Fig. 5.4. A Wavelet Tour of Signal Processing, 3rd ed. (a): The dyadic wavelet coefficients are computed by cascading convolutions with dilated filters $\hat{h}_j$ and $\hat{g}_j$. (b): The original signal is reconstructed through convolutions with $\hat{h}_j$ and $\hat{g}_j$. A multiplication by $1/2$ is necessary to recover the next finer scale signal $a_j$. 