



# Unit 28: Digital image manipulation techniques

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# Image manipulation history

- ▶ pre-digital commercial image manipulation techniques first began in the early 19<sup>th</sup> century which was first captured on glass and tin plates. The practice began shortly after the first photograph by Joseph Nicéphore who also developed heliography and made the first photographic print from a photoengraved printing plate.
- ▶ A negative can be manipulated while still in the camera using techniques like double exposure or in a darkroom by piercing photos or negatives together and some darkroom manipulation techniques. Some darkroom manipulations involved techniques such as bleaching to artfully lighten or totally wash-out parts of the photograph, or hand colouring for aesthetic purposes.
- ▶ While the technology and equipment continued to progress over time it wasn't till the late 20<sup>th</sup> century where the photography changed into a digital form. Digital photography was considered to be a radical new approach and was initially rejected by photographers because of its substandard quality by many people.



# Image manipulation past

- ▶ An example of image manipulation in the past is in the early 1860s, when a photo was altered using the body from a portrait of [John C. Calhoun](#) and the head of Lincoln from a famous seated portrait by [Mathew Brady](#) – the [same portrait](#) which was the basis for the [original](#) Lincoln [five-dollar bill](#).



# Pre-digital commercial image manipulation techniques

- ▶ Certain tools were used in the pre-digital era, certain tools like:
- ▶ Gouache paint: Gouache paint is similar to watercolour, however modified to make it opaque (the quality of lacking transparency or translucence).
- ▶ Kneaded erasers: It functions by absorbing and "picking up" graphite and charcoal

particles, in addition to carbon and pastel marks.

- ▶ Charcoal sticks: compressed charcoal powder mixed with gum binder compressed into round or square sticks. The amount of binder determines the hardness of the stick. This comes in a range of hard and soft and also sometimes

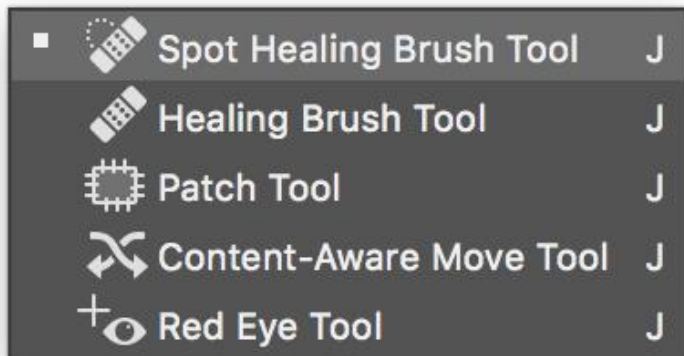
different colours. It can create quite dark blacks and is generally used to make the darkest darks on your sketch.

- ▶ An airbrush: is a small, air-operated tool that sprays various media, most often paint but also ink and dye, and foundation by a process of nebulization



# Digital Blemish Removal Techniques

- ▶ Photoshop tools can be useful to clear up a person's skin by using the tools: spot healing brush tool, patch tool and burns. The dodge and burn tool are used to lighten or darken areas of the image. These tools are based on a traditional darkroom technique for regulating exposure on specific areas of a print where the photographer holds back light to lighten an area on the print (dodging) or increase the exposure to darken areas on a print.
- ▶ The spot healing tool removes blemishes on the face of the person by taking a clear area of the skin and using it to cover an area of the skin with blemishes.



# Digital Blemish Removal

- ▶ Here is an example where you can see the digital blemish removal in use through these two images of the person below. In the first image you see blemishes, but the second shows a different outcome of the digital blemish removal technique used after.



# Digital colour correction Techniques

- ▶ Colour Correction is the process of adjusting the clips you shot to get good exposure in the image. You do this by balancing the light in the shot. Colour correction and grading are art forms in and of themselves
- ▶ Colour correction techniques are mainly around the control of levels within the colour, saturation and the hue of the image. An example of this is if you have an image with light blue skies in the background and want to change the colour to make it darker, you might want to go to the colour levels of the image and drop the amount of blue you would like to fit your perfect description.



# Digital colour correction



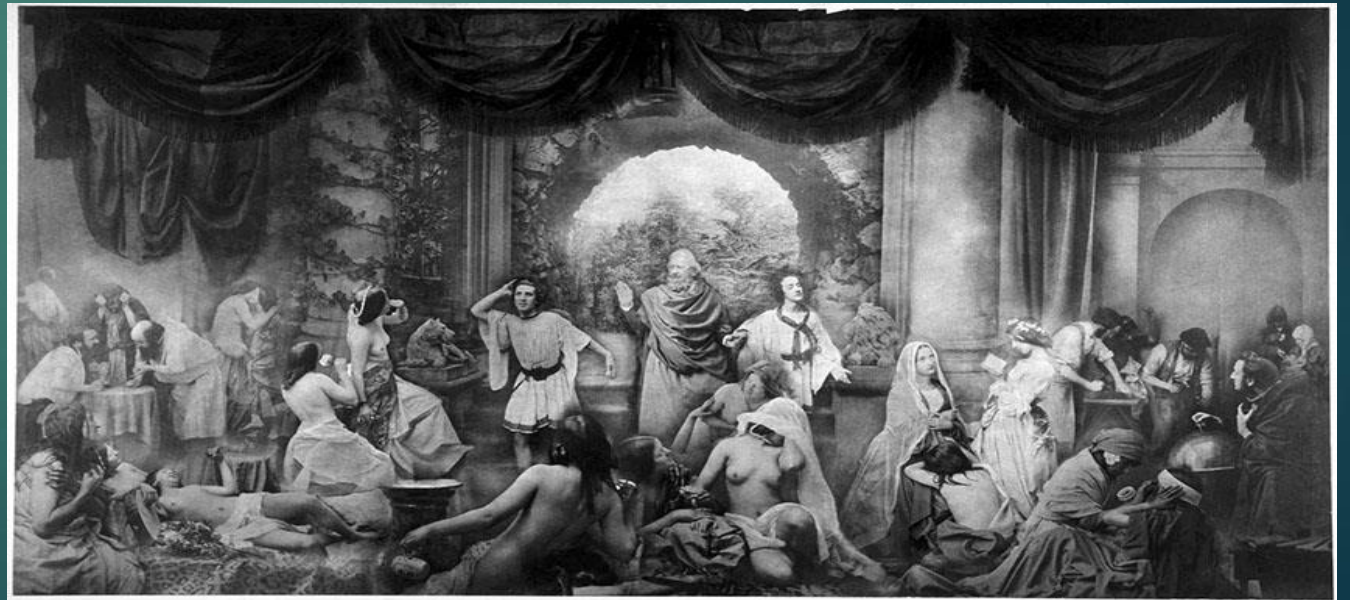
Here is a clear example of a colour correction technique. In the image below we can clearly see the second image has a slighter brighter tone than the first due to the brightened lighting and coloured effect. While the first image is dimmer than the second, the second image attracts more attention as it is bolder and much more attractive to use for magazine and other print advertisements.



# Pre-Digital use of manual photomontage and photographic collage in art and advertising

- ▶ A combination of several shots is joined together for an artistic effect or to show more of the subject than can be shown in a single art work. This is called photomontage. Images were composed by cutting,gluing,arranging and overlapping two or more photos in pre-digital photomontages. In a certain point in time the name “combination printing” came about when one of the most

famous photomontages came during the mid-Victorian era. It was created by Oscar Rejlander.



# Digital Photo-Compositing

- ▶ The use of digital photo is done by composing the composition of images into a singular photograph, for example taking pieces of other photos and layering them together to form one image. By cutting bits and pieces of certain images using the quick selection tool and then dropping them all on one page and merging the layers together in a way that

achieves the desired effect. This can be done in Photoshop.



# Digital visual effects and filters

- ▶ Visual effects and filters are regularly used in manipulation of an image as they can be used to give an image an effect by enhancing the image. This includes adding things that weren't there in the first place. In this image we can see the first image as bare and naked without any effect, however in the second image we see effects that make the background colour of the image, the objects used and the lighting change drastically. They are added to set the mood and bring life to the picture by manipulating the picture to fit the desired settings.



# Legal and Ethical issues

- ▶ The retouching and manipulation of images that come with legal and ethical issues is most commonly something to do with the false unrealistic expectations when it comes to beauty and certain products. This can lead the audiences into thinking differently from what the advertisers wanted, causing them to mislead people on what they advertise. For example Julia Roberts who featured heavy airbrushing for a make up advert had an example of her face being used to advertise the product, the advert was soon banned by the advertising standards authority for being misleading.

