Low Contrast

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The aim of this presentation is to discuss what a low contrast image is and how to produce one.
First, some background information is necessary.
Material for this presentation was gleaned from the excellent “The Art of Photography” by Bruce Barnbaum. I highly recommend the book to all keen photography students.

Photography is a form of non-verbal communication: like painting, sculpture and music.

- The photographer should not have to explain the image, it should speak for itself.
- Rembrandt and Michelangelo are no longer around to explain their works but they don’t have to - their works speak for themselves.

A good photograph conveys a thought, idea or emotion from the photographer to the viewer.

- We can experience a whole range of emotions: joy, sadness, awe, wonder, amusement, compassion, horror, disgust.
- Liking a photograph does not necessarily make it a good one.
- Even when a photo invokes strong negative feelings where none existed then it has communicated non verbally with you and is most probably a good photograph

Seeing beyond the obvious

- a meaningful photograph allows (or even forces) the viewer to see or otherwise consider something new or different in a scene perhaps looked at many times before.

- It creates something not experienced before, raises questions, creates mysteries, doubts

- To create a meaningful photograph the photographer has to go beyond a casual once over of the subject.
- It’s much easier when you photograph your areas of interest or have a passion for the subject.
- Conversely, it’s not easy when presented with a list of different set subjects you may not like.
- A practical solution: avoid the set subjects you have no interest in and concentrate on something that floats your boat. Your images will be the better for it.
- This may be why, for example, Bob Clarkson gives us so many wonderful images of cars and motorcycles. He is passionate about them and it shows in his images.

How the eye sees

- Despite what we think, we humans don't actually see a whole scene at once because we have only a very narrow beam of sharp focus
- our eyes dart from one sharply focussed spot to another at such a furious pace we are not aware of it happening. Our brains then pieces all the tiny images together seamlessly.
- This darting about is actually quite random but our eyes will naturally go to more prominent parts of the scene, like, for example bright whites, prominent colours and areas of high contrast.
- This knowledge can help us photographers to direct a viewer's vision in a planned "de-randomised" way. This is what **composition** is all about.

What is composition?

- **Why composition?**
  - You are looking for the most effective way of conveying your thoughts photographically.
- **What is composition?**
  - It is simply the means of bringing viewers into your photograph and holding their attention long enough to read your message and define their own feelings.

- Photo judges talk about composition ad nauseam during club assessment nights and often labour the point over certain rules of composition, implying that that if your image didn’t follow those rules then your photograph is substandard.
- What this reinforces is how beginners can quickly progress to a level of uniformity and mediocrity but seldom offers advice on how to develop expertise beyond that.
- Composition is poorly defined, rarely understood and never questioned. Its application will and must vary from scene to scene.
- I would go so far as to say no overall rules can be made: photography, indeed all art, is devoid of rules. Just look at some of the winning images in prestigious competitions.

- In a well composed image the viewer will first see the elements the photographer wants them to see most prominently and remember the longest before moving on the other elements in the image of secondary importance and finally on to the elements of subordinate importance.

- With good composition the photographer leads the viewer through the photograph in a controlled manner.

- A magnificent scene can be reduced to a mere recording (a snapshot) without good composition.

Selecting vs. composing

There is a difference between composing a scene (choosing the various elements within the scene and organising them in the camera’s display in order to guide the viewer) and merely selecting a scene.

Selecting vs. composing

- Successful photography is **not** simply the act of picking up a camera, pointing it at the subject and pressing the shutter. That is merely selecting the subject.
- Successful photography **is** a process of thoughtful consideration of your own point of view overlaid upon a scene.
- It requires some creative thinking and the application of one or more tried and true **elements of composition** before you press the shutter.

Let’s say you are on holidays and see before you a magnificent scene. Majestic snow capped-mountains, dark green forested slopes in the middle ground, a silvery river threading its way across the foreground, puffy white clouds and so on. Time is of the essence. The tour leader has already yelled “everybody back on the bus”!
You quickly raise the camera and fire off a picture, may lots on burst mode, just in case.
Later on, the picture just doesn’t quite seem to do justice to the scene you remembered. It’s just not as alive. Your relatives who weren’t there with you have no recollection of the emotions you experienced at the time and, while they politely say it’s a lovely picture, fail to be as moved by the image as you were by the scene.
It’s just another snapshot. You selected the scene and recorded it but you didn’t analyse the scene and compose your image in order to make communicate with the viewer

Elements of composition

- Light
- colour
- contrast & tone
- line
- form
- shape
- pattern
- texture
- balance
- movement
- positive & negative space
- camera position (point of view)
- focal length
- depth of field
- bokeh
- shutter speed

- Here is a list of many of the various methods of composing an image for maximum impact.
- Matt Kaarma gave us an excellent presentation on this topic last year and I'm not going to go through all of them again.
- Suffice to say, just having these elements in the image does not guarantee a strong image unless there is involvement of the elements with the scene and some sort of relationship between the elements and with the overall scene.

Elements of composition

- **Light**
- **colour**
- **contrast & tone**

- For the purpose of this presentation on low contrast we will consider only the first three which I believe are the most important.
- Without light there can be no contrast or tone
- Remember, we see naturally in colour

Light

- Remember how the eye sees? We learned that our eyes dart randomly to the brightest or most contrasty areas first.
- This physiological fact can be used more effectively than line, shape, form and the other elements to guide the viewer's eye.
- See for yourself! When you are looking into the viewfinder, before you press the shutter, you can **preview** the same light and dark areas that the viewer will see in the final image and make sure those light and dark areas do in fact guide the viewer's eye.

Light Quality

Not the same as quantity

strong sunlight

hazy sunlight

overcast light

foggy light

overhead light

side light

front light

back light

artificial light (flash, spotlight, tungsten, candle light etc)

- Most photographers, especially beginners confuse light **quality** with **quantity**. They are not the same.
- There is no lighting situation that is inherently good or bad as we can do much to control the way in which the light falls upon the subject.
- We can control the **quantity** of light through means such as ISO, shutter speed, aperture and filters but controlling the **quality** of light is a different kettle of fish.
- If, for example, you want strong side lighting to show off craggy features on a mountain side and it's a hazy or overcast day you might as well walk away.
- Your image will be much stronger when the light you have matches the light you want for the purpose of showing your subject in the way you want.

Looking at Light

- We are naturally drawn to a scene because of the objects in it
- But once you grab the camera you should stop thinking of the objects and concentrate on the light
- first, look at the distribution of light within the frame and then look at the objects
- if the light draws the eye to the **desired** objects and holds them there then you will have strong image

- Conversely, if the light happens to be in the top left corner rather than on the object and you fail to notice, you will not have a good photograph no matter how compelling the object itself.
- Practice learning to see the light using a small cut-out frame or by making a rectangle with your hands.

- When you begin thinking about how light can affect a scene or how the scene in front of you can change with different lighting you will no longer be thinking in terms of **recording** a scene but in terms of **interpreting** a scene.

- You will no longer be merely showing what you saw but how you reacted to it.

- You will no longer be **reporting** on a scene but **commenting** on it.

- In short, you will be using photography as a means of personal expression.

Contrast & Tone

- These two are so inter-related they cannot be considered apart. Every scene has an inherent contrast and an inherent tonal range - they are not one and the same.
- Together, contrast and tone set the mood of the image rather than draw the viewer's eye along a specific pathway.

- Contrast is not an element of composition in the same way as lines, shapes etc., but you can take advantage of the eye's tendency to jump randomly to areas of prominence, i.e. high contrast areas
- A high contrast image looks dramatic, energetic while a low contrast image offers calm and serenity. Both have their place, depending on the scene.

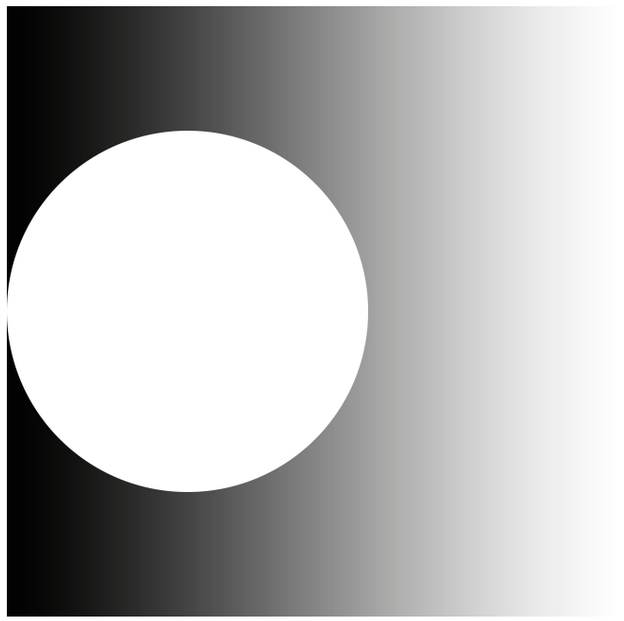
Manipulating Contrast & Tone

- You can print any image lighter or darker than a literal rendition to express yourself most effectively but be wary of overdoing it and creating an artificial mood..
- If you decide to manipulate contrast it should be in keeping with your feelings when you captured the image.
- Colour and monochrome contrast are different. Let’s begin with monochrome.

Zero Contrast

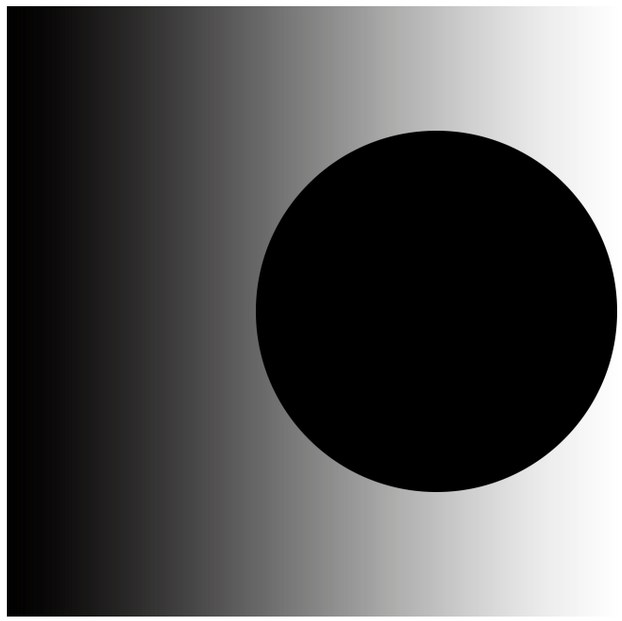
- Consider this gradient. Of course it is not an image such as you would record with a camera but it serves to demonstrate the point.
- You can have the entire range of tones from the darkest black to white but without any contrast whatsoever.
- Every pixel in the image will be surrounded by others having virtually identical luminance (brightness).
- When adjacent pixels are the same brightness there is no contrast.
- Gradient draw using Adobe Photoshop, idea by Bruce Barnbaum

High Contrast



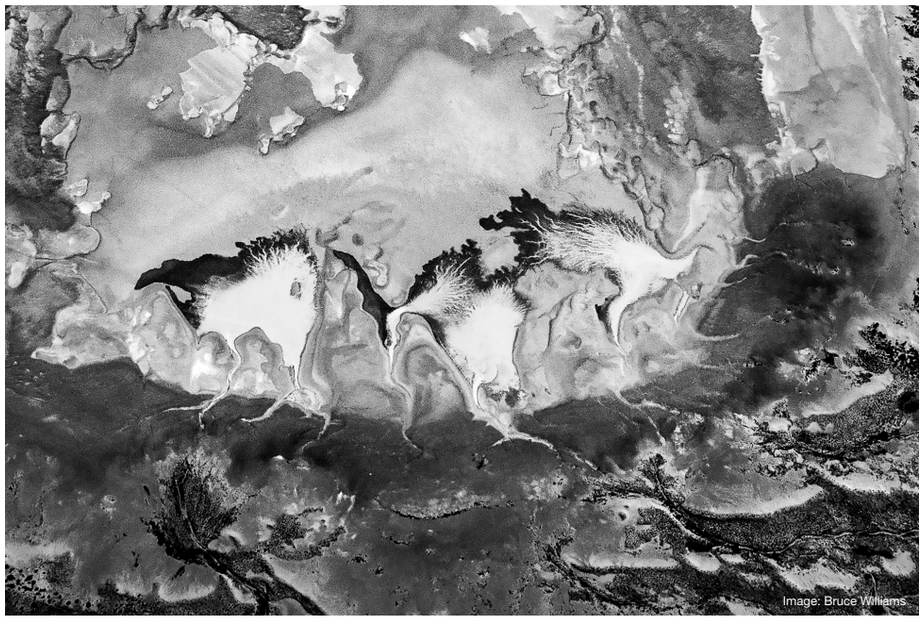
- Pixels along the inner edge of the circle have very marked differences in brightness with neighbouring pixels just outside the circle.
- This is greatest i.e. the most contrast exists on the left side of the circle and the difference lessens (the contrast reduces) as you move toward the right side of the circle.
- A high contrast image looks dramatic, energetic
- Gradient draw using Adobe Photoshop, idea by Bruce Barnbaum

High Contrast

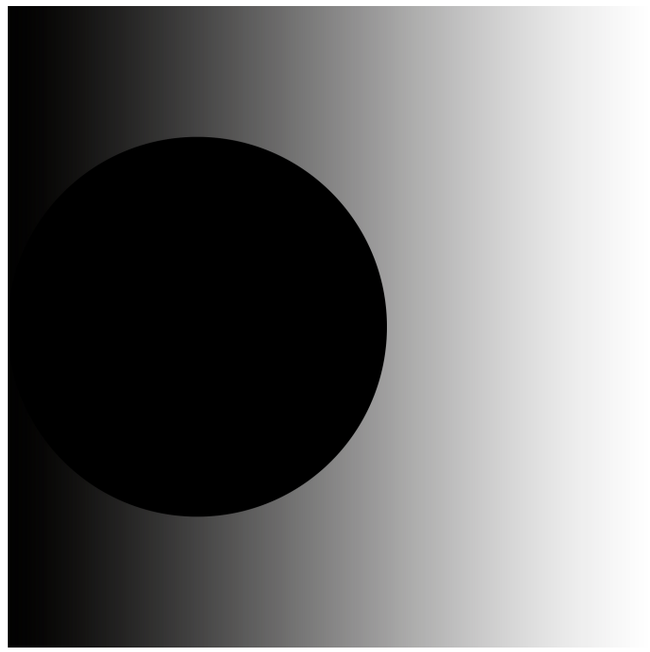


- Same thing here with the blacks and whites reversed. The most contrast is now on the right.
- Black on white or white on black does not matter.
- What matters is the degree of difference between adjacent pixels.
- Gradient draw using Adobe Photoshop, idea by Bruce Barnbaum

High Contrast

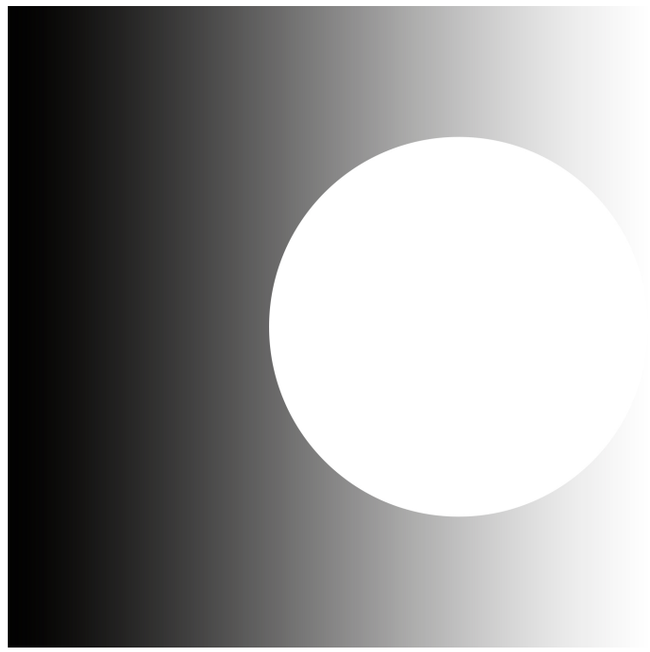


Low Contrast



- Pixels along the edge of the circle have the same or minimal differences in brightness between neighbouring pixels just inside and outside the circle on the left hand side.
- This is where the least contrast exists and the difference increases (the contrast increases) as you move toward the right side of the circle.
- A low contrast image often looks calm or serene.
- Gradient draw using Adobe Photoshop, idea by Bruce Barnbaum

Low Contrast



- Same thing here with the blacks and whites reversed. The least contrast is now on the right.
- Black on white or white on black does not matter.
- What matters is the degree of difference between adjacent pixels.
- Gradient draw using Adobe Photoshop, idea by Bruce Barnbaum

Low Contrast

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What about colour?

Colour

- We are attuned to colour. We naturally see everything in colour.
- All digital cameras* shoot colour by default.
- All raw images are in colour.
- Shooting monochrome needs to be a conscious decision.
- Perhaps shooting colour should be also.

- Consider the relative numbers of colour vs mono image on our assessment nights.
- Leica and perhaps one or two others actually make a monochrome camera with no colour array in front of the sensor.
- Raw images merely record the scene without any in-camera contrast, sharpening, saturation or de-saturation adjustments.

Colour

- But…in this particular scene, will colour get my message across to the viewer better than monochrome?
- Does the colour in the scene actually contribute to the composition…
- Or does it actually detract from the scene by hiding what would otherwise be compelling lines, forms etc?

- Recall again the purpose of the photograph as a means of non-verbal communication.
- For colour to be a true element of composition it ought to be a central consideration of the message, otherwise it can distract the viewer from being influenced by the other elements of light, contrast, line, form, balance etc.

Colour contrast:
Meet the ring of hues

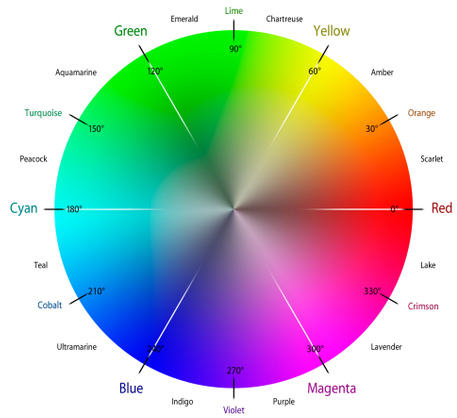
- Colour contrast, like luminance contrast is an element of composition that takes advantage of the eye's tendency to jump randomly to areas of prominence, in this case colour differences.
- That prominence is magnified when adjacent colours in an image are sit opposite one another on the "colour wheel" (also called a "ring of hues").
- These opposing colours are called complementary.

The Ring of Hues

- There are many different colour wheels but they mostly show the same thing: those colours which are similar and those colours which are different.
- All colour wheels show red opposite green and blue opposite orange in what are called “complementary” colours. Placed together in an image they provide dynamism and vibrancy, strengthening an otherwise ordinary image.
- Similar colours side by side produce a low colour contrast and opposite colours side by side produce a high contrast.

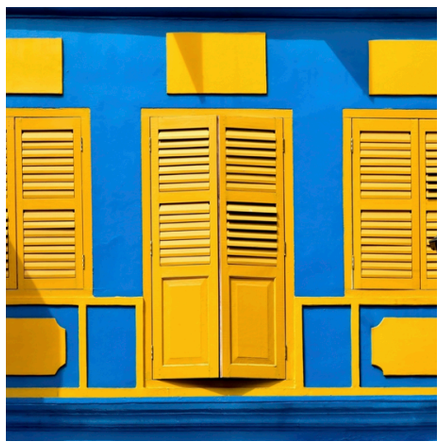
Adobe’s Ring of Hues

This particular ring of hues shows is how Adobe and photoshop handles colour. The numbers you see correspond to the Hue values in the HSL sliders. You most likely are familiar with the RGB number system but this is an additional offering from Adobe.



- They are basically they are the same. The wheel on the left has been flipped horizontally and then rotated some to align it with the Adobe version.
- It doesn’t matter so much where a colour is on the wheel but rather which colours are next to it and which are opposite.

High Contrast Colour



- Another interesting point about colours is that warm colours (red through to yellow) have a tendency to draw forwards in an image, while cooler colours (greens and blues) seem to recede into the background. (info courtesy of Matt Kaarma)
- Does this image have a slight three dimensional appearance? I think so, perhaps augmented by the central shutters being left slightly ajar.
- Blue and Yellow: Complementary colours. Pleasing to the eye

High Contrast Colour

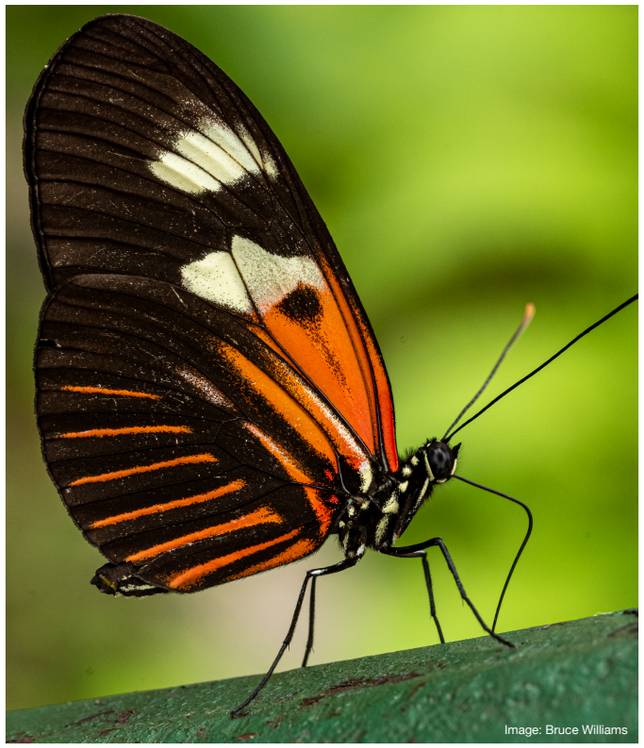
- Harking back to Matt Kaarma’s comments about warm colours coming forward and cooler colours receding I believe this green window appears to be sinking into the surrounding red wall. Make up your own mind.
- Red and Green: Complementary colours. Pleasing to the eye

High Contrast Colour

The Ring of Hues

Blue and Orange: Complementary colours. Pleasing to the eye

High Contrast Colour



- Do you think the warm orange of this butterfly’s wing helps propel it forward, away from the cooler green background?
- Orange and Green: Complementary colours. Pleasing to the eye

The Ring of Hues

Low contrast colour

- In this and the following examples we will see colours that are clustered together on the colour wheel and hence low in colour (but not necessarily luminance/brightness) contrast.

The Ring of Hues

Low contrast colour

The Ring of Hues

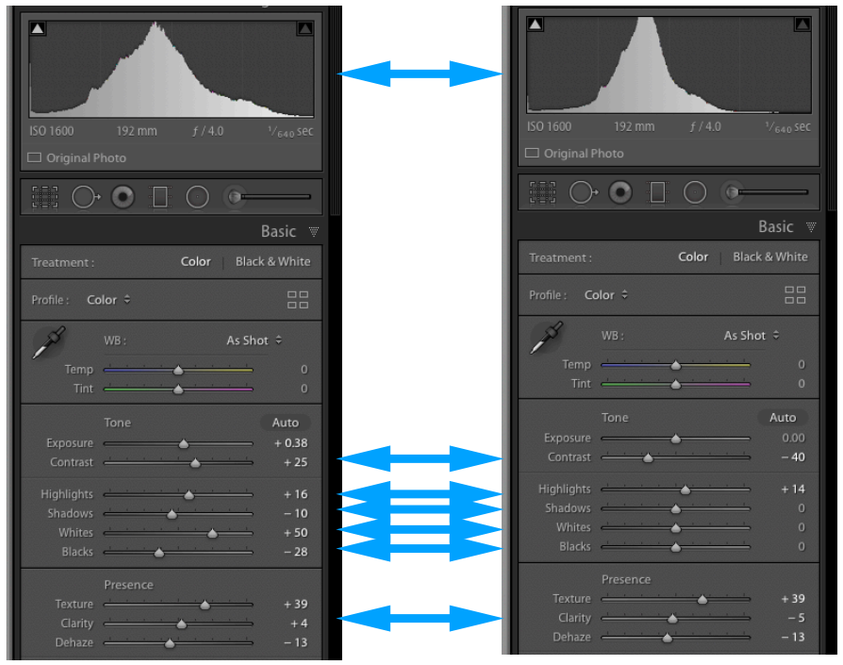
So, how do you make a low contrast image?

- So how do you make low contrast image.
- First, if possible, start with a suitable low contrast scene and try to capture it in camera. The real deal will always look and feel more convincing to the viewer.
- If you feel that your image is not quite getting your intended message across to the viewer you may wish to tweak the sliders in post processing to bring the image into line with your thoughts.
- Try to keep the post processing manipulations to a minimum

An example: before

Image: Bruce Williams

Reducing the Contrast



Before **After**

- In the before image, the histogram is spread fairly well across the entire spectrum of brightness levels, with some pixels extending almost into the blacks and, at the other end, into the whites
- In the after image you can see how the pixels have been pushed from both ends of the histogram toward the centre, leaving significant gaps in the dark/black and highlight/white ends of the scale.
- This is done by using some or all of the sliders in the Tone and Presence portions of the Basic panel in Lightroom.
    - Contrast is moved to the left
    - highlights are moved to the left
    - shadows are moved to the right
    - whites are moved to the left
    - blacks are moved to the right
    - texture and or clarity may be moved slightly to the left
    - ditto for the dehire slider

and after

the dehaze slider

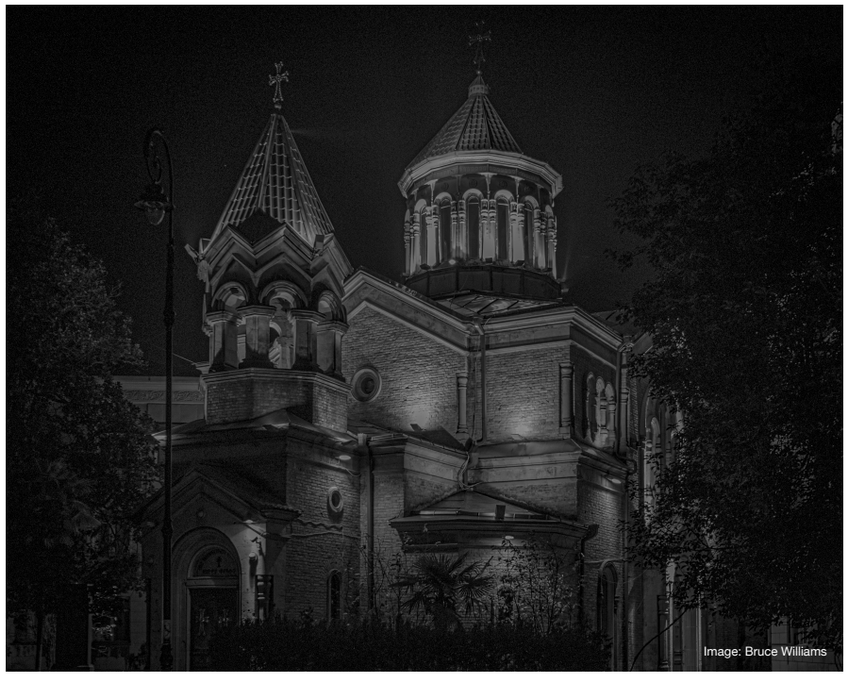
- In the roo example above you might have noticed I did not use the dehaze slider.
- This is really useful for images with cloud or fog

the dehaze slider

Is it “High Key”
or
is it “Low Key”

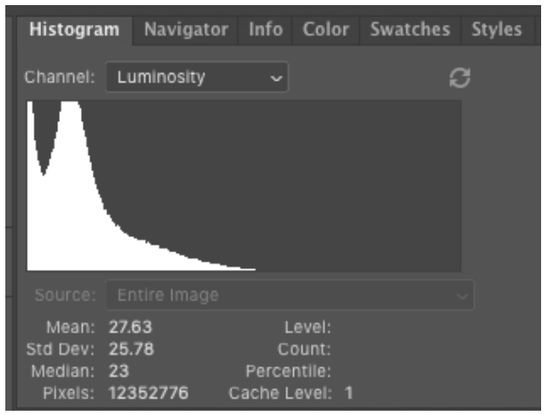
- Key and contrast are not the same concept.
- Key refers to an image’s overall level of luminance or brightness but it does not refer to its contrast, which, as you recall the difference in brightness between adjacent pixels.
- High and low key images are really a subset of low contrast images, with high key being predominantly made up of lighter tones and low key of darker tones.

Low Contrast and Low Key

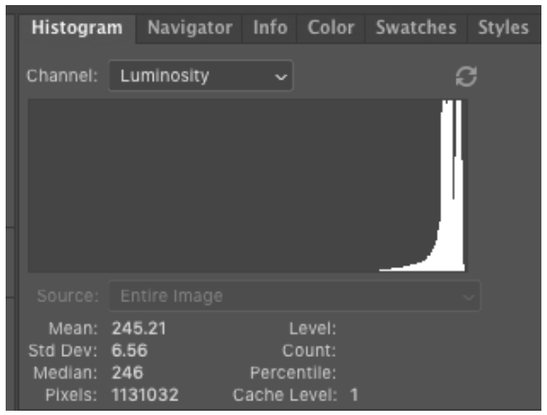


Low Contrast and High Key

The histogram shows the difference



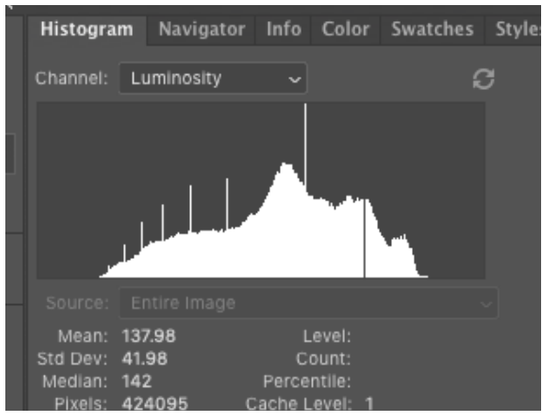
Low Key



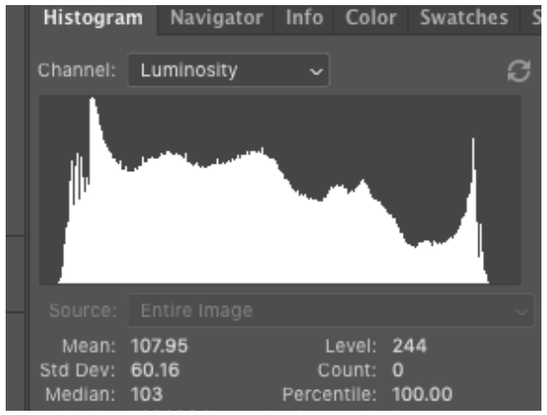
High Key

- Just so as there is no confusion, high and low key makes no reference to an image's contrast
- High and low key images are really a subset of low contrast images, with high key being predominantly made up of lighter tones and low key of darker tones.

The histogram shows the difference



Low Contrast



High Contrast