**The philosophical implications of the loophole-free violation of Bell’s inequality: Quantum entanglement, timelessness, triple-aspect monism, mathematical Platonism and scientific morality.**

Gilbert B. Côté

The complex quantum experiment and convincing results published in Nature by Hensen *et al.* (2015) show once more, and this time without any doubt, that the quantic world is non-local and that some of its properties are not predetermined, i.e. some aspects of reality are not subject to space-time constraints and are randomly determined. In other words, we can no longer escape the scientific conclusion that timelessness and abstractness exist alongside concrete space-time.

Although this standpoint is still labelled as “weird”, “scary” or “spooky” by several commentators, it nevertheless provides the basis for the paradigm shift necessary to explain the increasingly predominant view in physics that information, energy and matter are equivalent and constitute three essential, inter-related modes of existence, with incessant exchanges and transfers from one mode to the other. All three modes are real and make up the triple-aspect monism of reality: abstract, virtual and concrete. Information is abstract, infinite, timeless and immutable; it contains all numbers and the laws of physics. On the contrary, matter (space-time) is finite, discontinuous and ephemeral; it follows the rules of general relativity and evolves constantly. Finally, the quantum realm forms a measurable, hybrid bridge between information and matter: it consists of abstract probability functions that have space-time variables (Côté, 2013b).

The loophole-free experiment of Hensen et al. proves that decoherence of entangled quanta does not involve matter rushing faster than the speed of light, but is truly instantaneous, i.e. timeless, without any speed involved. The acceptance of the reality of timelessness and the recognition of quanta as abstract probability functions (that do not physically travel at any speed) also automatically solves the riddle of the so-called wave-particle duality.

All this implies that the modern version of mathematical Platonism is a logical necessity: numbers exist in an abstract realm alongside space-time, so that mathematicians do not invent their theorems but discover them (Côté, 2013a). It also implies that our universe is not predetermined and that we have free will: we can determine our own destiny in a universe solidly – although paradoxically – based on randomness (Set and Rêve, 2012).

Eventually, one is logically led to consider that energized, infinite information is the very definition of a universal consciousness, as variously interpreted by philosophy and religion. Scientists who recognize this new dimension can now apply their methods to discover and establish the principles of a universal, scientific morality and join the humanists who already believe that we have the capacity to ethically determine the path of our evolution (Harris, 2010).

Let us hope we will do it well.

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