9.27: Twin operation

The operation (action) of an element of symmetry that generates a *twin*.

Let H_i be the oriented point group of the i-th individual of a twin. The intersection group of the oriented vector point groups H_i of the individuals is indicated as $H^* = \cap_i H_i$. The symmetry of a twin is identified in vector space by a point group K which is a supergroup of H^*. The coset decomposition of K with respect to H^* gives the possible twin laws, each coset representing a twin law, and each operation in a coset representing a twin operation; the operations in a coset are equivalent under the operations of H^*.

Operations in H describe the vector point symmetry of the individuals, whereas those in the cosets obtained by decomposing K in terms of H^* connect the different individuals. To underline their different nature, the twin operations are often associated with a "color" and K is a thus a chromatic vector point group, known as *twin point group*.