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## A Discussion of choice of colourmaps in visualisation: Perceptual colourmaps and colourmaps for the colour-blind

Poor choice of colourmaps within visualisation can lead to the creation of visual artifacts, which creates false interpretation of the visualisation, either by seeing edges that do not exist or by obscuring edges that do. The use of perceptual colourmaps, where each change in colour is perceived as smooth can greatly enhance the ease of interpretation of a visualisation by removing ambiguity.

In addition, many default colourmaps do not allow for good visualisation by people suffering from colour-blindness. Colour-blindness in its most common form, red-green causes these two colours to appear undifferentiated to colour-blind people. Development of suitable colourmaps, that is, those that do not obscure matters for colourblind individuals, has been improved.

This discussion will focus on the selection of appropriate colourmaps for avoiding the introduction of perceptual errors in visualisations and to maximise the utility of the colourmap for people who are colour-blind. This will aid in creating better visualisations of data of any kind for maximum utility by as many people as possible.

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