

The secrets of logical thinking: types of arguments, principles of logics and use of syllogisms

(Part 1)

Different types of arguments

One can use different approaches in building up an apologetic argument:

Arguments built on or derived from historical data (such as archeological proofs, checking data from the Bible, looking at prophecies from the Bible and their fulfillment, etc.)

Arguments based on logical deductions – yet these depend on the premises used (and accepted) and on the logical mechanism of the argument. Also on the culture. For example, the existence of things, requires there is a creator or origin of these things (*a ticking watch needs a watch-maker, a functional house needs a builder*, etc.). Or in another example: it is logical to suppose that things were derived from something / somebody, until we reach the limit of an uncreated cause or person...

These arguments can be scientific or experiential. Science is the sum of our knowledge plus the theories we develop in order to explain this knowledge of facts. Arguments based on design, observed patterns and theories that explain the connection.

Some theologians, such as Anselm of Canterbury and Thomas d'Acquinas argued that **existence is stronger than non-existence** and, also, **personhood is superior to non-personhood**, therefore a personal God, existing from unmeasurable times – eternity, must exist...

Arguments based on human life experience, on psychology and reasoning, on feelings:

The satisfaction argument (C.S. Lewis: the possibility to enjoy and desire argue for the existence of that ideal source of enjoyment)

The argument from suffering and troubles (the problems and suffering in the life of humankind are a good argument that there is something wrong we can call „sin“, and there should exist somewhere a salvation and a saviour)

The ethical argument: the existence of a moral or ethical order in the Universe, or desire, indicates there should exist a Supreme and Just creator. Hegel and Kant, appreciated the existence of moral order in the Universe. Everybody wants justice, there should be a pure and absolute source and power and standards for justice...

One of the problems from using this type of logical approaches in our postmodern times is the acceptance of relativity in thinking and values, which leads to a denial of norms or of lack of acceptance towards absolute values or references. Such an attitude proves to be, almost always, flawed, not logical. People evaluate some things as being just relative, while others (like personal rights, personal desire for justice, or for happiness, etc.), to be held as valid and absolute values for all human beings and human societies.

Now, about **logics and logical thinking**.

Are there several **types** of logics? What are these?

Binary logics (true-false, black-white, good-wrong, 0-1).
What about gray areas or shades – or shades of gray?

Multiple values logics

(tertiary logics: **true-false-undecided**, etc.)

(quaternary logics: true-false, conditionally-true, conditionally-false)

Elements of Classical Binary Logic

There are four main laws or principles of Classical Binary Logic:

- I. Identity (clarity and precision)
- II. Non-contradiction (coherence)
- III. The third is excluded (rigor, consistency)
- IV. Sufficiency (basics, certainty, confirmation).

Identity

What is A? Answer: **A=A** (*description, explanation*)

When B is A? Answer: If **A=B**

This is how we answer the question: What is A? And when is B the same with A?

The Identity principle leads to clarity and precision in our statements or affirmations.

2-3. Non-contradiction and the third is excluded (tertium non datur).

Let there be A1="Paul is an apostle"

Let there be A2="Paul is not an apostle"

A1 and A2 cannot be true at the same time. If A1 is correct, then A2 is not correct. A1 and A2 are contradictory. Two statements cannot be both true, if one is the first one denied (the negation of the first). Or, the affirmation of something cannot be the same thing with its negation – or denial. Or, the existence of a quality cannot be the same thing with its non-existence. In binary logics there is nothing that could be true and false at the same time.

In the Bible much is in binary logical form: truth and lies, good and evil, life and death, blessings and curses, light and darkness, day and night. The creation of the world in Genesis 1-3 start with this information: there are things like strong pairs of opposite terms, or antithetical terms, they are fundamental to this Universe and to life as it is known.

“The third is out” principle says, there is no **A3 possibility** so that A1 and A2 be both false or true... Either A1 is true, and then A2 is false, or the other way around. Paul cannot be an apostle and also not be an apostle...

Unless there could be different definitions for the word „apostle”, **Then** there could be a third meaning possible...

Let's say apostle could mean:

a) One of the 12 apostles

b) Another apostle, the 13th apostle, of the gentiles.

Then both A1 and A2 could be false or true, because there is a third possibility.

Thus.

A1. Paul is an apostle (yet he is the 13th apostle)

A2. Paul is not an apostle (yes, he is not one of the 12 apostles).

We have, then, another possibility:

A3. Paul is an apostle, of a different kind than the 12 apostles. He is not an apostle – if we think of the 12 apostles, for he is not one of the 12. However, he is an apostle, if we define apostleship in a different way, as a multiple value or multiple category. Then, he is the apostle of the Gentiles, and could be called, as such, the 13th apostle.

Or, in another example:

Beautiful and Ugly – are the binary opposites? Can there be something that is beautiful and ugly at the same time?

Example 1: On the power of God. Third is excluded. Contradiction. Being God is something MAXIMIZED...

A PROBLEM IN TRAIN

God is all-powerful,

Then he can create anything, ie a stone that he cannot lift.

If he does that, then he cannot be God...

because he cannot do indeed anything in the Universe

See first **Isaia 44.6-8**

Thus says the LORD, the King of Israel
and his Redeemer, the LORD of hosts:

“I am the first and I am the last;
besides me there is no god.

Who is like me? Let him proclaim it,
let him declare and set it forth before me.
Who has announced from of old the things to come?
Let them tell us what is yet to be.

Fear not, nor be afraid;
have I not told you from of old and declared it?
And you are my witnesses!
Is there a God besides me?
There is no Rock; I know not any.”

The definition of God, according to the Bible, is that he is unique and absolutely good and righteous, and powerful, all knowing, etc. He is **SUPREME. MOST HIGH GOD.**

So, according to this definition, to affirm there are several Gods is a **contradiction**. Therefore, this answer is:

God is all-powerful, then he can create anything, yet he cannot create something stronger than him, because then he would not be God, the SUPREME... especially He cannot create an impersonal object that is stronger than Himself...

God, the Supreme Being, is Bigger and Heavier than anythings else...

4. The Sufficiency principle

There are three types of statements that can be made or conditions, or characteristics that could be affirmed in relation to something.

- a) Necessary, yet not sufficient;
- b) ~~Sufficient, yet not necessary;~~
- c) Necessary and sufficient – this is the complete minimal set of conditions so that something may exist.

Examples:

To start a race is necessary in order to win it, yet not sufficient...

To start a race, to run it and to end it - is necessary yet not sufficient to win it.

To start, run, end it, AND **to run faster than all**, this is necessary and sufficient in order to win it.

Or,

To fall in love is sufficient for getting married...

To fall in love, to ask, to be accepted and to declare it publically, before the state and the church, is necessary and sufficient in order to be married.

Syllogisms as a major logical mechanisms in arguments

What on earth **IS** a **syllogism**?

A syllogism is a **three stages type of argument** (a deductive argument in three steps):

Step 1: First Premise (condition 1) – **the major premise**

Step 2: Second Premise (condition 2) – **the minor premise**

Step 3: ***Conclusion***



Major Premise: **Giraffes are tall.** *A is like that...*

Minor Premise: **Johnny is a giraffe.** *B is like this...*

Conclusion: **Johnny is tall.** *B is a sort of A...*

Major Premise: **Horses are fast.** *General statement*

Minor Premise: **Brownny is a horse.** *Specific statement*

Conclusion: **Brownny is fast.** *Conclusion*

Major Premise: **Cats eat mice.**

Minor Premise: **Kitty is a cat.**

Conclusion: **Kitty eats mice.**

A proverb: what is born of cats, certainly eats mice!

Yet there could be some *incomplete* or wrong syllogisms, and therefore not true:

Major Premise: **Ice cream is cold.** *general*



Minor Premise: **Frozen chicken is cold.** *specific*

Conclusion: **A frozen chicken is an ice-cream.**

Wrong conclusion! They share one quality, but not all...

That quality is NOT sufficient, in order that A=B,

Ie to have an IDENTITY.

Say in your own words where is the mistake in the syllogism mentioned above?

Further, complex syllogisms could provide the possibility of contradiction:

A simple syllogism:

Major Premise: **All Cretans are liars.**

(Cretans: people living in the island of Crete)

Minor Premise: **Epimenides is a Cretan.**

Conclusion: **Epimenides is a liar.**

A more complex syllogism:

Major Premise: **Epimenides says „All Cretans are liars”.**

Minor Premise: **Epimenides is a Cretan.**

Conclusion: **Epimenides is a liar... ?**

Epimenides might or might not be a liar...

Conclusion is open ended, undecidable...!

Bible examples:

Titus 1.12-13

It was one of them (Epimenides), their very own prophet, who said,
“Cretans are always liars, vicious brutes, lazy gluttons.”

That testimony is true. For this reason rebuke them sharply, so that they may become sound in the faith,

Major premise: One of them (Epimenides) said: “Cretans are always liars, vicious brutes, lazy gluttons.”

Second premise: He was their own prophet (he was true, not a liar...),
That testimony is true.

*Being one of them does not mean he is like them, but
It means he knows them very well, he is an insider...*

Conclusion: He is right, this is true... and For this reason rebuke
them sharply,
so that they may become sound in the faith,

1 CORINTHIANS 15:12-20

Now if Christ is proclaimed as raised from the dead, how can some of you say there is no resurrection of the dead?

If there is no resurrection of the dead, then Christ has not been raised;

and if Christ has not been raised, then our proclamation has been in vain
and your faith has been in vain.

We are even found to be misrepresenting God, because we testified of God that he raised Christ-- whom he did not raise if it is true that the dead are not raised.

For if the dead are not raised, then Christ has not been raised.

If Christ has not been raised, your faith is futile and you are still in your sins. Then those also who have died in Christ have perished. If for this life only we have hoped in Christ, we are of all people most to be pitied.

But in fact Christ has been raised from the dead, the first fruits of those who have died.

The counter example destroys a false argument...

LOGICAL STRUCTURE OF THE BIBLICAL TEXT:

Now if Christ is proclaimed as raised from the dead, how can some of you say there is no resurrection of the dead?

First argument:

Premise 1:

If there is no resurrection of the dead, for all humans....

Premise 2:

Christ is a human

Conclusion 1:

then Christ has not been raised;

Second argument:

Premise 1:

and if Christ has not been raised,

Premise 2 (silent):

And you, like Christ, are humans, who will not be resurrected...

Conclusion 1:

then our (apostolic) proclamation has been in vain

Conclusion 2:

and your (Christian) faith has been in vain

Conclusion 3:

We are misrepresenting God (**are liars**),
because we testified of God that he raised Christ—
whom he did not raise
(*if* it is true that the dead are not raised).

Conclusion 4a (related to c2)

and you are still in your sins – and will die,
and be condemned.

Conclusion 4b (related to c2)

Then those also who have died in faith in Christ have perished (forever).

Conclusion 5

We have faith and hope in Christ **only for now**

Conclusion 6

We deserve pity... we are most unfortunate...

The force of the Counter Example:

If an argument is built on the assumption that **ALL** have or don't have a quality, the element that destroys the argument is the **COUNTER EXAMPLE**

A Counter-example is one example that shows that NOT ALL are like that, so it means that the premise 1 is wrong

In Corinthians 15, the counter – example is the following:

But in fact Christ has been raised from the dead, he being the first fruits of those who have died (*the first one to have resurrected in glory*)

(Then the premise 1: there is no resurrection, nobody will rise to life again, is wrong)