Refutation of neutrosophy as generalized from Hegel's dialectic

We assume the method and apparatus of Meth8/VŁ4 where Tautology is the designated proof value, F is contradiction, N is truthity (non-contingency), and C is falsity (contingency). The 16-valued truth table is row-major and horizontal. We evaluate the following in one variable of p.

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In philosophy he introduced in 1995 the 'neutrosophy', as a generalization of Hegel's dialectic, which is the basement of his researches in mathematics and economics, such as 'neutrosophic logic', 'neutrosophic set', 'neutrosophic probability', 'neutrosophic statistics'.

Neutrosophy is a new branch of philosophy that studies the origin, nature, and scope of neutralities, as well as their interactions with different ideational spectra. This theory considers every notion or idea \(<A>\) together with its opposite or negation \(<\text{Anti-A}>\) and the spectrum of "neutralities" \(<\text{Neut-A}>\) (i.e. notions or ideas located between the two extremes, supporting neither \(<A>\) nor \(<\text{Anti-A}>\)). The \(<\text{Neut-A}>\) and \(<\text{Anti-A}>\) ideas together are referred to as \(<\text{Non-A}>\). According to this theory every idea \(<A>\) tends to be neutralized and balanced by \(<\text{Anti-A}>\) and \(<\text{Non-A}>\) ideas - as a state of equilibrium. As a consequence, he generalized the triad thesis-antithesis-synthesis to the tetrad thesis-antithesis-neutrothesis-neutrosynthesis ...

LET:  
#  necessity, for all (as in for every );  %  possibility, for one (as in for some) ;  
~  Not ;  +  Or ;  -  Not Or ;  &  And ;  \  Not And ;  =  Equivalent ;  @  Not Equivalent ;  
>  Imply, greater than ;  <  Not Imply, less than ;  (%p>#p)  1 ;  ((%p>#p)-(%p>#p))  0 ;

\[p\]  A as notions or ideas ;  
\[#p\]  every \(<A>\), hereafter, and thesis \((0.1.1) ; (0.1.2)\)

\[\sim#p\]  \(<\text{Anti-A}>\) not every notion or idea, hereafter, and antithesis \((0.2.1) ; (0.2.2)\)

\[\sim(#p+\sim#p)\]  Not \((<A>\ Or \ <\text{Anti-A}>)\), as in neither \#p nor \~#p, and synthesis \((0.3.1) ; (0.3.2)\)

\(<\text{Neut-A}>\) spectrum of "neutralities" as notions or ideas between extrema of \(<A>\) and \(<\text{Anti-A}>\). In other words, \(<\text{Neut-A}>\) is greater than \(<\text{Anti-A}>\) and is less than \(<A>\), but not equal to either, as neutrothesis \((1.1)\)

\[
(\sim(#p+\sim#p)\sim#p)\&(\sim(#p+\sim#p)<#p) ; \quad \text{FFFF FFFF FFFF FFFF (1.2)}
\]

\[\sim(#p+\sim#p)\sim#p)\&(\sim(#p+\sim#p)<#p)\sim#p ; \quad \text{FFFF FFFF FFFF FFFF (2.2)}
\]

every \(<A>\) tends to be neutralized and balanced by \(<\text{Anti-A}>\) and \(<\text{Non-A}>\) as a state of equilibrium, and neutrosynthesis. That state is assumed to be zero.

\[
(<A>) \sim [\text{<Anti-A>} + \text{<Non-A>}] = 0 \quad (3.1)
\]

\[#p>(\sim#p\&(\sim(#p+\sim#p)\sim#p)\&(\sim(#p+\sim#p)<#p)) \sim#p) ; \quad \text{TCTC TCTC TCTC TCTC (3.2)}
\]
As a consequence, he generalized the triad thesis-antithesis-synthesis to the tetrad thesis-antithesis-neutrothesis-neutrosynthesis [i.e., the triad is a subset of the tetrad] as

\[
\text{Eqs. } (0.1.1\&0.2.1)>0.3.1 < (0.1.1\&0.2.1)(1.1>3.1) \quad (4.1)
\]

\[
((p\&\neg p)\neg (p+p)) < (p\&\neg p)((\neg (p+p)+p)\neg p)\&( (p+p)(\neg p))\&(p(p+p)(\neg p))\&(p(p+p)(\neg p))) ; FFFF FFFF FFFF FFFF \quad (4.2)
\]

Eq. 4.2 as rendered is not tautologous and a contradiction. This refutes the definition of neutrosophy and consequently invalidates it as a generalization of Hegel's dialectic.

**Remark:** Hegel's dialectical philosophy lacks a quantified and modalized symbolic logic; to map it into a modal logic model checker is hence potentially problematic.