

**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. (1.1)

Using Meth8/VL4,

LET p q: Alice; Bob; + Or; & And; > Imply; = Equivalent;  
% possibility, for one or some; # necessity, for all; (p=p) tautology; (%p>#p) ordinal one.

The designated *proof* value is T ; other logical values are F *contradiction*, N *truthity*; and C *falsity*. The 16-valued proof table is row-major and horizontal.

$(p+q)+(p\&q)=(p=p)$  ; FTTT FTTT FTTT FTTT (1.2)

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. (2.1)

$(p+q)+(p\&q)=(\%p\>\#p)$  ; CNNN CNNN CNNN CNNN (2.2)

Eqs. 1.2 and 2.2 as rendered are *not* tautologous. This refutes the Dezert-Smarandache theory.