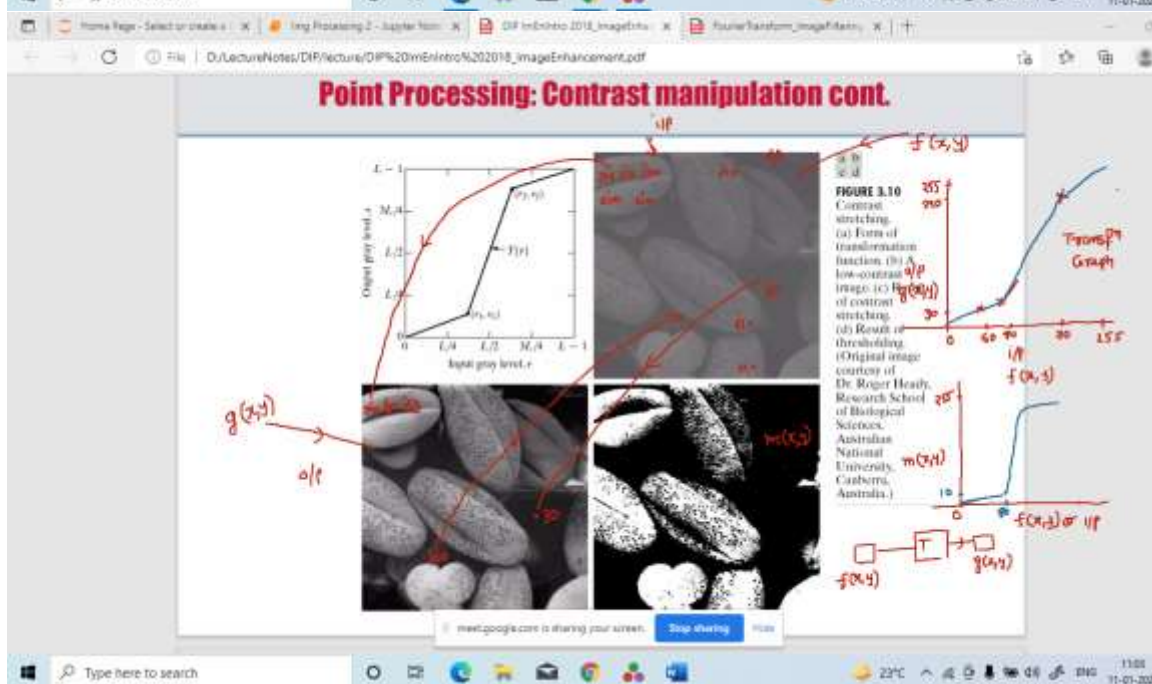


FIGURE 3.10 Contrast stretching. (a) Form of transformation function; (b) low-contrast image; (c) Result of contrast stretching; (d) Result of thresholding. (Original image courtesy of Dr. Roger Handberg, Research School of Biological Sciences, Australian National University, Canberra, Australia.)

Handwritten red annotations: $f(x,y)$ (pointing to original image), $g(x,y)$ (pointing to thresholded image), o/t (pointing to thresholded image).



The DFT and Image Processing

To filter an image in the frequency domain:

1. Compute $F(u,v)$ the DFT of the image
2. Multiply $F(u,v)$ by a filter function $H(u,v)$
3. Compute the inverse DFT of the result

