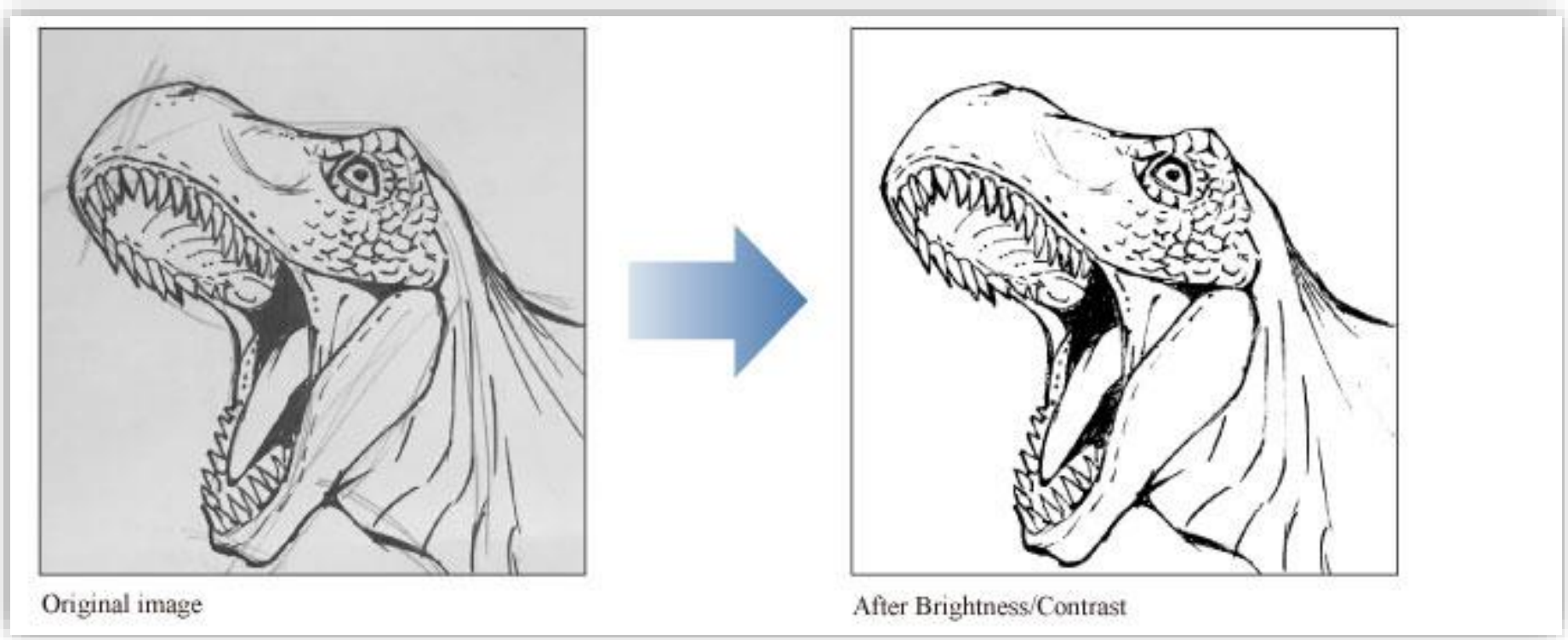
Digital Image Processing

Brightness and Contrast

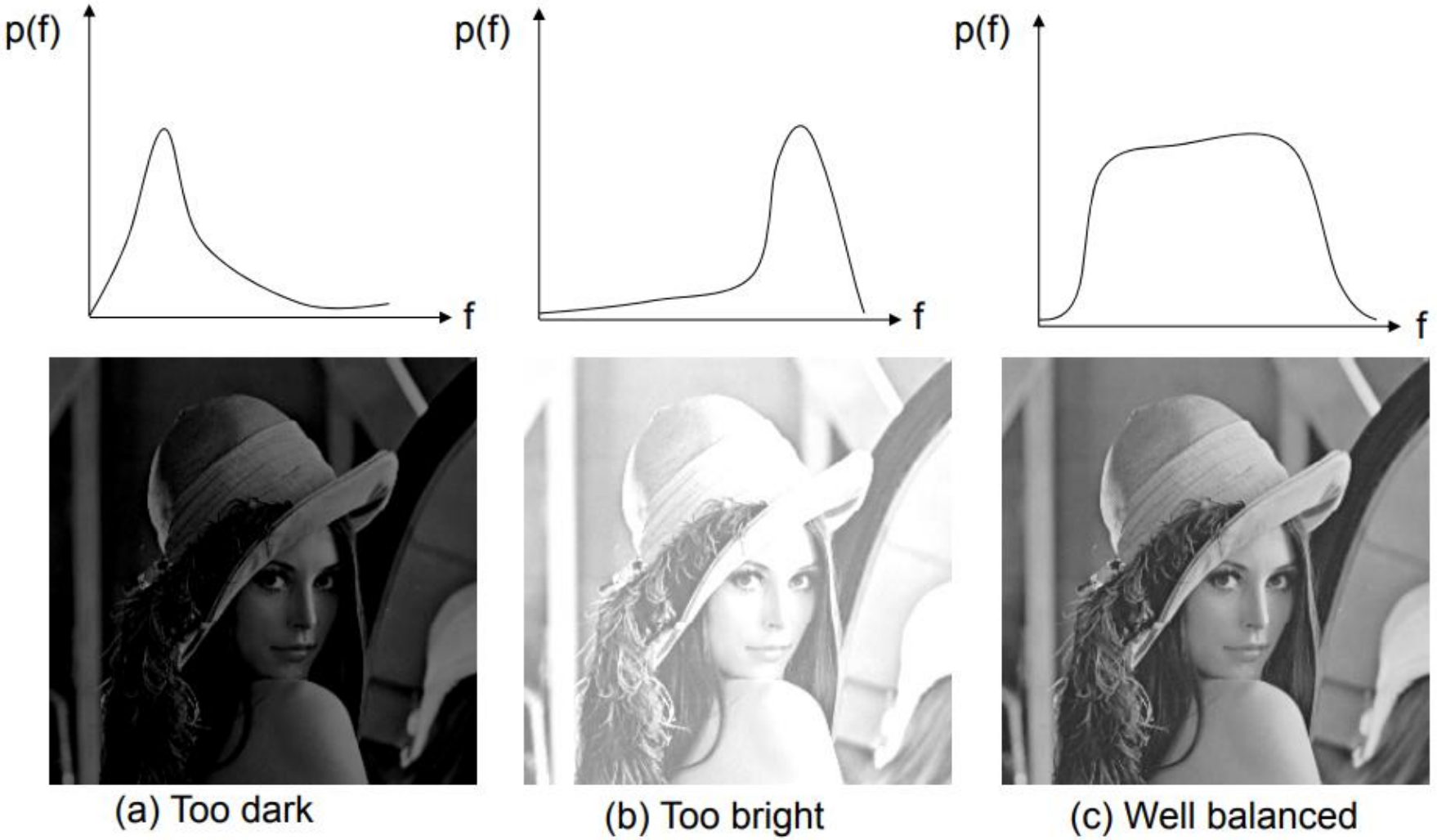
22-Jun-22

Brightness & Contrast

- For example:



Examples of Histograms



(a) Too dark

(b) Too bright

(c) Well balanced

Brightness and Contrast in Digital Images

- The basic contrast and brightness adjustments are transformations of the form
- $f(x)=\alpha x+\beta$
- The result rounded to an integer and clamped to the range [0,255]
- Here x is a color component value (R,G or B)
- The slope α controls contrast ($\alpha>1$ means more contrast and $0<\alpha<1$ less contrast)
- b controls brightness

References

- https://www.slideshare.net/raviscerator/introduction-to-matlab-37044507
- http://eeweb.poly.edu/~yao/EL5123/lecture3_contrast_enhancement.pdf