

0.1 Principle of explosion

If axioms contradict each other then it is possible to derive anything. That is:

$$P \wedge \neg P \vdash Q$$

We can prove this. If P and $\neg P$ are true, then the following is also true:

$$P \vee Q$$

We can then use $P \vee Q$ and $\neg P$ to imply Q .

This works for any proposition Q , including $\neg Q$.

As we can derive Q and $\neg Q$, our axioms are not consistent.