A Wavelet Tour of Signal Processing
Stéphane Mallat, Academic Press 1999 (2nd edition)

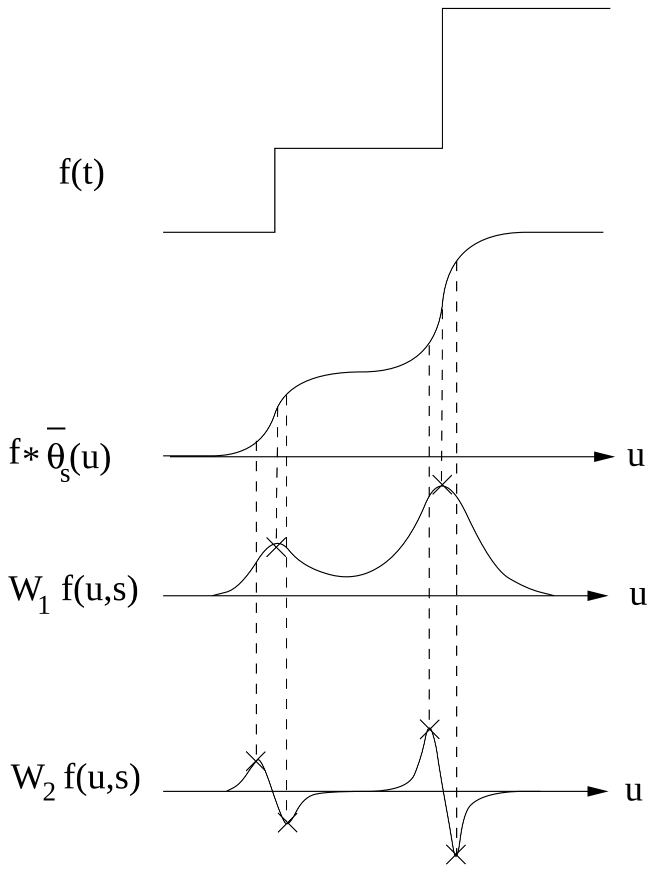

Figure 6.4: The convolution $f \star \bar{\theta}_s(u)$ averages f over a domain proportional to s. If $\psi = -\theta'$ then $W_1 f(u,s) = s \frac{d}{du}(f \star \bar{\theta}_s)(u)$ has modulus maxima at sharp variation points of $f \star \bar{\theta}_s(u)$. If $\psi = \theta''$ then the modulus maxima of $W_2 f(u,s) = s^2 \frac{d^2}{du^2}(f \star \bar{\theta}_s)(u)$ correspond to locally maximum curvatures.