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Aristotle's Apprehension of Reality

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Following Plato's definition of Knowledge as Justified True Belief, Aristotle understood Reality, and our description of Reality, as the emergence of actual-observable events (ενεργεία) from potentialities (δυναμει). This model is still the basis of relating models with observations, as illustrated by the following examples: 1) selecting admissible solutions from differential and difference equations (boundary conditions, asymptotic conditions), in electromagnetism, diffusion, scattering, 2) Theory of Phase Transitions, 3) non-equilibrium transitions of self-organizing complex systems, resulting from bifurcations, 4) The measurement problem in Quantum Theory, 5) Statistical Mechanics, Irreversibility and Chaos, 6) Network Dynamics.

The Aristotelian transition to actuality is conditioned by entelechy, filtering or shaping the actual from the possibilities inherent in our models.

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