake and sit by it on a day where it will be comfortable enough to do so for fifteen minutes. I have done this exercise in spring through to fall, and on sunny, cloudy, and somewhat rainy days. It is also interesting to perform in the winter, but one needs to decide in advance if it is warm enough to sit still for the time indicated above. Any small to medium body of open water will likely suffice, be it a small quiet lake in the country or a duck pond in a city park. The key is to find a place where you can sit still for a period of time and not be interrupted by other people. It is also suggested that, at least for the first time, you practice this exercise with another person. The opportunity to share experiences with another human being is something that often goes unappreciated in our present time. To reflect on your own experience of the world and then to be able to compare your experiences with the experiences of others is perhaps the best teacher that each of us has. It is also one that we often overlook.

> *Once you are at the pond, pick a quiet space and close your eyes. When your eyes are closed, I encourage you to turn your body approximately 90 degrees. This is so you do not anticipate the scene that you will "see" in the moment at which you open your eyes later in the exercise.*
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> *Once you have closed your eyes, work to still your senses one at a time. Try to sit, stand, squat or kneel in a comfortable position that you can hold for the duration of the exercise. Keep your body fairly upright to minimize the contact you have with the ground. In short, try to minimize your experience of a sense of touch. Begin to push away any sense of warm or cold, any smells, tastes or other sensations. Sounds are usually the most*

difficult to push away so I encourage people to work on these last. What is important is to refrain from naming any experiences, especially those that associate a conceptualized object with the senses. After you have spent 1-2 minutes relaxing into an inner stillness, simply open your eyes and pay careful attention to the visual impressions you have. Remain with your eyes open for 7-10 minutes and focus on the visual impressions you have. As with the other senses, refrain from naming the impressions.

A final word of advice: pay especially close attention to your visual experiences immediately upon opening your eyes. Some of the experiences happen quickly and it may require more than one attempt at the exercise to become sensitive to them.

I leave you to the exercise and will comment on the experience below.

Commentary on Exercise #5

What follows is a beginning description of common as well as subtle impressions that many people experience. While all people have some of these experiences, few have all of them on their first attempt. I have practiced this exercise with different groups over 100 times and each time I experience some new aspect, sometimes subtle, other times dramatically different.

The most common initial experience that many people have upon opening their eyes is one of intense color. The banks of ponds are often covered in grass so when people turn 90 degrees they are no longer facing the pond but are instead facing a grassy shore. Upon opening their eyes, the experience of "GREEN" can be very intense, saturated, and appear much brighter than it does later in the exercise. "The colors were so intense!" Is the most common phrase when this exercise is performed in the spring, summer and fall.

Many people also describe this experience as a "sea of color." The juxtaposition of color is often so powerful that one can catch an instant or two where no forms are distinguishable, as the observer experiences only color without the conceptual elements of vision. In this case many people describe that the color was "happening within them" or that they "were one with the color." The everyday habit of conceptualizing the world as 'out there' in distinction from my own self 'in here' is temporarily nonexistent. This experience can be frightening for some and empowering for others.

The experience of inseparability described above can be investigated further. It is as if the visual field of viewing were simply a 2-dimensional world. Limiting ourselves only to an experience of the colors will clearly result in this type of

world conception. A good painter is able to create a living scene on a flat canvas through a direct awareness of these planar color relationships. To form an image that has the appearance of a 3-dimensional perspective, we need to utilize the juxtaposition of color on the canvas such that it conveys the visual cues we regularly use in our everyday life. For example, smaller images and larger images of the same shape but different sizes can be interpreted as objects that are further away or closer. This is classically shown in perspective drawing. The meeting of two distinctively different colors can be interpreted as the boundary of an object. An example of this might be a green surface that is invaded by planes of brown. If done skillfully, the canvas appears to be a small patch of grass embracing the roots of a tree. While the canvas is flat, the juxtaposition of color, when viewed form the proper perspective, contains the same visual cues we are used to seeing in our everyday experience.

Usually the experience of a 2-dimensional planar world is quickly followed by a "popping" of the visual scene into the more commonly experienced 3-dimensional mode of viewing we are accustomed to. I find that about 50% of people who first perform this exercise have an initial experience of a planar view. With practice, one can hold this mode of observation for quite a long period of time. If you practice this even more, I have found that you can actually see not one but two planar images. The first time I observed this I was totally surprised until I quickly determined that the two planar images corresponded to the two images we see, one of each eye. It is very interesting to watch the two images slowly merge together and, once they coalesce into one image, the scene pops into a 3-dimensional scene.

The discussion above shows us the need to focus our eyes, to bring them into focus on a common point in order for the two images to work together as one. The point of focus is different depending on the distance between our eyes and the image we choose to focus on. Upon first opening our eyes the distance is unknown and usually found in a fraction of a second. By relaxing and practicing the exercise a number of times, we can live into the unknowing of that focal length and see it arising before our eyes.

When we look toward the water a new possibility arises. When the surface of the water is still, a number of images come to appearance. Depending on where we focus our eyes, multiple images appear, all while looking in the same direction. Upon first looking in the direction of a still body of water, we are likely to notice a similarity of the image above the surface of the water with an image that appears to be beneath the surface of the water. Under the right conditions, i.e. when the viewing angle to the surface of the pond is oblique, the colors beneath the surface of the water can appear to be as bright as the colors above the surface. A sunny day with the sun at your back, and a dark colored bottom of the pond, all enhance this visual appearance. Close examination of this image beneath the

surface will quickly reveal that the laws of perspective beneath the surface are identical to those above the surface.

If we shift our point of focus a bit more we can see the bottom of the pond. If not looking too obliquely at the surface of the pond we may see the bottom in the same area where our reflected image appeared just a few seconds before. It is an interesting exercise to try and distinguish the difference in how we use the muscles of our eyes in a different manner when looking for reflected images and looking at a point at the bottom of the pond where the water meets the earth below. Note that anyone who has had the experience of dropping car keys, a camera, or watch into a body of water will quickly recall that the bottom that appears to be closer to the surface than the depth with which one actually submerges their arm in order to fish out the dropped object. That is to say, the bottom we reach for is not where the bottom appears. This well-known phenomenon is called refraction.

A third point of focus is found when we look into certain bodies of water and see fine particles of sediment or some plant material floating in the water. The point of focus is now no longer the bottom, nor does the focal plane correlate with the reflected image of the scene seen in the water. Finally, floating objects on the surface of the water yield a fourth plane of focus. Observe all of these carefully and see that each of these images requires a differing focal point. If you find the right point on the shore or bank, you'll see that all four planes of focus can be seen by looking in the exact same direction. It is a wonderful experience to switch from one to the other and directly experience the effect on the muscles that control the focus of your eyes.

Exercise #6

The following exercise is a powerful one that once again requires a few special conditions, but is well worth the effort in order to experience and really work through the commentary that follows. You can use the same pond, very small lake, large puddle, or perfectly still body of water with which you performed the previous exercise. This exercise must be done on a sunny day either by mid-morning or later in the afternoon. It is important that you are able to see an image of the sun beneath the surface of the water, so the sun in the sky is visible above the surface of the water, and not behind you, as you face the pond or lake. The surface of the water should be perfectly still, such that the image of the sun in the water is also still. Finally, be sure that the image of the sun in the water is relatively close, such that you can throw a stone at the water where the image of the sun appears.

Once you have observed the two images of the sun, both above and beneath the surface of the water, note the geometrical

relationship between yourself, the two images, and the surface of the pond. When you have a clear picture of the relationships of these points of reference, throw a stone at the image of the sun and observe what happens to the image. Allow ample time for the disturbance to completely resolve itself, until the surface comes back to a place of relative stillness. All the while note what has happened to the image of the sun. Throw another stone at the image and repeat the process until you are clear what the patterns and relationships are between the disruption of the surface of the water and the appearance of the image of the sun beneath the surface of the water. If stones are not readily available or it is inappropriate to throw them, find a stick or any other long item that can be used to disturb the stillness of the surface of the pond and create enough movement that the image seen beneath the surface of the pond takes on a "more dynamic" quality.

Commentary on Exercise #6

The image of the sun that we see in the water is commonly referred to as a reflected image of the image of the sun above the water. A conventional explanation for the geometrical relationship of these two images usually involves the invocation of the theory that light leaves the sun, "bounces off" the surface of the water, and then "enters our eye" to create the image of the sun we see in the water. The type of thinking that describes light as a thing has a number of difficulties and paradoxes. While many people have heard of the idea that light can be both a wave and a particle, an understanding of such a statement is usually said to be beyond the understanding of the everyday observer. A simple thought experiment can help us understand the problem associated with thinking of light as a material entity. If the thought experiment is too challenging, it is very simple to actually perform the experiment itself, provided you can get a number of friends to participate in it with you.

Imagine (or actually get) a mirror, in the center of which is placed a large black piece of construction paper. The paper is solid except for a round hole in its center, just large enough that you can pass a pencil through it lengthwise. Now stand back from the mirror and look at the hole in the center of the black construction paper. What color will you see? Now, move side to side and look at the mirror from various angles. If the room was full of many people all looking at the mirror, will everyone see the same color in the hole if they are all looking at the mirror from different angles? If we assume each person is dressed in clothing of different colors, we quickly realize that every person in the room will see a different color in the hole in the black construction paper all AT THE SAME TIME. This suggests that the surface of the mirror is showing as many different colors as there are people, all simultaneously. If light is conceptualized as a

thing, an object, then all of these different colors of light must all be simultaneously bouncing off the mirror. If there are so many colors bouncing, why aren't they interfering with each other? Even if we assume that the light bits are small, we would still expect that there is a limit to how many of them can occupy the same space on the mirror at anyone time and still all give a true rendition of the color each individual experiences. Clearly, the idea that light is somehow just a very small object-like entity is insufficient to explain this situation.

Having identified a problem in one of the conventional explanations as outlined above, perhaps another means of expressing the relationship of the mirrored image is possible. While the concept of light as an object is problematic, the geometrical relationship expressed in the above description is still a lawful relationship. Simply said, the image of the sun above the water is geometrically related to the image of the sun in the water. There is one point on the surface of the water that, if disturbed, moves the single image of the sun in the water. The angle formed by the line connecting this point with the image of the sun above the water is the same as the angle formed by the line connecting the same point of the surface of the water with our observing eye, or the image of the sun that appears beneath the surface of the water. That key point on the surface of the pond is analogous to the hole in the black construction paper.

In common language, the above description is often stated as the law of reflection: the angle of incidence equals the angle of reflection. Note however that this description implies the idea that some*thing* is bouncing. The description we developed above,, while a bit longer, actually avoids the problem of bouncing objects and simply states the clarity of the images' geometrical relationships, without speculating about some unseen entity (bouncing light). While the relational description may at first blush appear a bit awkward, I encourage you to live with the image definition just a bit longer and see the fruits of such a way of thinking.

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When looking at the surface of a pond on a breezy summer day, many people will remark at the ripples they see on the surface. If we think about this statement a bit more, the ripple may become a bit more mysterious. How is it possible to see the water in a ripple if the water itself is clear transparent and lacking in color? What is the image quality of what we describe as a ripple? The key to answering this question occurred once quite by accident. I was observing a small duck pond in the middle of a park in the heart of my hometown in Saratoga Springs. It was an evening in June and as I was sitting on the east side of the pond, the setting sun could be clearly seen in the perfectly still surface of the pond. As I was observing, a duck flew in from the north and landed in the pond. Instantly, the perfectly still image of the sun was set in motion and exploded into a series of simultaneous images of the sun all dancing in a

beautiful rhythmic and, what I realized later, perfectly lawful pattern. In that instant there were myriad images of the sun in the pond. Due to the disturbance that the duck made in the pond, the ripples created were all places were the geometrical relationships described above were being met. The relationships between the image of the sun above the surface, the surface of the water, and my eye were being met in multiple places at once. What began as a single image became myriad images became many images, became four images that moved rhythmically until after a couple of minutes one image of the sun slowly came back to rest and the single relationship of the sun I had enjoyed early that evening came back into being.

I later recognized that ripples are simply a rhythmical repeating of an image pattern of the surrounding images above the surface of the pond. In the case above it was an image of the sun. In other cases it might be a pattern of tree, building or even the shirt of a friend standing on the opposite shore. Ripples are nothing other than a rhythmical pattern of moving image that is a repeated reflected image of the surroundings. We don't need to imagine light bouncing, we simply need to recognize that each of the images of brightness that we observed above were simply a reflected image of the sun. The situation becomes even more interesting when we recognize that the vast majority of the surfaces in our world are also not perfectly smooth, and that each high point is likely a place that is also reflecting an image of the sun, or else reflecting another surface's reflected image of the sun. If we think this through clearly, in the natural world during daylight hours, *all images are ultimately reflected images of the sun.*

If you look at a natural setting carefully, you can come to experience the truthfulness of the statement made above. All images are indeed either images of the sun or reflected images of images of the sun. The surface of the material surely gives the image or images of the sun a unique appearance, but, ultimately, all of the images we see are these myriad images of the sun.

While we think of the physical sun in astronomical terms as a glowing sphere many miles away, from a visual perspective, we already live within its visual sphere.

"We live within the visual sphere of the sun."