

CLASS NOTES ON LOGIC AND THE BIBLE

Introduction: Logic is divided into two areas of study. The principles of logic are rules for evaluating the validity of arguments.

A Deductive reasoning: The conclusion is a necessary consequence of the premises.

1-Categorical propositions (propositions classified according to quantity). Categorical propositions are of the subject-predicate type.

a-Universal

α -General (uses the words: *all, for every, whosoever, or whatsoever* $\pi\tilde{\alpha}\zeta, \pi\tilde{\alpha}\sigma\alpha, \pi\tilde{\alpha}\nu$).

β -Singular (has a single person or thing as the subject).

b-Particular (existential) - Uses the word *some, most, or any* a variation thereof. The word *some* is to be interpreted as at least one, the word *most* means more than 50%.

c-Types of categorical propositions: Letters derived from the first two vowels of the Latin words: *affirmo* (I affirm) and *nego* (I deny).

A form: universal affirmative

E form: universal negative

I form: particular affirmative

O form: particular negative.

2-Hypothetical (conditional) propositions - If A then B. The word *if* could be replaced by the words *whenever* or *suppose that*.

a-First symbolic form: $A \rightarrow B$

b-Second symbolic form: $A \supset B$

3-Hypothetical (biconditional) propositions If A then B and If B then A.

a-First symbol \leftrightarrow , first symbolic form: $A \leftrightarrow B$

b-Second symbol \equiv , second symbolic form: $A \equiv B$

4-Alternative-Either A or B, must have the word *or* to be an alternative. This form will allow for either A or B or both A and B. This is called an *inclusive or* in Boolean algebra (computer algebra or computer logic).

a-First symbol used: \vee Example: A or B = $(A \vee B)$

b-Second symbol used: \cup Example: A or B = $(A \cup B)$

c-Third symbol used: + (this symbol is used in Boolean algebra or computer algebra). Example: A or B = $(A + B)$

5-Conjunctive-A and B, must have the word *and* in order to be a conjunction.

a-First symbol used: & Example: A and B = $(A \& B)$

b-Second symbol used: \wedge Example: A and B = $(A \wedge B)$

c-Third symbol used: \cap Example: A and B = $(A \cap B)$

d-Fourth symbol used: \times Example: (A and B) = $(A \times B)$ (This symbol is used in Boolean algebra or computer algebra)

6-Disjunctive-Either A or B, but not both. This is a subdivision of the alternative proposition. This is called an *exclusive or*. Form: $\sim(p \wedge q)$ The symbol used in logic is $\underline{\vee}$, in Boolean algebra the symbol is: \oplus Example: $A \oplus B = \sim(p \wedge q)$.

7-Characteristics of deductive reasoning.

a-Deductive arguments move from the more general to the more specific.

b-They are truth-preserving (If the premises are true and they logically lead to the conclusion, then the conclusion must be true).

c-The conclusion provides no new information that is not already present, at least implicitly, in the premises.

8-How to test whether a given argument is deductive.

a-Do the premises (reasons given) attempt to lead us to a certainty of a conclusion?

b-If not, they are probably inductive arguments.

B Inductive reasoning: The conclusion is only more or less probable on the basis of the premises. Since conclusions are based upon premises, inductive logic is used to study the grounds for accepting the premises.

1-Definition: An inductive proof is one that moves

a-Either from a group of assertions about some events, things, or situations of a certain class to an assertion about all such events, things, or situations.

b-Or from assertions about miscellaneous things and events to an assertion that explains them in a relatively simple way.

2-Methods used to draw conclusions:

a-Generalizations are one ground for accepting a premise.

α -Mathematical extrapolation and interpolation are examples of generalizations.

β -If an observer observes that 4,000 polar bears are white and concludes that all polar bears are white he has generalized.

b-Analogies are another ground for accepting a premise.

α -Used to predict further similarities.

β -Used to expose a fallacy

γ -Used to establish a classification.

c-Causal connections are another ground for accepting a premise.

d-Unfortunately all three (above) have the potential for drawing a conclusion that it false.

I Definitions of terms in logic.

A Definitions of terms:

1-*Valid* - The premises support the conclusion, i.e. if the premises are true the conclusion must be true.

2-*Sound* - An argument that is valid and the premises are true.

3-*Tautology* - A sentence that is necessarily true because of its form.

4-*Necessary inference* - an intellectually compelling conclusion.

5-*Statement* - A statement is a sentence that is either true or false.

a-It must be a declarative sentence.

b-It cannot be a question (with the exception of a rhetorical question), a command, a wish, a definition (which is treated as a command), or an exclamation.

6-*Proposition* - A statement that is either true or false, but not both at the same time.

a-General propositions make use of such terms as: *All, every, none* or equivalent words.

b-Particular propositions use the words *some* or *any*.

7-*Inference* - The mental act of reaching a conclusion from one's premises. (The premises may be either implicit or explicit).

8-*Reasoning* - Mental activity of considering one's premises and making inferences.

9-*Proof* - An argument that successfully establishes the truth of its conclusion.

10-*Antecedent*: In a conditional sentence, the component governed by the word *if*. It follows the word *if*, but precedes the word *then*.

11-*Consequent*: In a conditional sentence, the component governed by the word *then*. It follows the word *then*.

12-*Copula*: In categorical sentences, the words *are* and *are not* (or any grammatical form of these words), serving to link subject and predicate.

13-*Argument*-A formulation in words or symbols of premises and of a conclusion that the speaker has inferred from them. An argument has two parts:

a-Evidence

b-And a conclusion

c-Types of arguments:

α -Evidence stated first ... therefore ... conclusion.

β -Conclusion stated first ... because ... evidence.

γ -Part of evidence ... therefore ... conclusion ... because ... remainder of evidence.

d-Examples of the three types of arguments:

α -All men are mortal, and Socrates is a man; therefore, Socrates is mortal.

β -Socrates is mortal because all men are mortal and Socrates is a man.

γ -All men are mortal; therefore, Socrates is mortal because he is a man.

B Connectives used in symbolic logic.

1-Connective word: *not*, symbol: \sim , name: tilde, negation, or denial, in some books the bar - is used as a negative, in other books the symbol is underlined to negate it, and in other books the \neg is used as a negative.

2-Connective word: *and*, symbol: \wedge , name: conjunction.

3-Connective word: *or*, symbol: \vee , name: disjunction, or alternation.

4-Connective words: *if ... then*, symbol: \rightarrow , name: implication or conditional. The word *if* can be replaced by:

a-*in case*,

b-*provided that*,

c-*given that*,

d-or *on condition that*.

e-The Greek words “ $\epsilon\iota$ ” and “ $\epsilon\acute{\alpha}\nu$ ” take the place of the word “if.”

5-Connective words: *if and only if*, symbol: \leftrightarrow , 2nd symbol \equiv name: biconditional.

6-Additional symbols used in logic textbooks and writings where logic is used.

a-The word *because* is sometimes replaced by the symbol \therefore .

b-The words *there exists* are sometimes replaced by the symbol \exists (this usually means that there exists at least one [the existential view – not to be confused with existentialism]).

c-The words *such that* are sometimes replaced by the symbol \ni .

d-The words *for all* (universal) are sometimes replaced by the symbol \forall .

e-The word *assertion* is sometimes replaced by the symbol \vdash .

f-The words *defined as* are sometimes replaced by the symbols $:=$ or \equiv .

g-The words *so* and *therefore* are sometimes replaced by the symbol \therefore .

h-The words *is a* are sometimes replaced by the symbol ε or \in (which is an abbreviation for the Greek word $\epsilon\sigma\tau\acute{\iota}$ - literal translation “it is.”)

i-The words *is included in* are sometimes replaced by the symbol $<$, for example, $A < B$ means “A is included in B.” This should not be confused with the meaning (in mathematics) of this symbol: $A < B$ (A is less than B).

j-The words *is identical with* are sometimes replaced by the symbol \equiv this is sometimes called: “identical equality.” (This is also a biconditional.)

k-An *empty or null set* is represented by the symbol \emptyset . An example of an empty set is X is the set of all square circles. Obviously there cannot exist a square circle, therefore this set is empty or null.

l-A tautology is a statement that is unconditionally true; it is represented by the symbol \top .

m-A contradiction is a statement that is unconditionally false; it is represented by the symbol \perp .

C Why have symbolic logic? Answer: the symbols are more precise and require less space.

II Fundamental principles of logic.

A Law of contradiction: For every proposition p, it is false that both p is true and p is false; or, $\sim[p \wedge (\sim p)]$. In other words, a proposition cannot be both true and false at the same time and in the same context.

1-Example # 1: It is false that an action can be right for one person and wrong for the same person, at the same time, and under the same conditions. Divorce for a cause other than fornication is not both right and wrong. (It is not true that it is right for the non-Christian and wrong for the Christian) {The word *wrong* is here being used as equal to *not right*.}

2-Example # 2: Atheists claim the Bible has a contradiction when it says “And God saw everything that he had made, and it was very good. (Gen. 1:31), but it says: “And Jehovah saw that the wickedness of man was great in the earth, and that every imagination of the thoughts of his heart was only evil continually.” (Gen. 6:5).

a-Atheists neglect the time factor in this false charge against the Scriptures.

b-Atheists are either irrational (by neglecting the time factor) or they are dishonest (in knowing of the time factor, but failing to acknowledge it).

3-Example # 3: This law applies to the whole system known of as *situation ethics*.

B Law of the excluded middle: For every proposition p , either p is true or p is false; that is, $p \vee (\sim p)$. Note that here we are using *or* in the exclusive sense: “either, but not both.”

1-Example # 1: Either God exists or God does not exist (materialism is true).

2-Example # 2: Either the Bible is the absolute standard in ethics or the Bible is not the absolute standard in ethics.

3-This law (or principle) is discussed in: Fox, 2003, Vol. I, p. 478 and 582; Fox, 2006, Vol. II, pp: 32-33, 37, 40, 42, 46, 49, 51, 53, 58, 65, 68, and 71.

C Law of identity: To say that x and y are identical is to say that they are one and the same thing.

1-Example # 1: If the church equals the kingdom of God, and the church equals the temple of God, then the kingdom of God equals the temple of God.

2-Example # 2: If a disciple of Christ equals a Christian and a Christian equals a child of God, then a disciple of Christ equals a child of God.

3-Example # 3: If there is only one body (Eph. 4:4) and the body is the church (Eph. 1:22-23), then there is only one church.

D Law of rationality: We ought to justify our conclusions by adequate evidence.

III Categorical syllogisms

A Rules for construction of a categorical syllogism.

- 1-A syllogism must have exactly three terms.
- 2-Two negative premises yield no conclusion.
- 3-Two positive premises yield a positive conclusion.
- 4-From a positive and a negative premise, only a negative conclusion follows.
- 5-If both premises are universal, the conclusion must be universal.
- 6-The term that occurs in both premises (the middle term) must be modified by the words *all* or *none* (be distributed) at least once.
- 7-A term that occurs in the conclusion modified by *all* or *none* (is distributed) must also be modified by *all* or *none* (be distributed) in both premises.

B Distribution of terms: (The letter “d” means “distributed” and the letter “u” means “undistributed.”)

1-Universals

Subject predicate

A d u All Sd are Pu

E d d No Sd are Pd

2-Particulars (the word “some” means at least one)

Subject predicate

I u u Some Su are Pu

O u d Some Su are not Pd

C Examples of valid categorical syllogisms:

Major Premise:	All A are B	Major Premise:	All A are B
Minor Premise:	Some C are A	Minor Premise:	All C are A
Conclusion:	Some C are B	Conclusion:	All C are B

Major Premise:	All A are B	Major Premise:	All A are B
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Minor Premise:	No C is B	Minor Premise:	Some C are not B
Conclusion:	No C is A	Conclusion:	Some C are not A

D Valid syllogistic moods: There are $4^3 = 64$ possible syllogistic forms. Of these 64, 11 are valid. The following are valid forms:

AAA AEO EAE IAI AEE AOO AAI AII EAO OAO EIO

IV Hypothetical syllogisms

A Rules for construction of an hypothetical syllogism.

- 1-A syllogism must have exactly three terms.
- 2-Two negative premises yield no conclusion.
- 3-Two positive premises yield a positive conclusion.
- 4-From a positive and a negative premise, only a negative conclusion follows.
- 5-The term that occurs in both premises must be modified by the words “all” or “none” at least once (distributed).
- 6-A term that occurs in the conclusion modified by “all” or “none” must also be modified by “all” or “none” in the premises.

B Forms of valid hypothetical arguments:

1-*Modus tollens*

If p then q	$p \rightarrow q$
Not q	$\sim q$
Therefore not p	$\therefore \sim p$

a-Example 1:

If John is a Christian, then he has been baptized.
 John has not been baptized.
 Therefore, John is not a Christian.

b-Example 2:

If organic evolution occurred, then the law of biogenesis is untrue.
 The law of biogenesis is not untrue
 Therefore, organic evolution has not occurred.

2-*Modus ponens*

If p then q	$p \rightarrow q$
p	p
Therefore q	$\therefore q$

a-Example 1:

If John is a Christian, then he has been baptized.
 John is a Christian.
 Therefore, John has been baptized.

b-Example 2:

If Jesus told the truth, then the kingdom was at hand in AD 29.
 Jesus told the truth.
 Therefore, the kingdom was at hand in AD 29.

3-Chain argument

If p then q	$p \rightarrow q$
If q then r	$q \rightarrow r$
Therefore if p then r	$\therefore p \rightarrow r$

a-Example 1: 1 Cor. 15:12-19.

b-Example 2:

If Jesus was resurrected from the dead, then Jesus was a prophet.
 If Jesus was a prophet, then what He spoke was true.
 If what Jesus spoke was true, then He was the Son of God.
 Therefore, if Jesus was resurrected from the dead, then He was the Son of God.

4-Biconditionals

Iff p then q $p \leftrightarrow q$ or it may be written: $p \equiv q$

a-If a conditional and its converse are both true they can be combined into a single statement by using the words “if and only if.” A statement that contains the words “if and only if” is called a biconditional. Its basic form is shown below.

p if and only if q.

b-Every definition can be written as a biconditional ... (Jurgenson, Ray C. et al., p. 34).

c-Note regarding biconditionals: The logical processes of: “Affirming the consequent” and “denying the antecedent” are not logical fallacies for biconditionals.

V Necessary and sufficient conditions

Lead into necessary/sufficient conditions with Mt. 12:28, Rom. 8:17, and 11:6.

A Necessary conditions: If p implies q or $p \rightarrow q$. In other words, for an object to be an element of p it is necessary that it be an element of q, although that is not sufficient. “A *necessary* condition for the occurrence of a specified event is a circumstance in whose absence the event cannot occur.” (Copi, p. 399)

1-Example 1: For a person to be a citizen of Oklahoma it is necessary that he be a citizen of the United States. It is not sufficient that he be a citizen of the United States to be a citizen of Oklahoma (he may be a citizen of Texas, Maine, etc.).

2-Example 2: For a person to be saved it is necessary for him to be baptized (Mk. 16:15-16). However it is not sufficient for him to be baptized to be saved (He must repent etc., Acts 2:38 etc.).

3-Refer to: Fox, 2003, Vol. I, pp. 567-568.

B Sufficient conditions: When we say that q is a sufficient condition for p, we mean that q implies p; or, $q \rightarrow p$. In other words, for an object to be an element of p it is sufficient for it to be an element of q, although this is not necessary. “A *sufficient* condition for the occurrence of an event is a circumstance in whose presence the event must occur.” (Copi, p. 400)

1-Example 1: For a person to be a citizen of the United States it is sufficient for him to be a citizen of Oklahoma, although it is not necessary (he may be a citizen of Utah, New York, etc.).

2-Example 2: For a person to be a faithful Christian it is sufficient for one to be a qualified elder in the Lord's church. It is not necessary for one to be a qualified elder, one may be single, have no children, be a woman, or be a novice.

3-Confusion of these two conditions has caused some religious error. (cf. The fallacies of "affirming the consequent" and "denying the antecedent.")

a-For example, denominational preachers see passages that say that it is necessary for one to believe in order to be saved, and conclude that it is sufficient.

b-These same people conclude that the Lord's church must be teaching water salvation because they apply this error to our assertion that baptism is a necessary condition for salvation. They interpret it to mean that we are teaching that baptism is a sufficient condition to salvation.

c-Some brethren have confused these two conditions when they say that the Bible is silent concerning non-apostles working miracles from Acts 2 through Acts 5. They draw the erroneous conclusion that only the apostles worked miracles from Acts 2 until Acts 6. It is a necessary condition that the Scriptures be silent concerning others working miracles for this (only the apostles worked miracles from Acts 2 until Acts 6) to be true, but it is not a sufficient condition. It would be a sufficient condition if the Scriptures explicitly stated that only the apostles worked miracles during this period of time.

4-Refer to: Fox, 2003, Vol. I, pp. 567-568 and Fox, 2007, p. 61.

VI Greek conditional sentences

A The Greek language has a construction for the hypothetical syllogism, the conditional sentences. (Refer to: Fox, 2003, Vol. I, pp. 587-588)

1-It is widely known that the Greeks were quite knowledgeable in the field of logic.

2-Understanding this construction would help to understand many arguments of the New Testament.

B The following information is taken from: Essentials of New Testament Greek. Ray Summers, pp. 108-110.

“(3) Conditional Sentences:

In the Greek New Testament there are many kinds of conditional statements. There are four classes of conditional sentences that are outstanding in usage. They follow with their means of expression:

1. First class condition affirms the reality of the condition. It is expressed by $\epsilon\iota$ with the indicative mood in the protasis (if clause) and almost any mood or tense in the apodosis (main or fulfilment clause)

2. Second class condition is contrary to fact condition In Greek it is expressed by the secondary tenses of the indicative mood. The correct form is $\epsilon\iota$ with the indicative in the protasis and $\alpha\upsilon$ with the indicative in the apodosis

3. Third class condition is the probable future condition. It is expressed by $\epsilon\omicron\upsilon$ with the subjunctive in the protasis and any form needed in the apodosis. It expresses that which is not really taking place but that probably will take place in the future

4. Fourth class condition is the possible future condition. It is expressed by $\epsilon\iota$ ‘with the optative mood in the protasis and $\alpha\upsilon$ with the optative mood in the apodosis. No example of the fully written construction is found in the New Testament This construction is expressive of that which is not now a reality and has little prospect of becoming a reality.

Study the following English sentences in the light of the above classification:

First class: If he is studying, he will learn the Greek. Second class: If he had studied, he would have learned the Greek. Third class: If he studies, he will learn the Greek. Fourth class: If he would study, he would learn the Greek.”

Sample 1st class Scriptures: Mt. 12:26, 27, 28, 1 Cor. 15:2, Lk. 19:8, 11:18, 2 Cor. 7:8, 14, Rom. 4:2, 15:27, 1 Jn. 4:11, etc.

Sample 2nd class Scriptures: Lk. 7:39, Jn. 15:22, 24, Mt. 26:24, 11:21, etc.

Sample 3rd class Scriptures: 1 Cor. 14:5, Phil. 3:12, Lk. 9:13, Rom. 11:14, 1 Thess. 5:10, 1 Cor. 4:15, 10:27, Jn. 7:37, 5:19, 12:32, etc.

VII Types of inferences

A Mediate

1-Definition: Mediate inferences are those, like the syllogism, that the implications of two or more conjoined propositions form the groundwork of the inference. The point of the distinction seems to be, that neither one of the premises of a syllogism would by itself yield the conclusion; the conclusion follows only when the premises are conjoined.

2-Examples of mediate inferences:

a-Categorical syllogisms

b-Hypothetical syllogisms

c-Alternative syllogisms

d-Disjunctive syllogisms

B Immediate

1-Definition: Where some proposition, rather than a conjunction of propositions, implies another on logical grounds so that, the former being true, the latter can be inferred without a further premise, the inference is said to be immediate.

2-Examples:

a-Conversion

b-Obversion

c-Contraposition

α-Partial (sometimes called conversion by negation)

β-Full (usually referred to as contraposition)

d-Inversion

e-Refer to the square of opposition chart. (Fox, 2003, pp. 80, 495, and 512; Fox, 2005, p. 582)

3-Examples of non-syllogistic inferences

If A is greater than B, and B is greater than C, then A is greater than C.

In symbols: If $A > B$ and $B > C$, then $A > C$

Biblical example: Hebrews 7:1-10 If Melchizedek is greater than Abraham, and Abraham is greater than Aaron; then Melchizedek is greater than Aaron.

a-Immediate inference by added determinants.

b-Immediate inference by complex conception.

c-Immediate inference by converse relation.

d-Immediate inference by transitivity of relations (argument *a fortiori*). Examples include: Mt. 6:23, 26, 6:28-30, 7:9-11, 10:25 (Jn. 15:20), 28, 29-31, 12:11-12, Mk. 2:23-28, Lk. 13:15-16, 14:1-6 (also an enthymeme), 18:1-8 (cf. Jn. 13:14). Refer to: Fox, 2003, Vol. I, Appendix B.

VIII Logical equivalence

A Propositions:

1-Hypothetical (conditional): $p \rightarrow q$ (If p, then q)

2-Categorical:

A-form: All p are q

E-form: No p are q

I-form: Some p are q

O-form: Some p are not q

3-Alternative: $\sim p \vee q$ (Either x is a non-p or x is a q)

4-Disjunctive: $\sim(p \wedge \sim q)$ (Not both is x a p and a non-q)

5-Conjunctive: $\sim(p \wedge \sim q)$ { same as disjunctive }

B Converse:

1-Rules for conversion:

a-Categorical: The converse is obtained by making the subject and predicate trade places.

α -The converse must be the same in quality as the convertend (original proposition).

β -No term can be distributed in the converse unless it was distributed in the convertend.

b-Hypothetical: The converse is obtained by making the antecedent and consequent trade places.

α -If a conditional and its converse are both true they can be combined into a single statement by using the words “if and only if. A statement that contains the words “if and only if” is called a biconditional.

β -Every definition can be written as a biconditional ... (Jurgenson, Ray C. et al., p. 34).

2-Hypothetical (conditional) $p \rightarrow q$ converts to: $q \rightarrow p$ (If q, then p)

3-Categorical:

A-form: All p are q converts to: Some q are not p

E-form: No p are q converts to: No q are p

I-form: Some p are q converts to: Some q are p

O-form: Some p are not q: Does not convert

4-Alternative:

5-Disjunctive:

6-Conjunctive:

C Inversion:

Definition: Its distinctive feature is that the inverse has as its subject the negative of the original subject.

1-Hypothetical (conditional) $p \rightarrow q$ inverts to: $(\sim p) \rightarrow (\sim q)$ (If not p, then not q)

2-Categorical:

A-form: All s is p becomes: some non s is non p.

E-form: No s is p becomes: Some non s is not non p.

I-form: No full inversion possible.

O-form: No full inversion possible.

3-Alternative:

4-Disjunctive:

5-Conjunctive:

D Obversion (sometimes called permutation)

1-A categorical sentence is obverted by changing its quality and negating its predicate.

A form: All s are p obverts to E form: No s are non p

E form: No s are p obverts to A form: All s are non p

I form: Some s are p obverts to O form: Some s are not non p

O form: Some s is not p obverts to I form: Some s is not p

2-The student should be aware that the prefix *non* is the proper negation of the predicate term. This prefix expresses simple negation, whereas the prefixes such as *un*, and *in* often express antithesis or words of contrary meaning.

E Contraposition (full) – sometimes called: “Transposition.”

1-Rules for obtaining the contrapositive:

a-Categorical: The contrapositive is obtained by making the subject and predicate trade places and negating each one.

b-Hypothetical: The contrapositive is obtained by making the antecedent and consequent trade places and negating each one.

α -The argument of Jesus, in Jn. 5:45-47, can only be understood if we understand transposition.

Jn. 5:45 Think not that I will accuse you to the Father: there is one that accuseth you, *even* Moses, on whom ye have set your hope. 46 For if ye believed Moses, ye would believe me; for he wrote of me. 47 But if ye believe not his writings, how shall ye believe my words?

β -Note the argument of our Lord:

If ye believed Moses, then you would believe me.

If ye do not believe My words, then ye do not believe Moses. (Contrapositive)

c-Refer to: Fox, 2003, Vol. I, p. 571; Fox, 2005, Vol. II, pp. 285-286, 288, 362, 507, 574, and 599; Fox, 2006, Vol. II, pp. 95, 187, and 188.

2-Hypothetical (conditional): $(\sim q) \rightarrow (\sim p)$ (If not q, then not p)

3-Categorical:

A-form: All s is p becomes A form: All non p is non s.

E-form: No s is p becomes O form: Some not p is not non s.

I-form: Has no full contrapositive.

O-form: Some s is not p becomes O form: Some non p is not non s.

4-Alternative:

5-Disjunctive:

6-Conjunctive:

F Contraposition (partial, conversion by negation)

1-Rules for obtaining the partial contrapositive: The proposition is first obverted and then converted. The inferred proposition has as its predicate the original subject, and as its subject the negative of the original predicate.

2-Categorical:

A-form: All s is p becomes E form: No not p is s.

E-form: No s is p becomes I form: Some not p is s.

I-form: Has no contrapositive (either partial or full)

O-form: Some s is not p becomes I form: Some not p is s.

3-Alternative:

4-Disjunctive:

5-Conjunctive:

G Summary:

1 A proposition and its contrapositive are logically equivalent.

a-If either is true, the other is true.

b-If either is false, the other is false.

c-If either has been proved as a theorem, the other is “automatically” established as a theorem, and does not require separate proof.

2-The opposite and converse of the same proposition (“1”) above are logically equivalent.

a-If either is true, the other is true.

b-If either is false, the other is false.

c-If either has been proved as a theorem, the other is “automatically” established as a theorem, and does not require separate proof.

3-Proving a proposition meets the need for proving its contrapositive, and vice versa.

4-Proving the converse of a proposition meets the need for proving the opposite of that proposition, and vice versa.

5-Because a proposition and its contrapositive are both true, it does not follow that the converse and opposite are both true; they may both be false or both true.

6-Because the converse and the opposite of a proposition are both true, it does not follow that the proposition and its contrapositive are both true; they may both be false or both true.

7-Proving a proposition does not establish either its converse or its opposite; if, however, either the converse or the opposite is also proved, independently, then all four propositions are established as theorems.

H Additional points:

The statement: All A are B is equivalent to the statement: Only B are A.

The statement: All A are B is equivalent to the statement: The only A are B.

The statement: All A are B is equivalent to the statement: No A are not B.

The statement: All A are B is equivalent to the statement: All non-B are non-A.

IX Conversion of forms

A Conversion from hypothetical to categorical.

1-Rules

The proposition $p \rightarrow q$ can be interpreted as "All p's are q's."

2-Forms of the arguments:

If p then q	$p \rightarrow q$: Every element of p is an element of q.
p	p	: This is an element of p.
Therefore q	$\therefore q$: Therefore this is an element of q.

If p then q	$p \rightarrow q$: Every element of p is an element of q.
If q then r	$q \rightarrow r$: Every element of q is an element of r.
Therefore if p then r	$\therefore p \rightarrow r$: Therefore, every element of p is an element of r.

B Conversion from categorical to hypothetical.

1-Rules

2-Examples

C Conversion from alternative to hypothetical.

1-It is not possible to convert from the alternative to the hypothetical.

2-If the alternative form exhausts all alternatives, it becomes a disjunctive and can be converted to the hypothetical form.

D Conversion from disjunctive to hypothetical.

1-The disjunctive syllogism is introduced by the form: Either p or q.

2-The proposition: p or q is true converts to: if p is false, q is true and if q is false, p is true.

E Conversion from conjunctive to hypothetical.

1-The conjunctive form is introduced by the form: *Neither p nor q.*

2-The proposition: p and q are not both false converts to: if p is false, q is true, and if q is false, p is true.

X Dilemmas

Definition: A dilemma is: A combination of hypothetical and disjunctive premises that presupposes the exhaustiveness of the disjunction and thus leads to a conclusion by forcing a choice between alternatives.

A Simple constructive dilemmas

1-Basic form:

If p then q ($p \rightarrow q$)
 If r then q ($r \rightarrow q$)
 p or r ($p \vee r$)
 $\therefore q$
 $(p \rightarrow q) \wedge (r \rightarrow q) \wedge (p \vee r) \therefore q$

2-Example 1:

If the Bible is infallible, then God exists.
 If the universe bears marks of design, then God exists.
 The Bible is infallible and the universe bears marks of design.
 Therefore, God exists.

B Simple destructive dilemmas

1-Basic form:

If p then q ($p \rightarrow q$)
 If p then r ($p \rightarrow r$)
 Not q or not r ($\sim q \vee \sim r$)
 Therefore not p $\therefore \sim p$

2-Example 1:

If atheism is true, then matter is eternal.
 If atheism is true, then there is no absolute right and wrong.
 Matter is not eternal and there is an absolute right and wrong.
 Therefore, atheism is not true.

3-Example 2:

If the Bible was from man alone, then it would have mistakes in it.
 If the Bible was from man alone, then it would condone evil.
 The Bible does not condone evil and it does not have mistakes in it.
 Therefore, the Bible is not from man alone.

C Complex constructive dilemmas

1-Basic form:

If p then q ($p \rightarrow q$)
 If r then s ($r \rightarrow s$)
 p or r ($p \vee r$)
 \therefore q or s ($q \vee s$)

2-Example 1:

If a man sings psalms, hymns, and spiritual songs with an instrument at home intending to worship God, then he sins by worshipping improperly.

If a man sings psalms, hymns, and spiritual songs with an instrument and does not intend to worship, then he sins by profaning the sacred.

Either a man who sings psalms, hymns, and spiritual songs with an instrument intends to worship or not to worship

Therefore, a man who sings psalms, hymns, and spiritual songs with an instrument either sins by worshipping improperly or he sins by profaning the sacred.

3-Example 2:

If a choir is for the purpose of teaching the church, then the women in the choir violate 1 Timothy 2 and 1 Corinthians 14.

If a choir is for the purpose of entertainment, then it is without scriptural authority.

Either the choir is for the purpose of teaching the church or for the purpose of entertainment.

Therefore, the women in the choir either violate 1 Timothy 2 and 1 Corinthians 14 or the choir is without scriptural authority.

D Complex destructive dilemmas

1-Basic form:

If p then q ($p \rightarrow q$)

If r then s ($r \rightarrow s$)

Not q or not s ($\sim q \vee \sim s$)

Therefore, not p or not r $\therefore (\sim p \vee \sim r)$

2-Example 1:

Whately said: "If this man were wise, he would not speak irreverently of Scripture in jest; and if he were good, he would not do so in earnest; but he does it, either in jest or in earnest; therefore he is either not wise or not good."

3-Example 2:

If the apostles were good men they would not be lying when they say that Jesus was resurrected from the dead.

If the apostles were evil men they would condone evil actions in their writings.

The apostles do not condone evil actions in their writings.

Therefore the apostles were good men, and if good men they were not lying when they say that Jesus was resurrected from the dead.

E Ways to escape from the consequences of a dilemma.

1-Escaping through the horns (demonstrate that there is at least one other alternative that has not been noticed by the framer of the dilemma). Jesus escaped the dilemma of the Sadducees (Mt. 22:23-33).

2-Taking the dilemma by the horns (deny the truth of at least one of the hypothetical propositions stated in the major premise).

3-Rebuttal, or the “counter dilemma.”

Dilemma: If p then q and if r then s , but either p or r , \therefore either q or s

Counter-dilemma: If p then $\sim s$ and if r then $\sim q$, but either p or r , \therefore either $\sim s$ or $\sim q$

Example 1: Eaton records the following: “An Athenian mother tried to dissuade her son from entering public life by this argument; ‘If you say what is just men will hate you; and if you say what is unjust the gods will hate you; but you must say either the one or the other; therefore you will be hated.’ The son answered, ‘If I say what is just, the gods will love me, and if I say what is unjust men will love me; but I must say either; therefore I shall be loved.’” (Eaton Ralph M. General Logic and Introductory Survey. Charles Scribner’s Sons, New York: 1959, pp. 198-199)

[Note this is not a true counter-dilemma]

4-Dilemmas are discussed in: Fox, 2000, pp. 5, 67, and 136; Fox, 2003, Vol. I, pp. 9, 32, 90, 391, 449, 471-474, 481, 486, 496-497, 501-502, 504, 509, 521-522, and 579; Fox, 2005, Vol. II, pp. 58, 73, 201, 252, 257, 279-280, 284, 575, 591, 606, 624, and 639-640; Fox, 2006, Vol. 1, p. 78, Vol. 2, pp. 9, 30, 33, 97, Fox, 2007, p. 151.

XI Fallacies

Definition: A fallacy is any argument that seems conclusive to the normal mind, but that proves (upon examination) not to establish the alleged conclusion.

A The fallacy of inconsistency.

1-Definition: Reasoning from premises that necessarily could not all be true because they logically imply contradictory consequences.

2-Example: One argues that the New Testament is neither a pattern for the Christian nor for the church, then argues that the life of Christ is a pattern for the Christian or the church.

B *Petitio principii*

1-Begging the question.

“One of the most common fallacies of evidence is the use of the unsupported assertion. Here, the speaker offers no evidence to support a statement; rather he or she asks us to assume that something is so merely because he or she says it is so.” (Freeley, Austin J. 1986, *Argumentation and Debate*. Belmont, CA: Wadsworth Pub. Co., p. 160)

“Fallacy of using a premise (or a form of inference) whose acceptability is bound to be at least as doubtful as is that of the conclusion supposedly being proved.” (Barker)

“arguing in a circle.” (Martin; Ohmann)

a-Form of the argument: p is true because p is true.

b-Example 1: The book of Mormon is inspired. How do you know? Because I know it.

c-Example 2: Households were baptized, households have infants, therefore infants were baptized.

d-The question is begged in several different manners:

α-The conclusion is assumed piecemeal (perhaps in a series of arguments)

β-Synonyms are used in begging the question. This is called *hysteron proteron*.

e-Refer to: Fox, 2000, pp. 25 and 268; Fox, 2003, Vol. I, pp. 18-20, 31, 68, 86, 118, 136, 142, 184, 228, 247-248, 337, 373, 375, 377, 385, 400, 412, 414-415, 431-432, 461-463, 474-475, 506-507, 510, 512; Fox, 2005, Vol. II, pp. 23, 26, 81, 84, 255, 388, 437, 574-575, 577, 594, 598-599, 603, 619, 628; Fox, 2006, Vol. I, pp. 146, 168, 179, and 183; Fox, 2006, Vol. II, pp. 4, 9, 30-33, 34, 36, 59-60, 73, 97, and 185; Fox, 2007, pp. 1, 89, and 168.

2-Circular reasoning

“A **circular argument**, also called **begging the question** or **circular definition**, is an assertion merely restated in slightly different terms: ‘Boxing is a dangerous sport because it is unsafe.’ Here ‘unsafe’ conveys the same idea as ‘dangerous’ rather than adding something new. This ‘begs the question’ because the conclusion is the same as the premise.” (Troyka, Lynn Quitman, 1993, *Simon & Schuster Handbook for Writers*. Englewood, Cliffs, NJ: Prentice Hall, p. 140)

a-Form of this fallacy:

p is true; because q is true
 q is true; because r is true
 r is true; because p is true. (go in a circle back to the beginning)

b-Example of the argument: Organic evolution is true because uniformitarian geology has proven it is true. Uniformitarian geology is true because organic evolution has proven it is true.

c-Refer to: Fox, 2000, pp. 25, 291-292, 299, 316, 319, 367, 391, and 416; Fox, 2003, Vol. I, pp. 3, 31, 85, 372-374, and 500; Fox, 2005, Vol. II, p. 619; Fox, Vol. 2, 2006, p. 1; Fox, 2007, pp. 58-59.

3-Complex question. A question purported to have only two answers when it, in fact, has three or more answers. This is a type of begging the question. (It is sometimes called: “The fallacy of pseudoquestion.”)

“The fallacy of *pseudoquestion* occurs when an advocate asks an unanswerable, ‘loaded,’ or ambiguous question; or a question based on a false assumption; or so many questions that an opponent cannot possibly answer them adequately within the available time. An example of this type of question is ‘Have you stopped cheating on examinations?’” (Freeley, Austin J. 1986, *Argumentation and Debate*. Belmont, CA: Wadsworth Pub. Co., p. 169)

A term is *ambiguous* in a given context when it has two distinct meanings and the context does not make clear which one is intended. On the other hand, a term is *vague* when there exist “borderline cases” such that it cannot be determined whether the term applies to them or not. Most words are vague in the sense indicated. (Copi, p. 129)

a-Form of the argument: either p or q (when in fact the truth is either p or q or r).

b-Example 1: Have you quit beating your wife?

c-Example 2: Do you teach salvation by faith only or by works only? (Neither is true).

d-Example 3: Either you teach doctrine or you teach love.

e-Refer to: Fox, 2003, Vol. I, pp. 92-93; Fox, 2005, Vol. II, pp. 287, and 578-579; Fox, 2006, Vol. I, pp. 2, and 184; Fox, 2006, Vol. II, pp. 25-28, and 33-75; Fox, 2007, pp. 1 and 168.

C *Non sequitur* fallacies

1-Formal fallacies in deduction:

a-Undistributed middle term (The middle term must be distributed in at least one of the premises.)

b-Illicit process (If the minor or major term is distributed in the conclusion, it must also be distributed in the respective minor or major premise, and vice versa. Otherwise, one is guilty of committing “The fallacy of the illicit process of the minor or major term” [also called: “Illicit minor” or “illicit major” fallacy].)

c-Fallacy of affirming the consequent:

$$\begin{array}{l} p \rightarrow q \\ q \\ \therefore p \end{array}$$

α -Example 1:

If John is a citizen of Oklahoma, then he is a citizen of the United States
 John is a citizen of the United States
 Therefore, John is a citizen of Oklahoma.

β -Example 2:

If a person has been saved, then he has believed.
 John Doe has believed.
 Therefore, John Doe has been saved. (Salvation by faith only)

γ -Refer to: Fox, 2003, Vol. I, pp. 308-309; Fox, 2005, Vol. II, pp. 278, 507-508, and 527; Fox, 2007, p. 61.

d-Fallacy of denying the antecedent:

$p \rightarrow q$
 $\sim p$
 $\therefore \sim q$

α -Example 1:

If Joe is a citizen of Texas, then he is a citizen of the United States.
 Joe is not a citizen of Texas.
 Therefore, Joe is not a citizen of the United States.

β -Example 2:

If Joe is a Christian, then he has believed.
 Joe is not a Christian.
 Therefore he has not believed. (Salvation by faith only)

γ -Example 3:

If the Scriptures specifically state that others than the apostles worked miracles before Acts 6, then others than the apostles worked miracles before Acts 6.
 The Scriptures do not specifically state that others than the apostles worked miracles before Acts 6.
 Therefore, others than the apostles did not work miracles before Acts 6.

δ -Example 4:

If the Scriptures explicitly prohibit act X, then act X is forbidden.
 The Scriptures do not explicitly prohibit act X.
 Therefore, act X is not forbidden.

ϵ -Refer to: Fox, 2000, pp. 26-27, 136-137, and 268-269; Fox, 2003, Vol. I, pp. 19, 358, 378, 415-416, and 572; Fox, 2005, Vol. II, pp. 28, 60, 278, 370-372, 380, 420, 437, 564-565, 567, 574, 589, 597, 620, and 622; Fox, 2007, p. 61.

e-Fallacy of “negative conclusion from affirmative premises):

f-Fallacy of “two negative premises”:

2-Fallacies of ambiguity

“**Ambiguity** and **equivocation** describe expressions that are not clear because they have more than one meaning. An ambiguous expression may be taken either way by the reader. A statement such as ‘They were entertaining guests’ is ambiguous. Were the guests amusing to be with or were people giving hospitality to guests? An equivocal expression, by contrast, is one used in two or more ways within a single sentence.” (Troyka, Lynn Quitman, 1993, *Simon & Schuster Handbook for Writers*. Englewood, Cliffs, NJ: Prentice Hall, pp. 142-143)

“Ambiguity arises when the meaning of a word, phrase, or passage may be reasonably interpreted in two or more ways. For example, what does a speaker mean when saying ‘I favor the American way of doing things’?” (Freeley, Austin J. 1986, *Argumentation and Debate*. Belmont, CA: Wadsworth Pub. Co., p. 162)

a-Equivocation (some definite word or phrase is ambiguous)

α -Fallacy of four terms (This poses as a syllogism, but is not.)

Example 1:

All designing persons are untrustworthy.
 All engineers are those who design.
 All engineers are those who are untrustworthy.

Example 2:

The assertion: “All colors are either black or white” is a fallacy because there are grays.
 Therefore, matters of morality are neither black nor white, there are gray areas of morality.

Example 3:

Preacher: I am just a poor preacher (meaning one who has very few possessions).

Respondent: I know you are a poor preacher, I talked to some of the members where you preach, and they have been listening to you (referring to his poorly preached sermons).

β -Composition (This fallacy is committed when a person argues that what is true of the individual is true of the whole.)

The fallacy of **composition** is committed when the conclusion of an argument depends on the erroneous transference of an attribute from the parts of something onto the whole. In other words, the fallacy occurs when it is argued that because the parts have a certain attribute, it follows that the whole has that attribute too and the situation is such that the attribute in question cannot be legitimately transferred from parts to whole. Examples:

...

Each atom in this piece of chalk is invisible. Therefore, the chalk is invisible.

Sodium and chlorine, the atomic components of salt, are both deadly poison. Therefore, salt is a deadly poison. (Hurley, p. 153)

It is called the fallacy of *equivocation* if some definite word or phrase is ambiguous.

...

Next we shall consider the fallacies of *composition* and *division*, two special forms of equivocation that involve an improper sort of reasoning from part to whole or from whole to part. This may either occur in syllogisms or in other kinds of argument. (Barker, p. 197)

Example 1: The individual Christian can spend his money to support a Christian college; therefore the church can spend the money from the treasury for support of a Christian college.

Example 2: The individual Christian can spend his money for entertainment; therefore the church can spend the money from the treasury for entertainment.

Refer to: Fox, 2003, pp. 265-266; Fox, 2007, pp. 91, 93-95, and 158.

γ -Division (This fallacy is committed when a person argues that what is true collectively of a whole or a class must be true of each part or member.

The fallacy of **division** is the exact reverse of composition. As composition goes from parts to whole, division goes from whole to parts. The fallacy is committed when the conclusion of an argument depends on the erroneous transference of an attribute from a whole (or a class) onto its parts (or members). Examples:
 Salt is a nonpoisonous compound. Therefore, its component elements, sodium and chlorine, are nonpoisonous. This jigsaw puzzle, when assembled, is circular in shape. Therefore, each piece is circular in shape. The Royal Society is over 300 years old. Professor Thompson is a member of the Royal Society. Therefore, Professor Thompson is over 300 years old.

In each case the attribute, designated respectively by the terms “nonpoisonous,” “circular in shape,” and “over 300 years old,” is illegitimately transferred from the whole or class onto the parts or members. As with the fallacy of composition, however, this kind of transference is not always illegitimate. (Hurley, pp. 155-156)

Example 1: That congregation of the church is strong; therefore every member of that congregation must be strong.

Example 2: The church is a temple (Eph. 2:19-22); therefore each member of the church is a temple of God.

Refer to: Fox, 2003, Vol. I, pp. 265-266; Fox, 2006, Vol. I, p. 30; Fox, 2006, Vol. II, pp. 124-125, 182; Fox, 2007, p. 95.

δ -Refer to: Fox, 2000, p. 361; Fox, 2003, 44, 73, 297, 461, 480-481, 493, 523-525, and 605-606; Fox, 2005, Vol. II, pp. 101, 364, 369, 436, 595, 607, and 621; Fox, 2006, Vol. I, pp. 2, 3, 30, 179, and 184; Fox, 2006, Vol. II, pp. 33, 34, 63, and 186.

b-Amphiboly (This is a fallacy in which the ambiguity attaches not to a word, but to an entire sentence.)

α-Example 1: The following is a good example of this.

THE GOOD MAN: F. W. Emmons

“He is an old and experienced man. In vice and wickedness he is never found. Opposing the work of iniquity he takes delight. In the downfall of his neighbor he never rejoices. In the prosperity of any of his fellow-creatures he is ready to assist. In destroying the peace of society he takes no pleasure. In serving the Lord he is uncommonly diligent. In sowing discord among his friends and acquaintances he takes no pride. In laboring to promote the cause of Christianity he has not been negligent. In endeavoring to stigmatize all public teachers he make no exertions. To subdue his passions he strives hard. To build up Satan’s kingdom he lends no aid. To support the gospel among the heathen he contributes largely. To the evil adversary he pays no attention. To good advice he gives great heed. To the devil he will never go. To heaven he must go where he will receive the just recompense of his reward.”

THE EVIL MAN

“He is an old and experienced man in vice and wickedness. He is never found opposing the work of iniquity. He takes delight in the downfall of his neighbor. He never rejoices in the prosperity of any of his fellow-creatures. He is ready to assist in destroying the peace of society. He takes no pleasure in serving the Lord. He is uncommonly diligent in sowing discord among his friends and acquaintances. He takes no pride in laboring to promote the cause of Christianity. He has not been negligent in endeavoring to stigmatize all public teachers. He make no exertions to subdue his passions. He strives hard to build up Satan’s kingdom. He lends no aid to support the gospel among the heathen. He contributes largely to the evil adversary. He pays no attention to good advice. He gives great heed to the devil. He will never go to heaven. He must go where he will receive the just recompense of his reward.”

It is all a matter of punctuation!

β-Second example: Can you spell backwards? Better put: Can you spell ‘backwards’?

γ-Third example of this fallacy: Oneness Pentecostals have quoted Mt. 3:17 in such a way as to support their doctrine.

Mt. 3:17 and lo, a voice out of the heavens, saying, This is my beloved Son, in whom I am well pleased. (They change the punctuation so that it reads: "... saying, This is my beloved Son in whom I am, well pleased." They usually do not even quote the words **well pleased**.)

δ-Fourth example of this fallacy: Jehovah's Witnesses have changed the punctuation of Lk. 23:43: "Truly I tell you today, You will be with me in Paradise." (New World Translation)

ε-Refer to: Fox, 2003, Vol. I, p. 42.

c-Fallacy of accent.

α-Definition: When a sentence varies in meaning when the accent is changed on a word.

β-Example 1: 1 Kgs. 13:27 could be easily twisted: "And he spake to his sons, saying, Saddle me the ass. And they saddled him."

γ-Example 2: Mt. 26:27 And he took a cup, and gave thanks, and gave to them, saying, Drink ye all of it; (the word *all* properly refers to the apostles)

δ-Example 3: Jn. 21:15 So when they had broken their fast, Jesus saith to Simon Peter, Simon, son of John, lovest thou me more than these? He saith unto him, Yea, Lord; thou knowest that I love thee. He saith unto him, Feed my lambs. (the word **these** may refer to the fish)

3-Fallacies of irrelevance *ignoratio elechi* (arguing beside the point)

a-Abusive *ad hominem* (to the man)

"An **argument to the person**, also known as **ad hominem**, attacks a person's appearance, personal habits, or character instead of dealing with the merits of the individual's arguments, ideas, or opinions. ... In truth, however, the suggestions, not the person who makes them, must be dealt with. The person who argues is *not* the argument." (Troyka, Lynn Quitman, 1993, *Simon & Schuster Handbook for Writers*. Englewood, Cliffs, NJ: Prentice Hall, p. 141)

“**Guilt by association** is a kind of *ad hominem* attack implying that an individual’s arguments, ideas, or opinions lack merit because of that person’s activities, interests, or associates.” (Troyka, Lynn Quitman, 1993, *Simon & Schuster Handbook for Writers*. Englewood, Cliffs, NJ: Prentice Hall, p. 141)

α-Bill cannot be teaching the truth since he does not practice what he preaches.

β-If you are guilty of sin you cannot judge another person (cf. Mt. 7:1).

γ-The Jews committed this fallacy in Jn. 8:48.

b-Appeal to authority *ad verecundiam* (appeal to reverence).

“Using **false or irrelevant authority**, sometimes called **ad verecundiam**, means citing the opinion of an ‘expert’ who has no claim to expertise about the subject at hand. This fallacy attempts to transfer prestige from one area to another.” (Troyka, Lynn Quitman, 1993, *Simon & Schuster Handbook for Writers*. Englewood, Cliffs, NJ: Prentice Hall, p. 141)

α-Thayer is often quoted when he is merely giving his commentary.

β-Vine is another who is quoted when he is merely giving his commentary.

γ-Example 1: “Brother so and so does not agree with you on that point; therefore you must be wrong.”

δ-Example 2: I cannot leave my grandmother’s (mother’s) religion because I revere her memory.

ε-Refer to: Fox, 2003, Vol. I, pp. 10-25, 181, 467, and 605; Fox, 2005, Vol. II, pp. 366-367, 379-380, and 615; Fox, 2006, Vol. I, pp. 6, 130, and 133.

c-Appeal to force: *argumentum ad baculum* (appeal to the stick).

α-Example 1: You had better believe me since I will beat you up if you do not, or we will fire you, or we will verbally abuse you, etc.

β-Example 2: The argument of Jn. 11:47-48 closely resembles this fallacy.

d-Appeal to pity *ad misericordiam*.

α-Example 1: A young man pleads for mercy to the court, when he is charged with the murder of his parents, because he is an orphan.

β-Example 2: A man claims that he did not have Scriptural grounds to divorce his first wife, but says that he has children, by his second wife, and it would be too hard upon them to split up the family.

e-Black-white fallacy

“**The either-or fallacy**, also known as **false dilemma**, offers only two alternatives when more exist. Such fallacies often touch on emotional issues and can therefore seem accurate at first. When people reflect, however, they quickly come to realize that more alternatives are available.” (Troyka, Lynn Quitman, 1993, *Simon & Schuster Handbook for Writers*. Englewood, Cliffs, NJ: Prentice Hall, p. 142)

α-Example 1: Either the church has love or doctrinal soundness.

β-Example 2: You are either a legalist or you teach grace.

γ-Refer to: Fox, 2003, Vol. I, pp. 89 and 525; Fox, 2005, Vol. II, pp. 510 and 513; Fox, 2006, Vol. II, pp. 33 and 98.

f-Argument from ignorance *ad ignorantiam*. (appeal to ignorance)

“The fallacy of the *appeal to ignorance* occurs when advocates maintain that something cannot be so because they, or the audience, have never heard of it. Uninformed persons, for example, at one time declared the telephone to be an impractical gadget because ‘Everyone knows you can’t talk over wires.’” (Freeley, Austin J. 1986, *Argumentation and Debate*. Belmont, CA: Wadsworth Pub. Co., p. 169)

α-Form of the argument: P is true because you cannot disprove it.

β-Example 1:

Mormon: Can you explain the baptism for the dead (1 Cor. 15:29)? Christian: No I cannot explain that passage.
Mormon: Then my explanation must be right.

γ-Example 2:

Premillennial: Can you explain all of the book of Revelation?

Christian: No I cannot explain all of that book.

Premillennial: Then my explanation of it must be right.

This argument crosses the line and becomes “denying the antecedent.”

If one can explain the book of Revelation and answer my argument, then my explanation is wrong.

On cannot explain the book of Revelation and answer my question.

My explanation is not wrong.

δ-Example 3: We can practice “X” because you cannot prove it is sinful.

ε-Refer to: Fox, 2000, pp. 113-114 and 296; Fox, 2003, p. 224; Fox, 2005, p. 380.

g-Emotional appeal *ad populum*. (appeal to the people)

“**Bandwagon**, also known as **going along with the crowd** or **ad populum**, implies that something is right because everyone is doing it, that truth is determined by majority vote: ‘Smoking is not bad for people because millions of people smoke.’” (Troyka, Lynn Quitman, 1993, *Simon & Schuster Handbook for Writers*. Englewood, Cliffs, NJ: Prentice Hall, p. 141)

“The fallacy of popular appeal occurs when an advocate seeks to gain support for a position by maintaining that he or she is just ‘an ordinary human’ like everyone else. This device was particularly popular with rural politicians at the turn of the century and still has considerable currency today. ... Another aspect of the same fallacy is the ‘*bandwagon*’ technique – or arguing that something should be done because ‘everybody’ is doing it.” (Freeley, Austin J. 1986, *Argumentation and Debate*. Belmont, CA: Wadsworth Pub. Co., p. 168)

α-First form of the argument: p is true because I feel it is true (personal form of argument).

Example 1: I get this good feeling when I pray, therefore I must be doing what God wants me to do. Therefore my religion must be right.

Example 2: I know Joseph Smith was a prophet because I prayed and got a good feeling. If you pray you will also get a good feeling, which will prove he was a prophet.

Example 3: The Jews committed this fallacy in Jn. 7:47-48.

β -Second form of the argument: p is true because many people feel it is true (objective form of the argument).

Example 1: Roman Catholicism must be right because it has more adherents than your religion.

Example 2: Your group is small; therefore you must not be right in what you teach.

γ -Third form of the argument: p is true because I told a joke (we meet the opponent's arguments, not by evidence, but by a joke.)

Example 1: When responding to an argument, make note of the fact that the opponent is bald headed and tell a bald man joke.

Example 2: The joke may be disguised as an analogy.

Response to this type of argument: "This joke was funny, but the audience wants to hear the truth, they want a reply and will follow the truth, not a joker."

δ -The fallacy of "loaded language."

"Loaded language provides many possibilities for obstacles to clear thinking. Emotionally charged words are often used in an effort to establish a contention without a proof. In a recent political campaign one candidate declared, 'The time has come to throw this do-nothing, corruption-riddled Administration out of office.' Obviously, such an administration should be thrown out of office, but the mere use of these labels did nothing to prove that the Administration was guilty of either of the charges. ...

Loaded language, or name calling, is all too often used in political campaigns. Time magazine reported this example from a Florida senatorial campaign:

[George] Smathers used fancy language to convey sinister meanings to benighted rural listeners. 'Are you aware that Claude Pepper is known all over Washington as a shameless extravert?' Not only that, but this man is reliably reported to practice nepotism with his sister-in-law, and he has a sister who was once a thespian in wicked New York. Worst of all, it is an established fact that Mr. Pepper before his marriage habitually practiced celibacy.'" (Freeley, Austin J. 1986, *Argumentation and Debate*. Belmont, CA: Wadsworth Pub. Co., p. 164)

[Quote from: *Time*, April, 25, 1983, p. 29]

h-Accident (Treating as permanent a quality that may be only temporary. This fallacy is committed when we argue from some general principle to some particular case whose accidental features make it an exception to the principle.)

α -Example 1: Jesus did not have sin; therefore baptism cannot be for the remission of sins.

β -Example 2: Cornelius received miraculous gifts; therefore, all should receive miraculous gifts.

i-Converse accident, or hasty generalization: This is the converse of the fallacy of accident. This fallacy consists of taking an exceptional case as a basis of generalization.

α -Example 1: The thief is taken as an example of how to be saved (Lk. 23:43)

β -Example 2: Cornelius is often used as an example of Holy Spirit baptism, and then it is claimed that all should receive it as he did.

D Additional fallacies

1-False cause *non causa pro causa*.

a-Definition: Certain premises from which a false (or absurd) conclusion follows are stated. It is then concluded that some proposition in the premises which is not really the reason (cause) of this absurd conclusion is itself false, when as a matter of fact some other proposition in the premises is that from which the absurd conclusion follows. This fallacy is usually related to the *reductio ad absurdum*.

b-“The fallacy of **false cause** is called **post hoc, ergo propter hoc** in Latin, - which means ‘after this, therefore because of this.’ This fallacy results when someone assumes that because two events are related in time, the first one causes the second one. This cause-and-effect fallacy is very common.” (Troyka, Lynn Quitman, 1993, *Simon & Schuster Handbook for Writers*. Englewood, Cliffs, NJ: Prentice Hall, p. 140)

2-Existential fallacy.

3-Reductive fallacy.

4-Chronological snobbery or *argumentum ad annis*.

a-Example 1: I have been a member of the church longer than you; therefore I know more about this topic or that topic.

b-Example 2: I have been preaching longer than you; therefore I am right on this point of doctrine (cf. 1 Kings 13).

5-The fallacy of special pleading.

This fallacy consists of appealing to a general statement in refuting another person's assertion, and then ignoring that statement in defending one's own. This is a type of the fallacy of inconsistency. (Monroe Beardsley, *Thinking Straight*. Prentice-Hall Inc., Englewood Cliffs, N.J.: 3rd ed., 1966, p. 286)

“The fallacy of *special pleading* occurs when advocates accept a line of reasoning and its conclusions but urges a special exception for their case.” (Freeley, Austin J. 1986, *Argumentation and Debate*. Belmont, CA: Wadsworth Pub. Co., p. 166)

“**Card-stacking**, also known as **special pleading**, ignores evidence on the other side of a question. For all the available facts, the person arguing selects only those that will build the best (or worst) possible case.” (Troyka, Lynn Quitman, 1993, *Simon & Schuster Handbook for Writers*. Englewood, Cliffs, NJ: Prentice Hall, pp. 141-142)

a-Denominations claim to interpret the Bible literally, but reject their position in the parables, etc.

b-Brethren claim that the indwelling of the Holy Spirit is literal, because the language of Scripture is to be interpreted literally, but reject this in Acts 2:38.

c-Refer to: Fox, 2000, pp. 114 and 269; Fox, 2003, Vol. I, pp. 297-298, 347, 479, 490-492, 499, and 525; Fox, 2005, Vol. II, pp. 22, 233, 375, 381, 514, 526-527, 545, 557, and 573; Fox, 2006, Vol. I, pp. 50, 186, and 289, Vol. II, p. 56, Fox, 2007, pp. 89, 99, and 170.

6-Diverting the issue.

a-Form of the argument: p is true (or false) because r is true (or false [where p and r are not logically related or factually related]).

α -Example 1: It is right for women to lead prayers with Christian men present; because girls have been allowed to participate in chain prayers at youth meetings. (Ruby-pp. 138-140)

β -Example 2: It is right to have more than one congregation under one eldership, because this has been practiced (children's church, Spanish-Anglo congregations under one eldership, etc.).

b-The fallacy of *a red herring*. Refer to: Fox, 2003, Vol. I, p. 487, Fox, 2006, Vol. I, pp. 2, 77-78, 128, 150, and 186; Fox, 2006, Vol. II, pp. 1, 5, 34, 56, 59-61, 76, and 186.

“A **red herring**, sometimes referred to as **ignoring the question**, sidetracks an issue by bringing up a totally unrelated issue: ‘Why worry about pandas becoming extinct when we should be concerned about the plight of the homeless?’ Someone who introduces an irrelevant issue hopes to distract the audience as a red herring might distract bloodhounds from a scent.” (Troyka, Lynn Quitman, 1993, *Simon & Schuster Handbook for Writers*. Englewood, Cliffs, NJ: Prentice Hall, p. 141)

“The **red herring** fallacy is committed when the arguer diverts the attention of the reader or listener by changing the subject to some totally different issue. ... The fallacy gets its name from a procedure used to train hunting dogs to follow a scent. A red herring (or bag of them) is dragged across the trail with the aim of leading the animal astray. Since red herrings have an especially potent scent caused in part by the smoking process used to preserve them, only the best dogs will follow the original scent.” (Hurley, p. 121)

c-The fallacy of *poisoning the well*. Refer to: Fox, 2003, Vol. I, pp. 461 and 466; Fox, 2006, Vol. I, pp. 2, 10-11, and 128.

α -If one opposes some practice, he might be called “anti.” This is a form of poisoning the well.

β -If one is for something that might “seem” new, he might be called “a liberal.”

γ -Sometimes “poisoning the well” goes along with misrepresentation of what the other person teaches or does.

7-Fallacies in the use of arguments by analogy:

a-The *false analogy*. This is when one supposes or insists that there is a relevant connection when none in fact exists.

α-Some have argued that Bible classes are a parallel to the missionary society.

β-Some have argued that orphans homes are a parallel to the missionary society.

γ-Refer to: Fox, 2000, pp. 329-330 and 401; Fox, 2003, Vol. I, pp. 238, 354-355, 359, 514, 519, and 549; Fox, 2005, Vol. II, pp. 364, 512, and 653.

b-The fallacy of “pressing an analogy too far.” This is extending an analogy beyond its actual reach, even when a connection does exist.

α-This is the same fallacy as pressing a parable into saying something it was not intended to say.

β-Some have tried to make the parable of the tares (Matthew 13) prohibit church discipline.

8-Fallacy of *straw man*. (Some logicians group the straw man as a subdivision of, *secundum quid*).

“The fallacy of ‘*straw argument*’ occurs when advocates set up an issue just so they can knock it down. Sometimes they attack a minor argument of their opponents and claim that they have refuted the whole case, or else they refute an argument their opponents did not advance and claim that they have thus refuted their opponents’ position.” (Freeley, Austin J. 1986, *Argumentation and Debate*. Belmont, CA: Wadsworth Pub. Co., p. 168)

a-The *straw man* is when one misrepresents an opponents’ position in order to make it easier to attack or attack a weaker opponent while ignoring a stronger one.

α-Example 1: Those who use instrumental music in worship often resort to the claim that the Lord’s church opposes all music in worship.

β-Example 2: Some of those who teach the personal indwelling of the Holy Spirit claim that those who teach the representative indwelling of the Holy Spirit teach that the Holy Spirit is the word of God (the Scriptures). They attack this error and claim to have proven that the indwelling is literal (or personal).

b-Refer to: Fox, 2003, Vol. I, pp. 19, 92, 460, 462-465, 476, and 481; Fox, 2005, Vol. II, pp. 93, 41, 284, 508, 561, 582, 584, 596-597, 600, 624, 639, and 704; Fox, 2006, Vol. I, pp. 2 and 186; Fox, 2006, Vol. II, pp. 4, 29, 34, 44-45, 56, 64, 69, and 98.

9-The fallacy of *secundum quid*

a-Definition: To hold a man to the letter of his statement, without regard to obvious limitations upon its applicability, is to trap him by the fallacy of *secundum quid*.

α -Example 1:

All those who thrust a knife into another person are those who commit an evil act.
Surgeons are those who thrust a knife into another person.
Surgeons are those who commit an evil act.

β -Example 2:

All men have sinned (Rom. 3:23).

Jesus was a man.

Jesus sinned.

The obvious limitations are that all except the One perfect person have sinned. (In the context of Rom. 3:23, the word “all” refers to Jews and Gentiles. Even though Jesus was a Jew, He is still an exception.)

γ -Example 3: 1 Cor. 15:27

10-The fallacy of using flattery (cf. Mt. 22:16-17).

a-Flattery is a form of diverting attention from the real issue (similar to the red herring).

b-Flattery is used to make others (who are observing) think the flatterer is being kind to the one being flattered. (It hides the real motives of the flatterer.)

c-Flattery is often used to get a person to “let his guard down” and to be taken unawares by something (e.g. by an argument).

XII Truth tables

A Rules for the use of “and” \wedge , and “or” \vee .

p	q	$p \wedge q$	$p \vee q$
T	T	T	T
T	F	F	T
F	T	F	T
F	F	F	F

B Rule for the use of “not” \sim .

p	$\sim p$
T	F
F	T

C Conditional (if p, then q) and biconditional (if and only if, iff).

p	q	$p \rightarrow q$	$p \leftrightarrow q$
T	T	T	T
T	F	F	F
F	T	T	F
F	F	T	T

XIII The modality of propositions.

A Some propositions are assertoric (or contingent).

1-This type of proposition states a matter of fact. It is true or false for the actual.

2-This type of proposition belongs to the sphere of deductive logic.

B Some propositions are problematic (possible).

1-This type of proposition states a possibility.

2-This type belongs to the sphere of probabilities (inductive logic).

C Some propositions are apodeictic (necessary).

1-This type of proposition states a necessity. It is true or false for everything possible.

2-This type of proposition belongs to the sphere of deductive logic.

XIV Exclusive and exceptive propositions.

A Exclusive propositions which confine the application of the predicate to subject. It is introduced by the words only, none but, nothing except, or an equivalent expression.

1-The proposition Only S is P, is equivalent to, No non-S is P, and to, All P is S.

Example: The expression Only those who are believers will be saved, is equivalent to No non-believers are saved, and to All saved are believers.

2-Specific statements are exclusive in nature.

B Exceptive propositions exclude the predicate from a certain part of the subject (by such words as *except*, *but*, and *unless*) at the same time that it affirms the predicate of the subject.

1-The proposition: All men *except (but)* foolish men obey God can be changed to the exclusive form.

2-Example: All men *except (but)* foolish men obey God is changed to: *Only* foolish men do not obey God.

XV DeMorgan's theorem.

A Form of the theorem:

1- $\sim(p \vee q)$ and $(\sim p \wedge \sim q)$ are equivalent.

2- $\sim(p \wedge q)$ and $(\sim p \vee \sim q)$ are equivalent.

B Examples:

1-First example:

The proposition: Either God exists or there is no standard of ethics, can be converted to the proposition: It is not true that God both does not exist and there is a standard in ethics.

This argument in symbols is:

$G \vee \sim E$ becomes: $\sim(\sim G \wedge E)$

2-Second example:

The proposition: He that believeth and is baptized can be converted to the proposition: It is not true that he that believes not or he that is not baptized shall be saved.

This argument in symbols is:

$Be \wedge Ba$ becomes: $\sim(\sim Be \vee \sim Ba)$

3-Does the expression **he that disbelieveth shall be condemned** (Mk. 16:16) prove that it is not necessary to be baptized?

a-Proof # 1: Construct a truth table for each argument.

$Be \wedge Ba \rightarrow S$ is true for all instances in which $\sim Be \rightarrow \sim S$

Be	Ba	S
T	T	T
T	F	F
F	T	F
F	F	F

b-Proof from DeMorgan's theorem: $Be \wedge Ba \rightarrow S = \sim(\sim Be \vee \sim Ba) \therefore \sim\sim(\sim Be \vee \sim Ba) = \sim Be \vee \sim Ba = \sim S$ (This is proven by a truth table.)

4-Refer to: Fox, 2003, Vol. I, pp. 579-583.

XVI The Sorites

Definition: A sority is a chain of syllogisms in which the conclusion of one becomes the premise of the next.

A The Aristotelian sorites.

1-Definition: The first premise contains the subject of the conclusion, and the common term of each successive proposition appears first as a predicate, then as a subject.

2-Rules:

a-No more than one premise may be negative; if a premise is negative, it must be the last.

b-No more than one premise may be particular; if a premise is particular, it must be the first.

3-Example:

All dictatorships are undemocratic.

All undemocratic governments are unstable.

All unstable governments are cruel.

All cruel governments are objects of hate.

We may infer the conclusion: All dictatorships are objects of hate.

B The Goclenian sorites.

1-Definition: The first premise contains the predicate of the conclusion, and the common term of each successive proposition appears first as subject, then as predicate.

2-Rules:

a-No more than one premise may be negative; if a premise is negative, it must be the first.

b-No more than one premise may be particular; if a premise is particular, it must be the last.

3-Example:

All sacred things are protected by the state. All property is sacred.

All trade monopolies are property.

All steel industries are trade monopolies.

∴ All steel industries are protected by the state.

XVII The Enthymeme

A Definition of an enthymeme: “A syllogism that is incompletely stated, in which one of the premises or the conclusion is tacitly present but not expressed, is called an enthymeme.”

(Cohen; Nagel, p. 78)

1-There is another definition of a enthymeme: “The enthymeme is a syllogism based on probabilities, signs, and examples, whose function is rhetorical persuasion. Its successful construction is accomplished through the joint efforts of speaker and audience, and this is its essential character.” (Bitzer, p. 408)

2-The definition used in this study will be limited to the enthymeme as a truncated syllogism in which one of the premises or the conclusion is absent.

B The enthymeme is divided into three types:

1-An enthymeme of the first order is one in which the major premise is unexpressed.

a-The argument of the Pharisees (Mt. 12:22-24).

Major Premise: Unstated
 Minor Premise: Jesus is one who casts out demons.
 Conclusion: Jesus is one who casts out demons by the power of Beelzebub.

b-The answer given by Jesus.

Major Premise: Unstated
 Minor Premise: Your sons are those who cast out demons.
 Conclusion: Unstated (Implied: Your sons are those who cast out demons by the power of Beelzebub.

c-The only major premise which would link these two arguments is: All those who cast out demons are those who cast out demons by the power of Beelzebub. This argument is also a dilemma.

2-An enthymeme of the second order is one in which the minor premise is unexpressed.

a-This type is usually found where the major premise is in the Scriptures and the minor premise is supplied by the one who studies the Scriptures.

b-Example of this form of enthymeme.

Major Premise: All those who are scripturally baptized are those who have repented (Acts 17:30, 2:38, Lk. 13:3, 5, etc.).
 Minor Premise: Unstated
 Conclusion: The eunuch is one who repented (Acts 8:36-39).

c-The obvious minor premise is: "The eunuch is one who was scripturally baptized." This is the argument used to prove that one part of the plan of salvation is implicitly required even though the text does not explicitly say it was required.

3-An enthymeme of the third order is one in which the conclusion is unexpressed.

a-Many of the Lord's parables functioned in this same manner (i.e. the conclusion is reached before the hearer realized he was condemning himself).

b-Example:

Major Premise: All liars shall have their part in the lake that burneth with fire and brimstone (Revelation 21:8).

Minor Premise: John Doe is a liar.

Conclusion: Unstated

c-The conclusion required to complete this categorical syllogism is: John Doe is one who shall have his part in the lake that burneth with fire and brimstone.

4-Refer to: Fox, 2000, p. 269; Fox, 2003, pp. 561-565.

5-Argument establishing the "plan of salvation" by enthymemes and other logic.

a-All those who are saved are those who believe and have been baptized (Mk. 16:15-16).

b-All those who are saved are those who have remission of sins (axiomatic truth).

c-All those who have remission of sins are those who repent and are baptized (Acts 2:38).

d-All those who are saved are those who confess that Jesus is the Christ, the Son of God (Mt. 10:32 and Lk. 12:8).

e-By conjunction: All those who are saved are those who have: believed, repented, confessed that Jesus is the Christ the Son of God, and have been baptized.

f-The same kind of reasoning can be used to establish: (1) the worship of the Lord's church, (2) the officers in the Lord's church, (3) the duties of each office, etc.

ARGUMENTATION AND DEBATE

I Note taking

A Outlining is very important.

1-Outline your notes.

2-Outline the arguments of the opponent.

B A method of assimilating information: Chunking material into smaller segments helps to remember it.

1-Chunking is the arranging of material into smaller segments in order to remember it more efficiently.

2-Example of chunking: the telephone number is chunked into segments and is therefore easier to remember.

3-Anything that facilitates drawing distinctions helps to remember. Even study at a different place for each subject helps.

II Overview of argumentation and debate.

A Types of arguments.

1-One sided-More effective for audiences who agree with you. Adds more reasons to believe.

2-Two sided-Best way to persuade a hostile audience.

B Success is not necessary for persuasion to occur.

1-A person may be persuaded against our position by a bad presentation of our case.

2-Success can occur as a result of persuasion, but it is not required.

C There is no persuasion without a choice.

1-Coercion can occur without a choice, but not persuasion.

2-A person may change his actions because of fear, but not be persuaded. The actions have changed, but the person is not persuaded.

3-Christianity must use persuasion (2 Cor. 5:11).

D Definition of *persuasion*: The attempt by an individual or group of individuals to influence the beliefs, attitudes, values, and/or behavior of another individual or group of individuals through the transmission of a message.

1-This implies that there must be an intent to influence.

2-There must be some form of communication.

3-Success is not necessary (the attempt to persuade is necessary).

4-There must be a choice on the part of the one or ones to be persuaded.

5-Freeley defines this as purposeful persuasion (p. 8).

6-*Propaganda* is the use of persuasion by a group (often a closely knit organization) in a sustained, organized campaign using multiple media for the purpose of influencing a mass audience.

III What is argumentation?

A Aristotle's three modes of proof. Rhetoric = all of the available means of persuasion (Aristotle).

1-*ethos*-Characteristics of the speaker-e.g. appearance, body language, style, sincerity, competence (knowledge and experience), reputation, dynamism, good will, and trustworthiness.

a-*ethos* = in modern terms this is called "source credibility."

b-Coordination = perception of how the speaker has a similar background with me.

c-Charisma = A phenomenon unexplained by research in literature in which a person has an unusually high degree of *ethos*.

d-According to Aristotle *ethos* is the most important aspect of rhetoric. People are more persuaded by the *ethos* of the speaker than any other factor.

2-*Pathos*-Receiver or audience oriented. The emotional component aroused in the audience.

3-*Logos*-Characteristic of the message. Substance of the message in terms of:

a-Logical nature of the message.

b-This is the argumentation part (subset) of persuasion.

c-*Logos* is a subset of persuasion.

B Definitions.

1-Definition of argumentation as a field of study: The field of inquiry made up of the basic principles of logic and rhetoric that underlie reasoned discourse.

2-Working definition (as a practical endeavor): Reason giving in communicative situations with the aim of establishing conclusions.

3-The principle concern of argumentation is the logical proof of propositions.

4-Argumentation is a logical subset of persuasion. The other two subsets are:

a-*Ethos*

b-*Pathos*

C Distinctions between argumentation and persuasion.

1-Functions.

a-Persuasion = The changing of minds by any means (except coercion).

b-Argumentation = The establishment of conclusions through reasoned discourse.

2-Criteria of evaluation.

a-Persuasion-The main criteria is effectiveness.

b-Argumentation-The main criteria is logical validity.

D Distinctions between discussion and debate.

1-They differ in being different approaches to decision making.

2-Discussion = An internal method of decision making. It is self contained (all participants are playing a dual role).

a-Advocate

b-and Judge

c-Either the group compromises or comes to a consensus (all agree).

d-There is no outside group or person to decide the point(s) in question.

e-The persuasion is directed at the group itself because they are the ones who make the final decision.

3-Debate = An external method of decision making.

a-Each debater functions as an advocate.

b-The observers serve as judges therefore the persuasion is directed at the observers.

c-Examples: court of law, political debate, religious debate, etc.

E Additional points.

1-If the goal of the speech is to persuade someone the last point is the most important.

2-If the goal is to inform someone the first point is the most important.

IV Arguments

A Definition of argument: It is a conclusion and its supporting reasons (and evidence).

1-An argument is a set of sentences related in such a way that some of the sentences purport to provide evidence to support one of the sentences.

2-This conforms more to the definition of a logician.

B Logic

1-Definition: It is the field of study concerned with analyzing arguments and appraising their correctness or incorrectness.

2-The logician's interest is: In whether the alleged evidence in an argument would, if true, support the claim or conclusion.

C Important terms (for the most fundamental parts of an argument).

1-Premise: A sentence that provides the basis, or part of the basis, for the claim (the reasons for accepting the claim).

2-Conclusion: The claim that is being argued for.

V Refutation (The process of attacking an opponent's argument with the intent of weakening his/her overall position).

A Steps of refutation.

1-State the argument you are refuting.

2-State your counter argument.

3-Develop and explain the response.

4-Substantiate it with evidence, if necessary.

B Additional points.

1-Refute the affirmative arguments.

2-Then set forth the negative arguments.

VI Propositions (A statement of judgment that identifies the central issue in controversy).

A Propositions of fact (asserts that something is or is not true).

1-They are absolutely true or false.

2-The determination of truth or falsity may be impossible.

B Propositions of value (Maintains that something is good or bad, right or wrong, better than or worse than something else, etc.).

1-We must establish the criteria for measuring the value.

2-Apply the criteria to the proposition “x.”

3-Countering a value proposition:

a-Establish counter criteria.

b-Apply the counter criteria to “x.”

c-Demonstrate, if possible, that “x” does not even meet the affirmative criteria.

d-Establish criteria for the opposite value.

C Propositions of policy (Maintains that action[s] should be enacted to make a change).

1-Must argue proposition of fact and value before a policy proposition.

2-Presumption (a logical advantage given to an opponent of a policy proposition).

a-*Status Quo* (existing conditions continue unless the affirmative proves his case).

b-The burden of proof rests upon the affirmative to give a compelling reason to change the policy.

VII Issues (critical claims inherent in the proposition).

A Stock issues (hinges upon which the debate turns).

1-The affirmative must win all stock issues to carry the proposition.

2-The negative must win at least one stock issue.

B Stock issues in propositions of value.

1-Definitive issues.

a-Definitions of key terms.

b-Criteria for values.

2-Designative issues.

a-Do the facts correspond to the definitions.

b-What are the applications of the values.

C Stock issues in propositions of value.

1-Justification

a-Significance of the issue (is there a compelling need for this change in policy?)

α -Quantitative (statistics)

β -Qualitative

b-Inherency (inherent in the *status quo*).

α -Cause (some element in *status quo* has caused the problem).

β -Perseverance (If the *status quo* continues this problem will continue).

γ -Reform (The only way to solve the problem is to enact the policy).

2-Plan

a-Workability (will the plan be enforceable, cost effective, etc.?)

b-Solvency (Does it solve the problem? Develop an alternative causality).

3-Advantages (Is the plan, on balance, advantageous?)

VIII Flow sheets (a system of note taking to use in tracking the flow of arguments in a debate).

A Used by participants

1-To facilitate the following of the flow of the arguments.

2-To insure that all arguments have been answered.

3-To consider the strength of the answers to each argument by comparing the arguments.

B Used by judges

1-To facilitate the following of the flow of the arguments.

2-To insure that all arguments have been answered.

3-To be able to consider the strength of the answers to each argument.

C Aspects of flow sheets (There are two sides to the flow).

1-Case side (affirms that a change is needed).

a-Affirmative case the justification (We need to change because: ...).

α -Significance

β -Inherency (There is something bad in the status quo which will not change without a change in the status quo.).

b-Negative case (denies the justification).

2-Plan side (Type of change to be implemented).

a-Workability

b-Solvency (Will it take care of all the problems?)

c-Advantages (Is it, on balance, advantageous).

ASSIGNMENT FOR LOGIC CLASS

Determine if the following syllogisms are valid, and if you determine that they are not valid give the reason or reasons why they are invalid. (These are taken from copies of debates).

Falls-Storment Debate: Proposition: The Scriptures Teach that Women Must Wear an Artificial Covering in the Assembly Today.

1. Women were to be covered when praying (I Cor. 11:4,5).
2. Women pray in the assembly today.
3. Therefore, women are to be covered throughout the assembly today. (p. 9)

1. Women were to be covered when praying (I Cor. 11:4,5).
2. Women pray everywhere (I Thess. 5:17).
3. Therefore, women must always wear a covering. (p. 9)

1. Women were to be covered when praying (I Cor. 11:4,5).
2. Women pray in the assembly today.
3. Therefore, women are to be covered throughout the assembly today. Brother Storment, the logical and correct conclusions to the major and minor premises is: Therefore, women are to be covered while PRAYING in the assembly today! (P. 19)

... This syllogism is false also. Notice:

1. Women were to be covered when praying (I Cor. 11:4,5).
2. Women pray everywhere (I Thess. 5:17).
3. Therefore, women must always wear a covering. Shame, shame, brother Storment! The correct and logical conclusion should be: Therefore, women must wear a covering everywhere she prays. (p. 20)

Syllogism 1:

1. "Praying and "prophesying," as mentioned in 1 Cor. 11:2-16, were spiritual gifts.
2. Spiritual gifts have passed away.
3. Therefore, no one today prays or prophesys (sic) in the sense of 1 Cor. 11:2-16.

Syllogism 2:

1. Women were to wear an artifical (sic) covering when "praying or prophesying" (1 Cor. 11:2-16).
2. No one today prays or prophesys in the sense of 1 Cor. 11:2-16.
3. Therefore, "The Scriptures do not teach that women must wear an artifical (sic) covering in the assembly today." (p. 30)

Thrasher-Welch Debate (baptismal formula)

SYLLOGISM NUMBER ONE:

- 1) No man hath seen God (the Father) at any time (Exodus 33:20; Jn. 1:18; 1 Jn. 4:12).
- 2) But men have seen Jesus Christ (Jn. 1:14; 1 Jn. 1:1-3; 1 Cor. 15:3-8).
- 3) Therefore, Jesus Christ is not God the Father.

SYLLOGISM NUMBER TWO:

- 1) God the Father knew of that day and hour (Mk. 13:32).
- 2) But Jesus Christ the Son did not know (Mk. 13:32).
- 3) Therefore, Jesus Christ is not god the Father.

SYLLOGISM NUMBER THREE:

- 1) God the Father hath not flesh and bones (Jn. 4:24; Lk. 24:39).
- 2) But Jesus Christ the son had flesh and bones (Lk. 24:39).
- 3) Therefore, Jesus Christ is not God the Father. (Pp. 28 and 29)

PROOF THAT JESUS CHRIST IS NOT THE HOLY SPIRIT

SYLLOGISM NUMBER ONE:

- 1) Those of the world could not see the Spirit (Jn. 14:17).
- 2) But those of the world could see Jesus (Jn. 14:19).
- 3) Therefore, Jesus Christ is not the Holy Spirit.

SYLLOGISM NUMBER TWO:

- 1) Blasphemy against the Holy Ghost shall not be forgiven (Mt. 12:32).
- 2) But blasphemy against Jesus Christ may be forgiven (Mt. 12:32).
- 3) Therefore, Jesus Christ is not the Holy Ghost.

SYLLOGISM NUMBER THREE:

- 1) The Holy Spirit hath not flesh and bones (Lk. 24:39).
- 2) But Jesus Christ had flesh and bones (Lk. 24:39).
- 3) Therefore, Jesus Christ is not the Holy Spirit. (p. 31)

Welch's Dilemma On The Name of The Church

SYLLOGISM NUMBER ONE:

- 1) D. L. Welch: "the church that the Lord died for...is not ashamed to be called by His name."
- 2) The "United Pentecostal Church" is not called by the name of Jesus Christ.
- 3) Therefore, the "United Pentecostal Church" is not "the church that the Lord died for."

SYLLOGISM NUMBER TWO:

- 1) The saved person is added to “the church that the Lord died for (Acts 2:47; Acts 20:28; Eph. 5:23).”
- 2) But the “United Pentecostal Church” is not “the church that the Lord died for.”
- 3) Therefore, the saved person is not added to the “United Pentecostal Church.” (P. 36)
Welch’s Dilemma On The Name Of The Church

SYLLOGISM NUMBER ONE:

- 1) D. L. Welch: “the church that the Lord died for...is not ashamed to be called by His name.”
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- 1) The saved person is added to “the church that the Lord died for” (Acts 2:47; Acts 20:28; Eph. 5:23).
- 2) But the “United Pentecostal Church” is not “the church that the Lord died for.”
- 3) Therefore, the saved person is not added to the “United Pentecostal Church (p. 109).”

Connally-Hicks Debate (marriage-divorce-remarriage) A SYLLOGISM

PREMISE A: When Jesus comes again we will be judged by what is written in the books.
(THE BIBLE)

PREMISE B: The separationist command is not written in the books. (BIBLE) CONCLUSION:
Therefore we will not be judged by the separationist command. (p. 68)

MAJ. PREM. All doctrines which are not in the Bible are doctrines by which no man shall be judged.

MIN. PREM. The doctrine that unscripturally divorced and remarried persons must get out of their remarriage situations is a doctrine which is not in the Bible.

CONCL. The doctrine that unscripturally divorced and remarried persons must get out of their remarriage situations is a doctrine by which no man shall be judged. (p. 168)

SYLLOGISM ON JNO. 3:5

MAJ. PREM. If it is the case that Jno. 3:5 teaches that the only way one can get into the kingdom is to be baptized, then it is the case that any interpretation of any passage which contradicts that teaching is an erroneous interpretation.

MIN. PREM. It is the case that Jno. 3:5 teaches that the only way one can get into the kingdom is to be baptized.

CONCL. It is the case that any interpretation of any passage which contradicts that teaching is an erroneous interpretation. (p. 201)

SYLLOGISM ON MT. 19:9

MAJ. PREM. If it is the case that Mt. 19:9 teaches that the only scriptural ground for divorce and remarriage is the ground of one's having put away his companion because of that companion's fornication, then it is the case that any interpretation of any passage which contradicts that teaching is an erroneous interpretation.

MIN. PREM. It is the case that Mt. 19:9 teaches that the only scriptural ground for divorce and remarriage is the ground of one's having put away his companion because of that companion's fornication.

CONCL. It is the case that any interpretation of any passage which contradicts that teaching is an erroneous interpretation.

(p. 202)

SYLLOGISM ON MT. 19:9 AND CONTINUOUS ACTION

MAJOR PREMISE: If it is the case that the present tense of the verb μοιχαται (in Mt. 19:9) means continuous action, then it is the case that all persons who put away their companions and marry another companion--except upon the ground of fornication upon the part of the companion put away--are persons who keep on committing adultery.

MINOR PREMISE: It is the case that the present tense of the verb μοιχαται (in Mt. 19:9) means continuous action.

CONCLUSION: It is the case that all persons who put away their companions and marry another companion--except upon the ground of fornication upon the part of the companion put away--are person who keep on committing adultery. (p. 298)

Highers-Blakely Debate (instrumental music in worship)

1. All acts or activities employed in Christian worship, as acts or actions of worship, without scriptural authority, are acts or actions which are sinful.
2. The use of mechanical instruments of music in Christian worship is an act or action without scriptural authority.
3. Therefore, the use of mechanical instruments of music in Christian worship is an act or action which is sinful.

(p. 31)

BLAKELY'S BASIC ARGUMENT

1. All acts or actions employed in Christian worship, as acts or actions of worship, without scriptural authority, are acts or actions which are nevertheless acceptable to God.
2. The use of mechanical instruments of music in Christian worship is an act or action without scriptural authority.
3. Therefore, the use of mechanical instruments of music in Christian worship is nevertheless acceptable to God. (p. 92)

BLAKELY'S OLD TESTAMENT ARGUMENT

-stated in logical form-

MAJOR PREMISE: Whatever was used in praising God in the Old Testament is approved for praising God today.

MINOR PREMISE: Instrumental music was used in praising God in the Old Testament.

CONCLUSION: Therefore, instrumental music is approved for praising God today. (p. 170)

BLAKELY'S ARGUMENT ON WORSHIP

-stated in logical form-

MAJOR PREMISE: Conduct which is unregulated by the scriptures is conduct which gives Christians freedom of action.

MINOR PREMISE: Worship is conduct which is unregulated by the scriptures. CONCLUSION:

Therefore, worship is conduct which gives Christians freedom of action. (p. 236)

BLAKELY'S HEAVEN ARGUMENT

-stated in logical form-

MAJOR PREMISE: Everything mentioned for the praise of God in heaven is permissible for the praise of God on earth.

MINOR PREMISE: Instrumental music is mentioned for the praise of god in heaven.

CONCLUSION: Therefore, instrumental music is permissible for the praise of God on earth. (p. 257)

The following were taken from: *The Timeless Trinity for the Ceaseless Centuries*. Roy H. Lanier Sr., pp. 211-212.

1. He that built all things is God (Heb. 3:4).
2. Jesus built all things (Jn. 1:1-3).
3. Therefore, Jesus is God.

1. That which existed before creation is uncreated.
2. Jesus existed before creation, since he created all things.
3. Therefore, Jesus, as the Word, is uncreated.

Furthermore:

1. That which is uncreated is self-existent and wholly independent.
2. Jesus, as the Word, is uncreated, as proved above.
3. Therefore, Jesus, the Word, is self-existent and wholly independent.

1. That which is self-existent and wholly independent is God.
2. Jesus, the Word, is self-existent and wholly independent, as proved above.
3. Therefore, Jesus, the Word, is God, as stated in Jn. 1:1.

The following were taken from: *A Study of the Holy Spirit of God*. Richard Rogers, pp. 26-27 (1968 edition).

Major Premise: Peter was to speak words whereby Cornelius was to be saved (Acts 11:14).

Minor Premise: Peter was to speak all things commanded by God (Acts 10:33).

Conclusion: The words whereby he must be saved included all things commanded of God.

Major Premise: Peter commanded him to be baptized in the name of the Lord (Acts 10:48).

Minor Premise: The words whereby he was to be saved included all things commanded of God by Peter.

Conclusion: Baptism in the name of the Lord was included in the words whereby he would be saved.

Major Premise: Peter preached only one gospel (Acts 15:9, 11).

Minor Premise: In preaching the gospel in Acts 2 he commanded people (Jews) to be baptized (Acts 2:38).

Conclusion: In preaching the gospel to Cornelius (Gentiles), he would command baptism.

Major Premise: Peter commanded people to be baptized in the name of the Lord “unto the remission of sins (Acts 2:38).”

Minor Premise: Peter commanded Cornelius to be baptized in the name of the Lord (Acts 10:48).

Conclusion: Peter commanded Cornelius to be baptized for the remission of sins.

Major Premise: Whatever Peter told the people in Acts 2 to be baptized “unto” he also told them to repent “unto.”

Minor Premise: Peter did not tell them to repent “unto” (because of) the remission of sins.

Conclusion: He did not tell them to be baptized “unto” (because of) the remission of sins.

Major Premise: He told them to repent “unto” (in order to) the remission of sins.

Minor Premise: He told them to be baptized for the same reason he told them to repent.

Conclusion: He told them to be baptized “unto” (in order to) the remission of sins.

Major Premise: Peter told the people in Acts 2 to be baptized unto the remission of sins. Minor Premise: Peter preached but one gospel (Acts 15:9, 11). Conclusion: He told Cornelius to be baptized “unto” (in order to) the remission of sin.

The following was made by Mac Deaver in the Deaver-Fox Debate (p. 55).

1. If the Holy Spirit indwells a person through the word, then either (1) a person is saved prior to baptism or (2) the Holy Spirit can indwell the heart of an alien sinner.
2. It is false that the Holy Spirit indwells a person through the word.
3. Therefore, it is false that either (1) a person is saved prior to baptism or (2) that the Holy Spirit can indwell the heart of an alien sinner.

Additional notes:

1-Complete the following arguments (these are enthymemes).

2-Set forth what would have to be proven to demonstrate that the major premise was untrue. (Hint use the square of opposition chart)

Major Premise:

Minor Premise: I am one who has spoken in tongues.

Conclusion: I am one who was baptized in the Holy Spirit.

Major Premise:

Minor Premise: I am one who had a “better felt than told” experience.

Conclusion: I am one who has evidence of my salvation.

Major Premise:

Minor Premise: The household of Lydia (Acts 16) is a household that was baptized.

Conclusion: The household of Lydia (Acts 16) is an instance of infant baptism.

Major Premise:

Minor Premise: Jn. 3:16 is a verse that teaches that one must believe to be saved. Conclusion: Jn. 3:16 is a verse that teaches that one is saved by faith only.

Major Premise:

Minor Premise: Acts 2 through Acts 6 is a passage that is silent concerning non-apostles working miracles.

Conclusion: Acts 2 through Acts 6 is a passage that teaches that all non-apostles were non-workers of miracles from Acts 2 through Acts 6.

Major Premise:

Minor Premise: Mk. 16:17-18 is a passage that teaches that believers would work miracles.

Conclusion: Mk. 16:17-18 is a passage that teaches that miracles are worked today.

Major Premise:

Minor Premise: Parasites are things that are purposeless.

Conclusion: Parasites are things that prove that atheism is true.

Major Premise:

Minor Premise: The doctrine of church cooperation in evangelism is a doctrine that is a parallel to the missionary society.

Conclusion: The doctrine of church cooperation in evangelism is a doctrine that is false.

Major Premise:

Minor Premise: The doctrine of separate Bible classes is a parallel to the missionary society.

Conclusion: The doctrine of separate Bible classes is a doctrine that is false.

Major Premise:

Minor Premise: Murder is an act of evil.

Conclusion: Murder is an act that proves that atheism is true.

Major Premise:

Minor Premise: The doctrine of opposing abortion is a doctrine that is taught by the Roman Catholic Church.

Conclusion: The doctrine of opposing abortion is a doctrine that is false.

Major Premise:

Minor Premise: Acts 1:14, 2:42, 4:24-30, etc. are passages that say that the multitude of the disciples prayed together.

Conclusion: Acts 1:14, 2:42, 4:24-30, etc. are passages that teach that women participated in chain prayers or led prayers.

Major Premise:

Minor Premise: Women are those who have taught the Bible in a moving classroom (a bus) with men present.

Conclusion: Women are those who can teach the Bible in a stationary classroom with men present.

Major Premise:

Minor Premise: Women are those who have led prayer in a moving classroom (a bus) with men present.

Conclusion: Women are those who can lead prayer in a stationary classroom with men present.

Major Premise:

Minor Premise: Women are those who have taught in a classroom with men present (team teaching).

Conclusion: Women are those who can teach in a classroom with men present.

CONVERT THE FOLLOWING HYPOTHETICAL SYLLOGISMS TO CATEGORICAL SYLLOGISMS.

CRITIQUE THESE SYLLOGISMS

If the child is going to be born deformed, then it is lawful to abort it.

This child is going to be born deformed.

Therefore, it is lawful to abort it.

If Adam became a living person when God breathed into his nostrils the breath of life, then unborn children become living persons when they take their first breath.

Adam became a living person when God breathed into his nostrils the breath of life.

Therefore, unborn children become living persons when they take their first breath.

If a child is going to be born as a result of rape or incest, then it is lawful to abort it.

This child is going to be born as a result of rape or incest.

Therefore it is lawful to abort it.

Logic problems (fallacies):

1-What fallacy is employed in the following?

a-No educated person believes in creation.

b-All educated people believe in organic evolution.

c-The Koran is true because Mohammed was a prophet.

d-Only those who are mentally unbalanced need religion.

e-I know the Bible has errors because scholars say that it does.

f-My explanation of this passage must be right, since you cannot explain it.

g-No implicit instructions are binding upon Christians.

h-John Doe uses deductive logic to prove that we should not use deductive logic to interpret the Scriptures.

i-The second and third century church did not argue for the authority of the silence of the Scriptures being prohibitive, therefore it is not prohibitive.

2-CRITIQUE THE FOLLOWING QUOTES:

“I don’t think that people are turning aside from the authority of the Scripture, but the question is, ‘What does the Scripture lead us to?’ Does it lead chiefly to the organization of the church or does it lead us to compassion and love for our fellow man?’ he says.” (*Christian Chronicle*, September 1989, p. 6)

“... Luke then said (verse 14), ‘These all continued with one accord in prayer and supplication, with the women, and Mary the mother of Jesus, and with his brethren.’ We don’t know exactly how this prayer meeting was conducted, but we do know they had one. Therefore, let’s not start eliminating the various ways it could have been conducted simply because the record does not specify any particular way.” (Casey, James *In Defense of Girls Praying*. Baytown, Texas: Casey Publications, 1975, p. 39)

“Are we saved by grace, or by doctrinal accuracy on every point?” (Randy Mayeux, *21th Annual Youth Minister’s Seminar*; Lubbock, Texas, 10-19-89)

“We see the early disciples, in Acts 2, and in Acts 3, and in Acts 21, just to list three examples; going into that temple and participating in the temple worship on a regular basis as Jews who accepted the Messiah.” (Larry James, Sermon, Richardson, Texas 2-26-89)

“And early on psalms, and hymns, and spiritual songs were sung; probably almost always without instrumental accompaniment. I expect, sometimes, there may have been some accompaniment in homes.” (Larry James, Sermon, Richardson, Texas, 2-26-89)

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