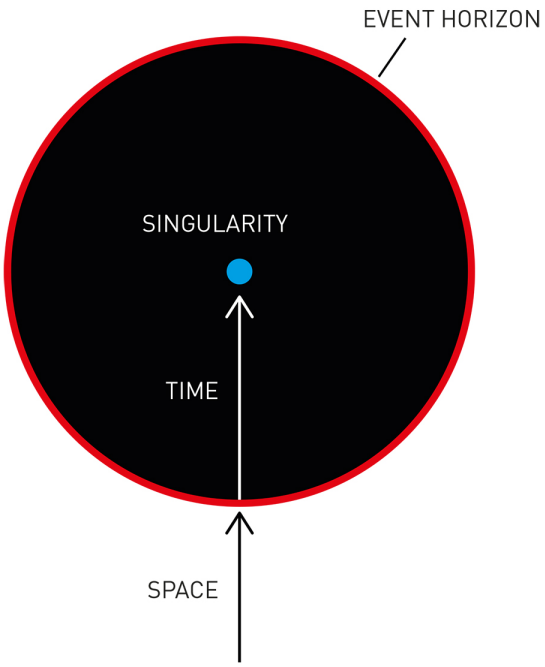

Figure 1. *Schematic diagram showing the interior of a black hole. Inside of the horizon the radial direction is time-like. Time ends at the singularity.*

Such trapped surfaces can also be found in the case of rotating black holes. In fact, the trapped surface remains, regardless of how the solution is perturbed, and its existence is independent of any assumptions about symmetry. After realizing the power of the idea of trapped surfaces, Penrose proceeded to prove that once a trapped surface had formed, it is *impossible,* within the theory of general relativity and with a positive energy density, to prevent the collapse towards a singularity (Penrose 1965). See figure 2.