

## Part 1: Axiom Overview Table

No.	Axiom Title	Definition
0	State vs. Configuration	A state is a quantitatively or observably distinguishable property of an element. A configuration is the structured arrangement of system elements.
1	Continuity of State Change	States change continuously unless an external discontinuity acts.
2	Discrete Configuration Transitions	Configurations change discretely along defined transition paths.
3	System Elements and Model Termination	System elements are either atomic or recursive. Model depth is finite.
4	Existence of States and Configurations	States always exist. Configurations either exist or do not exist.
5	Realization of Configurations	Configurations are either realized and effective, or not realized.
6	Actuality and Potentiality	Realized configurations exist in the mode of actuality; non-realized (but structured) configurations exist in the mode of potentiality.

## Part 2: Predicate Logic Formulation of Each Axiom

**Axiom 0:** -  $\forall x(State(x) \rightarrow Property(x) \wedge \neg Structure(x)) \wedge \forall y(Configuration(y) \rightarrow Structure(y) \wedge Arrangement(Subset(y)))$

**Axiom 1:** -  $\forall z(State(z) \wedge \neg Interaction(z) \rightarrow continuous(z))$

**Axiom 2:** -  $\forall c_1, c_2(Configuration(c_1) \wedge Configuration(c_2) \wedge Transition(c_1, c_2) \rightarrow discrete(Transition(c_1, c_2)))$

**Axiom 3:** -  $\forall e(Element(e) \rightarrow Object(e) \vee System(e)) \wedge \exists d(Depth(System) = d \wedge finite(d))$

**Axiom 4:** -  $\forall s(State(s) \rightarrow Exists(s)) \wedge \forall c(Configuration(c) \rightarrow Exists(c) \vee \neg Exists(c))$

**Axiom 5:** -  $\forall c(Configuration(c) \rightarrow (Realized(c) \leftrightarrow (Exists(c) \wedge Interacts(c))))$

**Axiom 6:** -  $\forall c(Configuration(c) \wedge Realized(c) \rightarrow Mode(c, Actuality)) \wedge (\neg Realized(c) \wedge Structurable(c) \rightarrow Mode(c, Potentiality))$

### Part 3: Paradox Test Cases

Paradox	Everyday Interpretation	kQP (classical)	DSCRQT (AQP)
Schrödinger's Cat	"Undecided: dead or alive?"	Superposition until measurement	State structure exists, but configuration is not realized (Potentiality) until transition through interaction
Tree falls in forest with no witness	"Was it heard?"	No clear assertion	Movement state exists; configuration is realized if interaction occurred (e.g., ground vibration)
State without observer	"No reality without observation?"	No wavefunction without collapse	States always exist; observation is not metaphysical but a configuration transition

### Endnote

The DSCRQT model allows a differentiated ontological treatment of quantum-like processes without mystifying the observer and without maintaining classical paradox theater.

It relies on complex state representation, structural configurations, relational transitions, and the Aristotelian distinction between act and potency (Actuality vs. Potentiality).

**END**