"Proof of Churches"

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A personal interest project, explorations of logical relations in contemporary theology using First Order Logic.

1 Exploration 1

Let C represent the attribute of Church. Let the D relationship represent $'derives from'$.

1 $\exists x \exists y \exists z((C(x) \land C(y)) \land \neg(x = y) \land (C(z) \to (z = x \lor z = y)))$:PR

2 $\exists x(D(x, l))$:PR

3 $\exists y(D(y, d))$:PR

4 $C(x) \to (D(x, l) \lor D(x, d))$:PR

5 $(C(x) \land D(x, l)) \to (P(x))$:PR

6 $\neg(D(x, l)) \to D(x, d)$:PR

7 $\quad (C(a) \land C(b)) \land \neg(a = b) \land (C(c) \to (c = a \lor c = b))$:AS

8 $\quad\quad D(a, l)$:AS

9 $\quad\quad\quad D(b, d)$:AS

10 $\quad\quad\quad (C(a) \land C(b))$: $\land$E7

11 $\quad\quad\quad (C(a))$: $\land$E10

12 $\quad\quad\quad (D(a, l)) \lor D(a, d)$:$\to$E4, 11

13 $\quad\quad\quad C(a) \land D(a, l)$: $\land$I8, 11

14 $\quad\quad\quad P(a)$:$\to$E,11, 13

15 $\quad\quad D(b, d) \to P(a)$:$\to$I9 $-$ 14

16 $\quad D(y, d) \to P(x)$: $\exists$15

17 $(C(a) \land C(b)) \land \neg(a = b) \land (C(c) \to (c = a \lor c = b)) \to D(y, d) \to P(x)$:$\to$I7 $-$ 16

18 $\therefore (C(x) \land C(y)) \land \neg(x = y) \land (C(z) \to (z = x \lor z = y)) \to D(y, d) \to P(x)$:$\to$I7 $-$ 16

If the two religious entities are at odds, it seems to imply an absolute kind of opposition. No possibility for mutual success. Granted, 'success' and 'opposition'are extremely vague terms.

Demonstration of logical principle of explosion.

$$
\begin{array}{r|l}
1 & A \text{ :PR} \\
2 & \neg A \text{ :PR} \\
\hline
3 & \bot : 1, 2 \\
4 & \therefore B \text{ :X3}
\end{array}
$$

(On 2 Nephi 2:11)

1 $\neg O \to \neg(G \land E)$:PR

2 $\quad O$:AS

3 $\quad G \land E$:$\to$E1, 2 (Skipped double negation step)

4 $\therefore G \land E$

A very simple implication from the verse.