Shooting and seeing in Black & White

Why do black and white photographs continue to excite so many photographers of all levels, when we have cameras and techniques at our disposal that can capture every color under the sun?

We can produce photographs of spectacular color range but removing the color from a photo changes the focus—it shifts the viewer's attenton from the colors to things that can be more abstract, less immediately notceable, and it presents the world to us in a way that few of us are used to seeing it.

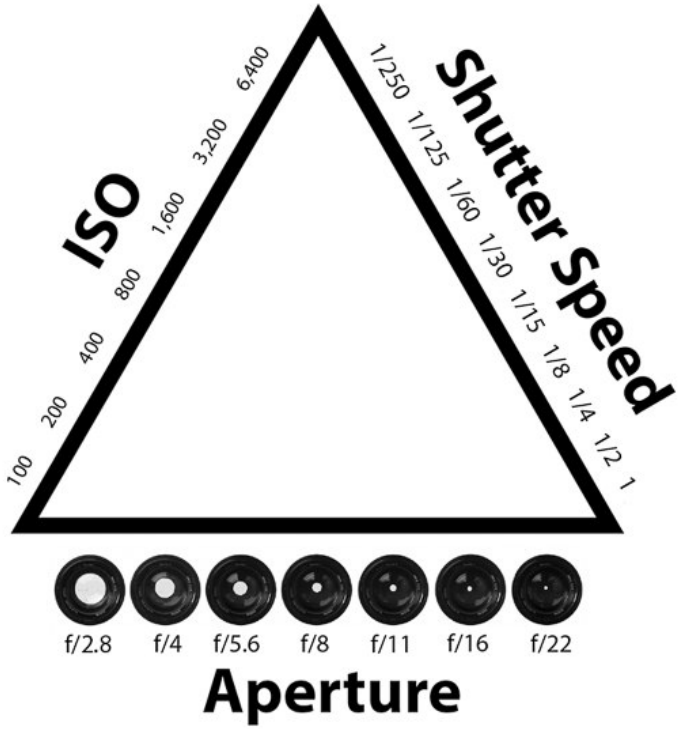
Camera settings for Black and white

- Image type- RAW or RAW + JPG
- ISO- range to match light or grain interest
- White Balance- Auto or Match lighting situation
- Manual or semi manual modes (Shutter / Aperture Priority)
- Histogram on or check histogram occasionally when shooting

EXPOSURE:
Defined in photography-

- **exposure** is the amount of light which reaches your camera sensor or film. It is a crucial part of how bright or dark your pictures appear.
- There are only two camera settings that affect the actual “luminous exposure” of an image: shutter speed and aperture. The third setting, camera ISO, also affects the brightness of your photos

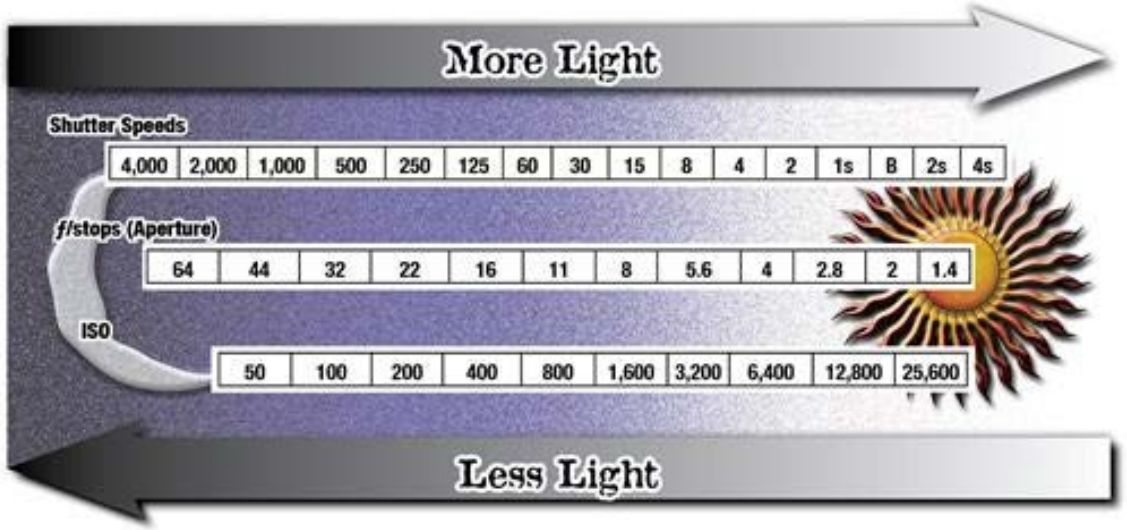
Exposure Triangle



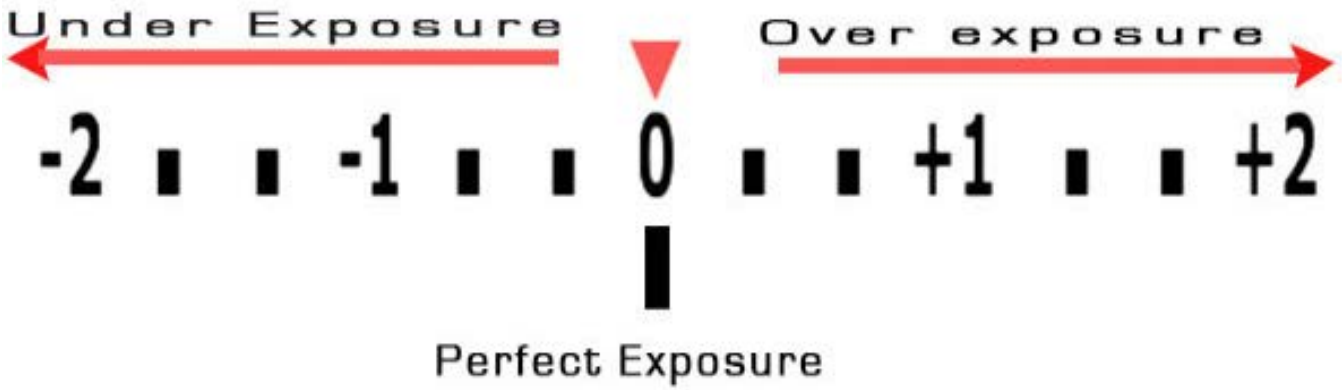
Three Pillars of photography

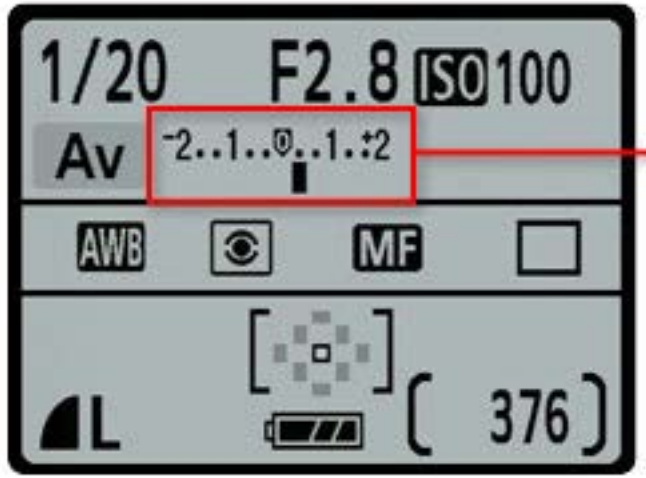
Law of reciprocity

Reciprocity is the law of the relationship between shutter and aperture. It stipulates that one stop increases in aperture is equivalent to the shutter duration doubling. Both increase light by one stop.

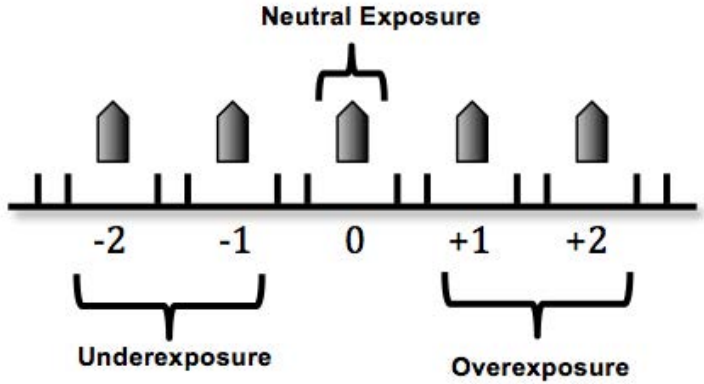


Exposure and understanding the Lightmeter





The light meter.
Note that it goes from
-2 stops to +2 stops



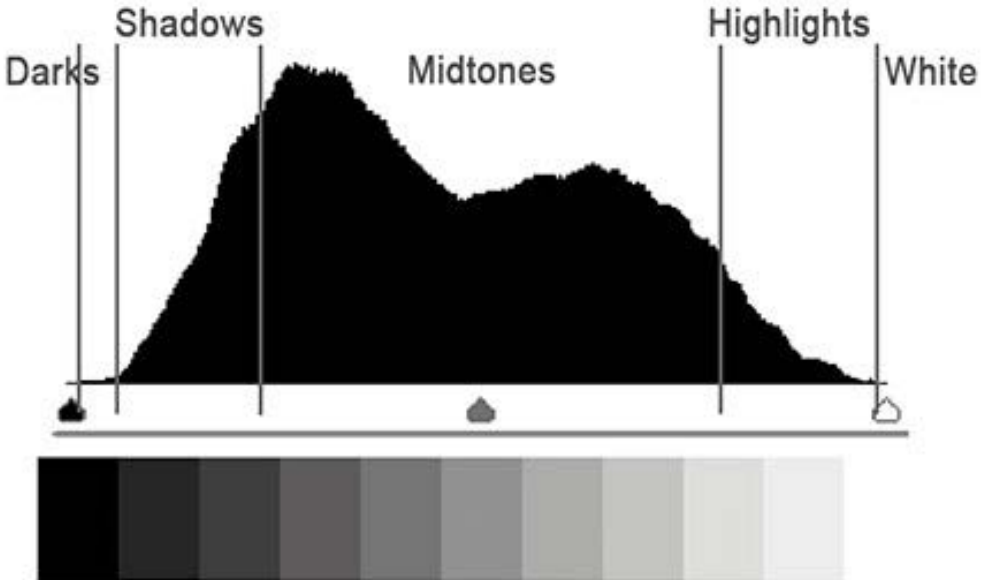
How image brightness changes with shutter speed

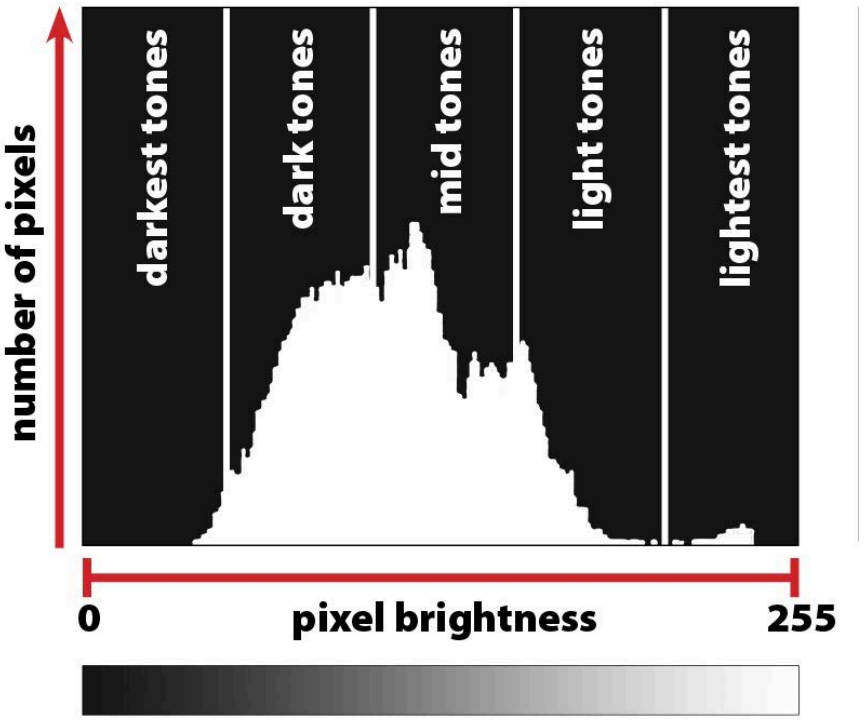
1/25 second shutter speed

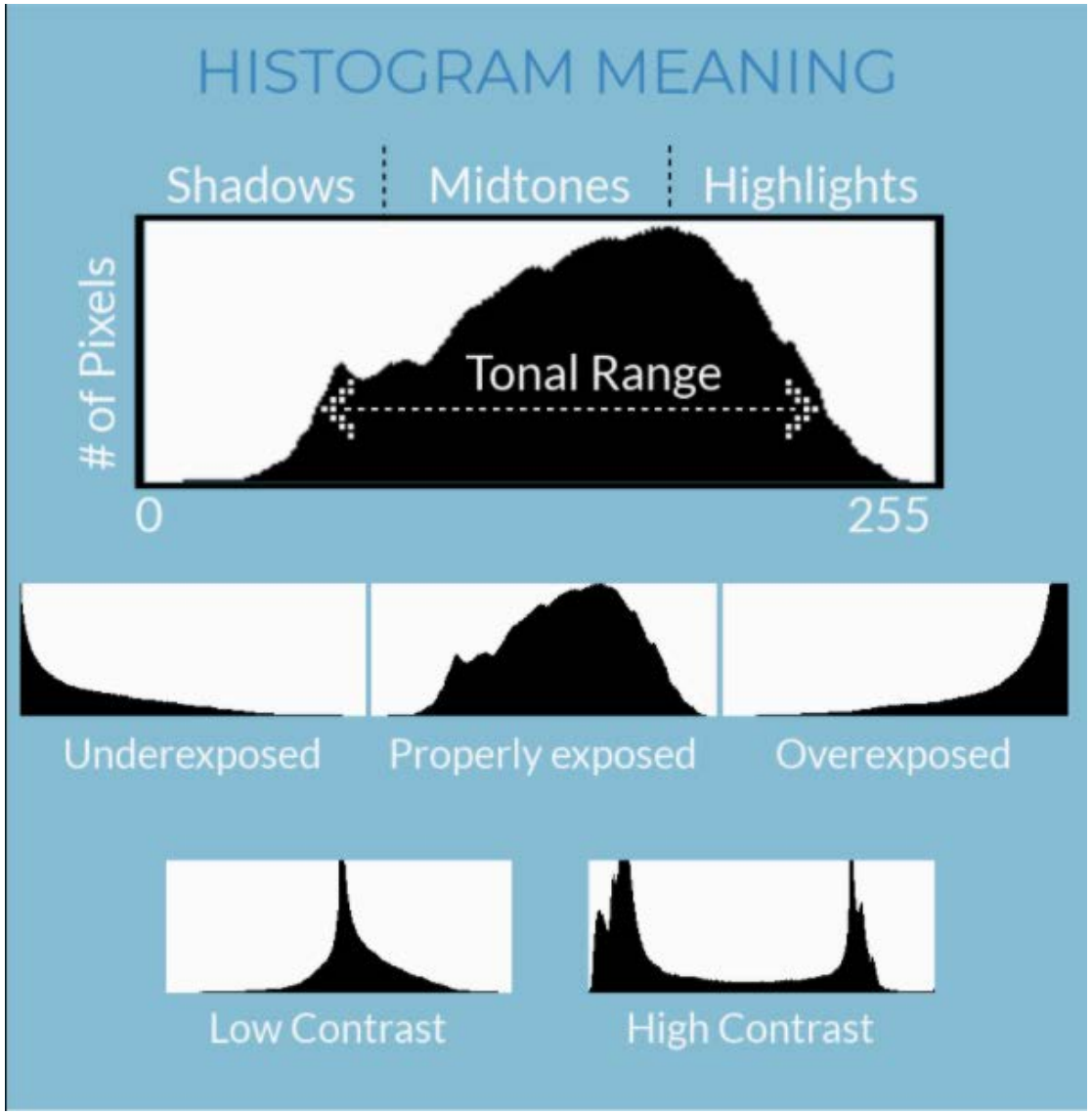
1/13 second shutter speed

1/6 second shutter speed

1/3 second shutter speed


Shadows
Highlights
Darks
Midtones
White


number of pixels
darkest tones
dark tones
mid tones
light tones
lightest tones
0
pixel brightness
255

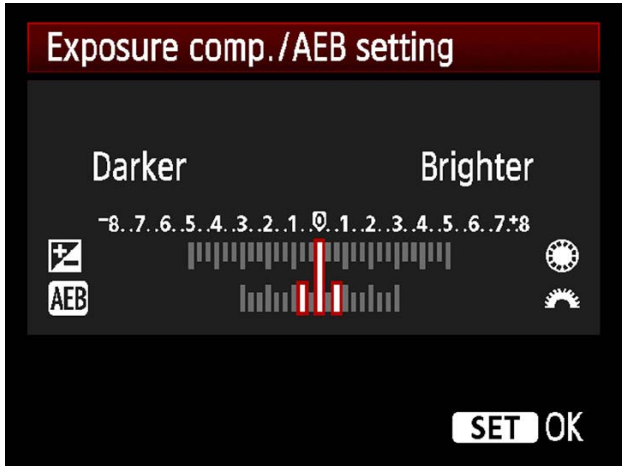

HISTOGRAM MEANING
Shadows
Midtones
Highlights
# of Pixels
Tonal Range
0
255
Underexposed
Properly exposed
Overexposed
Low Contrast
High Contrast

BRACKETING

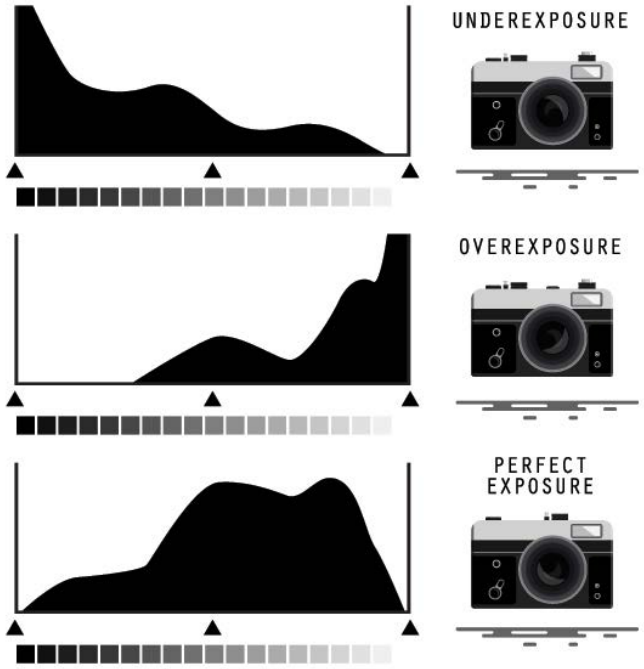
-2EV

'Correct' exposure

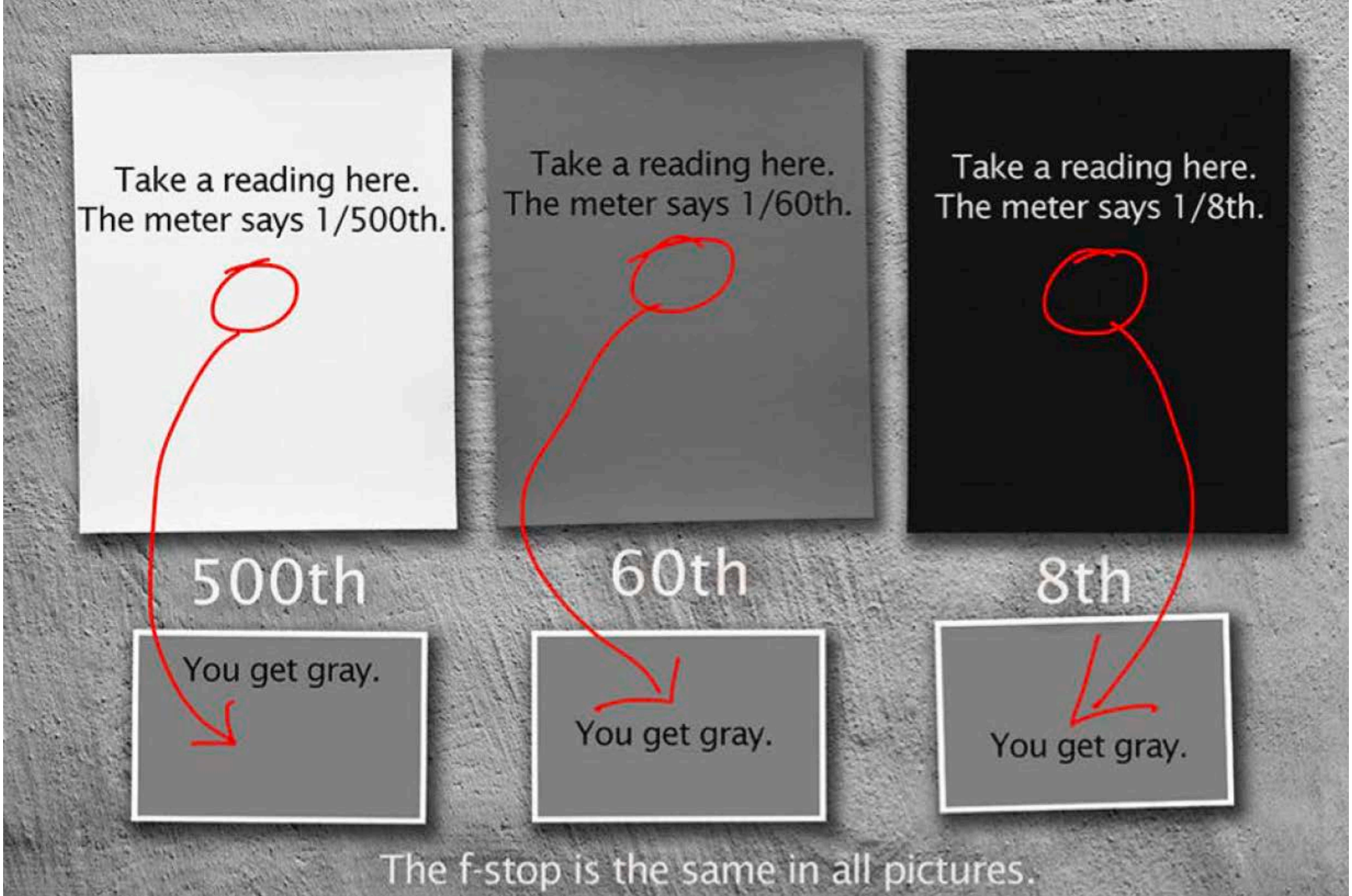
+2EV

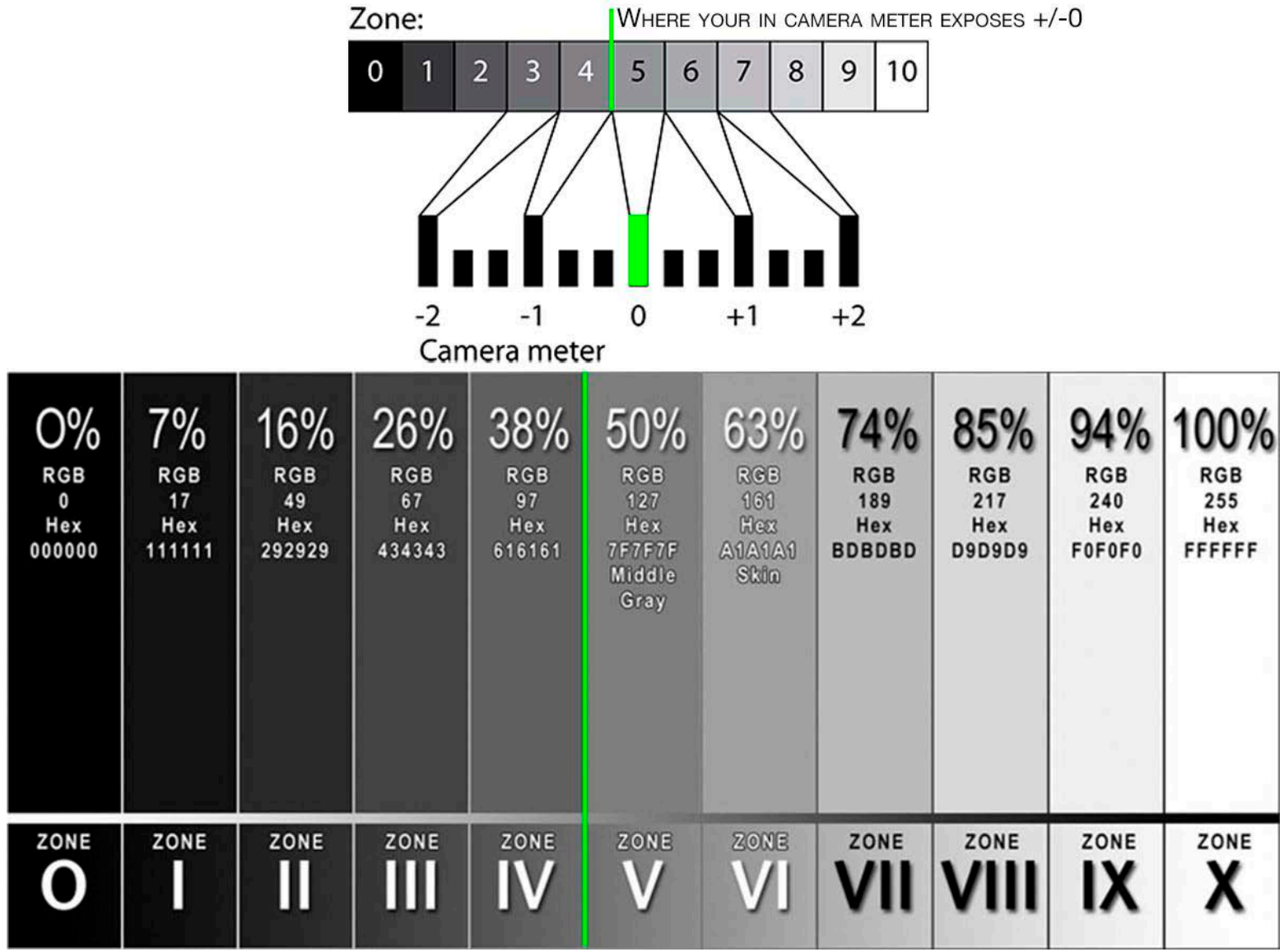


AEB or Auto- will change settings for you



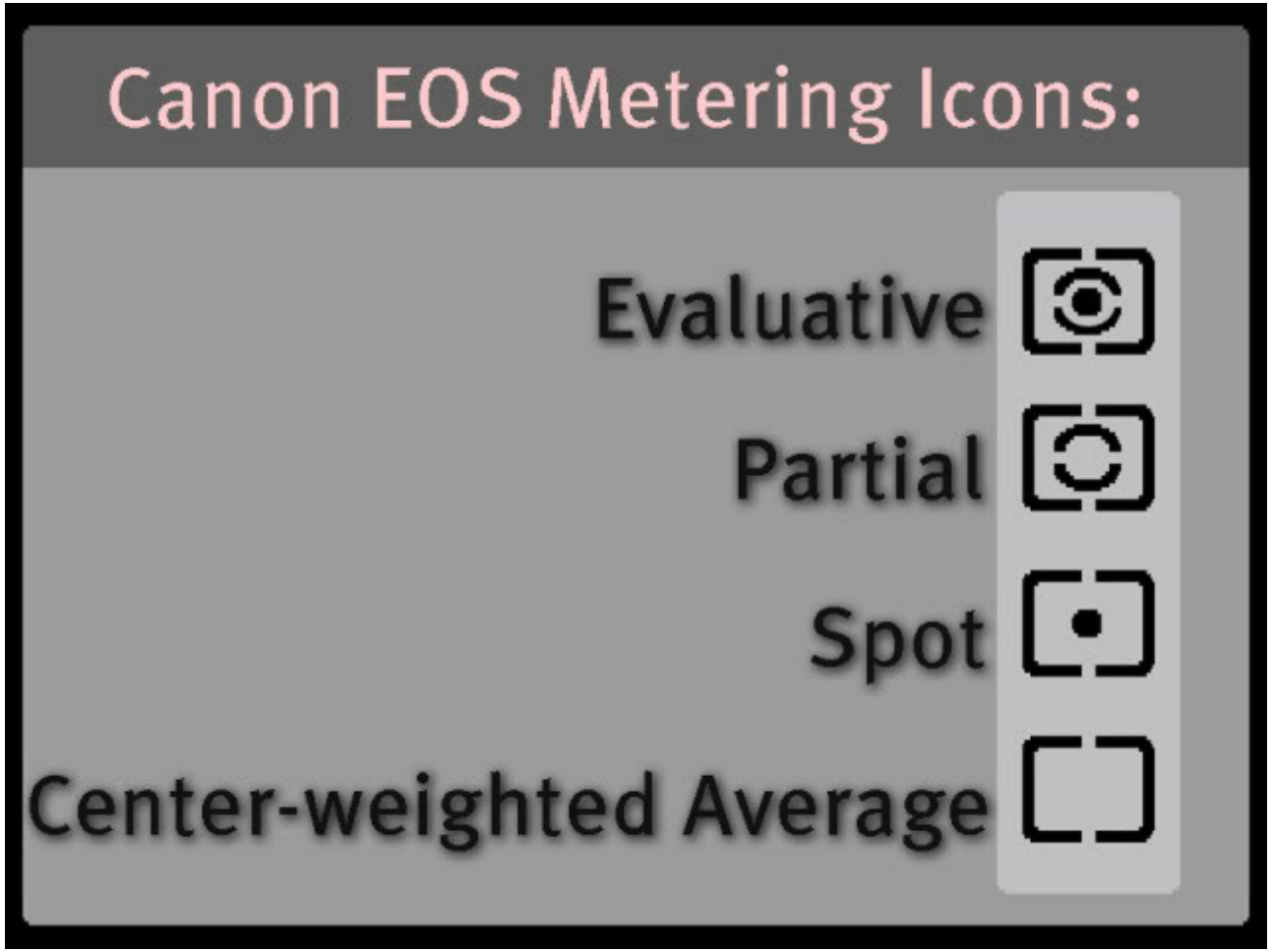
Using the +/- you can change as you shoot

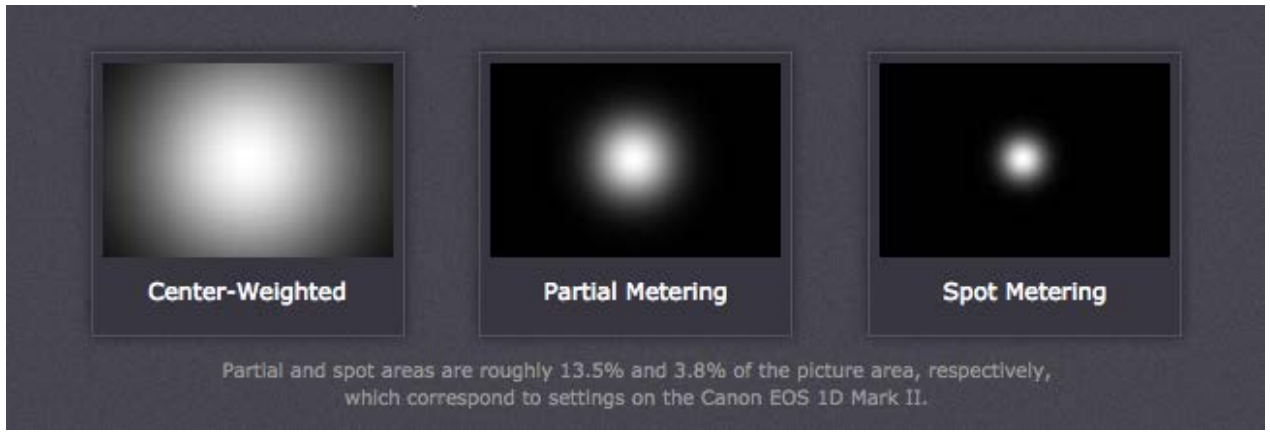

Take a reading here.
The meter says 1/500th.
Take a reading here.
The meter says 1/60th.
Take a reading here.
The meter says 1/8th.
500th
60th
8th
You get gray.
You get gray.
You get gray.
The f-stop is the same in all pictures.



*Digital photo Protect your highlights! ETTR

METERING


Canon EOS Metering Icons:
Evaluative
Partial
Spot
Center-weighted Average

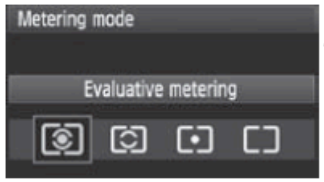


Changing the Metering Mode☆

The metering mode determines the exposure. Different metering modes measure the subject brightness differently. Normally, evaluative metering is recommended.

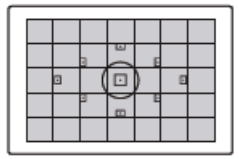
1 Select the [Metering mode].

- Under the [📷:] tab, select [**Metering mode**], then press <(SET)>.



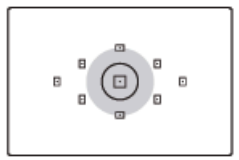
2 Set the metering mode.

- Press the <◀▶> key to select the metering mode, then press <(SET)>.



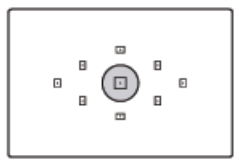
Evaluative metering

This is an all-around metering mode suited for portraits and even backlit subjects. The camera sets the exposure automatically to suit the scene. This metering mode is set automatically in the Basic Zone modes.



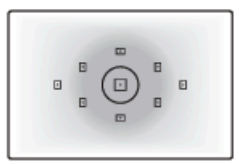
Partial metering

Effective when the background is much brighter than the subject due to backlighting, etc. The gray area in the figure is where the metering is weighted to obtain the standard exposure.



Spot metering

This is for metering a specific part of the subject or scene. The gray area in the left figure is where the metering is weighted to obtain the standard exposure. This metering mode is for advanced users.



Center-weighted average metering

The metering is weighted at the center and then averaged for the entire scene. This metering mode is for advanced users.

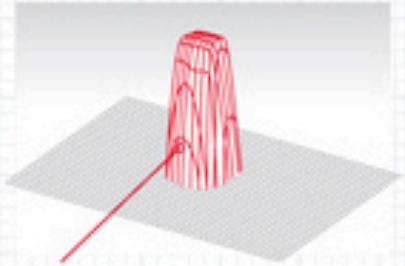
NIKON METERING MODES EXPLAINED

MODES AT A GLANCE

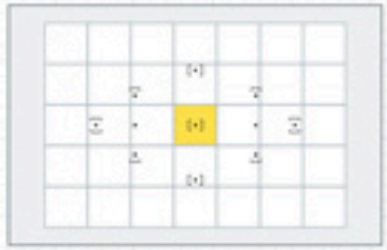
How each of the metering patterns works, and when to use them

Spot

Spot metering only measures the intensity of light over a small circular area around the active AF point, so you need to pay attention to where this is. The area corresponds to roughly 1.5-2.5 per cent of the frame, depending on which Nikon D-SLR you're using.



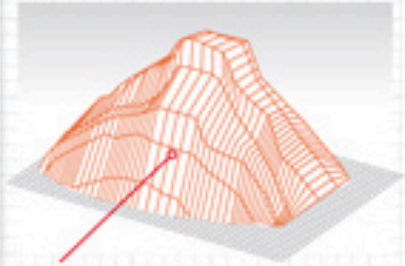
This graph shows how spot metering concentrates around the AF point



The small area around the AF point gives an indication of the region covered by spot metering

3D Color Matrix

The default metering mode on Nikon D-SLRs measures light distribution across the whole frame, together with colour and focus data. It then compares this to an internal database of typical photographic scenes to arrive at a suitable exposure.

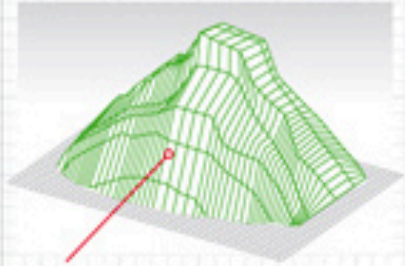


With matrix metering, the shape of the graph changes with each scene

Your current focus point is one of the criteria used by matrix metering to work out the best exposure

Centre-weighted

This mode measures the light across the whole picture area, but strongly biases the resulting reading to the centre of the viewfinder. On more advanced Nikon D-SLRs, you can change the size of this central area, and hence the overall bias.

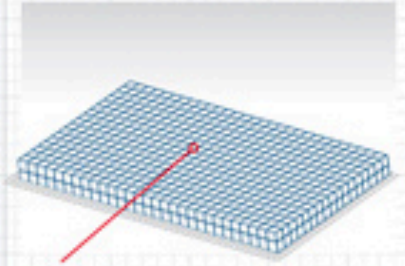


This graph is higher in the middle, where it's heavily 'weighted'

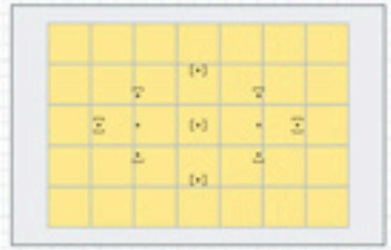
The exposure is based mainly on the central part of the image, though the outer parts have an influence too

Average

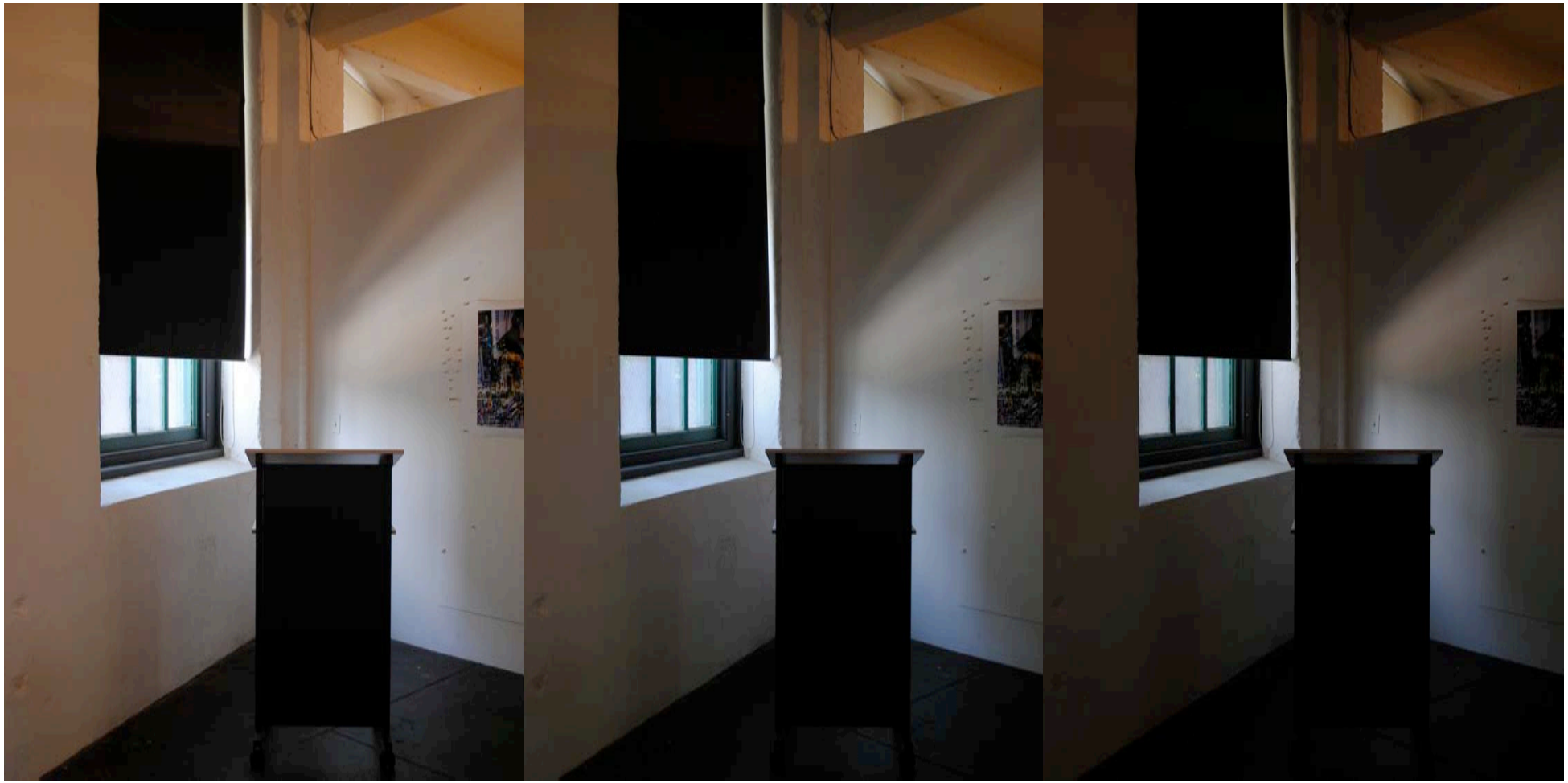
This is a variation on the centre-weighted mode that's only available on Nikon's pro D-SLRs. It measures light evenly across the whole frame, which makes it the least sophisticated metering system of all, but for experts it can be the easiest to interpret.



The graph for average metering is flat, as all areas are treated equally



The light across the whole frame is measured as a single value. It's a crude method but can be useful



Matrix

f/4.5 @ 1/30

Spot

f/4.5 @ 1/100

Center Weighted

f/4.5 @ 1/60

Standing in sun, shooting into shade

Matrix
f/4.5 @ 1/1,250

Center Weighted
f/4.5 @ 1/1,600

Spot
f/4.5 @ 1/400

Standing in sun, shooting into shade

Matrix
f/4.5 @ 1/1,250

Center Weighted
f/4.5 @ 1/400

Spot
f/4.5 @ 1/320

Lens Filters

Filters change the dynamics of light entering the lens and usually require you to alter your exposure to compensate for this fact.

UV Filter / Skylight Filter

Ultra violet filters are transparent filters that black ultra-violet light, in order to reduce the haziness that is noticeably apparent in some daylight photography.

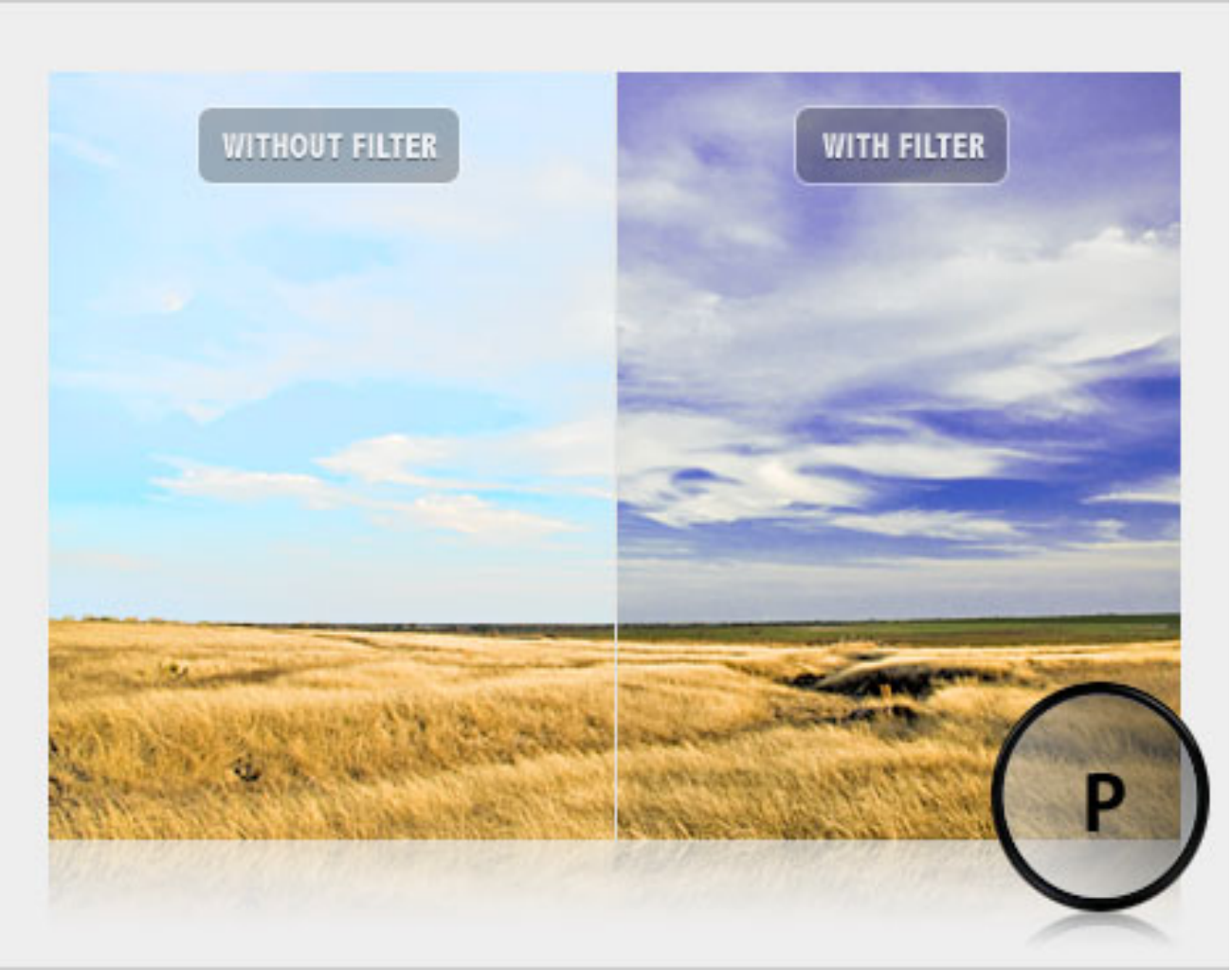
Good as a lens protector as they do not affect the majority of visible light.

There are some stronger UV filters that cut the atmospheric haze.

Polarizing Filter

This filter is used to darken overly light skies as it increases the contrast between clouds and the sky.

Typical function of a polarizer is to remove reflection from water and glass



Neutral Density Filter

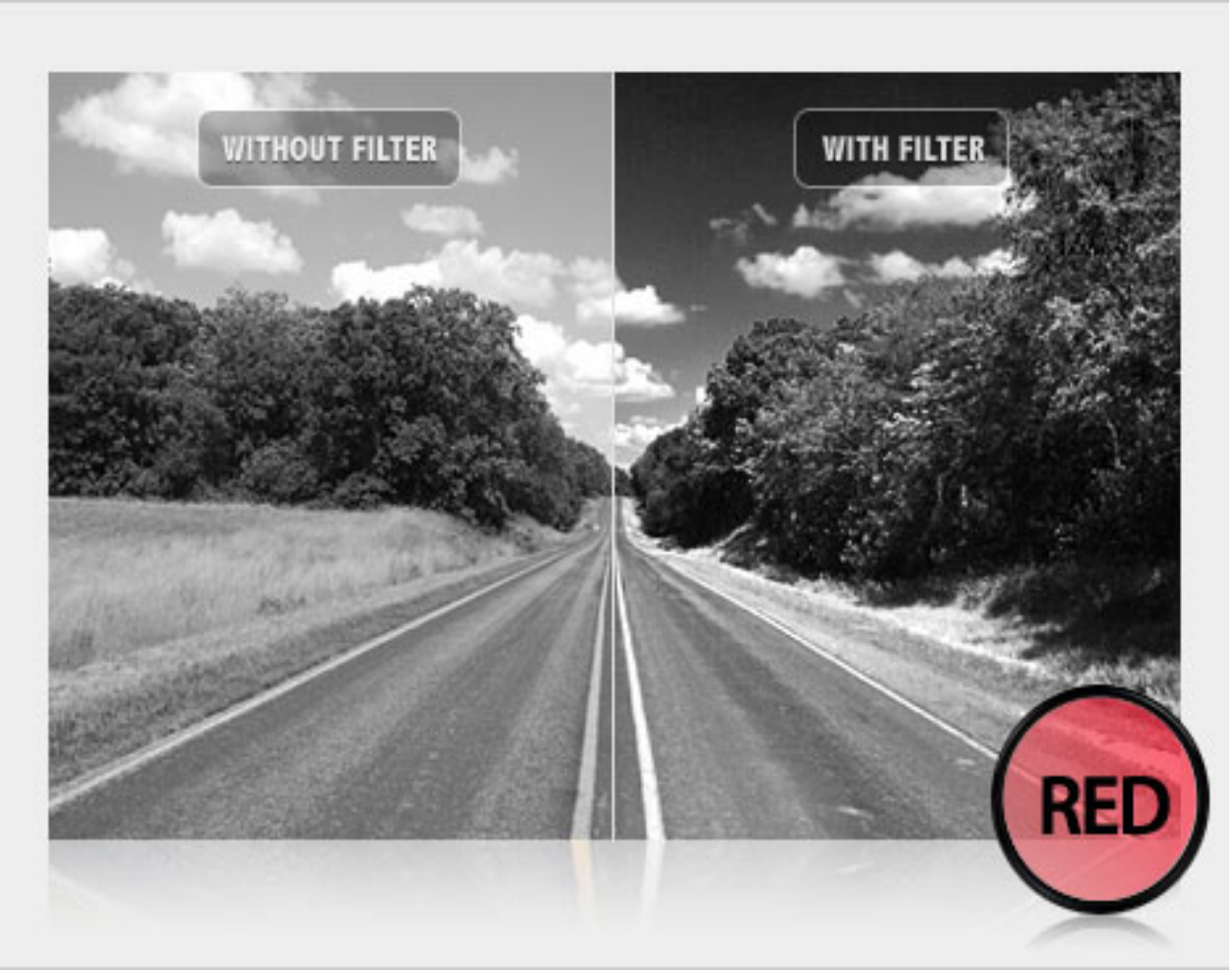
This filter uniformly reduces the amount of light entering the lens. The ND filter is helpful when the contrast between highlights and shadow is too great to get a quality exposure. Also enables greater motion blurring and image detail allowing large aperture and or a slow shutter speed to be used.

Filters for B&W Photography

There are specific filters for B&W photography that lighten similar colors and darken opposite colors, enhancing the monochromatic look.

Red, orange, yellow, green and blue filters- landscape photographers like red filters to add drama to the sky.

Yellow will also add more drama to sky bringing out clouds.



Dynamic Range &Tonal Contrast

- **Dynamic Rage-** is the difference between the darkest and lightest tones in an image, generally pure black and pure white. It's more often used to talk about the maximum dynamic range a camera is capable of.
  - Sometimes described in terms of "Stops"
  - An increase of one stop equals a doubling of the brightness level.
  - A decrease of one stop equals one half of the brightness level.

- **Tonal contrast** can be broken down into three categories:
  - **HIGH, NORMAL, AND LOW**
- HIGH-contrast image consists primarily of white and black with very little gray.
- NORMAL-contrast image consists of a balance of all three.
- LOW-contrast image can appear very flat since there's little distinction between colors or tones within the image.

Ansel Adams

Sally Mann

Lewis Baltz

Sebastiao Salgado

Henri Cartier-Bresson

Robert Frank

Irving Penn

High–Key is where the picture is all light values.

Low–Key is where the picture is all dark values.

High key

High Key Black and White
visualwilderness.com

Photos in High Key Black and White ...
guillenphoto.com

Creating Wildlife Photos in High Key ...
guillenphoto.com

High key photography |...
pinterest.com

High-Key Black and White Photography ...
slrlounge.com

Harry Callahan

Minor White

Michael Kenna

Low key

Low Key Black and White Photography
digital-photography-school.com

What is Low-Key Monochrome Photography?
photographylife.com

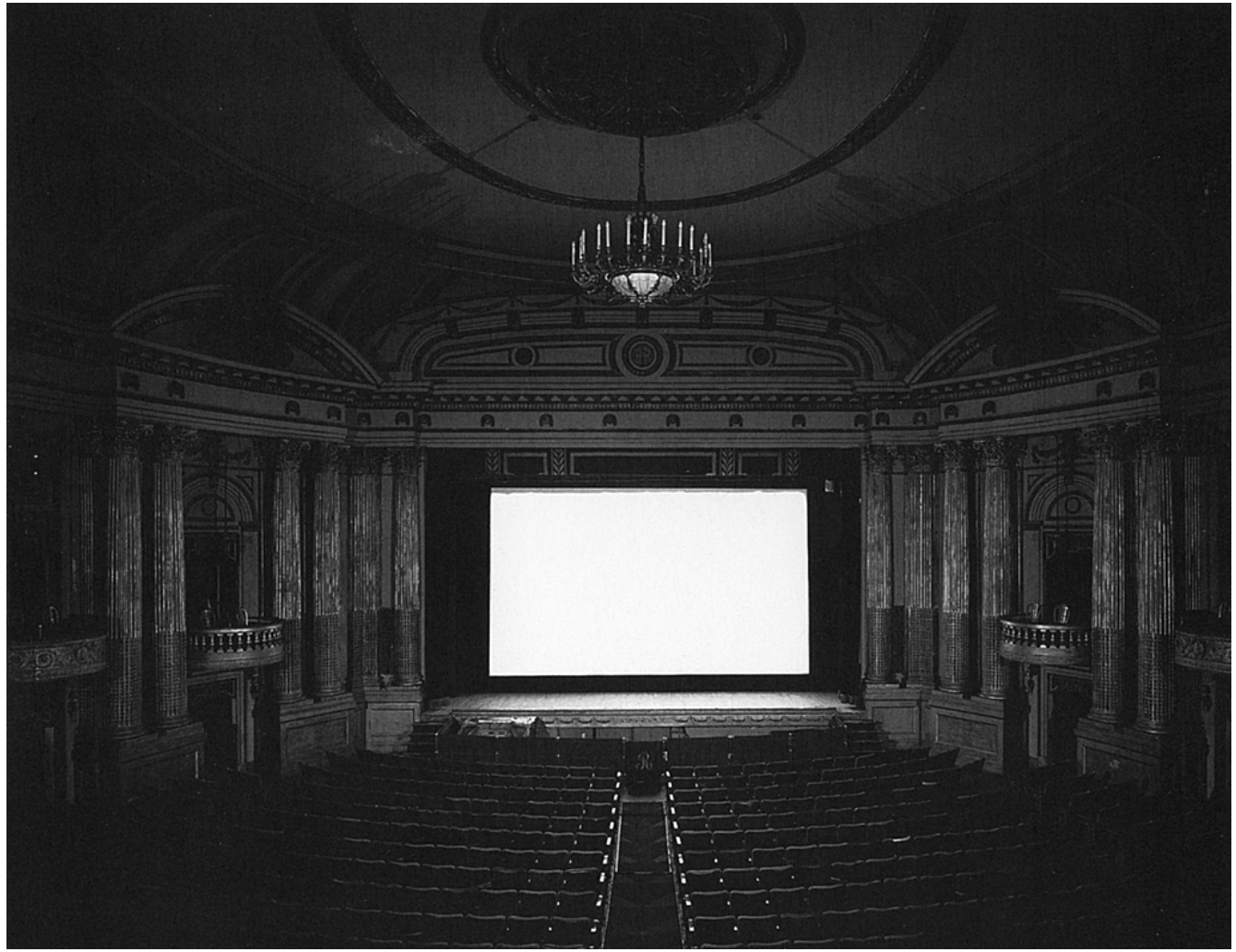
Low Key Black and White Photography
digital-photography-school.com

What is Low-Key Monochrome Photography?
photographylife.com

Low-Key Photography: Ho...
medium.com

LOW KEY PHOTOGRAPHY - Black And White ...
youtube.com

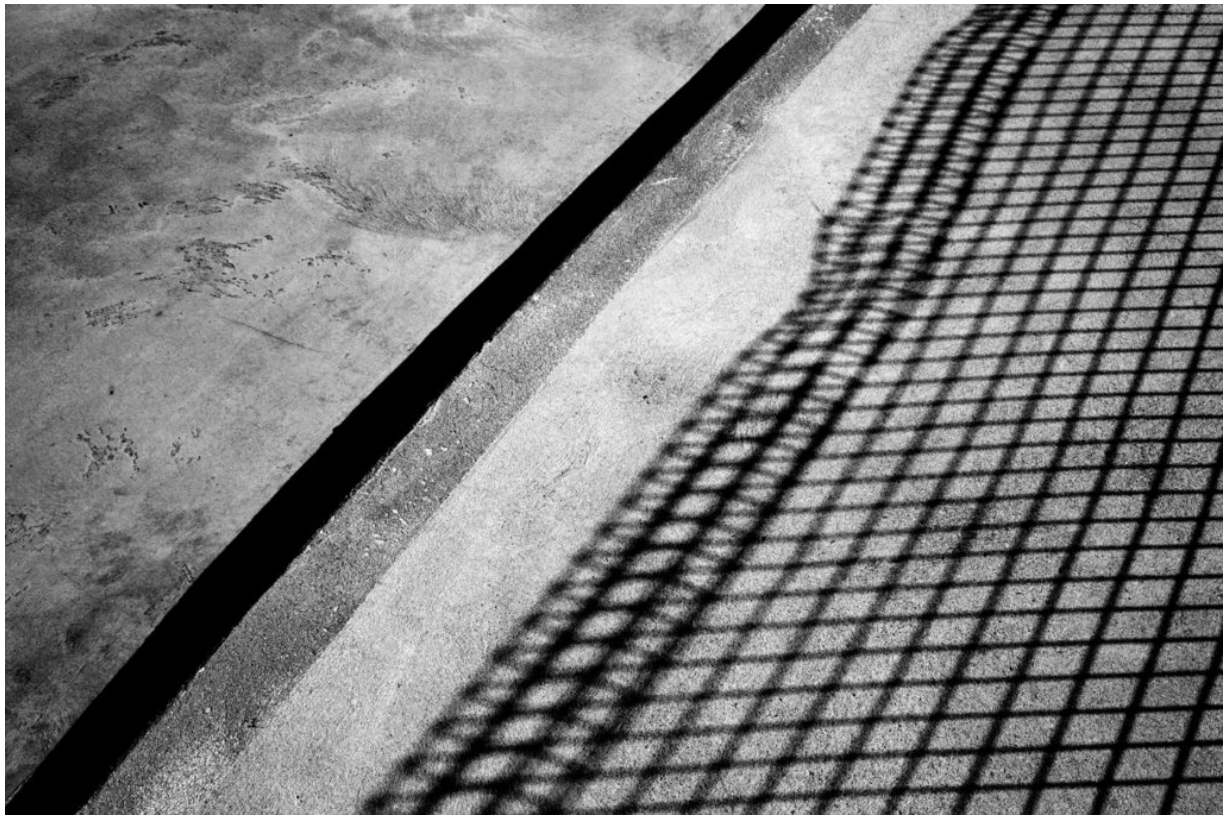
Ray Metzker

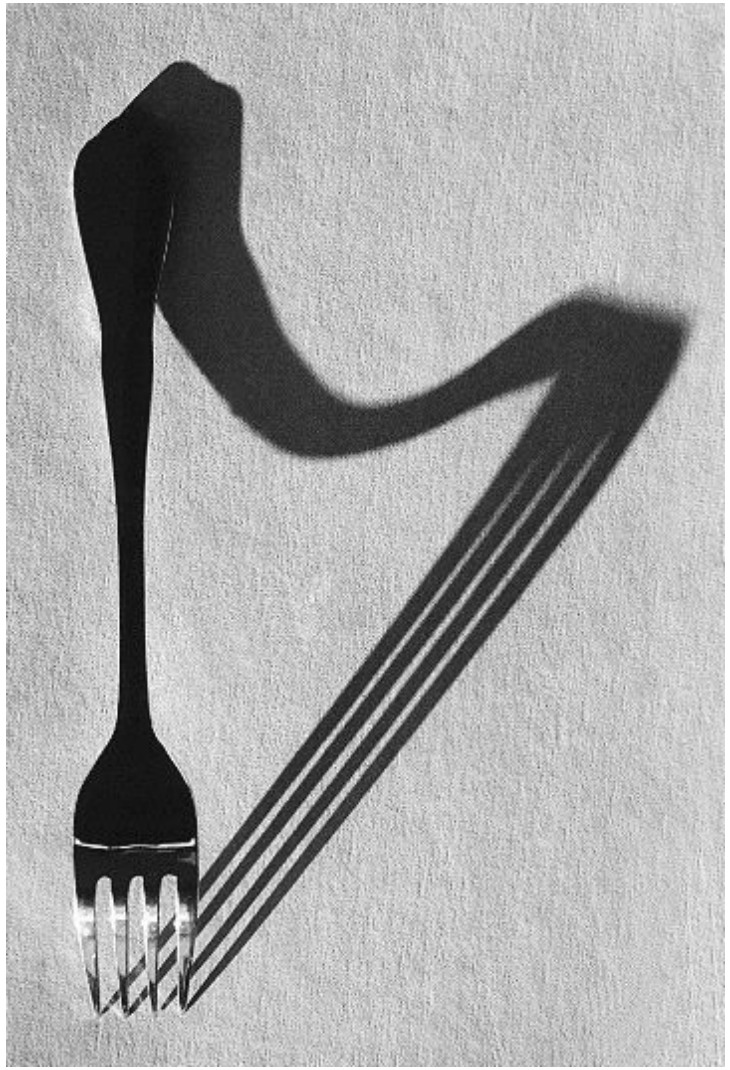


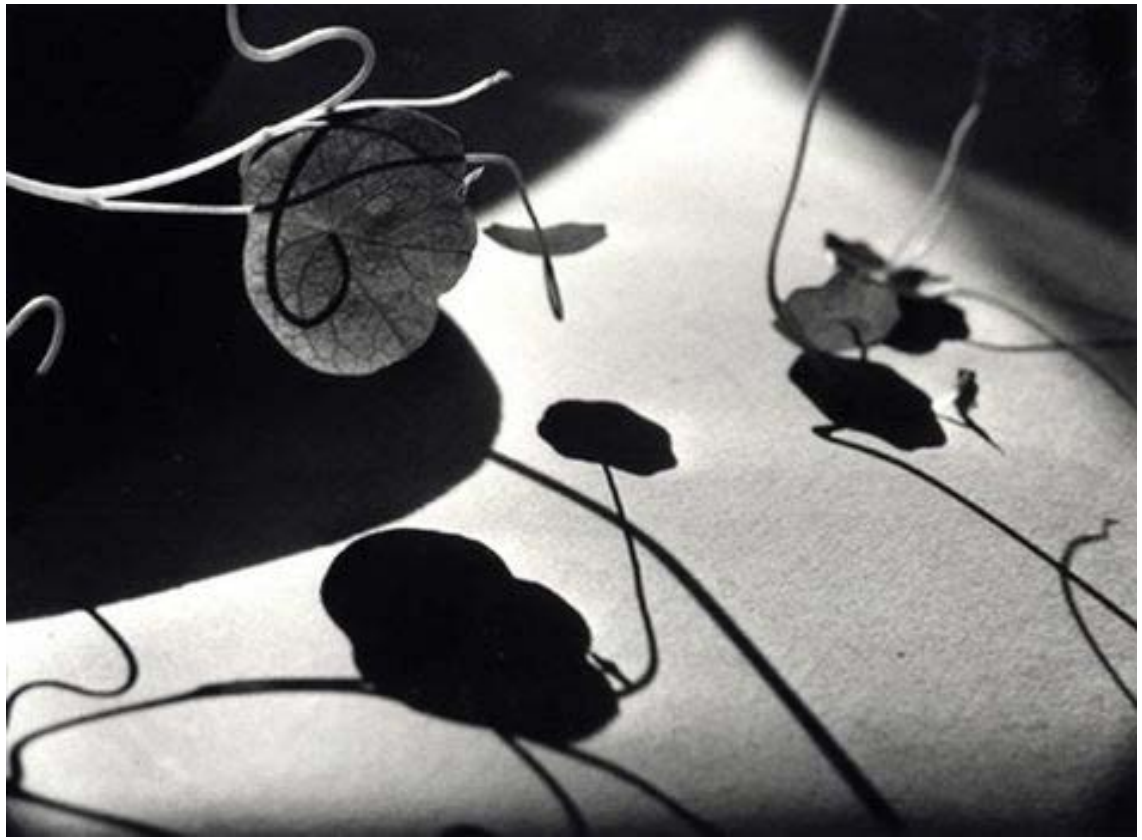
Hiroshi Sugimoto

Winston Churchill
by Yousuf Karsh

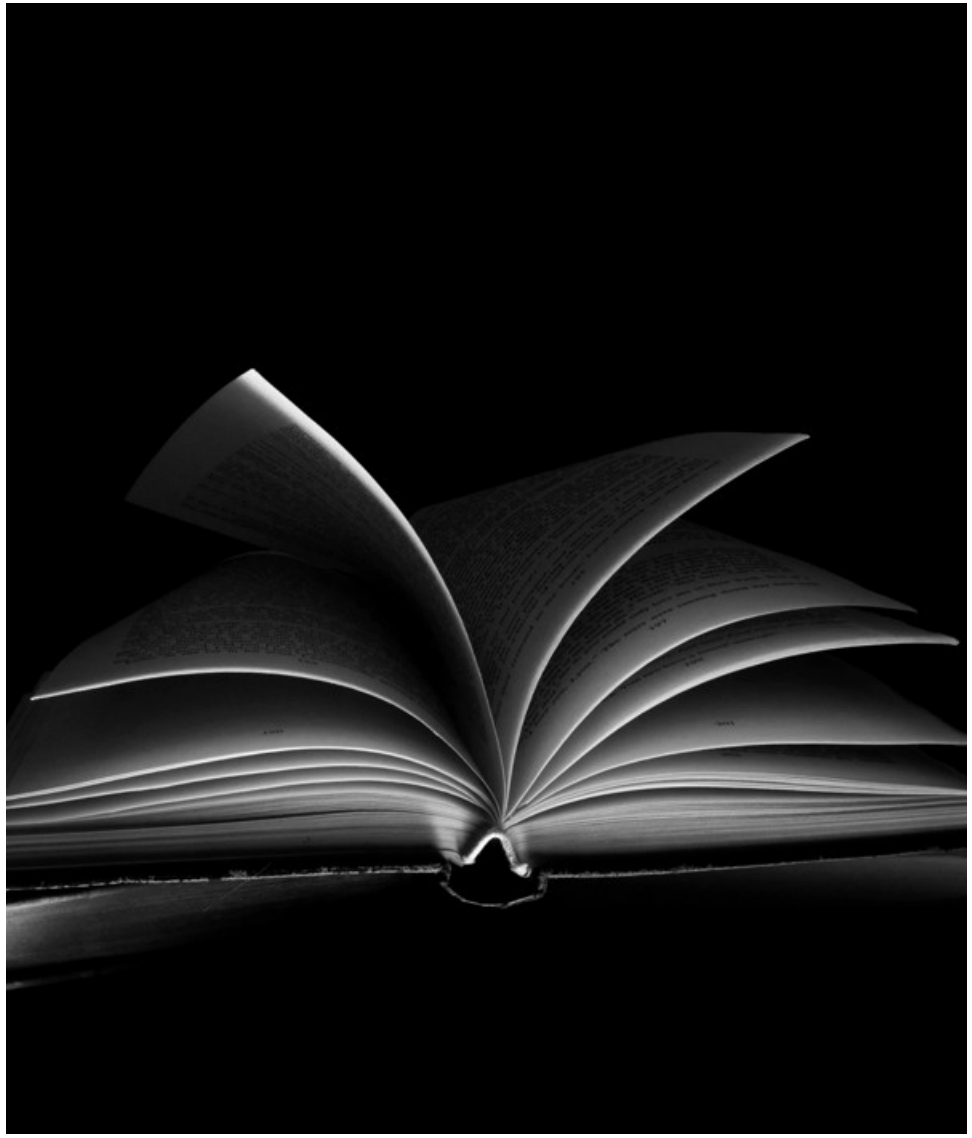
Light&Shadow








IZOD
INDYCAR SERIES
ATTENTION
DRIVERS

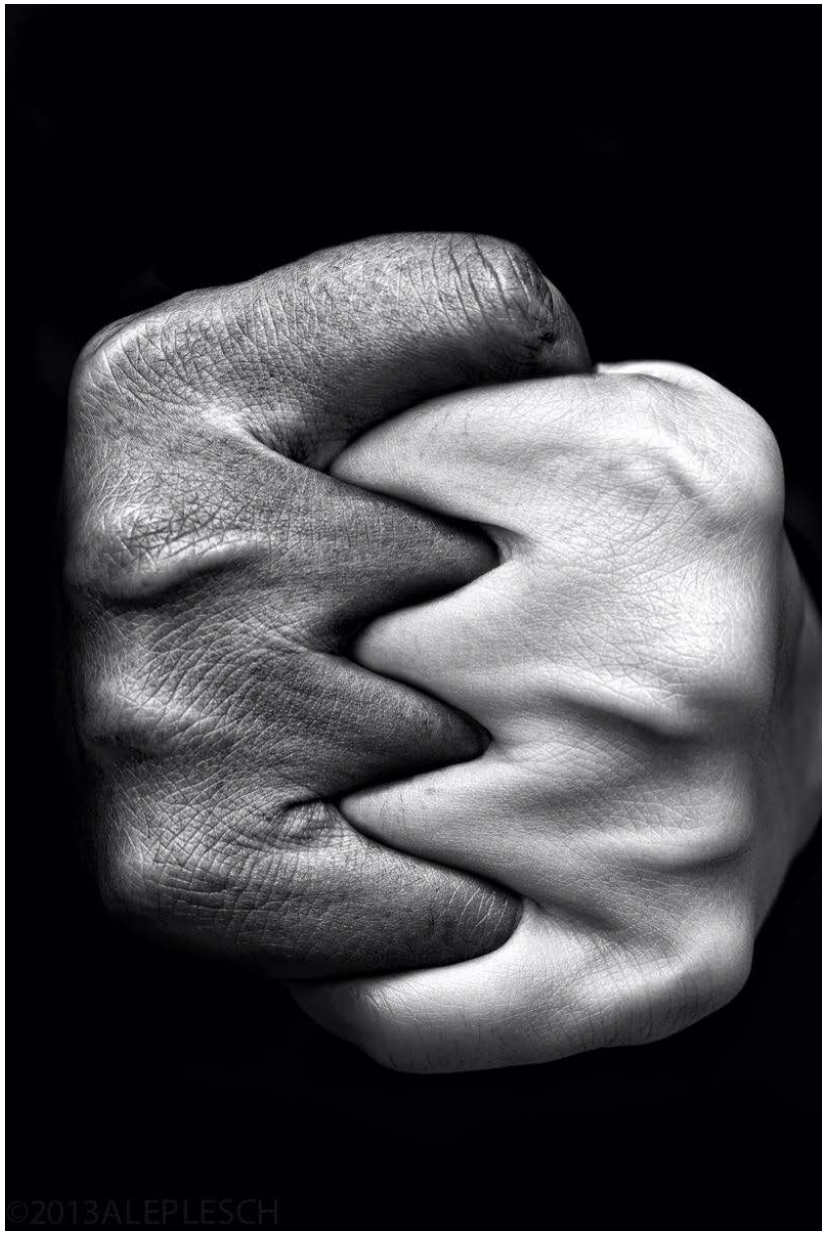


Ray Metzker

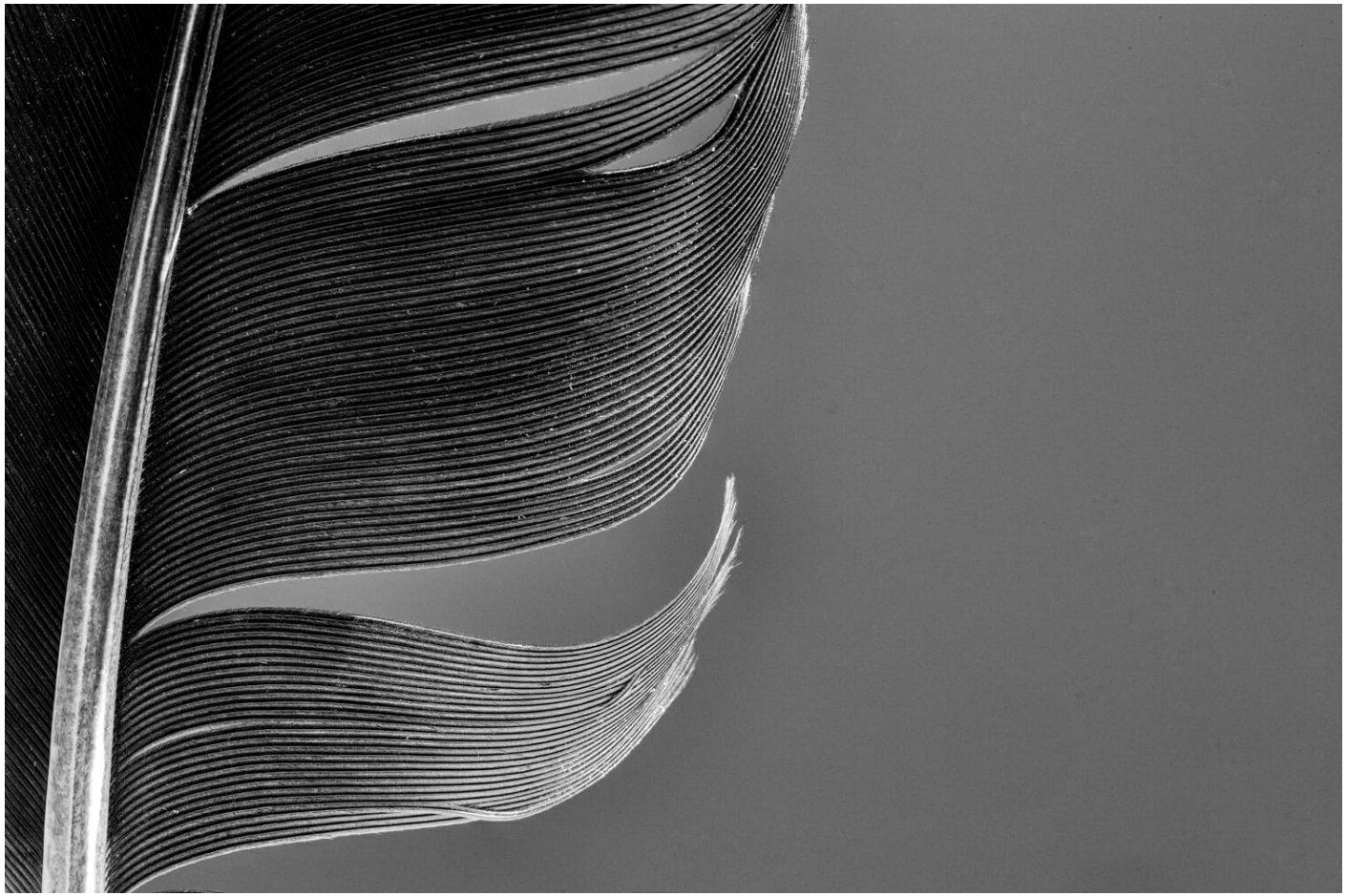
Texture

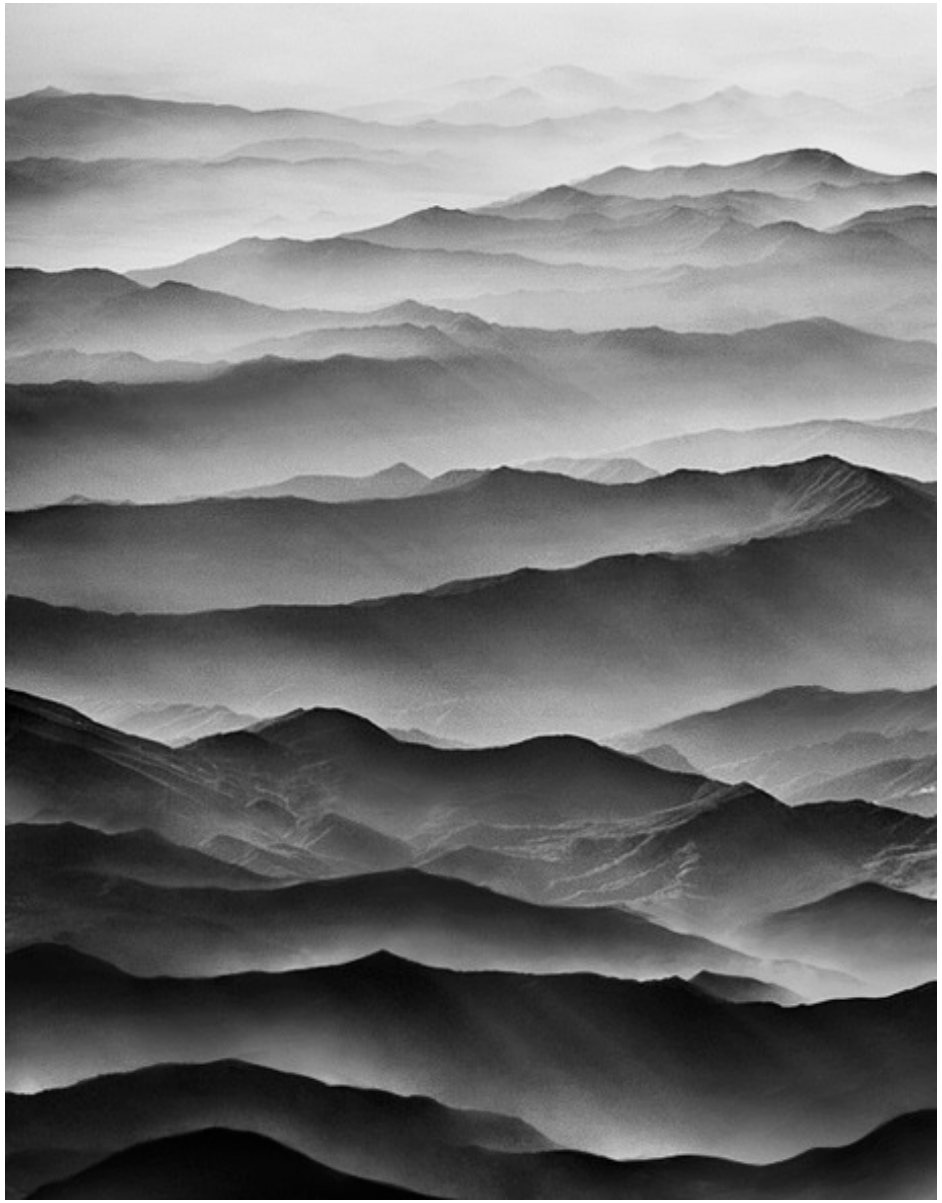
Edward Weston

Aaron Siskind



Ansel Adams





Ben Heine