

Refutation of the Free Will hypothesis based on its defective FIN

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We assume the method and apparatus of Meth8/VL4 with τ as the designated *proof* value, F as contradiction, N as truthity (non-contingency), and C as falsity (contingency). The repeating fragment(s) of 16-valued truth table(s) is row-major and horizontal.

LET $p, q, r, w, x, y, z: j, k, l, w, x, y, z;$
 $\&$ And; $+$ Or; $-$ Not Or; $>$ Imply, \rightarrow , greater than; $<$ Not Imply, lesser than;
 $=$ Equivalent; $@$ Not Equivalent;
 $(p@p)$ ordinal zero, 0; $(\%p>\#p)$ ordinal 1; $(\%p<\#p)$ ordinal 2; $(p=p) \tau$, *proof*.

From: Conway, J.; Kochen, S. (2006). The free will theorem. arxiv.org/pdf/quant-ph/060409.v1.pdf

"The SPIN axiom: A triple experiment for the frame (x, y, z) always yields the outcomes 1,0,1 in some order. We can write this as: $x \rightarrow j, y \rightarrow k, z \rightarrow \ell$, where j, k, ℓ are 0 or 1 and $j + k + \ell = 2$.
 ... [I]f measurements in the order x, y, z for one particle produced $x \rightarrow 1, y \rightarrow 0, z \rightarrow 1$, then measurements in the order y, z, x for the second particle would produce $y \rightarrow 0, z \rightarrow 1, x \rightarrow 1$."
(1.1)

$((((p=((p@p)+(\%p>\#p)))\&(q=((q@q)+(\%q>\#q)))\&(r=((r@r)+(\%r>\#r)))\&(((p+q)+r)=(\%p<\#p))) > (((x>p)\&((y>q)\&(z>r)))\&(((y>q)\&(z>r))\&(x>p))) ;$
TTTT TTTT TTTT TTTT (1.2)

"The TWIN axiom: For twinned spin 1 particles, if the first experimenter A performs a triple experiment for the frame (x, y, z) , producing the result $x \rightarrow j, y \rightarrow k, z \rightarrow l$ while the second experimenter B measures a single spin in direction w , then if w is one of x, y, z , its result is that $w \rightarrow j, k, \text{or } l$, respectively."
(2.1)

$((((x>p)\&((y>q)\&(z>r)))\&w)>((w=(x+(y+z)))>(w>(p+(q+r)))) ;$
TTTT TTTT TTTT TTTT (2.2)

The FIN axiom: "'effective causality,' that effects cannot precede their causes."
(3.1)

$(p>q)>\sim(q<p) ;$
TTFT TTFT TTFT TTFT (3.2)

As rendered, Eqs. 1.2 and 2.2 are tautologous, but 3.2 is *not* tautologous. This means axioms for SPIN and TWIN are tautologous, but the axiom for FIN is *not* tautologous.

Because the assumption of axiom FIN is essential to the authors' proof, the Free Will theorem is also *not* tautologous and refuted by its own derivation. This means the Free Will theorem can not be reasserted by resurrection as such.