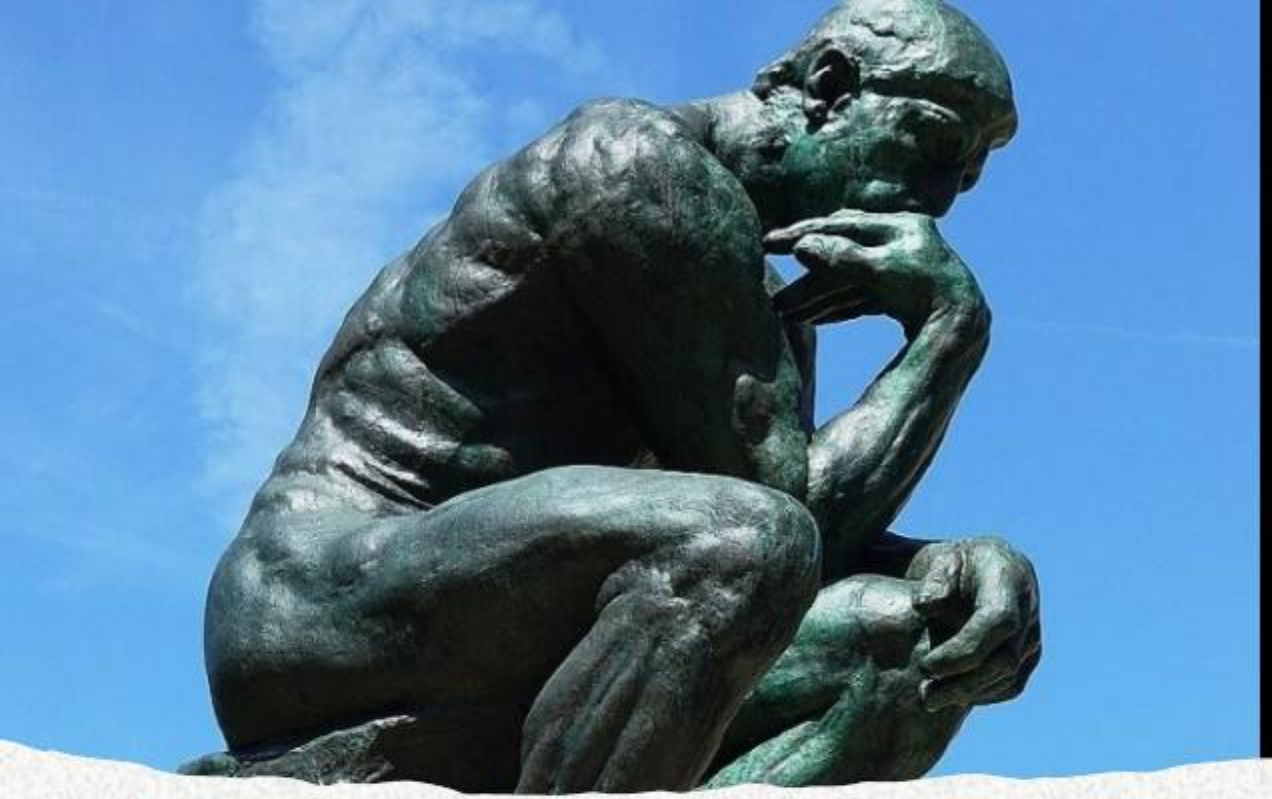
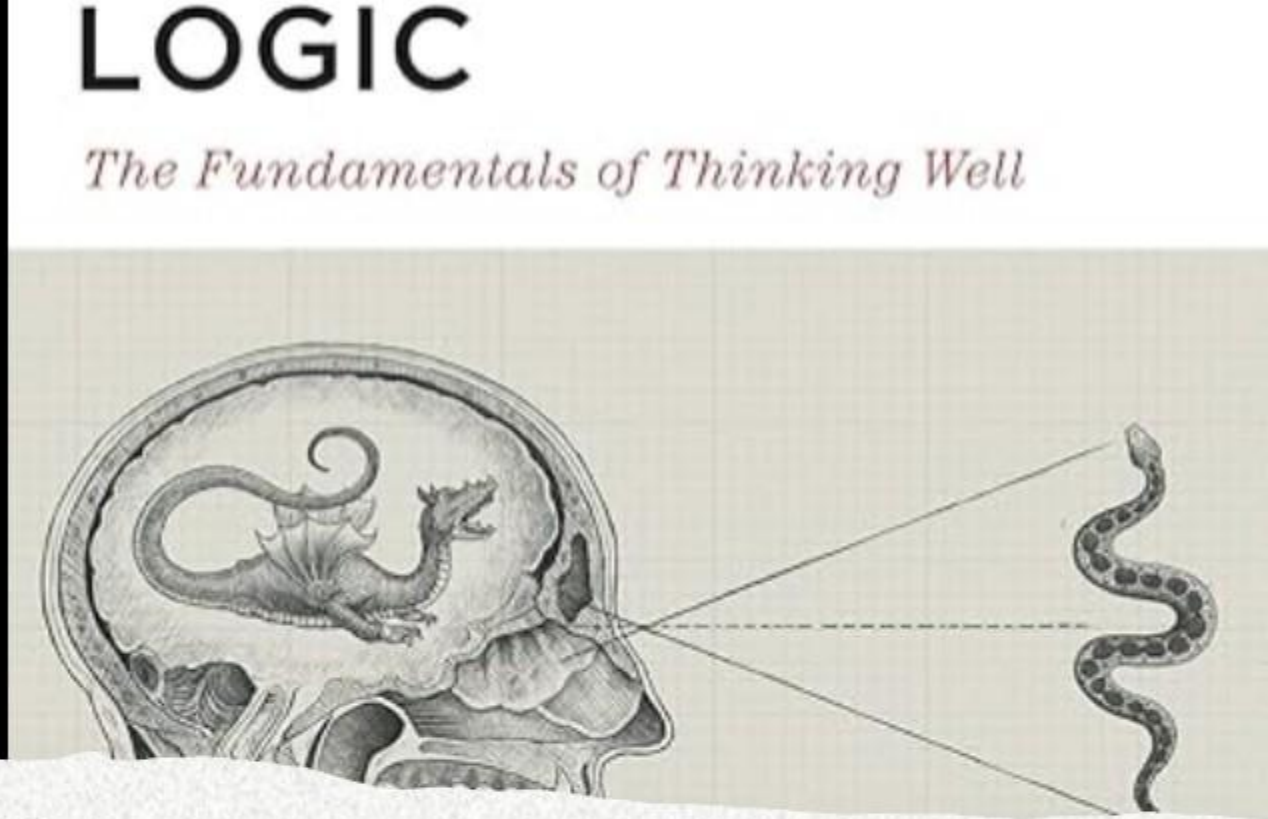




Come Let Us Reason Together: Learning To Love God With All Thy Mind

Nathan Kooienga
&
Bryan Ross

The Square of Opposition

Come Let Us Reason Together: Learning To Love God With All Thy Mind

7/13/25

Categorical Statements: Review

- All S are P. (A=Universal Affirmative)
  - Everyone who goes to our church believes in God.
  - All our church-goers believe in God.
  - All our church goers are God-believers.
  - All C are G.
- No S are P. (E=Universal Negative)
  - None of my friends understands Algebra.
  - No friends of mine understand Algebra.
  - No friends of mine are Algebra-understanders
  - No F are A.

Categorical Statements: Review

- Some S are P. (I=Particular Affirmative)
  - Many Christians know a lot about the Bible.
  - Some Christians now a lot about the Bible.
  - Some Christians are Bible-knowers.
  - Some C are B.
- Some S are not P. (O=Particular Negative)
  - Many books in the Bible do not have a references to Satan in them.
  - Some books in the Bible do not have a reference to Satan in them.
  - Some Bible books are not Satan-referencers.
  - Some B are not S.

Square Of Opposition

All S are P

No S are P

Some S are P

Some S are not P

A

E

I

O

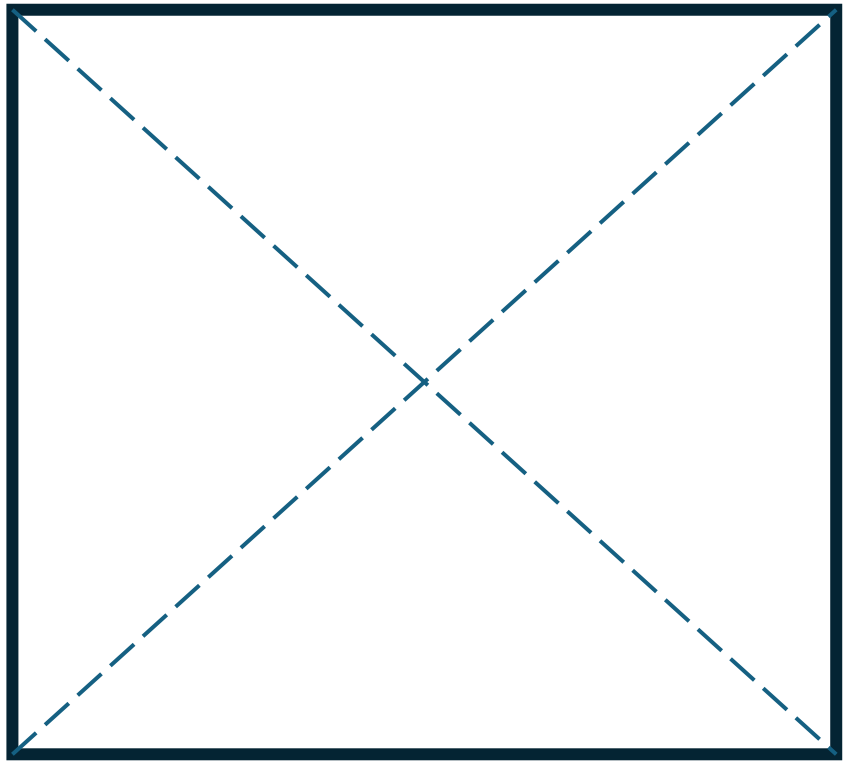
Square Of Opposition Relationships

- The square of opposition presents five different relationships between categorical statements.
- Contradiction
- Contrariety
- Subcontrariety
- Subimplication
- Superimplication

Contradiction: Relationship Between A & O; I & E Statements

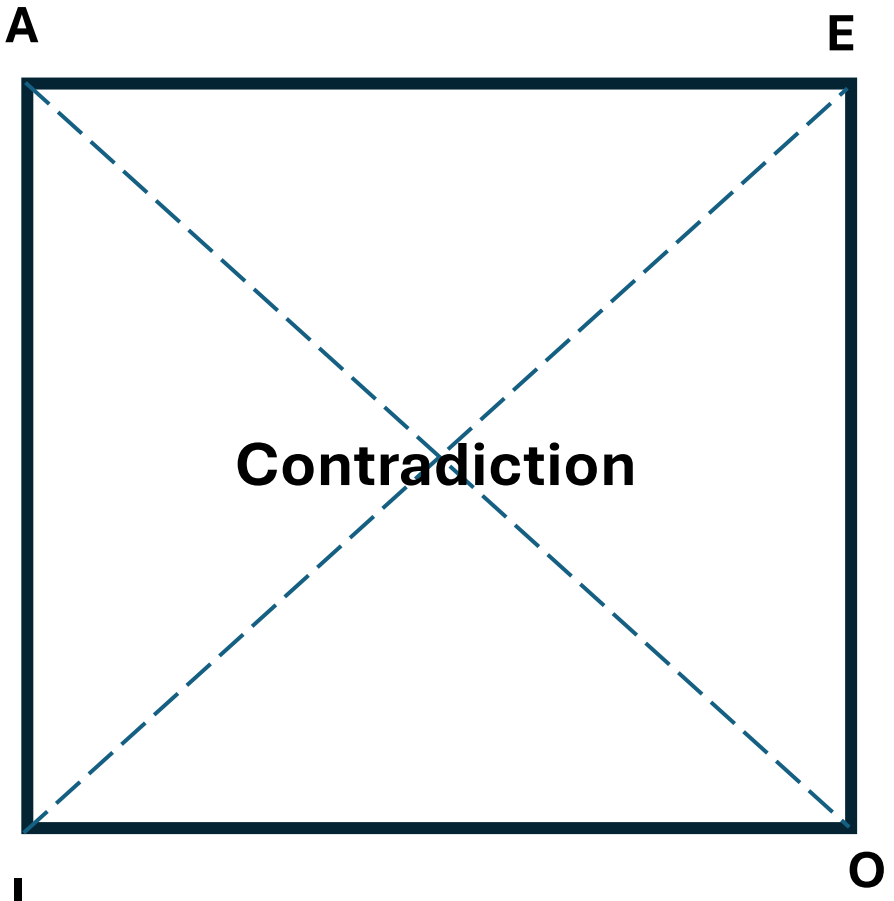
All Christians are forgiven sinners.

No Christians are forgiven sinners.



Some Christians are forgiven sinners.

Some Christians are not forgiven sinners.



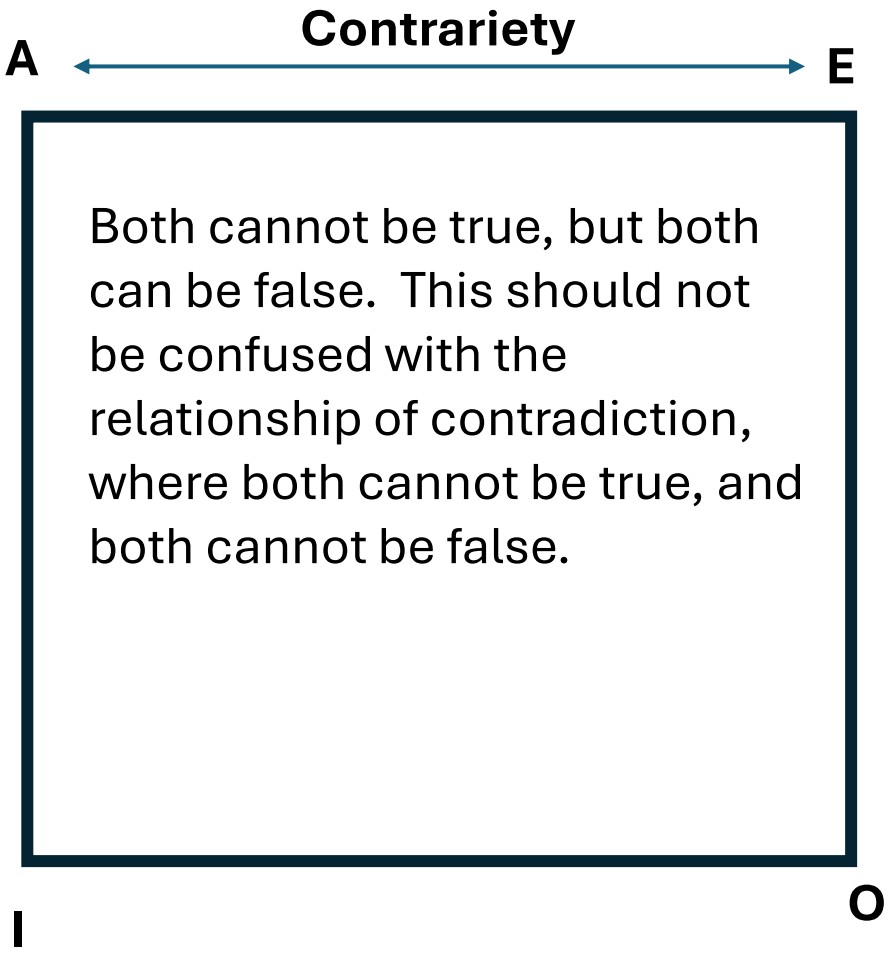
Statements in the opposite corner are contradictory statements.

Contrariety: Relationship Between Universal Statement A & E

All astronauts are men.

No astronauts are men.

- Both cannot be true, but both can be false.
- If all are men, then it is false that none are.
- If none are men, then it is false that all are.
- At the same time, it is possible for both to be false.

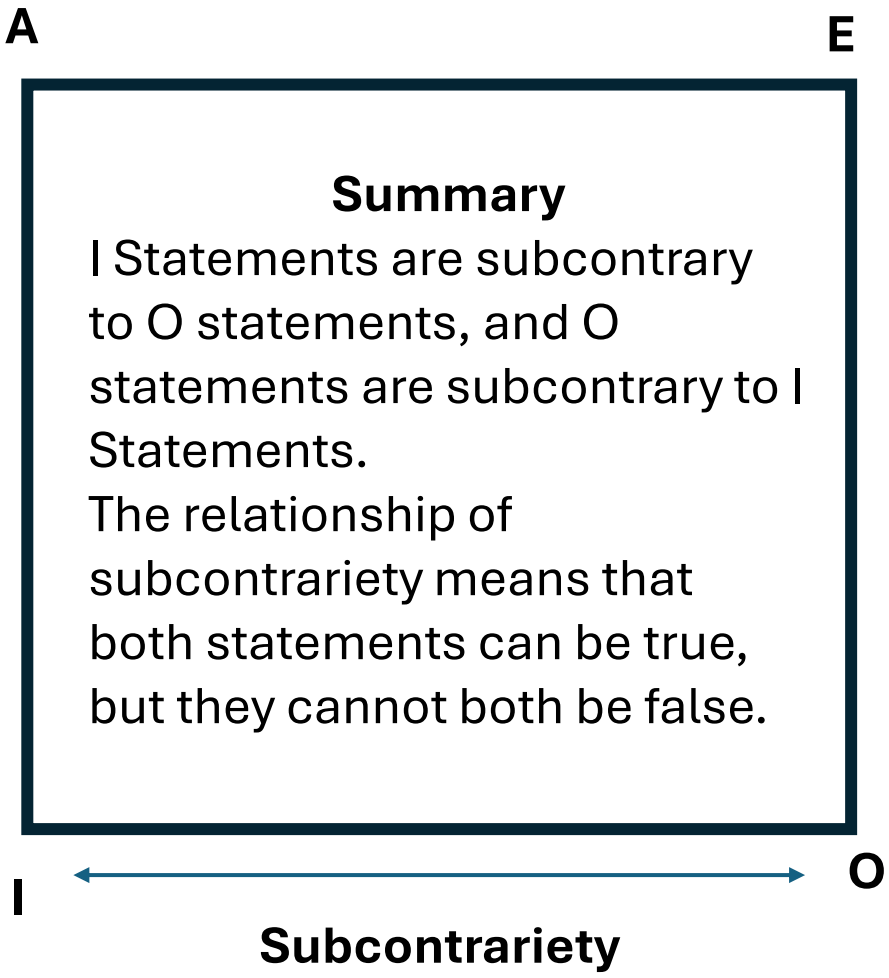


SubContrariety: Relationship Between Universal Statement I & O

- It is possible for both an I statement and an O statement to be true.
- But it is not possible for both to be false.
- Contrariety: Both statements cannot be true, but they can be false.
- Subcontrariety: Both statements can be true, but they cannot both be false.

Some preachers are boring speakers.

Some preachers are not boring speakers.



Subimplication: Relationship Between Universal & Particular Statements A & I, E & O

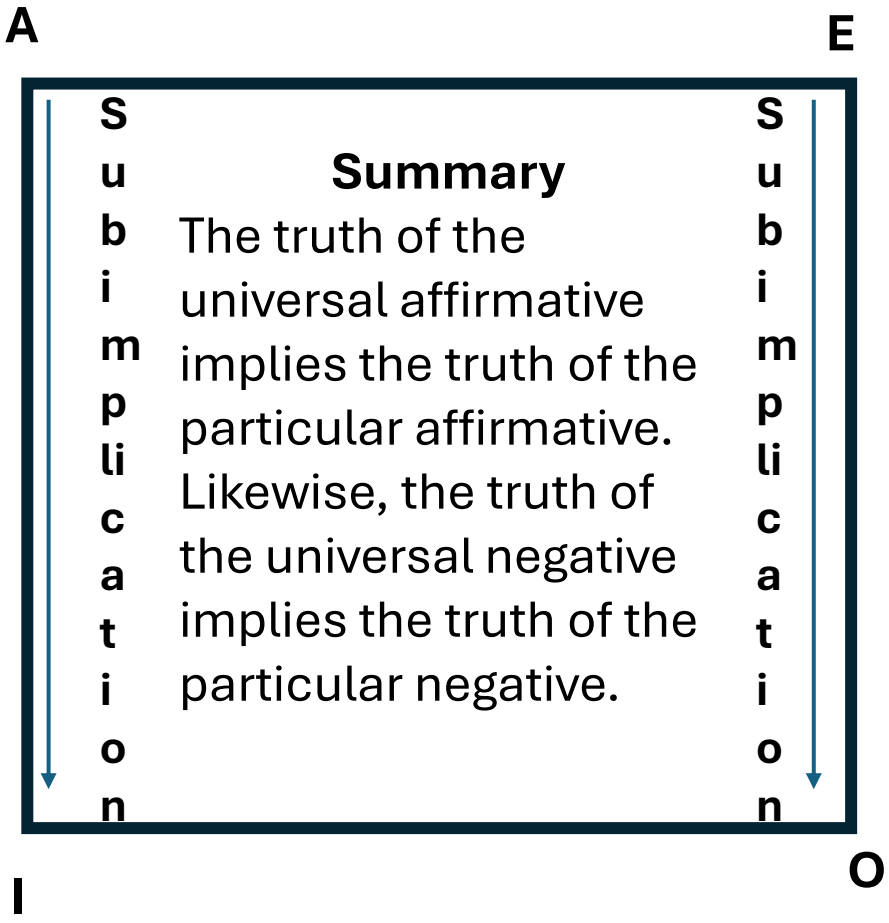
All Christians are God's Children.

No logicians are poets.

- Given the truth of a universal A Statement, the truth of the corresponding particular statement (I) is implied. Same for E to O.
- If an A statement is true, then its corresponding I statement must be true.
- If an E statement is true, then its corresponding O statement must be true.

Some Christians are God's children.

Some logicians are not poets.



Superimplication: Relationship Between Universal & Particular Statements I & A, O & E

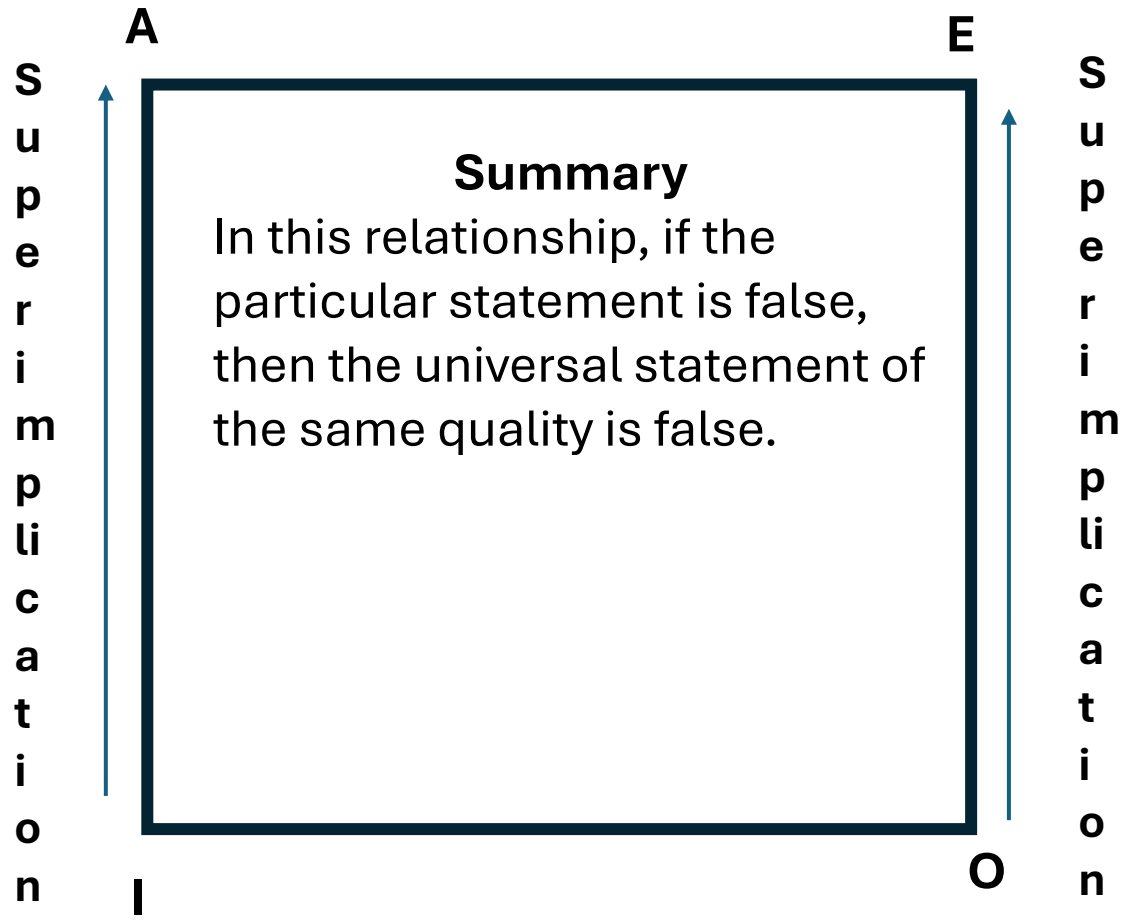
All Christians are atheists.

No dogs are mammals.

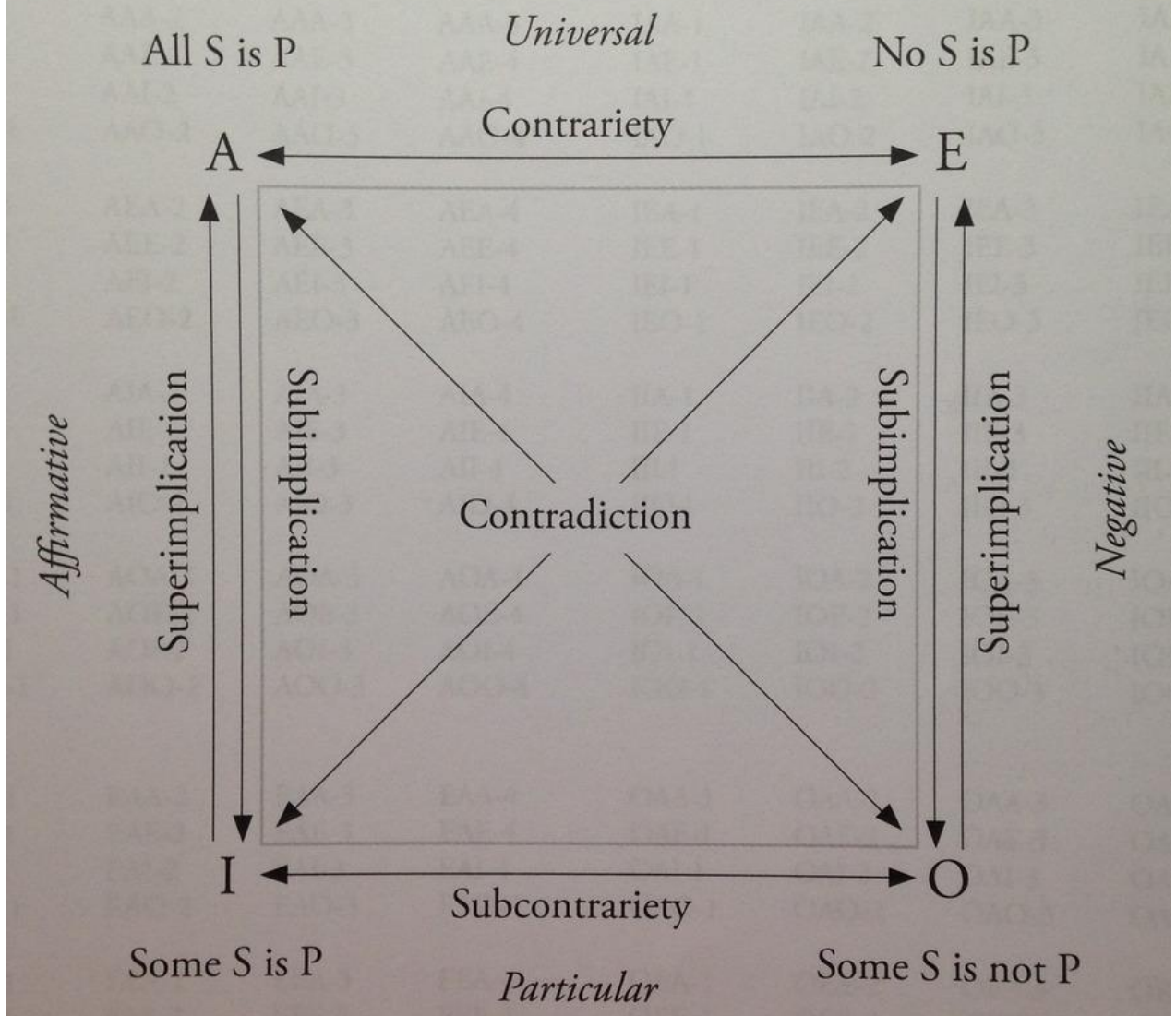
- Is the implication of falsity.
- In superimplication, given the falsity of a particular statement, the falsity of its corresponding universal in implied.
- In other words, the falsity of an A statement can be inferred from the falsity of an I statement. Likewise from E & O.

Some Christians are atheists.

Some dogs are not mammals.



THE SQUARE OF OPPOSITION



Works Cited

Introductory Logic: The Fundamentals of Thinking Well. Moscow, ID: Canon Press, 2014.