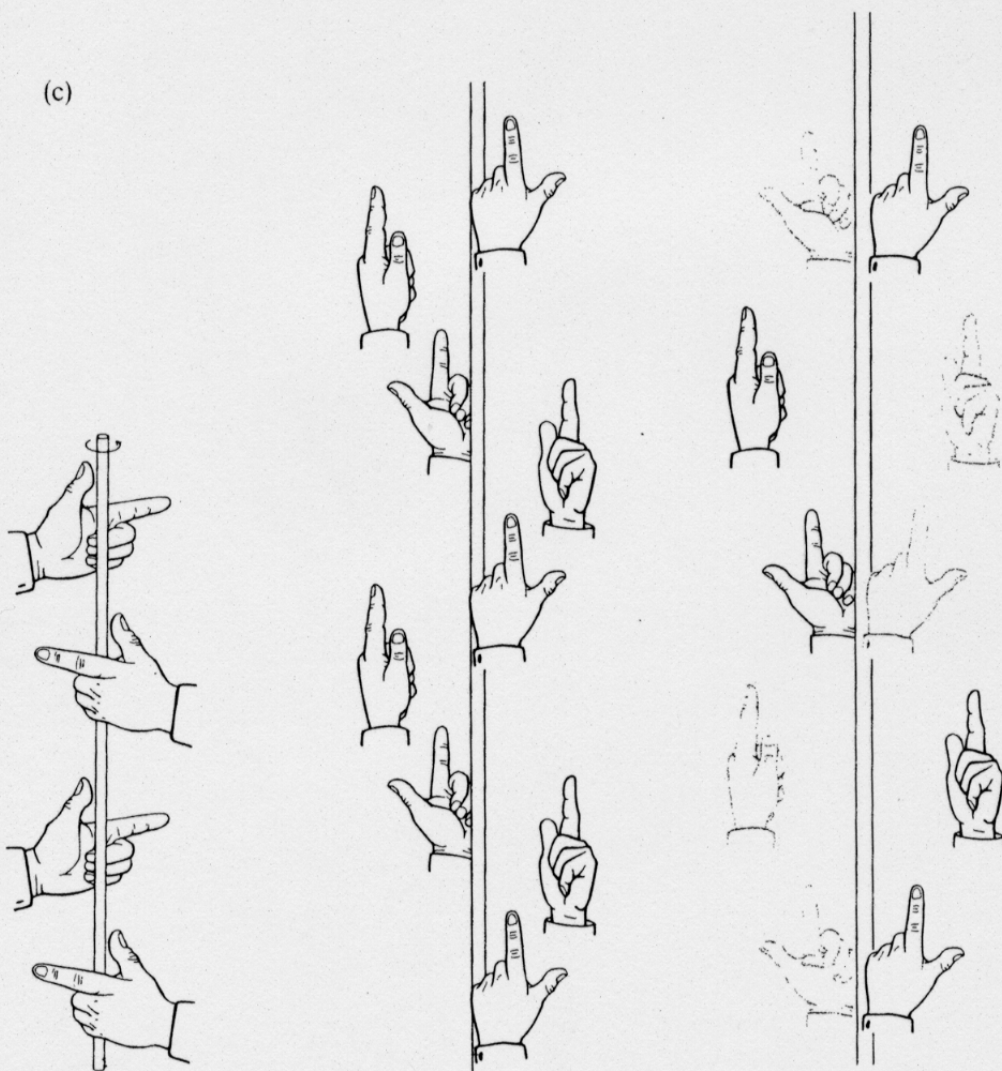


(a)

(b)



(c)

**Figure 13-17**

*Motifs, lattices, and symmetry operations.* (a) A lattice and simple motif (a single hand). The crystal is the convolution of the motif and the lattice. (b) Two motifs containing symmetry-related structures. The two hands on the left are related by a twofold rotation ( $C_2$ ) axis. The two hands on the right are related by a  $2_1$  screw axis. In each structure, the motif consists of two hands. The asymmetric unit is just a single hand. (c) Arrays generated by screw axes. From left to right, the axes are  $2_1$ ,  $4_1$ , and  $4_2$ ; the resulting unit cells have 2, 4, and 4 asymmetric units, respectively. [Drawings by Irving Geis.]