Game Theory: The Calculus of Strategy

If probability shows us what might happen, Game Theory simulates what actors will choose to make it happen. It is not about modeling the entire infinite ∞ chaotic set of possible events; instead, it mathematically winnows the universe down to only the most strategically viable scenarios.

Consider the famous Monty Hall problem. At first glance, a game with three doors appears to be a simple uniform distribution with 1/3 probability of each. But game theory and Bayesian updating reveal that the space is non-Binary. When the host — an actor with knowledge of the system — opens an empty door, the probabilities do not reset to a 50/50 binary coin toss. The geometry of the probability space collapses, shifting a 2/3 probability mass to the remaining unopened door. Strategic viability dictates that changing your choice is mathematically superior.