

Refutation of “Refutation of the simulation argument and incompleteness of information”

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Abstract: Colin James III used $\forall\exists$ in his paper titled “Refutation of the simulation argument and incompleteness of information” [James III, C. (2019); <http://vixra.org/pdf/1906.0090v1.pdf>] to show that the equation used to refute Nick Bostrom’s argument [Philosophical Quarterly. 2003, 53, 243-255] in the original paper titled “The Simulation Argument and Incompleteness of Information” [Goyal, S. (2019); <http://vixra.org/pdf/1906.0090v1.pdf>] is non tautologous and hence the refutation fails. In this paper, I attempt to show how the use of Meth8/ $\forall\exists$ as done in the refutation of the original paper critiquing Bostrom’s argument is itself non tautologous and hence the refutation fails.

Keywords: $\forall\exists$; Quaternary Logic; Meth8; Bayes’ Theorem; Simulation Argument; Tautology

Analysis

Colin James III (2019) converted the standard Bayes’ theorem into a quaternary logic analog and then attempted to show that the equation derived from the theorem is rendered non tautologous in the quaternary logic system [1]. The specific equation derived from Bayes’ theorem that is converted is found in the original paper by Shreyansh Goyal (2019) which is a critique of Bostrom’s simulation argument [2]. Bostrom’s simulation argument refers to an argument developed by Nick Bostrom (2005) that uses mathematical reasoning to lend credence to the idea that given certain assumptions, it is more likely than originally conceived that humans are simulated beings [3].

One of the partial conversions of a term in the paper by James II, which will be the focus of this paper, is as follows –

$R \text{ exists} | \text{We live in } R = \%r|r$

Where ‘p’ is ‘P’, and ‘r’ is ‘live in Real world’ [1].

Referring to the original paper, the partial term refers to the probability of real world existing given that we (humans) live in real world [2]. Considering we live in a real world, i.e., ‘We live in R’ or simply, ‘r’ is true, R would exist and ‘R exists|We live in R’ would be true (analogous to ‘1’ in binary logic system and ‘3’ in quaternary logic systems).

For Colin James III’s conversion to be accurate representation of the term in the original paper, it must itself be tautologous to the partial term. This means that when ‘r’ is true, ‘ $\%r|r$ ’ must be true as well.

If ‘r’ is true, then ‘ $\%r$ ’, which means ‘possibility of r’, is also true. ‘ $\%r|r$ ’ means ‘not (possibility of r and r)’ [1]. Considering both ‘r’ and ‘ $\%r$ ’ are true, ‘ $\%r|r$ ’ evaluates to false.

Because ‘R exists|We live in R’ and ‘ $\%r|r$ ’, both evaluate to different logical values (when ‘r’ is true), they are not tautologous and thus, refutation of the original paper by James III appears to be invalid.

References

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