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## **Chirality, False chirality and Time chirality**

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Chirality describes a property where an object or a state and its mirror image cannot be superimposed, regardless of spatial rotations, translations, and even time reversal (**T**). This means that the object lacks mirror symmetry in any spatial orientation or position. Since space inversion (parity, **P**) can be represented as a combination of mirror reflection and a 2-fold spatial rotation, true chirality implies the absence of both **P** and **PT** (combined parity and time reversal) symmetries. This concept can be generalized further. A system that breaks **P** and **T** symmetries—regardless of spatial rotations and translations—is known as *False Chirality*. Conversely, when **T** and **PT** symmetries are broken, the system is said to possess *Time Chirality*. A special case in which all three symmetries (**P**, **T**, and **PT**) are broken is referred to as *Super-Chirality*. We have identified magnetic point groups corresponding to each of these chirality types and their distinct physical properties and phenomena.