

A macroscopic system itself is described by the laws of Classical Mechanics, but its constituent parts at the microscopic scale are described by the laws of Quantum Mechanics. If Quantum Mechanics is fundamental and universally valid, then as we move from the micro- to macro-scale, the laws of Quantum Mechanics should be smoothly transformed into the laws of Classical Mechanics. The question of how effectively macro-systems around us emerge from the underlying micro-systems is known as the problem of quantum-to-classical transition. What *physical processes* are able to transform the quantum description of constituent parts to the classical description of the macroscopic system? In this talk, I examine some conjectures about the nature of such physical processes.