

Dissemination of Culture using a Quantum Model

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Axelrod's cultural dissemination model introduces an agent-based simulation where random agent interactions transmit culture through an agent population, and the system evolves over time to form multiple stable homogeneous cultural regions. We expand upon this work by introducing a quantum model. Agents are represented by quantum registers, and agent interactions are quantum operations performed on those registers. Results indicate that multiple stable heterogeneous cultural regions form, the number of regions is greater in the quantum model, and there is a greater diversity in the sizes of the cultural regions.