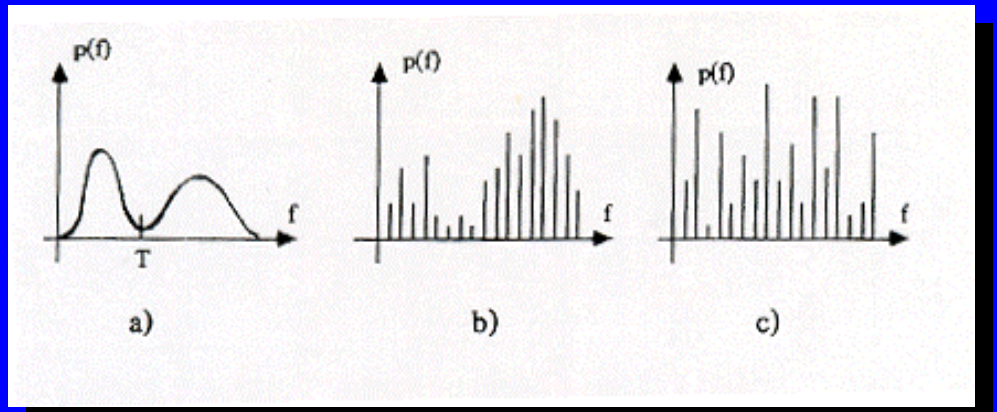
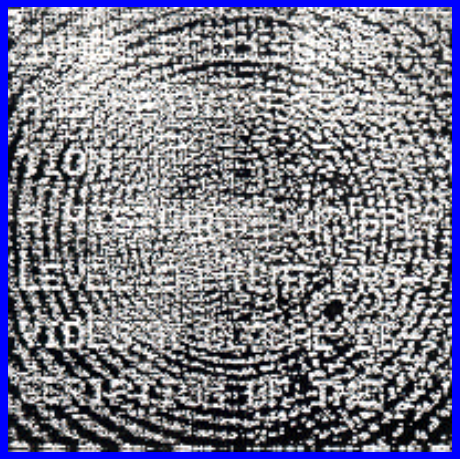
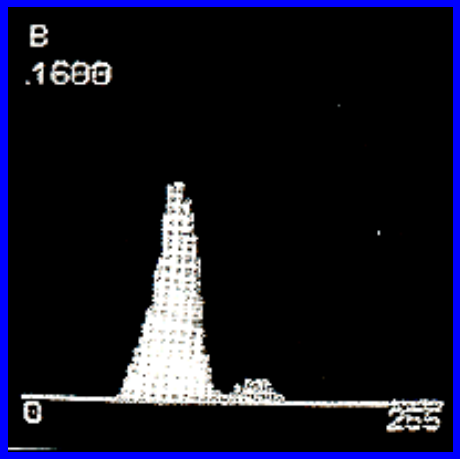
HISTOGRAM THRESHOLDING



Global thresholding



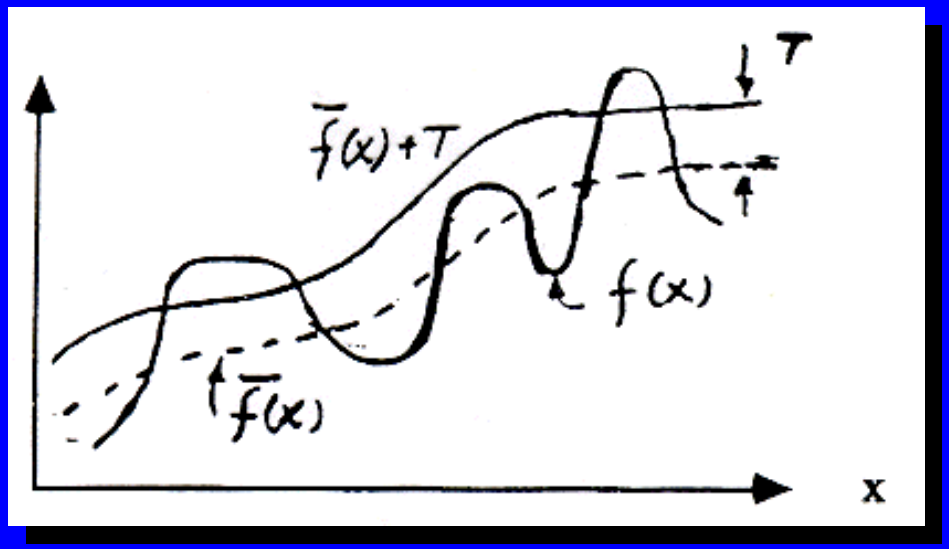
Original image



Histogram

Thresholded image

Local thresholding



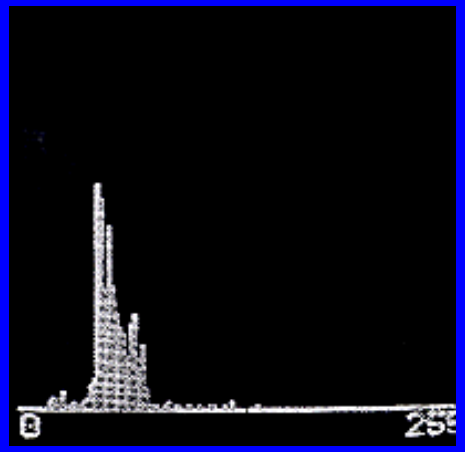
$$g(x) = 1 \text{ if } f(x,y) \geq \overline{f}(x,y) + T$$

equivalent to:

$$\underbrace{f(x,y) - \overline{f}(x,y)}_{\text{Laplace operator + global thresholding}} \geq T$$

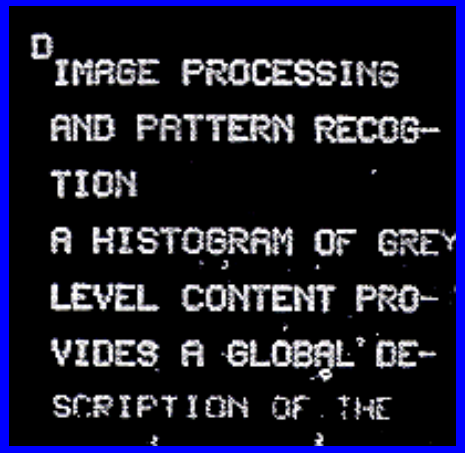
Local thresholding

Original image



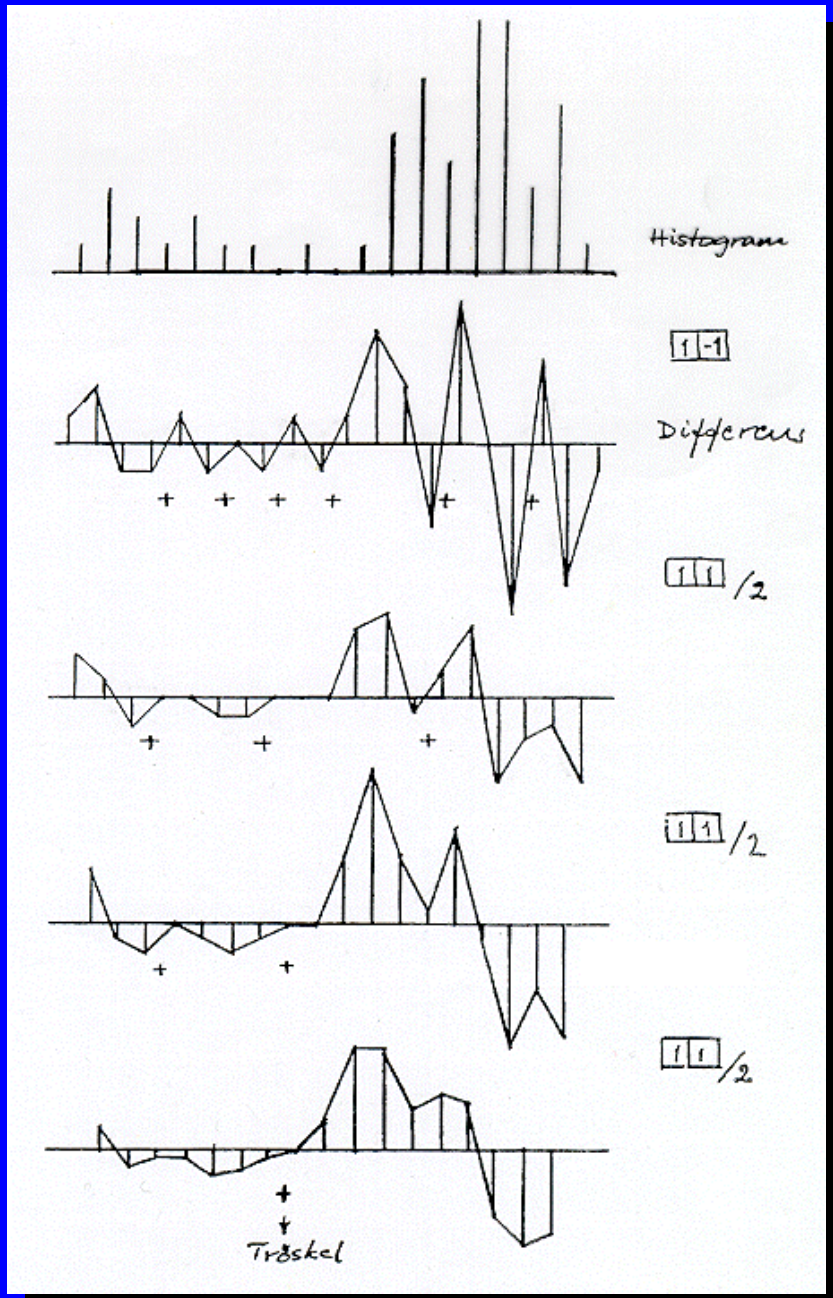
Histogram

Global threshold

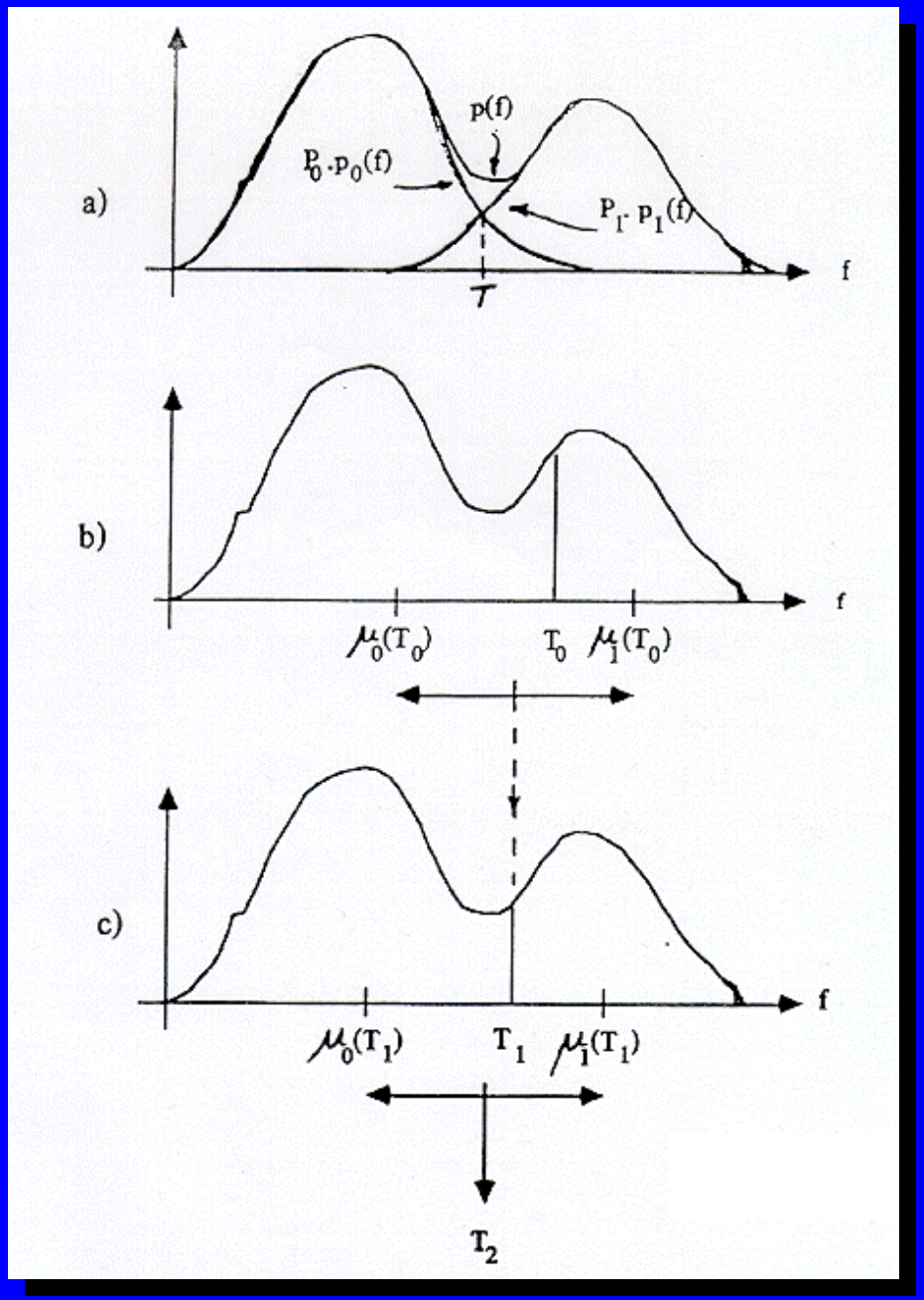


Local threshold

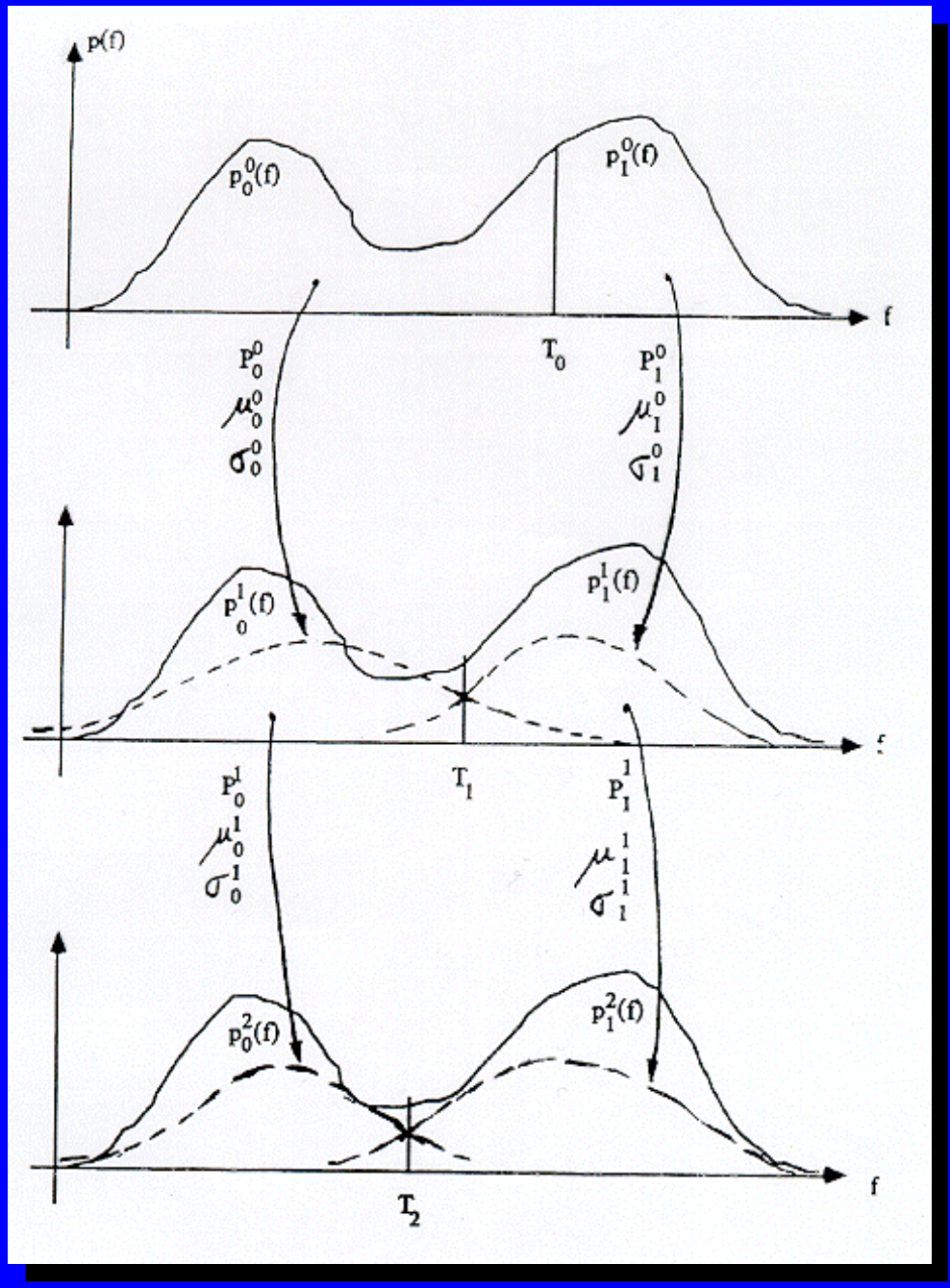
Histogram smoothing

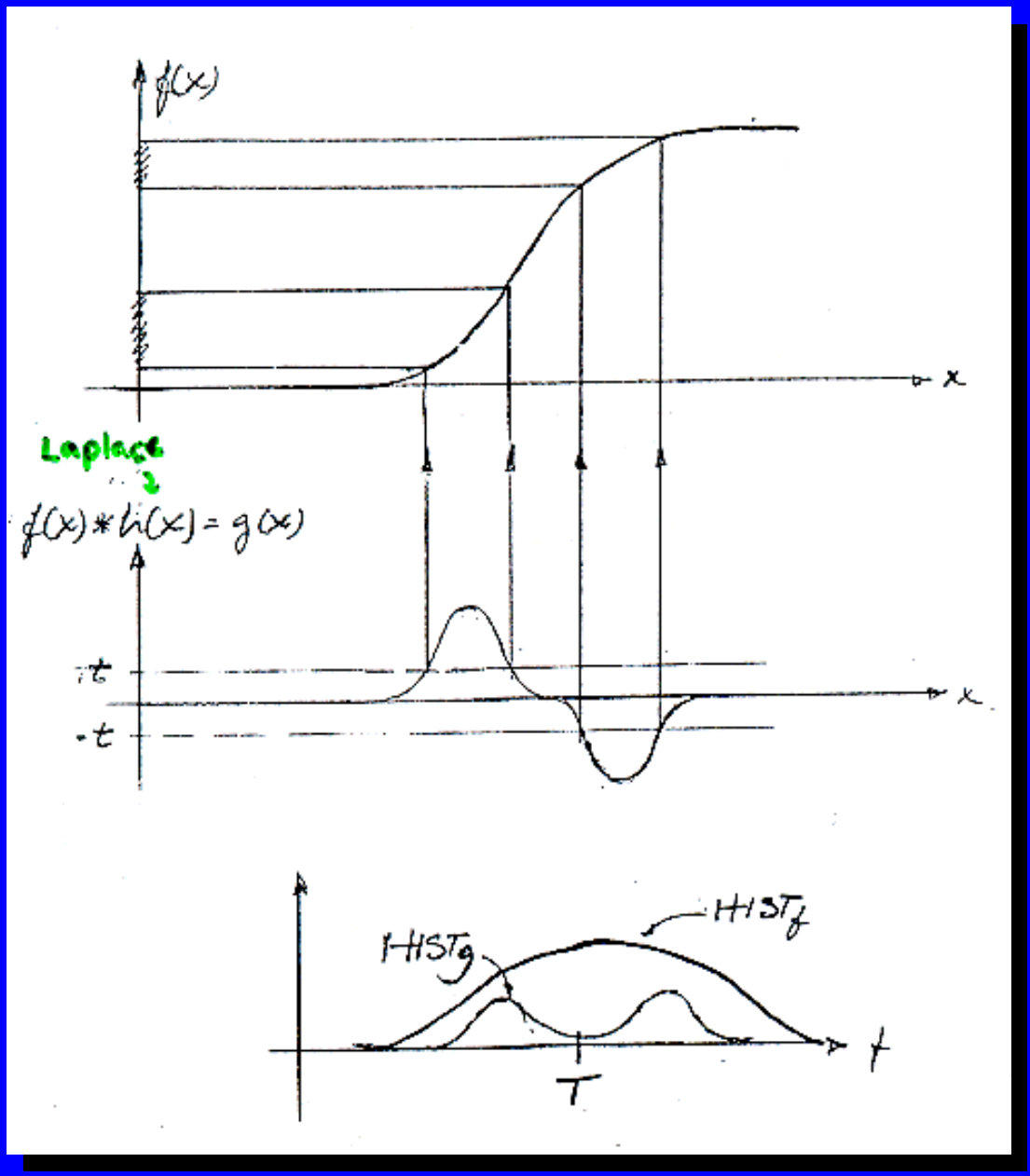


Midpoint method



Minimum error method





The thresholded g(x) is used as a mask applied to f(x). The masked pixels hopefully create a bimodal histogram $Hist_g$