

## The Many Worlds Fantasy<sup>1</sup>

In quantum theory quantum collapse is *random*, so an unstable atom can radiate a photon when it wants to, as it does. Such events that occur with no necessary physical history are a threat to the idea that only physical events cause physical events. Indeed if every physical event arises from a random quantum collapse, as quantum theory says, physical determinism falls entirely. Physical events might *connect* to each other by Newton's laws, but they would no longer be *physically caused*.

To meet this threat, in 1957 Everett proposed many-worlds theory - that every quantum choice spawns a new universe. If every quantum option actually occurs in an alternate world, the *multi-verse* makes no choices and the ghost of quantum randomness is dispelled. This theory was initially seen as ridiculous, and by definition it can never be tested, but physicists today prefer it 3:1 over the Copenhagen kludge (Tegmark & Wheeler, 2001) p6. It says that the innumerable photons, electrons and quarks of every galaxy in the universe, each making up to  $10^{43}$  choices per second, have for the last fourteen billion years created whole new universes with every quantum choice. It is not hard to see that:

“... universe of universes would be piling up at rates that transcend all concepts of infinitude.” (Walker, 2000) p107.

That in the time it took you to read this sentence untold numbers of *universes* have been created is the best answer that conventional physics has to the challenge of quantum randomness! The next best is the Copenhagen contrivance that meaning is meaningless. Many worlds theory doesn't just offend Occam's razor, it outrages it, and the *clockwork multi-verse* just reincarnates the *clockwork universe* quantum theory demolished last century. Deutsch's attempt to rescue this zombie theory<sup>2</sup> by letting a finite number of universes “repartition” after each choice just recovers the original problem (Deutsch, 1997), as what chooses which worlds are dropped? More fundamentally, why would the universe, like a doting parent with a video-camera, copy everything we *might* do? The ex-post-facto argument of many worlds shows how far some will go to deny the implications of quantum theory.

In quantum realism, quantum randomness is just a server effect. Our servers generate “random” values in simulated worlds, so a quantum server can be random to us.

Deutsch, D. (1997). *The Fabric of Reality*. Penguin Press: Allen lane.

Tegmark, M., & Wheeler, J. A. (2001). 100 Years of the Quantum. *Scientific American*, (Feb), p68–75.

Walker, E. H. (2000). *The Physics of Consciousness*. New York: Perseus Publishing.

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<sup>1</sup> This is section 3.7.1 from Chapter 3 [The Light of Existence](#), of the book Quantum Realism by Brian Whitworth, currently under development. The link gives a free early access to the whole chapter. This work is ©Brian Whitworth 2014 but shared under a [Creative Commons Attribution-Noncommercial license](#).

<sup>2</sup> Zombie theories make no new predictions and can't be falsified. Like zombies, they have no progeny nor can they be theoretically falsified, i.e. "killed", as they are already scientifically “dead”.