

## Small Subjects, Big Lessons: The Direction of Light

By David Hayden

Once you begin working with small tabletop setups regularly, one thing becomes obvious fairly quickly. Moving a light, even a small amount, can completely change the photograph.

Early on, many photographers think primarily in terms of brightness. More light. Less light. Bigger lights. Brighter lights. Another modifier. Another stand. Another thing advertised online by someone dramatically photographing steam rising from a coffee cup while cinematic music plays in the background.

But a change in the direction of light usually adds far more interest to a photograph than will a simple change in intensity.

A textured book cover beneath frontal light may appear relatively flat and subdued. Move the light off to one side and suddenly scratches, fibers, dents, and surface wear begin appearing that barely existed a moment earlier. The surface starts describing itself differently because the tiny shadows responsible for revealing texture are no longer hiding directly behind the raised detail.

The opposite of this is also true. Direct frontal lighting can remove texture. Portrait photographers often use frontal lighting for exactly this reason, to soften skin.

Coffee mugs make wonderful little practice subjects for this. Place one on a table and move a small lamp slowly around it while watching what happens to the handle. Front light tends to flatten the transition around the curves. Side light creates shape through shadow. Back light may illuminate the rim beautifully while allowing the front of the mug to fall darker and more subdued.

None of this requires expensive equipment to study. A desk lamp works perfectly well. So does window light. The important thing is slowing down long enough to notice what changes and what does not.

One thing worth paying attention to is how much shape is actually described by shadows. When we start our photographic journey, we often think of shadows as problems to eliminate, but without shadows many objects become surprisingly difficult to read dimensionally. Shadows describe transition. They separate surfaces from one another. They explain depth.

Texture responds similarly.

Take a folded piece of fabric and light it directly from the front. The weave may remain visible, but much of the dimensional structure begins flattening out. Move the light lower and farther to the side and suddenly the folds begin casting tiny shadows across one another. The fabric develops weight and dimension because the light is now traveling across the surface rather than directly into it.

Landscape photographers see this constantly whether they consciously think about it or not. Early morning light often feels richer because the low angle reveals texture across terrain that midday overhead light tends to suppress. The same thing happens on a tabletop with old tools, weathered wood, pottery, or textured paper

But let's not ignore the potential of overhead sunlight. High noon light is still directional, it is just casting the shadows beneath the subject, so it is often lost. There are times when a scene or subject benefits from overhead directional light, something you may notice working with tabletop photography.

Reflective surfaces introduce an entirely new layer of complexity because reflective objects reveal the light source itself rather than simply revealing their own shape.

I remember photographing framed artwork for local artists years ago and discovering very quickly that dark artwork under glass is an exercise in negotiation with reflections. The paintings themselves were heavily chiaroscuro influenced with deep dark tones beneath glass, which turned out to be a wonderful education in reflections because dark glossy surfaces behave suspiciously like mirrors. Every light in the room immediately announced its existence.

I approached the problem somewhat naively at first by trying to light the artwork evenly from the front. The result was exactly what physics predicts. Large bright reflections stared directly back into the lens.

That assignment became one of the first times I really began paying attention to what photographers mean when they say AI equals AR. And in this case AI has nothing to do with artificial intelligence. AI means Angle of Incidence. AR means Angle of Reflection.

Light striking a reflective surface leaves the surface at a matching opposing angle. Once you begin noticing that behavior, reflections stop feeling random and start becoming somewhat predictable.

Or at least predictable enough to work with.

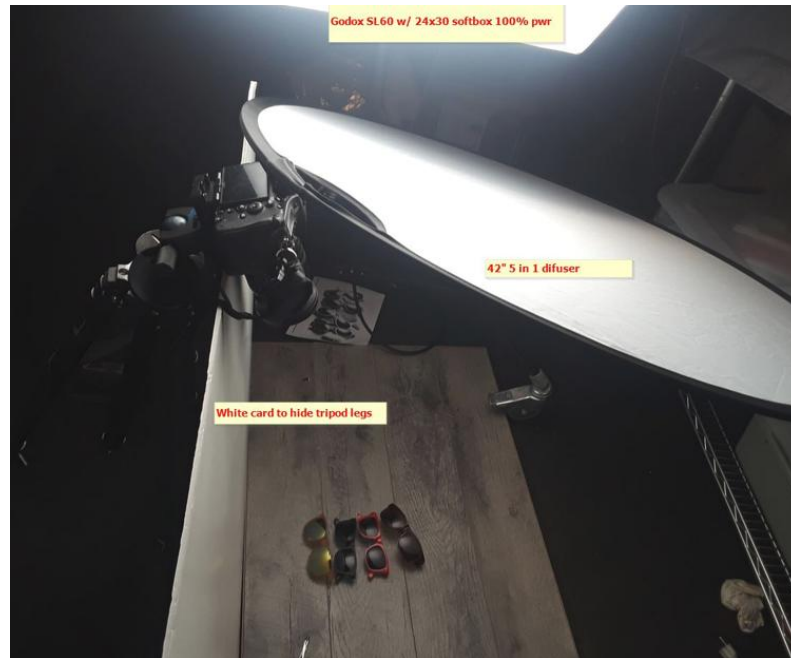
I eventually moved the lights off to the sides so the reflections would bounce away from the camera position instead of directly back into it. At one point I even cut a rough hole into a piece of black foam core and placed it around the lens because both the camera and I kept reflecting in the glass. The setup looked faintly ridiculous but worked surprisingly well.

That assignment also introduced another behavior of light I did not fully understand at the time. Increasing the distance from the lights to the artwork made illumination across the artwork more even. For a while I could not explain exactly why certain placements behaved better than others. I simply knew they did.

We will revisit some of that later when we begin discussing light quality and light falloff more directly.

Shiny objects have a way of teaching humility because they reveal nearly everything you forgot to think about.

I remember another shoot involving sunglasses where I spent an unreasonable amount of time trying to create a smooth gradient across the lenses. Tiny changes in angle completely altered the reflections. What looked controlled one moment suddenly reflected ceiling fixtures, walls, or portions of the room I thought were nowhere near the frame.



That was another moment where it became obvious that reflective objects are not particularly cooperative subjects. They reflect everything.

Chrome spoons are wonderful practice subjects for exactly this reason. Place one on a tabletop and move a flashlight slightly while watching through the camera. The specular highlights race across the surface immediately. The spoon becomes a little geometry lesson sitting on the table.

And this is where small tabletop studies become so valuable photographically. The changes happen so quickly that you immediately see cause and effect much more clearly. Raise the light slightly and reflections shift. Move it farther to the side and texture deepens. Lower it and shadows become longer. Sometimes a movement of only a few inches completely changes the photograph.

Over time you begin thinking less about individual pieces of equipment and more about relationships.

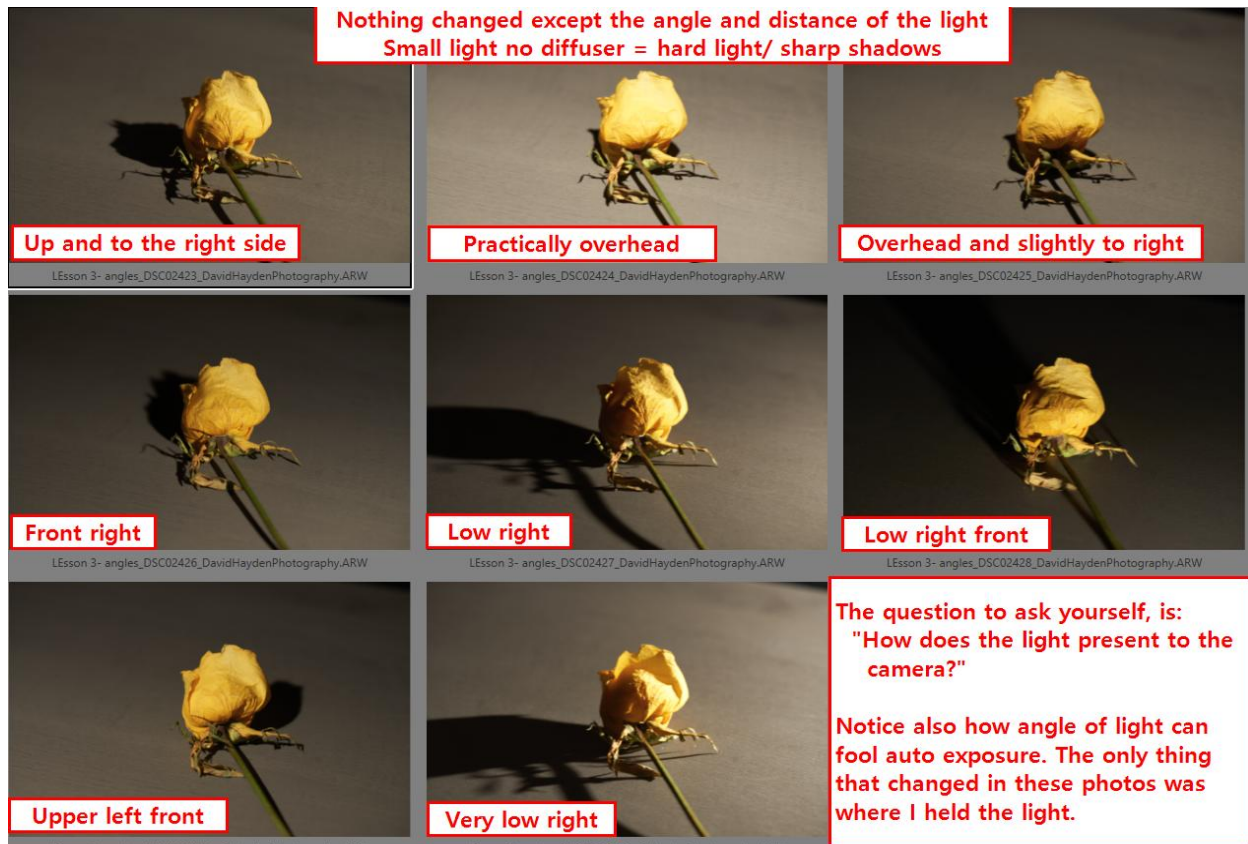
Where is the light coming from?  
What surfaces are reflecting it?  
What role are the shadows playing?  
What changed when the light moved?

Those questions tend to improve photographs far more reliably than buying equipment with great hope and waiting for confidence to arrive in the mail.

One of the more surprising realizations for many photographers is that moving a light often changes a photograph more dramatically than changing a lens. That sounds almost suspiciously simple right up until you spend an evening photographing the same object from a tripod while slowly adjusting the light position a few inches at a time.

Then it becomes difficult not to notice.

After a while you also begin noticing that direction is only part of the conversation. Some light transitions feel gentle while others become abrupt. Shadows sometimes spread softly across a surface and other times turn sharp and aggressive. We will begin looking more closely at that in the next lesson.



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