Symmetries have played played a central role in formulating and understanding the two pillar theories of modern physics, quantum field theory and the Standard Model of Particle Physics on the one hand, and Einstein's theory of General Relativity on the other. So one may reasonably expect that symmetries may also provide the key to a future understanding of quantum gravity and the unification of physics beyond the known standard models, and perhaps even for "M Theory", the putative non-perturbative formulation of string theory. In this talk, recent attempts in this direction will be described.