

Simple statement relationship to (non-truth functional) compound statements and to truth-functional compound statements.

Table 1

Simple statement: The board is white	Non-truth func. Compound statement: I believe that the board is white.
T	T or F (relative depending on if the person really believes that the board is white; this non-truth functional compound statement's truth or falsity is not dependent on if the board really is white.)
F	T or F (relative depending on if the person really believes that the board is white; this non-truth functional compound statement's truth or falsity is not dependent on if the board really is white.)

Note: the truth or falsity of the board being white doesn't affect the truth or falsity or the non-truth functional compound statement, "I believe that the board is white." Or "I don't believe that the board is white." Such non-truth functional compound statements are true, assuming the one affirming them is telling the truth as a result of having been convinced/dissuaded via proof. ...Note: phrases like "I believe..", "I am certain..", "Maybe...", followed by a simple statement indicate a compound statement that is *not* truth-functional.

Table 2

Simple statement: The board is white	Truth-functional compound statement: It is false that the board is white
T	F
F	T

Note: the truth or falsity of the board being white does affect the truth or falsity of the truth-functional compound statement "It is false that the board is white." When the simple statement is true, the truth functional statement is false, and when the simple statement is false, the truth functional statement is true. This particular example is that of a negation truth functional statement. Its rule is to just "flip" the truth value of the original simple statement. See the truth-functional lecture notes on Negation for more detail. There are different rules for each specific kind of truth-functional compound statement. We talked about conjunction and disjunction as qualifying as truth-functional statements too, and we'll also talk about conditionals and biconditionals next time.

Table 3

Simple statement: Jesus is the Son of God	Non-truth func. Compound statement: I believe that Jesus is the Son of God
T	T or F (relative depending on if the person really believes that Jesus is the Son of God; this is not logically dependent on if Jesus really is the Son of God.) <i>although theologically there is a dependency</i>
F	T or F (relative depending on if the person really believes that Jesus is the Son of God; this is not logically dependent on if Jesus really is the Son of God.) <i>although theologically there is a dependency</i>

This table above is *logically* equivalent to table 1.

Table 4

Simple statement: Jesus is the Son of God	Truth-functional compound statement: It is false that Jesus is the Son of God
T	F
F	T

This table here is logically equivalent to table 2.