

Abstract: We evaluate these topics using the Meth8/VL4 modal logic model checker:

Refutation of the fundamental problem of Christology

We assume the method and apparatus of Meth8/VL4 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 \sim Not, \neg ; + Or, \vee , \cup , \sqcup ; - Not Or; & And, \wedge , \cap , \sqcap , \cdot , \circ , \otimes ; \ Not And;
 $>$ Imply, greater than, \rightarrow , \Rightarrow , \mapsto , $>$, \supset , \Rightarrow ; $<$ Not Imply, less than, \in , $<$, \subset , \nsubseteq , $\not\subset$, \leftarrow , \lesssim ;
 $=$ Equivalent, \equiv , $:=$, \Leftrightarrow , \leftrightarrow , \triangleq , \approx , \simeq ; @ Not Equivalent, \neq , \oplus ;
 $\%$ possibility, for one or some, \exists , $\exists!$, \diamond , M; # necessity, for every or all, \forall , \square , L;
 $(z=z)$ T as tautology, \top , ordinal 3; $(z@z)$ F as contradiction, \emptyset , Null, \perp , zero;
 $(\%z\>\#z)$ N as non-contingency, Δ , ordinal 1; $(\%z\<\#z)$ C as contingency, ∇ , ordinal 2;
 $\sim(y < x)$ ($x \leq y$), ($x \subseteq y$), ($x \sqsubseteq y$); $(A=B)$ ($A \sim B$).
 Note for clarity, we usually distribute quantifiers onto each designated variable.

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The fundamental problem of Christology is the apparent contradiction of Christ's having two apparently complementary – contradiction-entailing – natures, the divine and the human (see Cross 2011). This problem may be sharpest for Conciliar Christology, as in Timothy Pawl's work (2014; 2016); however, the prima facie problem is clear for any orthodox or traditional Christianity according to which Christ has two apparently complementary natures.

Here is one way to see the fundamental problem:

1. Christ is immutable (in virtue of Christ's divine nature).
 2. Christ is mutable (in virtue of Christ's human nature).
 3. Therefore, Christ is both mutable and not mutable (via logic).
- (0.1)

Remark 0.1: We reject Eq. 0.1 as inexact for Anglo Catholicism and rewrite it as:

If God created man who is mutable then if Christ is God who is not mutable and Christ is God and man, then Christ is not mutable.

(4.1)

LET p, q, r, s : God, Christ, man, mutable.

$$(((p > (r > s)) > ((q = p) > \sim s)) \& (q = (p \& r))) > (q > \sim s);$$

TTTT TTTT TTTT TTTT (4.2)

Remark 4.2: Eq. 4.2 is tautologous, confirming there is no "fundamental problem".

Eq. 4.2 also has the advantage of showing that Christ *as* mutable is *not* tautologous:

$$(((p > (r > s)) > ((q = p) > \sim s)) \& (q = (p \& r))) > (q > s);$$

TTTT TTTF TTTT TTTT (4.3)

Moreover for the "fundamental problem" as consequent, for Christ as mutable *and* not mutable, that also is *not* tautologous:

$$(((p > (r > s)) > ((q = p) > \sim s)) \& (q = (p \& r))) > (q > (\sim s \& s)) ;$$

TTTT TTT**F** TTTT TTTT

(4.4)

Eq. 4.2 also fits as a consequent to the primary antecedent of defining God the Holy Trinity as:

If God is equivalent to Father, Son, and Holy Ghost, then
 if God created man who is mutable then if Christ is God who is not mutable and
 Christ is God and man, then Christ is not mutable. (6.1)

LET p, q, r, s, t, u: God, Christ, man, mutable, Father, Holy Ghost.

$$(p = ((t \& q) \& u)) >$$

$$(((p > (r > s)) > ((q = p) > \sim s)) \& (q = (p \& r))) > (q > \sim s) ;$$

TTTT TTT TTT TTTT}128

(6.2)

Remark 6.2: In the consequent for $(q > s)$ or $(q > (\sim s \& s))$, the truth table result is the same as for Eqs. 4.3 and 4.4 as TTTT TTT**F** TTTT TTTT}128.

After all of this, we ask why mutability was claimed as a fundamental problem of Christology in the first place, and can only point to a root cause as theology *outside* that of the Historic Church.

This example utilizes application of Meth8/VŁ4 to conjectures in analytic theology.