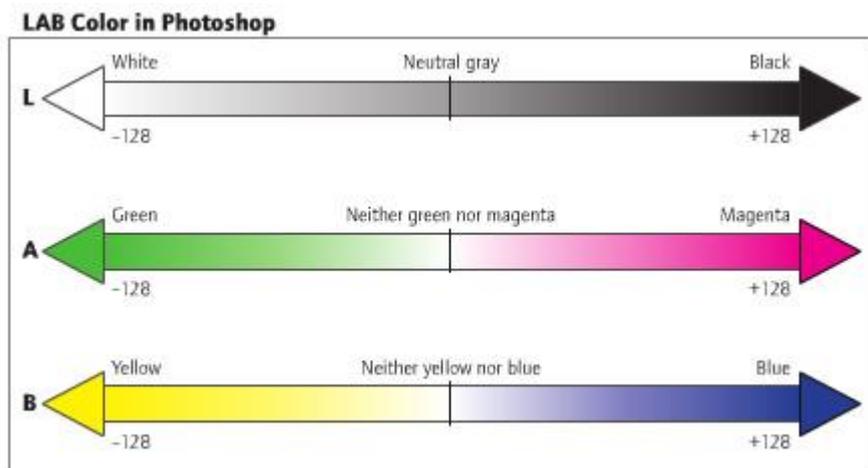


Image Enhancement Using LAB Colour Space

A few notes on the presentation of the evening of 5th October 2016

Not widely used (or even known about) LAB colour space is an extremely useful alternative to the more widely used RGB colour space.

LAB – Luminosity, A & B Channels does have some significant advantages over other colour space formats. The most significant is that the luminosity (lightness / darkness) is separated from the colour channels. With RGB if any colour is increased the luminosity drops and the image becomes darker and likewise if one of the colours is reduced the image becomes lighter. This can make colour editing complicated. However if LAB is used the colour / luminosity can be changed independently greatly simplifying and potentially speeding up the processing.



Splitting the image up into the various channels looks like this:



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LAB use in Photoshop

Most of the time we work in RGB when we are using Photoshop, however PS does give us the facility to switch to LAB colour space instead. This might seem an odd thing to do, but colour adjustments and enhancement is often very much simpler and considerably quicker in LAB mod than in RGB. This is largely due to the fact that the colour makeup of the image has been split away from the luminosity which means we can change the colours without having to worry about the brightness of the image.

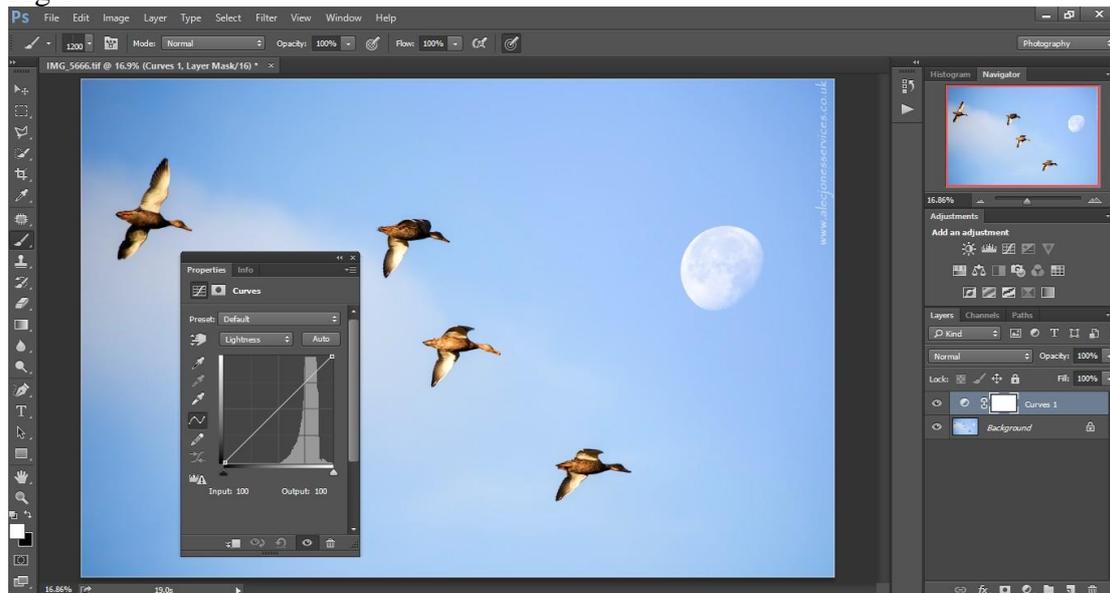
In Photoshop -

From the top menu: Image > Mode > Lab colour

Once in LAB mode the Curves adjustment becomes a very powerful tool. Rather than allowing us to adjust Red, Green or Blue, the options are now: Luminosity, A and B. A is Green / Magenta and B is Blue / Yellow.

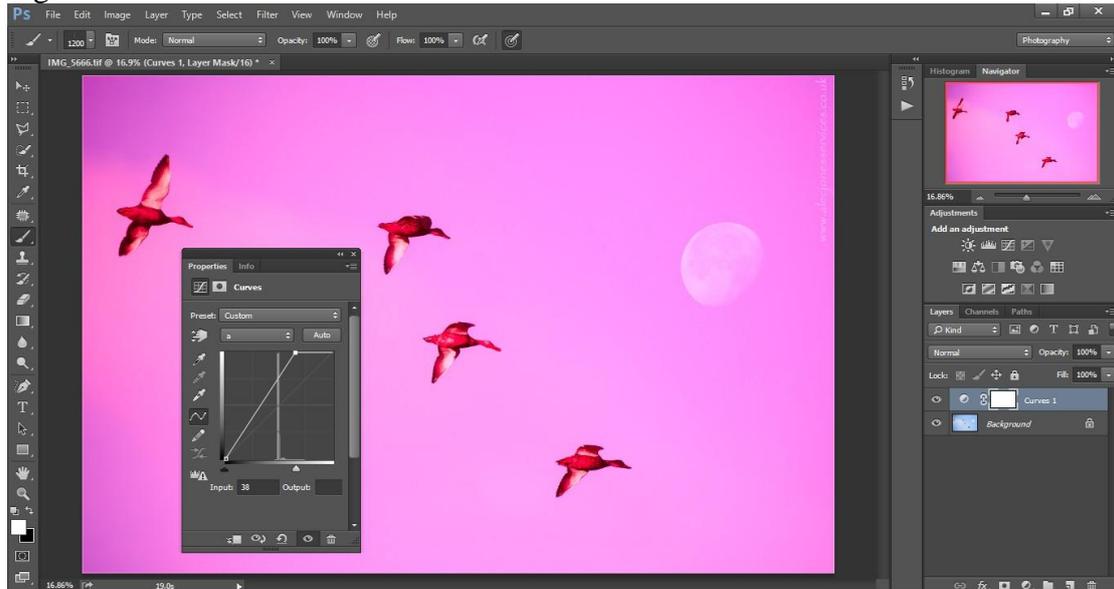
The power of the curves adjustment is shown in the following images:

Fig.1



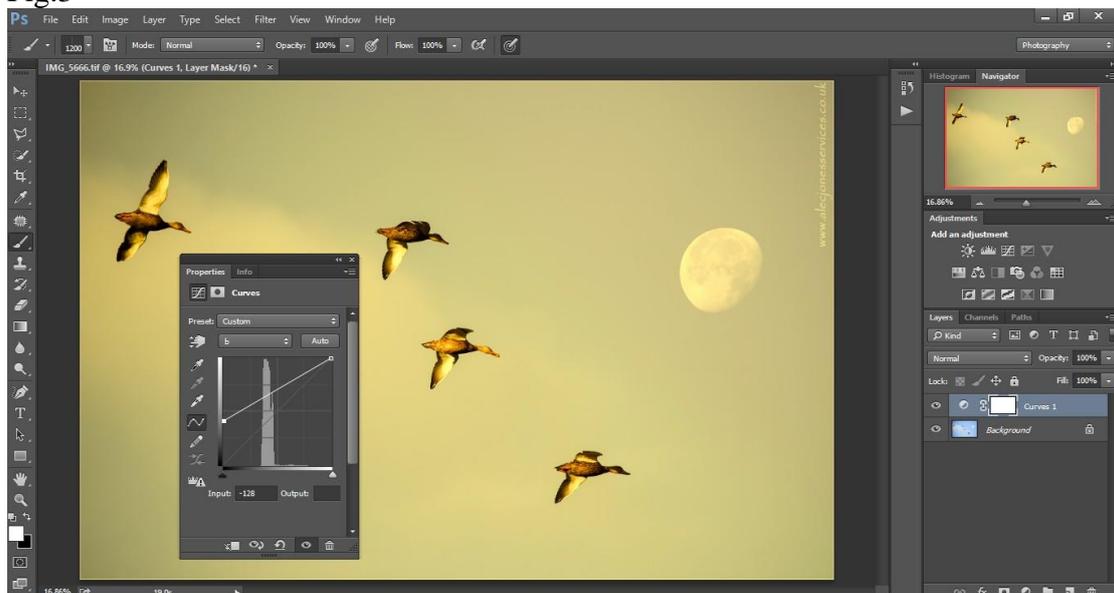
This image show the curve adjustment open with the lightness channel open. No adjustment has been made to the original image yet.

Fig.2



In this image the A channel is open giving control over Green/magenta. By moving the slider in from the right the Magenta has been increased.

Fig.3



This image shows the adjustment of the B channel. The slider at the left (blue end) has been moved upwards having the effect of reducing the blue colour.

A small amount of experimentation soon leads to an understanding of how quickly the colours of an image can be adjusted using this method. This is particularly effective at quickly removing colour casts from images.

Once you have finished adjusting the image colours go back into RGB mode to continue editing and hopefully finishing the image. Many PS features are not available in LAB mode.