

Photography

Photographic Light

March 24, 2018 | Charles T. Low, Photographer

Light: the essential - but too often missing - compositional element

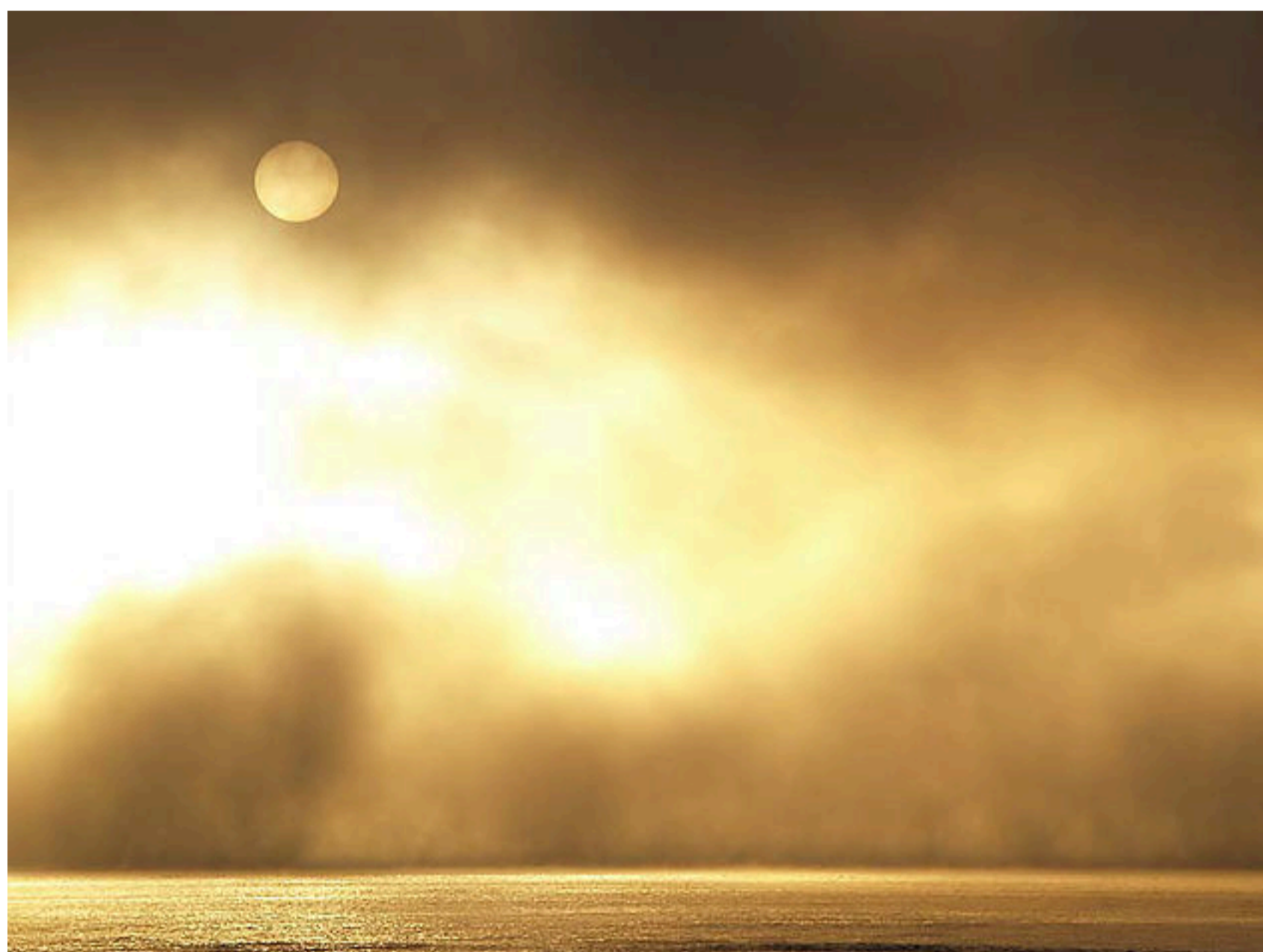
Not all photographers adequately appreciate the very medium of our work: light.

You won't find every aspect of light covered in detail here, because of i) impossibility and ii) I don't want to do that. I would rather reflect on my personal understanding, to date, of light, and on my observations of common misunderstandings.



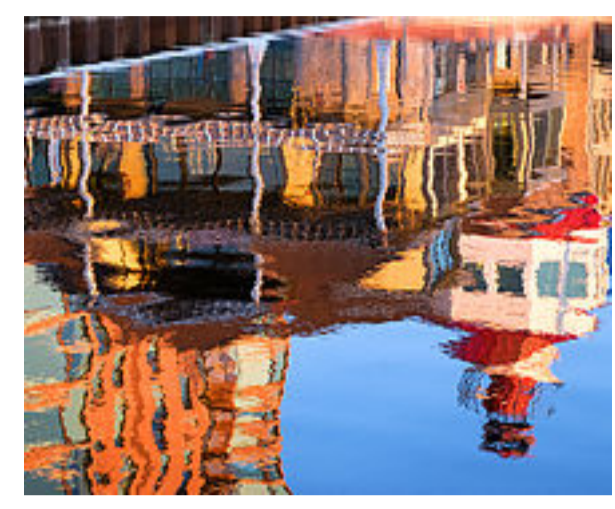
Light includes *ambient* light, in all of its many moods, and *artificial* light. Artificial light includes *constant* light and *flash/strobe* light. With artificial light(s), you have more control than with ambient light, albeit with a high and steep learning curve. With ambient light, the trick is often firstly to notice and recognize the light's character. Other than that, the principles of understanding light pertain to all of them similarly.

I often say that I want my light unnoticeable, simply excellent but not intrusive, but even that over-simplifies a complex situation. Occasionally, for example, light comprises the actual subject of the photograph.



Dawn mist - photo largely of the light itself

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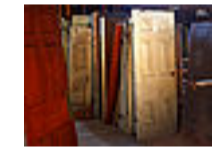
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Again: the photograph is of lights.

Photographers work with light, which therefore deserves our utmost attention; neglect it at our peril. Painters use paint. Sculptors use rock or wood. Dancers use motion. Musicians use sound, and some concentrate too much on technique, however essential. (What does technique matter if it doesn't sound good?)

The same applies to photography. I have railed against over-reliance on equipment, and have introduced some of the important factors of visual composition.

But a good composition without adequate attention to light resembles technically flawless music ... but performed without soul.



People have said nice things about this photograph (thank you!), and clearly it would be nothing if it didn't have that extraordinary light.

I grade visual art using this simple framework:

- subject
- composition
 - including light
- spark

It certainly helps to make a photograph of a beautiful, or interesting, **subject**.

Spark refers to the often subtle distinctions between competence and genius.

But we are here, now, because of **light**.

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I recently captured this mountainside at dawn, under a clear sky, just as the sun poked its head over the horizon. Rather than dissect it, just let me say that i) an overcast sky wouldn't have appeared as pleasing but ii) bright mid-day sun wouldn't have worked either.

Characteristics of Light

So, my teachers have looked at light like this:

- quantity
 - contrast
- quality
 - direction
 - hardness
 - colour

None of these characteristics has a right or wrong. Many times of course we will prefer some particular combination of them to some other, and that can only occur if we consciously think about and analyze our light.

Quantity - You need enough light to expose your photograph, and that will require some combination of ISO, shutter speed and aperture.



This image contains enough snow that the camera perceived more light than actually available, so I over-

exposed it by one stop, which kept the snow from looking grey. (The branches *still* have no detail - not that it matters.)



A real-estate photograph, and the owner said, "Not enough light, sorry!" But I had a tripod, and eventually blended three exposures, the longest of which was twenty seconds.

Apart from shutter-speed considerations - and they do occur - I feel generally unconcerned about the absolute quantity of light. The camera can adjust for that.

The quantity of light will however also vary within a photograph, and of course we call that **contrast**. Too little, and the photograph appears flat. Too much, and the highlights and shadows lack any internal detail. I cannot provide a rule about contrast, but learning to use it effectively - probably another entire topic of its own - also most definitely matters.



No direct sunlight, but few viewers would think about it until pointed out. The photograph in this case is better with that flat light, relying on *colour* for contrast; too much *other* (tonal) contrast would detract from that (but notice the black spaces in the background - probably important to the appreciation of the image).

But I do have to say this about contrast: I find many photographs with large areas of undistinguishable black. White space is one thing, and a well-known, valid compositional variant. But black? Blech! Now, if you wish to construct a goth-themed, very black photograph, then that's up to you, but it feels more often like neglect: a lot of black appeared in a scene we wished to photograph, so it ended up in the image. But I say no: either don't bother, unless enough of the major components of the image attain excellence, or fix it. How to overcome excess contrast, such as too much black, is another entire topic, but just accepting it with resignation does not please me.

But that's just me.

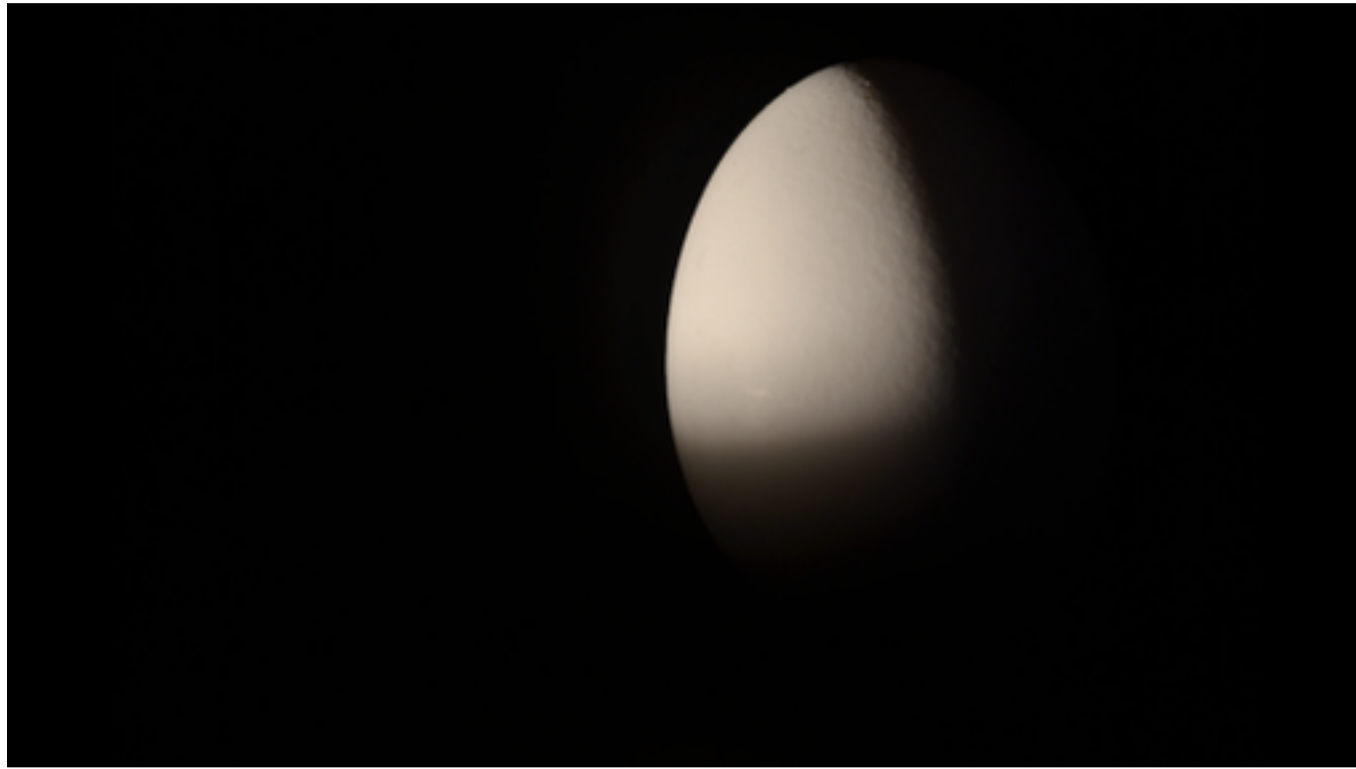
Quality

Win or lose on the quality of your light.

We can most easily understand **direction**. Imagine a bare light bulb, some distance away from your subject, and you can see that you will get some of the subject in light, and some in dark.

A photography exercise uses such a light ... and an egg. This guy, a bit long-winded, says this egg-lighting demonstration [video](#) will make you gasp (I don't think so, but it is instructive).

And his example uses a white setting. He doesn't show how a *black* background, i.e. producing no reflection or scattering at all, makes for a very harsh light.



The transitions between light and shadow are very abrupt.

We get around such a **hardness** of light by using big light sources, such as umbrellas and light-boxes, as you will see in photographers' studios. Unless we have a specific reason otherwise, most photographs will look better with a softer light, in which the *transitions* between light and shadow will appear less jarringly abrupt.

And then by adding in some fill light on the other side, so that the shadows will appear more open, they can retain detail while providing some contrast with the brighter areas.



Barn Studio - this lovely farming family wanted a portrait in their barn. The umbrella makes a small light source bigger, i.e. the light comes from a broader source, making it softer - the light/shadow transitions more gentle.



And that setup - with another light and mixing in indirect daylight - i.e. soft *and* filled - resulted in this gently-lit photograph. There is some shading, which is good, but it's muted. What a difference in lighting from the harshly-lit egg!

But, if not in a studio, so outdoors or otherwise using ambient light, how then can we make our light-source big?

Well, the very small part of the sky occupied by the extremely bright sun overpowers the rest of the sky, so behaves like a small, distant light-source, producing deep, hard shadows. So we tend to avoid direct sunlight. People have often said to me, "Too bad about last weekend and your photography, without any sunlight", and I attempt to explain the wonderful time I had in overcast conditions.

With overcast skies, however, the backgrounds can become a problem, with the sky unexpectedly washed out, and the light frustratingly too flat.



This, a blend of several exposures, required a considerable underexposure of the sky portion, in order to render it as I wished - because the sky was dark, not neutral, in tone.

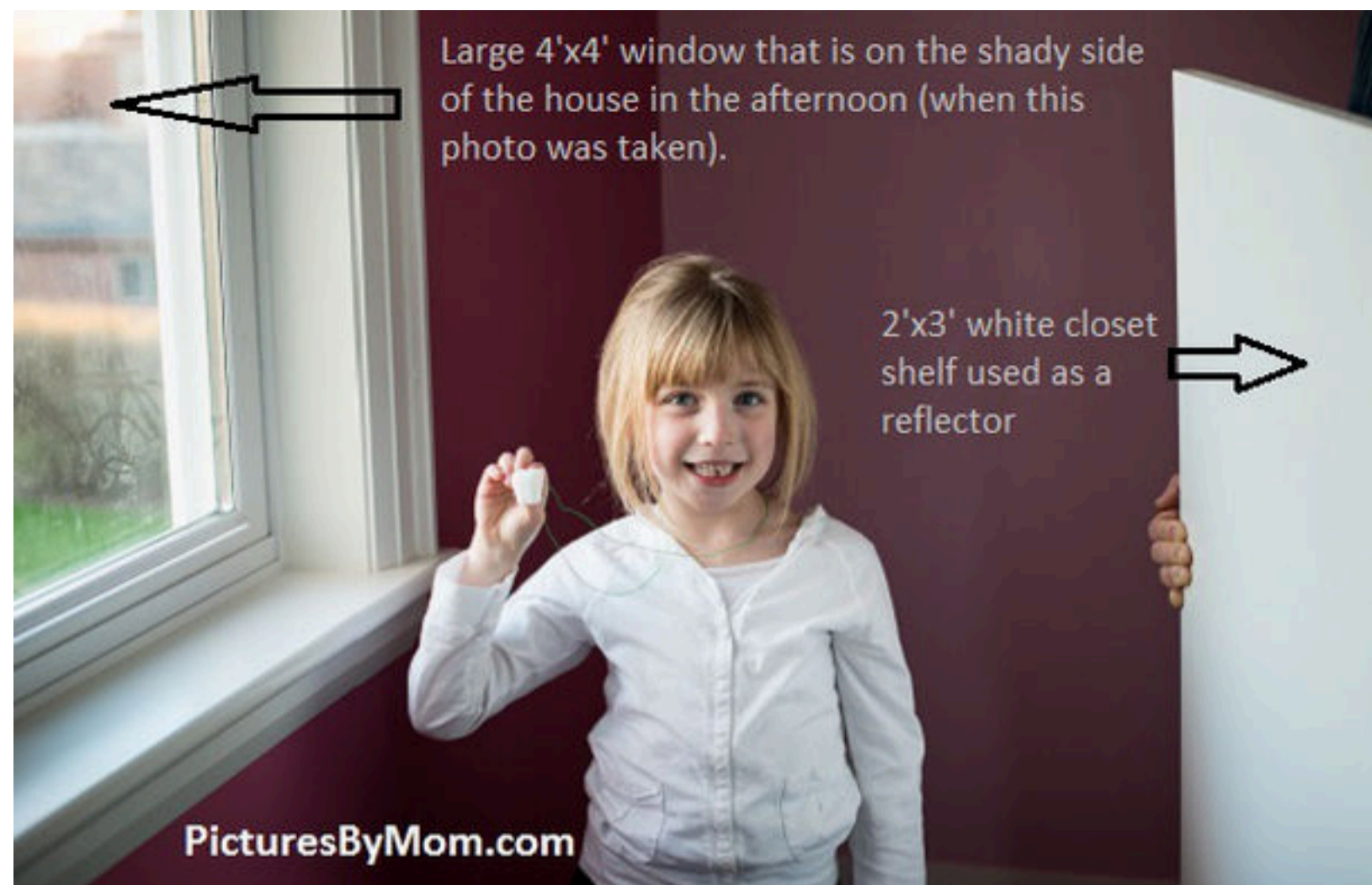
You will often see a photographer move her subjects into "open shade", such as provided on the shadow-side of a building. Then a large expanse of sky becomes the light source, without any competing direct sunlight. Sometimes, you may still get a little shading, with one side of the people a little brighter than the other, which often creates quite a pleasing effect.



Me, in open shade, showing some tonal gradation, not a totally flat light

As another variation on a large light from the sky, artists for centuries have used north-facing windows (in the Northern Hemisphere), preferably a large window to get a gentler light, and with no direct sun

in it. This friendly light can still have shadows a bit too dark - and shadows will always appear darker in a photograph than they did to your eye - but a simple reflector can often solve that problem quite elegantly.



North-window light and reflector



Backlighting - this a bit before sunset - can be very effective. (And no: I was 100% sober.)

Or, outdoors, just around sunrise or sunset can work out very well. When the sun is below the horizon, then the entire sky becomes your light source, so the shadows remain open (i.e. not pitch-black), and of equal importance, the shadow transitions remain gentle.

Or, the one-hour (-ish) blocks after sunrise and before sunset, called the Golden Hours, can still provide a fairly even light, because with the sun low in the sky, all of the extra atmosphere (and particulate matter) which the sunlight has to traverse, at that angle, diminishes its intensity.

The Golden Hour leads very nicely into ...

... the colour of light.

This topic could fill tomes on its own, although generally, we set our camera's white-balance ("WB") on Auto, and forget about it. That doesn't always work, so for serious art I set the WB myself, which works better, but again, not always flawlessly. However, in editing we can correct what we should perhaps more accurately call "colour temperature", and more easily with raw than processed files.

Our concern about white balance/colour temperature centres on the well-known fact that the eye-brain complex adapts to changes in light very seamlessly, but photographic media (film, sensors) do not. So for example a photograph shot with a daylight WB, but under tungsten lighting, will come out orange.

(Sometimes, the scene provides us with mixed light: some ambient, some created. Then ... we may just have to make a decision!)

Orange however sounds vaguely related to "golden", and we were talking about the Golden Hour, the time just after sunrise or before sunset. Photographers often leave their WB set at "daylight", and let

the gold colour show, as it does to the eye, if not more so.

It is a beautiful colour.



Note what the dawn sunlight does for this photo, adding gold, making the greens glow. Note also that this light still provides contrast, but unlike when the sun is higher, the shadows are open, i.e. dark but retaining detail, not black.

Sweetness and Light

This feels like the most bare-bones summary of photographic light which I could have imagined. Books have been written on the subject. I could say so much more. But to summarize my key points about light:

- contrast - control it
- direction(s) of light - recognize or adjust it
- control shadow transitions
- manage fill light and back light
- colour - find a good one, then check your white balance

Let's presume that you find or make a scene, work hard at the placement of objects inside it, get the exposure right, establish a rapport with your subjects, etc., etc. ... all of the things a good photographer has to think about, sometimes over hours, sometimes in a split second.

Also give a thought to your light. It will make a tremendous difference to your photography.

In the heat of the moment, if unable to go through the lighting checklist explicitly, then just ask yourself this, before you release the shutter: do I like this light?

I do wish to add that, when nature provides you with an unsuitable light, then *return at a time which provides better light* (when possible, practical and reasonable - but do exert some energy if the image feels important to you). Sometimes that means waiting a minute for the clouds to shift. Sometimes it means returning on a different day or even in a different season. Often it means returning during the Golden Hours, interference with sleep or dinner notwithstanding.

You're a photographer. Sleep and dinner are for mortals.

You seek the light.



dawn light, the Golden Hour

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Thank you so much for reading.



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