

## Normalize Vs Equalize

Anonymous

8 years

Under the "histogram" menu What's the difference between equalize and normalize. Both seem to try stretch the image to fit the maximum possible range of brightness, and both seem to be able to work on the whole image, or on smaller portions thereof. But they results from equalize and normalize are visibly different. What are these filters actually doing? Can someone here explain?

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They both produce similar results but use different techniques. The normalize is quite simple, it looks for the maximum intensity pixel (we will use a grayscale example here) and a minimum intensity and then will determine a factor that scales the min intensity to black and the max intensity to white. This is applied to every pixel in the image which produces the final result.

The equalize will attempt to produce a histogram with equal amounts of pixels in each intensity level. This can produce unrealistic images since the intensities can be radically distorted but can also produce images very similar to normalization which preserves relative levels which the equalization process does not.

So if you are concerned about keep an image realistic then use normalization, but if you want a more even distribution of intensity levels then equalize can help with that.

STeven.