

The Entangled Trinity: Quantum Physics and Theology. By Ernest L. Simmons.
Minneapolis, MN: Fortress, 2014. Pp. x, 205. \$39.

The notion of panentheism has become quite popular among Christian systematic theologians in recent years. It represents a middle position between pantheism and classical theism. Yet how the material world can exist “in” God and still retain its own finite identity and specific mode of operation remains a matter of debate. Simmons proposes two major concepts out of contemporary quantum physics, namely, entanglement or relational holism and superposition or complementarity. These can serve as guiding metaphors for understanding a “perichoretic” relation between God and the world. S. divides his book into three parts. First, he discusses how systematic theology is based on both faith and reason. He then reviews the history of trinitarian theology from its biblical beginnings to the Council of Nicaea (325 CE), and from Constantinople I to the Reformation. Finally, the third part extends the historical review into the 20th century, covering the works of Karl Barth, Karl Rahner, Jürgen Moltmann, and Wolfhart Pannenberg. Only then does S. take up the challenge of explaining in general terms (with multiple concrete illustrations drawn from ordinary human experience) the complicated notions of entanglement and superposition, first as they are understood in quantum physics, and then as they can be applied to the notion of trinitarian panentheism.

Entanglement can be linked to, for example, the notion of *perichoresis* in the teachings of the Greek Church Fathers. The divine Persons are entangled with one another in that they “flow in and out of one another in a continuous way; no separation is possible, though distinction is” (151). S. does not, however, further explain how the Persons remain distinct from one another. He seems to avoid commitment to any metaphysical scheme beyond a generalized endorsement of process-oriented approaches to reality. In this way he can appeal to philosophers and theologians with different philosophical background—for example, Philip Clayton from a process-oriented background and Denis Edwards from the perspective of transcendental Thomism (155–59).

Quantum theory uses the notion of superposition to indicate how two states of a quantum entity are simultaneously possible, but only one is actual at any given moment (e.g., light as potentially both wave and particle but never both at the same time and in the same location). As S. sees it, superposition nicely describes the relation between the immanent and the economic Trinity: “the economic Trinity is superimposed on the eternal potentiality of the immanent Trinity and emerges in particularity in relationship to the creation” (153). But is the immanent Trinity in itself an actuality quite apart from its self-manifestation as the economic Trinity within salvation history? Admittedly, S. also claims that “God is in the world but is more than the world. The world is not divine but is totally related to the divine” (153). But how these two understandings of the God–world relationship are compatible is unclear.

S. deserves much credit for attempting to explain in relatively simple language the concepts of entanglement and superposition first within theoretical physics and then analogously in a panentheistic understanding of the God–world relationship. But I am uneasy with his recourse to two metaphors, the systematic relationship of which remains a matter of debate even among quantum physicists. In my view, what is further needed in this intriguing comparison of concepts from quantum theology and trinitarian theology is a master metaphor, akin to the Aristotelian understanding of substance, that would explain the dynamic relationship between relational holism and superposition in a more readily intelligible manner. Such a master metaphor might be the notion of system. Systems, after all, are composed of entangled or dynamically interrelated parts or members. Likewise, systems are normally ordered to one another hierarchically with the higher-order system superimposing its own mode of operation on lower-order systems, while safeguarding the integrity and intrinsic mode of operation of those lower-order systems as its constituent parts—for example, the reciprocal relation between individual molecules and the cells of which they are constituent parts. A possible objection to this proposal from proponents of Thomistic metaphysics might well be that the unity of the triune God is then not the unity of a transcendent individual entity or substance, but the unity of a transcendent life-system co-constituted by the three divine Persons in and through their dynamic interrelationship. Given the increased prominence of the category of relationship (as opposed to that of substance) within contemporary trinitarian theology, however, an imaginative leap to the new concept of system as master metaphor for understanding reality should not be insurmountable.

Joseph A. Bracken, S.J.
Xavier University, Cincinnati (Emeritus)