Refutation of the Church-Rosser theorem

Abstract: The Church-Rosser theorem evaluates as not tautologous, hence forming a non tautologous fragment of the universal logic VL4.

We assume the method and apparatus of Meth8/VŁ4 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.)

From: en.wikipedia.org/wiki/Church–Rosser_theorem

If term a can be reduced to both b and c, then there must be a further term d (possibly equal to either b or c) to which both b and c can be reduced. \( (1.1) \)

\[
\begin{align*}
\text{LET} & \quad p, q, r, s: \quad a, b, c, d. \\
(p > (q \& r)) & > ((s = (q + r)) > ((q \& r) > s)) ;
\end{align*}
\]

\[
\begin{array}{cccc}
TTTT & TTNN & TTTT & TTTT \\
\end{array}
\]

\( (1.2) \)

Remark 1.2: Eq. 1.2 may also be rendered as \( % (s = (q + r)) > ((p > (q \& r)) > ((q \& r) > s)) \) with the same truth table result. \( (1.3) \)

Eqs. 1.2 and 1.3 are not tautologous, hence refuting the Church-Rosser theorem.