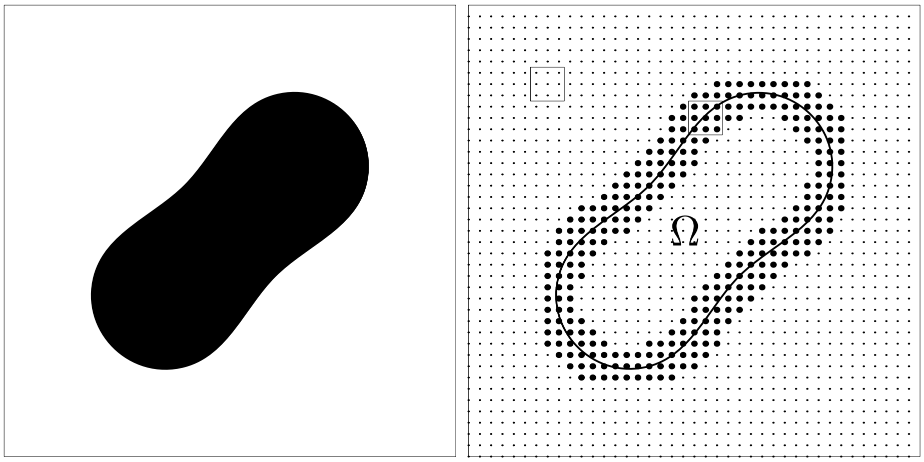
A Wavelet Tour of Signal Processing
Stéphane Mallat, Academic Press 1999 (2nd edition)



(a) (b)

Figure 9.5: (a): Image $f = \mathbf{1}_\Omega$. (b): At the scale 2^j, the wavelets $\psi^l_{j,n}$ have a square support of width proportional to 2^j. This support is translated on a grid of interval 2^j, which is indicated by the smaller dots. The darker dots correspond to wavelets whose support intersects the frontier of Ω, for which $\langle f, \psi^l_{j,n} \rangle \neq 0$.