Note on refutation of the simulation argument and incompleteness of information

Abstract: The conjecture using a Bayesian pipe symbol (|), instead of the fractional division symbol (/) as originally published, is *not* tautologous, thereby relegating it to a *non* tautologous fragment of the universal logic VŁ4.

We assume the method and apparatus of Meth8/VŁ4 with Tautology as the designated proof value, **F** as contradiction, N as truthity (non-contingency), and C as falsity (contingency). The 16-valued truth table is row-major and horizontal, or repeating fragments of 128-tables, sometimes with table counts, for more variables. (See ersatz-systems.com.)

LET ~ Not, ¬ ; + Or, ∨, ∪, ⊔ ; - Not Or; & And, ∧, ∩, ⊓ ,·; \ Not And;
> Imply, greater than, →, ⇒ , ↦, ≻, ⊃, ↠ ; < Not Imply, less than, ∈, ≺, ⊂, ⊬, ⊭, ↞, ≲ ;
= Equivalent, ≡, :=, ⇔, ↔, ≜, ≈, ≃ ; @ Not Equivalent, ≠;
% possibility, for one or some, ∃, ◊, M; # necessity, for every or all, ∀, □, L;
(z=z) T as tautology, ⊤, ordinal 3; (z@z) **F** as contradiction, Ø, Null, ⊥ , zero;
(%z>#z) N as non-contingency, Δ, ordinal 1; (%z<#z) C as contingency, ∇, ordinal 2;
~(y < x) (x ≤ y), (x ⊆ y), (x ⊑ y); (A=B) (A~B).
Note for clarity, we usually distribute quantifiers onto each designated variable.

From: Goyal, S. (2019). The simulation argument and incompleteness of information. vixra.org/pdf/1906.0073v1.pdf [no email]

Abstract: Nick Bostrom, in his paper titled "Are you living in a computer simulation?" [Philosophical Quarterly. 2003, 53, 243-255], presented an argument as to why the possibility of an advanced human civilization that can generate human-like observers greatly bolsters the view that we might be living in a simulation. Bostrom argues why the fraction of simulated observers among all types of observers with human-like experiences would be close to one, provided one accepts some assumptions, and then the bland principle of indifference dictates as to why one must thus, assuming himself to be a random observer, put the highest credence in the option which is the most common. Bostrom's case rests on the idea that we lack evidence to shift our credence the other way, against the probabilistic conclusions, significantly, however, I argue that we are justified in doing so and a priori. Using Bayesian analysis, I show that the conclusion of the argument need not possess similar credence as the argument suggests, even granting all its assumptions.

5. Bayesian analysis of the argument: Now, applying Bayes' theorem ('R' as discussed signifies "the real world") -

Remark 5.0: From vixra.org/pdf/1906.0327v1.pdf, we now read the author's intended meaning of the equation below. The fractional division symbol (/), with inverse of the multiplication symbol (×), comes to mean the pipe symbol (|) as a Bayesian form which injects an implication operator as follows. "P(We live in R | R exists)" means the probability of "if R exists", then "We live in R". Similarly, "P(R exists | We live in R)" means the probability of if "We live in R", then "R exists".

Hence this rendition without the fractional division symbol as:

P(We live in R | R exists)=
[[P(R exists | We live in R)×P(We live in R)] |
[[P(R exists | We live in R)×P(We live in R)]+
[P(R exists | We live in a simulated world)×P(We live in a simulated world)]]]
(5.1.1)

is rewritten to mean the author’s intended, as:

P(If R exists, then We live in R)=
[If [[P(If We live in R, then R exists)×P(We live in R)]+
[P(If We live in a simulated world, then R exists)×P(We live in a simulated world)]],
then [P(If We live in R, then R exists)×P(We live in R)]] (5.2.1)

LET p, r, s: P, live in Real world, live in Simulated world.

(p&(%r>r))=((((p&(r>%r))&(p&r))+((p&(s>%r))&(p&s)))>((p&(r>%r))&(p&r))) ;
FN**F**N **F**T**F**T **F**T**F**T **F**T**F**T **F**T**F**T (5.2.2)

Eq. 5.2.2 as rendered is *not* tautologous, thereby refuting the conjecture.