Shall we let our Cameras make all the decisions?

This struck me when seeing the recent TV ads for the Nikon D5100.... in which the key line is “I'm getting photography lessons from my camera!” Whatever next? Cars that can parallel park on their own? Pardon?.... oh, ok.

I also love a game of golf and for years I've heard people trying to sell (in a book or video) “the secret”. There's no real secret, once you understand the basics of how a club best strikes a golf ball.

But here's something of a genuine secret to photography and I'll share it with you - but first I need you to put your camera away. You see, cameras are becoming smarter and smarter every year as the ability to pack more and more information and programming into their circuits becomes available thanks to the march of progress. (Is your camera away now? We don’t want your camera getting wind of this conversation).

The truth is, your camera wants you to be average. More precisely, your camera wants your pictures to be average. Let me explain with a bit of background.

Cameras haven’t always had light meters in them. They started out as simple pinholes, graduating up to more and more complex systems, but always relying on the human operating them to work out the right amount of light to let in via a shutter and aperture (as well as the light sensitivity of chosen film). But then light meters made the move. They were tired of being hand-held units, only reporting back the ambient light striking them at one particular spot on the planet, letting a human figure out the rest. They wanted to see what we saw.

And so light meters made their way into SLR cameras and their popularity grew. These meters were simple at first; they would only be able to sample from one spot in the scene and tell us what they measured with the simplest of needles, partially out of view.

One metering spot grew to two and four and now we have systems with over 60 different light metering 'nodes'. Along the path the light metering aspect also offered to take over setting our shutter speed and aperture for us. I mean, it’s such hard work and the electronic brain of the camera is now so fast, why not?

Why not? Because your camera doesn’t know what you want.

Your camera’s computer brain (today) measures light coming into the body and tries to find an average. **The camera doesn’t know what you are exposing for**. Is it the interior of a coal mine? Or the snow in the countryside, under the sun? It also might have trouble focusing because it isn’t quite sure what you want to focus on – but that's another story.

This leads your camera to try to create an average picture. By itself, this isn’t such a bad thing. Your camera’s sensor can only pick up a certain range of light (around 7-9 stops currently, but growing every year)and it has to decide how to fit a scene beyond its range into that frame. Your eye picks up and your brain can handle about 15 stops of light at a given moment. In this case, your camera is already doomed not to show what you see (which is where HDR comes in to fill the dynamic range gap, until cameras catch up).

All this is not to say your camera hates you, it doesn’t. It's a loyal and obedient friend, just doing the best it can for you - and it thinks you want middle of the road average. It will pick highlight and shadow that come across its sensor and attempt to find middle ground.

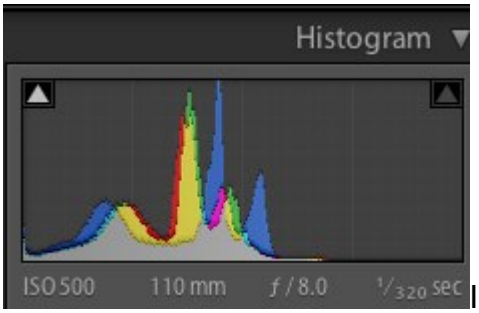
This is often desirable, but not always. Maybe the foreground is more important to you and should be exposed more brightly. Maybe the sunset shouldn't be so harsh in the sky and you don't care if the foreground is dark.

Maybe your camera can't read your mind. I hope it can't. So what do you do with a camera that wants to bring about an average shot every time?

Exposure Compensation/Bias

Find and use the exposure compensation, or bias, on your camera. It is a great tool for popping your camera out of the average rut. It typically works in Program, Aperture and Shutter Priority modes.

Check The Histogram



If your camera has a histogram display, try to use it. You will see average pictures being a nice even mountain. If that isn't getting you the oomph you want, try pushing things one direction or the other. The histogram will tell you how far you can push (dark or light) before you start losing data. The 'mountain' of the graph pushing up against one end, or both, indicates a loss of detail. There's a valid technical reason for trying to get the majority of the mountain towards the Highlight (right) end of the scale – if you're shooting Raw you should ignore the image that the camera displays on the LCD – that's a very quick conversion from the Raw state to a Jpeg – and can be very different to your recorded image.

Lose Data

Nothing says you have to have a perfectly exposed image time and time again. Move the limit and focus on what you want. Besides, "perfectly exposed image" is an entirely subject phrase and there is no set rule that says you are restricted from having part or most of your image over or underexposed if that is what you like. Experiment.

Post Process

Post processing shouldn't be relied on as a means to fix problems. Try to get the shot right the first time. But the reality is that a computer is helpful when used well. In this case, with the photo above, the camera rendered a fairly flat image. 45 seconds spent in an editing program will give the photo some life. If you shot in Raw, you could get the exposure and white balance much closer to the way the image was when shooting it. If you didn't shoot Raw, your options are more limited, but if the picture still looks 'average', open it in your editing program and adjust the "Levels" (plenty of advice on the Learning page). Most of the time, that's all it requires.

Use Spot Or Centre -Weighted Metering and AEL

It’s time to stand up for what you want and move away from the matrix or evaluative metering your camera has been using. Try out spot or centre-weighted metering and point them towards what’s most important to you in the scene, bearing in mind that whatever you use to 'meter on' will be 'average'. Also get accustomed to using your camera’s auto exposure lock (AEL) feature to hold the metering while recomposing a shot.

Learn To Read Light And Use Manual Mode

In an ideal world, we'd all learn how to use cameras by having to shoot our first thousand shots in a fully Manual exposure mode. Then use Aperture Priority or Shutter Priority at a later stage (if needed.... we'd probably all find it easier to stick with Manual forever once we'd learned how to use it properly, and then turn our noses up at Auto-anything!). You *could* stick with Program Mode for every shot you take – but you're going to get a lot of 'average' shots.

To be successful (measured to your own person liking) at photography, it is key to be able to see and read light. Nothing says you have to use the metering suggestion of your camera. Every DSLR still has a manual mode where you decide the three key elements: Shutter Speed, Aperture and ISO. Your camera might flash things at you, telling it thinks you’re making mistakes, but take the shot anyway and learn from your mistakes (one great thing about digital photography is that you can make as many mistakes as you like – then try again.

You don’t deserve to have average shots. But don’t blame your camera either. Learn how your camera is ‘thinking’ and make adjustments accordingly to bring about the image you want. Average works at times, but if you want to get more life into your pictures, stop listening to your camera’s light meter all the time. 'Average' shots, sticking with what the camera tells itself to do, usually need more editing than those shots where you've taken complete control of the camera yourself. Average shots nearly always need to be 'perked up' on the computer.

Myself? Aperture Priority, almost all the time.... I'm not really into action shots, I'm more a landscape/tripod person, so the important thing for me is to control how much of the subject is in focus, then adjusting the aperture to suit. This then adjusts the Shutter Speed to give me a fairly accurate exposure – but then I use the Exposure Compensation (based on knowing roughly what to do with particularly bright or dark elements – e.g. 'overexpose' by 1.5 stops (roughly) for a snowy scene, (because the meter is telling the camera that the scene is bright and therefore doesn't need much exposure), 'underexpose' when the scene is very dark (because the meter is telling the camera to give more exposure to turn the black into grey).