PHOTOGRAPHY: UNDERSTANDING EXPOSURE

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There are multiple ways of measuring exposure on a camera:

- Center-weighted average (from older cameras) and matrix decomposition of the luminosity (newer cams) tend to average the lightning conditions and set a mean exposure. If you want to control exposure, you can't rely on them.

- Spot or partial metering with meter the light only on a specific area (the center of the focus screen).

Imagine you're metering an object. How can the camera know whether it's black or white? Well the answer is simple: **CAMERA CAN'T DETERMINE THIS BY THEMSELVES**. They consequently assume that the brightness of the subject is somewhat between black and white. All cameras are calibrated to give exposure for a middle grey called: 18% GREY.

This grey is normalized; however, you can safely assume that it's a not too dark grey. Kodak sells special grey cards if you're interested. Otherwise, create a grey with 80% of black on your computer screen. The 18% grey looks almost like that.

Remember that this 18% grey is a convention.

In order to precisely determine exposure, you will need to meter your subject and compensate the recorded value. Imagine that you're measuring snow. With spot-meter, the camera assumes that snow is 18% grey. It is obviously not. So, overexpose the read value by, say, +3 EV so that it is closer to white. Similarly, measuring a very dark thing might require a -1 or -2 EV compensation. Be careful, what I'm writing here is relevant for digital and slide. Negative offers alternative measurements (this is explained below).

SO, RULE NUMBER 1: SWITCH TO SPOT METER (or use center-weighted and fill the viewfinder with the area that you wish to meter).

The media is important. There are two categories:

- Slide and digital sensors are very picky on recording information. Anything below -2 Ev will be black, and above +3 Ev will be white. (Ev = Exposure Value)

- Negative film can record information from -2 EV to +5 EV. But be careful: paper will only print a ~5Ev range (this is a technical limitation). So, during the printing process, you can vary the paper exposure time so that you print, say, the +0EV to +5EV range of your film.

RULE NUMBER 2: THERE IS NOT A UNIQUE GOOD EXPOSURE IN A CERTAIN SITUATION.

Exposure depends on what you wish to record. Say you're shooting someone on a bright day with the sun at their back. An average metering will try to expose for the whole scene. Since it's so bright, it will tend to darken the overall picture. And ***bang*** your portrait is too dark to see any details.

Another example: your subject is in bright sunlight. If it receives directly the sun, then the measurement of the global scene will be OK because the subject itself is as bright as the scene.

Want another one? Night photography: in this case, most of the scene is dark, with few bright light spots. The camera in matrix mode will overexpose the scene, assuming that it should be overall closer to an average grey. Obviously, it is not! The result will be a grey pic with burned highlights. Since you WANT a black image here, underexpose by -2 or -3 EV.

RULE NUMBER 3: METER FOR YOUR SUBJECT

Using spot metering; you meter only your subject. Remember that I told you the camera will meter for an 18% grey. Is your subject 18% grey? Uh, not easy to say.

Let's take snow. It's not grey but white. I could assume it's +3EV. So, I can measure it, and if my camera says, for instance f/16 1/1000 I can overexpose by 3 EV -> f/16 1/125 (1/1000->1/500->1/250->1/125)
On caucasian skin, you can safely assume a +1EV compensation. Meter for instance the hand of your subject, and overexpose by one stop (=1EV)

What I gave you is the right GLOBAL exposure. This is the way to operate with slides and digital.

RULE NUMBER 4: WITH NEGATIVE FILM, THE INTERPRETATION IS YOURS

Negative film is much more flexible. A negative is not reality but a reverse of it. During the printing process (and assuming you can do it manually - otherwise, it's useless), you can vary the paper exposure time so that you brighten or darken the overall image as you like.

Say you have shot two images: one at 1/30, one at 1/60, both at the same aperture, which will give differing exposures. If you print the first one in 1 sec and the second in 2 sec, you will end up with the same print, because you have compensated for the under/over exposure in the printing process.

Thus, the interpretation is yours.

What's the good exposure then? Well, it's the one that gives enough details in your subject. You

can meter an average luminosity zone on your subject and place it at +1EV: you'll record enough information in dark and bright areas. These considerations apply to negative scans too.

CONCLUSION: for a portrait, meter the persons' face in spot mode, and set exposure to +1EV

Another example: imagine you're photographing a person with dark skin.

- with slide and digital, meter the face and use this value. You won't need to overexpose by one stop because you're recording a darker area.

- with negative, you can still overexpose by +1EV. You'll record very rich deep dark tones and you just have to compensate during printing.