Refutation of Dezert-Smarandache theory © Copyright 2018 by Colin James III  All rights reserved.

The Dezert-Smarandache theory arises from the following scenario with Alice and Bob as suspects.

That either Alice or Bob is not innocent or both Alice and Bob are not innocent is a tautology. \hspace{1cm} (1.1)

Using Meth8/VL4,

\begin{align*}
\text{LET } p, q: \text{Alice; Bob; } &+ \text{ Or; } &\& \text{ And; } > \text{ Imply; } = \text{ Equivalent;} \\
\% \text{ possibility, for one or some; } &\# \text{ necessity, for all; } (p=p) \text{ tautology; } (%p>\#p) \text{ ordinal one.}
\end{align*}

The designated \textit{proof} value is \(T\); other logical values are \(F\) \textit{contradiction}, \(N\) \textit{truthity}; and \(C\) \textit{falsity}. The 16-valued proof table is row-major and horizontal.

\begin{align*}
(p+q)+(p&q)=(p=p) \; ; & \quad \text{F} \text{TTT F} \text{TTT F} \text{TTT F} \text{TTT} \quad (1.2)
\end{align*}

If Eq. 1.1 introduces probability as a numeric variable, then we rewrite as:

That either Alice or Bob is not innocent or both Alice and Bob are not innocent is one. \hspace{1cm} (2.1)

\begin{align*}
(p+q)+(p&q)=(%p>\#p) \; ; & \quad \text{C} \text{NNN C} \text{NNN C} \text{NNN C} \text{NNN} \quad (2.2)
\end{align*}

Eqs. 1.2 and 2.2 as rendered are \textit{not} tautologous. This refutes the Dezert-Smarandache theory.