The main logical fallacies and unfair-tactics in theological and historical debates

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The Introduction

All would say that they were objective in their analysis. Most properly are sincere about this claim. But how many were really objective in their historical and theological analysis!

Being biased is the natural attitude in analyzing things. Therefore, "impartiality is something that Researchers need to be trained at. Bias is a factor that is influenced by the believe system of the Researcher, and this system is really complex and contradictive. Solid logic in this system is just a small factor among many others. Social and materialistic benefits are actually strong factors in this system. Also, the rebellious phenomenon is also a factor in this system: There will always be a small percentage of people that are rebellious toward the surrounding environment. For example, I have a friend who is really smart, but he truly believes that the earth is flat. There are many people who have this belief, and they have their own groups and foundations. I truly think that this belief has originated from a rebellious stand.

However, more objectivity can be obtained by having the skills to detect logical fallacies. For example, a conclusion related to a historical event cannot be put into experimentations, it only depends on logical arguments. Therefore, a superior Orator might present a plausible conclusion that depends on many hidden logical fallacies that aren't easy to be detected by the untrained eyes. Therefore, this conclusion might seem to be very logical though it is not. It should be noted that these hidden fallacies might not be intentional from the Orator, and the Orator might really think that his conclusion is the absolute truth.

Having the ability to detect and highlight the logical fallacies would probably not eliminate bias, but it would highly increase the quality of debates many folds.

This is the objective of this article.

Chapter 1 - The major unclarities

All who are studying history and theology (either in self or college study) can easily fall into the following unclarities:

- The differentiation between fabrications, assumptions, and facts.
- The differentiation between valid logical deductions and false logical deductions.
- The differentiation between claims of evidences, interpretations of evidences, and descriptions of evidences.

These unclarities can be reduced by understanding the terms related to them.

Now ... there are no universal standard institutions that have a set of terms related to this subject. So, I am presenting here my terms. Therefore, it is expected that many Readers might disagree with my terms and definitions. However, this list would provide the Reader with a starting "blue-print". Therefore, Readers who disagree with my terms and definitions can easily adjust these terms to fit their views. However, I would expect that the difference between my definitions and theirs would be minimal.

So, let us discuss the related terms and definitions:

1.1# Claims vs Conclusions:

The Claim could just be an outcome of a quick process of analysis, while the conclusion would probably be the outcome of a thorough process of analysis. But here, we will regard claims to be the same as conclusions, but with claims to be general while conclusions to be specific.

1.2# Conclusions vs Arguments:

Arguments would include the conclusions and the process of analysis that derived them (i.e. how we came to adopt these conclusions).

1.3# Assumptions:

Assumptions are probable claims. There are many types of assumptions, but we will highlight two:

1.3.1# Assumptions based on indirect data: this assumption lack direct data, but it also doesn't have refuting data (this means that there are no direct data that oppose this assumption), but the absence of refuting data is not an evidence for this assumption. However, this assumption depends on the comparison between the event-in-question and other similar events.

For example: the assumption that the follower of Jesus included the rich and the poor. This claim might be without direct data, but it is a valid assumption because we can say that Jesus movement was spiritual, and spiritual movements in history include the rich and the poor. Therefore, this assumption might be without direct data, but it is still valid because of the validity of the similar data for it.

1.3.2# Assumptions based on direct data but not highly-likely. So, this assumption is supported by direct data, but this data is probable and not highly-likely.

So, in the previous example, we can highlight some rich followers of Jesus. Therefore, we have direct data here. But how many rich individuals we know about? If these rich people were just few then we cannot just generalize this and say that the movement of Jesus included the rich and the poor.

So, we have here indirect data (as discussed in the previous point) and probable direct data. Both data can increase the probability of the assumption, but it will continue to be an assumption because we don't have highly-likely data.

1.4# Highly-Likely Conclusions:

These are claims that are supported by sufficient and highly-likely data.

1.5# Information. This is the input data to the process of analysis. So, the analysis has inputs (i.e. data), process, and output (i.e. conclusions). So, it is possible that the conclusions (i.e. the output) of an analysis is the information (i.e. the input) to the next analysis.

1.6# Raw Data vs Processed Data:

Both these types are information. However, the Raw-Data is the elementary information, which is the information that wasn't an outcome of any process of analysis. While Processed-Data was an outcome of one or more processes of analysis.

Now ... it might not be easy to identify the Raw-Data in the subject, but we are able to recognize the data that are more near to the Raw-Data.

1.7# Evidences vs Data:

Evidences are Data (i.e. information) that can be used to support a claim.

Notice that observations can be used as evidences, however, in order to use these observations, we need first to describe these observations. Therefore, the evidence here is the description (i.e. the data) of these observations.

1.8# Rejected evidences, claimed evidences, and interpreted evidences:

#Rejected evidences: If someone (let us call him Peter) witnessed an event and he is using it as an evidence. But this evidence doesn't fit with our collected data, then this matter needs to be handled in a way that to avoid any possible personal conflicts.

Therefore, We are saying here that the rejection of this evidence doesn't mean that we are accusing Peter of lying, but it means that Peter might have misunderstood the situation, or he might viewed things from the different perspective, or maybe he forgot some elements in what he saw, etc.

Therefore, rejecting the accounts of some people doesn't necessary mean that they are lying, but it means that they might have been mistaken. Equally, if someone rejected your accounts then this doesn't mean that you are accused of lying, but it means that some people think that you might have been mistaken.

#Claimed evidences: If you are saying that "John" (who is a Scholar in the field) have an opinion about this subject and he has evidences for that. But you failed to present these evidences (as probably you forgot about them) then your statement is not an evidence, but a claim for evidences. This claim can be regarded as a clarification for others, but this claim cannot be regarded as an evidence in the debate.

Let us clarify this in more details:

> Suppose that Peter and Simon are debating about a work related to Simon. So, it is obvious that Simon (as a researcher) need to study the mainstream concepts and to review the work of the main scholars in this profession (this is called "literature review"). But also, it is obvious that Simon cannot just read every single book and every single article that are related to his research. So, if Peter was drawing the attention about an article of an unknow scholar (John) then this is a good advice from Peter. But if Peter is claiming that John has very strong evidences against Simon, and Peter didn't present these evidences then Peter is actually falling in the fallacy of appealing-to-authority, and It is clear here that Peter's claims are just claims and not evidences.

> However, if Peter insisted that Simon shouldn't have published his work until he examines John's work, then Peter is just illogical; because (as we have said before) Simon cannot just read every single article related to his research, specially that John is not a well-known scholar in this profession. The right approach is for Peter to present the evidences of John, but if he couldn't then Peter's claims are just claims.

> Now .... if John (the unknown Scholar) evidences were valid then it will gradually attract the attention of the mainstream, and then afterward, Simon would need to address these evidences.

#Interpreted evidence: If there is an evidence that can have many valid equal interpretations, then each interpretation cannot be regarded as the highly-likely interpretation, and the conclusion that depend on such interpretation cannot be regarded as the highly-likely conclusion.

For example: It has been said that many villages in Palestine from 1300BC where excavated and there were no pork bones found in them.

The above was the description of the data (evidence). One interpretation for this data is that the Israelites lived in Palestine before 1300BC. But another equal valid interpretation: there are many ancient people other than the Israelites who didn't eat pork.

So, both interpretations are valid, therefore, we cannot just superpose one of them over the other without extra valid data.

1.9# The reliability and clarity of evidences:

Evidences have two properties: reliability and clarity. The reliability is related to the source of the evidence and it varies between highly reliable to highly unreliable. The clarity is related to the content of the evidence, and it varies from crystal-clear to ambiguous.

Therefore, we might have different types of properties for evidences. For example:

> We might find a highly-reliable-but-ambiguous evidences as the statement of someone who is highly honest, but his statement isn't clear.

> Also, we might find a highly-unreliable-but-crystal-clear evidences as the statement of someone that we know that he is not usually honest, but his statement is very clear.

1.10# Valid vs Adopted Conclusions;

There are some contradicting Conclusions (or arguments) that can both be valid, but both (to you) cannot be true. Therefore, you would accept (i.e. adopt) one of them and reject the other.

Therefore, there are some valid arguments that you might just reject. So, how an argument can be valid and wrong at the same time?

The valid argument is the one that depend on valid data (although we might not regard it to be the most probable one) and follow a process of deduction that doesn't violate the logical process of analysis (although we might prefer a different process).

For example, there are two arguments related to the aftermath of the crucifixion event of Jesus:

- Jesus didn't die on the cross, but he was in a deep coma (which is something that doesn't contradict with science). This can be supported by many accounts of people seeing and talking to Jesus.

- Jesus died on the cross, and the accounts about the people seeing and talking to Jesus were either illusionary or false.

Now ... from the scientific historical analysis, we can say that both arguments are valid because they depend on accepted data, and both arguments don't violate the logical process of analysis. Therefore, we can only discuss the most plausible argument here, and at the end, people would "adopt" one argument over the other.

1.11# Facts:

Facts are claims that are supported by <u>numerous</u> highly-likely data without any valid refuting data. So, if there is a claim that people can highlight some highly-likely evidences for it, but there are also some valid refuting data then this claim is not a fact.

1.12# Generalizations and anomalies:

Suppose we have 1000 cards on the table and all the cards are red. Therefore, this statement is totally accurate: "all cards are red", and this statement can be a fact. Therefore, any random-selected card will be red.

But if we have 999 red cards and one green card, then it is highly-likely that the random-selected card will be red. And the green card can be regarded as an <u>anomaly</u>.

However, if we have 900 red cards and 100 green cards, then we can have a <u>generalization</u> that the random-selected card would probably be red, and there is a <u>minority-chance</u> that it would be green.

For example: it has been regarded that the people at Galilee at the time of Jesus were mostly peasants, and peasants at that time were mostly illiterate. But this doesn't mean that all the people in Galilee were illiterate. So, we have here a generalization: Most people in Galilee were illiterate. So, if we know that Sam was in Galilee at that time and we don't know anything about Sam, then it is highly-likely that Sam was illiterate. But if we have valid sufficient data that Sam was literate, then the generalization is no longer valid.

Therefore, if we have valid sufficient data regarding an incident then the generalization regarding this incident is no longer valid.

But in the same time, if we have valid sufficient data that Sam was literate, then this data cannot refute the generalization. So, returning back to the cards with 999 red and one green card. The green card is an anomaly and the generalization here is that the cards are red, and this is a valid generalization. Therefore, if a random-selected card was green, then we cannot use this incident to show that the generalization is wrong.

Therefore, anomalies and minority incidents cannot refute valid generalization.

But it should be noted here that the generalizations above are "quantified and tangible" generalizations" that were derived from objective observations and analysis.

<u>Therefore</u>, they are different than "unquantified and intangible" generalizations that can be regarded as generalized superficial claims quickly constructed in statements to be used in the debate. The enforced conclusions that might be derived from these generalized claims can be regarded as false deduction or (at best case) probable, but it cannot be regarded as highly-likely conclusions without sufficient data.

It should be noted that generalized claims could be regarded as valid personal-judgments. But it cannot be regarded as valid evidences without sufficient data.

1.13# Fabrications:

Fabrications are false data or conclusions that cannot be derived from the available valid data.

For Example, suppose that someone (and let us call him Simon) said the following:

> Jesus was so depressed at the time of his trials in front of Pilate that he couldn't defend himself. The reason is very obvious: As many scholars confirmed that Jesus was married. However, Jesus realized just few days before he was captured that his wife was having an affair with his best friend "Peter". Jesus was shocked for this, and he just couldn't know what do to. He was rough with Peter but didn't really tell him that he knew. Jesus was so depressed to the point that he just couldn't defend himself in front of Pilate.

Now ... the conclusion that Jesus was married could be regarded as an assumption based on the thought that people at the age of Jesus would have been married. So, there is no direct data for this claim, but there is valid indirect data, therefore this claim could be regarded as an assumption, but not as a highly-likely conclusion, and not as a fact.

However, all other claims that Simon presented in the previous example are just invented fabrications because these claims cannot be derived from the available data.

There is a false phrase here that need to be noticed as it is <u>used</u> in many fabricated claims: "<u>As many scholars confirmed</u>", and there are no scholars that confirmed that Jesus was married.

1.14# Valid vs false logical deductions:

The process of logical analysis (which includes a series of valid logical deductions) depend on the subject of research and its best practices that were derived over the years.

However, the best indicator that the process of analysis is probably valid: is the absent of false logical deductions. Therefore, if we looked at the stages of deductions and confirmed that all are valid, then we can say that the process of analysis is probably valid.

Now, there are many false deductions that researchers (intentionally or unintentionally) might perform. You can look at these false deductions by searching Google for the <u>List of logical fallacies</u>.

We will discuss some of these false deductions in chapter 2 and the appendix. But here, we will highlight the 3 main types (in our view) of these false deductions:

1. Deduction that depend on false data.
   This deduction would generate unfounded claims over unfounded claims.

2. Deduction that glues sentences together.
   For example, someone is saying: The weather today is bright. <u>Therefore</u>, Britney Spears is gorgeous.

There is no logic in the previous deduction, because the second term (Britney Spears is gorgeous) has nothing to do with the first term (The weather today is bright). Although the words "Bright" and "Britney" might seems phonetically related, but still they are not related in the meaning. Therefore, the word "<u>Therefore</u>" didn't link these two terms, but it just glued them together.

This glue in the previous example is very obvious, but there are many glued statements that are not. If you want to check them then just listen to the extreme political activists. For example, you might find someone says: You are voting for X, <u>therefore</u> you are voting against the country. There is no valid connection between the previous two terms, it is just gluing one sentence with another one.

3. The inconsistency of deduction. So, someone would say: A means B. But if we checked this statement and found that there are many A's that aren't B's then this statement is false.

The first type would be verified and confronted by Data Check (i.e. Fact Check). The second and third types would be verified and confronted by Logic Check, mainly using the "comparison approach" that we will discuss in the appendix.

1.15# Questions vs evidences:

Questions are not evidence, though they might be presented as such. For example: If God exists then why is there suffering in the world!

This question cannot serve as refuting evidence because if we simply transform the question into a logical statement then it might be as follows:

- If God does exist, then there will be no suffering on Earth
- There is suffering on Earth.
- Therefore, God doesn't exist.

The first term in this statement is weak and cannot be verified. Therefore, the original question cannot really be good refuting evidence.

But what about the following question related to the example in the fabrication (1.13) section: If Jesus was married then why no one said anything about it?

Now ... do we really need to raise this question to establish an evidence! Can't we just transform the question into a logical statement and say: There are no evidences at all that suggest that Jesus was married!

Questions help in enquiring and in explaining, but in terms of presenting evidences then I think these questions should be transformed into logical statements because there are so many presented questions that are used argumentatively but actually they don't have strong logical weights.

1.16# Similarities vs Evidences:

Many of the similarities between two things are not regarded as evidence for <u>direct relationships</u> between them. However, similarities can serves as triggers to check for possible relationships.

So, if we noticed that A is somehow similar to B then we cannot immediately jump to the conclusion that there is a relationship between them. Instead, we will be motivated to explore this possibility, and sometimes there is and sometimes there isn't. For example, the pyramids in South America and Egypt have some similarities but they are not related.

1.17# Personal Judgments:

These Judgments can also be named as Expert Judgments or Value Judgements. These are claims that we might assume its accuracy, but they aren't supported by sufficient data.

Now ... There might be a conclusion "A" that is supported by sufficient direct data, but you don't feel that this conclusion is accurate, and you think that "B" might be more accurate than "A". This "B" is a claim that is regarded to be your <u>own</u> "Personal Judgment", which you can research it. But this claim has no <u>weight</u> in logical arguments.

For example, there might be a crime, and all the evidences suggest that Peter is innocent of this crime, therefore, he will be released. But the police might still think that Peter is involved. The police can still (indirectly) investigate this matter, but their view has no legal weight.

Chapter 2 - The main logical fallacies

2.1# <u>The verse against verses</u>: Singling out a verse (or a text) from the scripture (or the accepted data) and use it to support a claim that contradict with the other verses in that scripture.

2.2# <u>The part against the context</u>: Severing part of a text from the scripture (or the accepted data) and use it to support a claim that contradict with the context of that text.

2.3# <u>The free logic</u>: Using a logic that can be used by anyone to support anything.

> For example, the idea that the NT are books inspired by God because if they weren't then God could have blocked them from circulation. This logic can be used by all people to support all sort of books. Therefore, this logic is really invalid.

2.4# <u>Forcing the inconclusive</u>: Regarding one interpretation of an evidence (that has many valid interpretations) to be the only accepted interpretation for this evidence.

2.5# <u>Overturned superiority</u>: Regarding a complex and indirect interpretation to be superior over a direct and simple interpretation without sufficient data.

> For example, "Elohim" is a plural name that Jews have used to refer to God. This name came from "El", and it is within the Hebrew language to use plurals for

glorification purposes. This is the direct and clear interpretation for the origin of using this name. Therefore, it is not logical for the Christians to use this name as an evidence for the Trinity.

2.6# Fundamentals on assumptions: Using assumed or disputed evidences to support fundamental claims.

2.7# Different fields: Using tools and concepts that are specifically designed and tested in one field of knowledge to support claims in different field of knowledge without justification.

2.8# Appealing to authority: Using the claims of well-known Scholars as part of the main evidences.

2.9# Begging the question: Using the conclusion to prove the conclusion. So, it is about supporting the conclusion by assuming that the conclusion itself is true.

> For example: proving the trust-worthy of Paul by the letters of Paul. Therefore, we are here proving Paul by Paul.

2.10# Only my Views: Concentrating on reviewing and discussing all supporting data while ignoring most of the refuting data.

2.11# Generalization over supported incident: Using a generalization to refute (without sufficient justification) an incident that is supported by valid data (see 1.12).

2.12# Anomalies over Generalization: Using anomalies and minority incidents to refute (without sufficient justification) a valid generalization (see 1.12).

2.13# Forcing generalized claims: Using generalized claims (i.e. layman generalizations) as conclusive evidences for conclusions or for refuting valid data (see 1.12).

2.14# Presenting Questions as evidences: Using argumentative questions (that cannot be transformed into solid logical statements) as evidences.

Chapter 3 - The main unfair-tactics

It should be noted here that these tactics are not necessary performed intentionally, but many debaters are using them unintentionally.

3.1# Claims over claims**:** Presenting an "interweaved set of unfounded claims" with high dose of generalizations, assertions, conformations, and personal stories. This presentation can be described as Ritch in claims and poor in evidences.

> For example: The conclusions of the extreme political activists (regardless whether they were left or right), and the conclusions of the extreme religious apologists.

3.2# Gathering authorities: Listing many opinions of Scholars, therefore, implying that the opponent's view is false as it contradicts with the Scholars' view.

However, this is unfair-tactic, especially if the subject has many contradictive opinions from so many different Scholars.

3.3# Forcing an authority: Presenting the claim of a Scholar without clarifying the related evidences and then giving the opponent the burden of checking this Scholar claim and evidences.

> For example: William Lane Craig has introduced "John Earman" statistical theory in the debate with Bart Ehrman to prove that the resurrection is almost certain. However, he didn't provide a clear demonstration: He introduced the complex formula, but he didn't apply the numbers, and he didn't derive the overall probability for the resurrection. He just implied that this formula prove that the probability of the resurrection is almost certain. He also didn't clarify if this theory is adopted by the "mainstream statisticians" (which it is not) but he did "imply" that this theory is adopted by contemporary philosophers. So, this approach of Craig is just an "appealing to authority" as discussed in 1.8.
>
> [Reference: Ehrman vs Craig: Evidence for Resurrection - 41:00, https://www.youtube.com/watch?v=MW5_nJYSKyk]

3.5# False logic: Deriving false claims using false deductions, false comparisons, unjustified magnification or minimization of data, and forcing inconclusive data.

3.6# Charming based claims: Using charming, charismatic skills and superior rhetoric styles to present inconclusive claims as though they are conclusive.

3.7# Throwing red herrings: This tactic is used to distract the opponent by throwing so many thoughts and questions into the argument that are not related directly to the argument itself. Therefore, the opponent (if they were not aware) would consume time and energy into arguing thoughts that are not related to the main argument.

The origin of this term came from the attempt to mislead fox hunting dogs by throwing red herrings (a fish with strong smell) along the trail, therefore, the dogs would follow the scent of these herrings instead of the target that they were chasing.

3.8# The Personalization of the debate: Shifting the debate from the subject into attacking the opponents either directly or indirectly. This unfair-tactic is sometimes employed when debaters are unable to respond to an argument. By shifting the argument towards attacking the opponents, they attempt to divert attention from their own shortcomings.

The Appendix - Notes on logical analysis

This appendix is taken (with modification) from a previous article (Proposed solutions for the three puzzles of the early Christian history, #54.01 in the library site – chapter 10). The appendix here discusses some aspects related to contradictions and false deductions.

1# A Contradiction in a statement requires two opposing sub-statements that each of them "might" possibly be right alone, but they cannot both be right at the same time.

For example: let a variable X be larger than 9 and smaller than 2. This statement includes two sub-statements. Each one of them might be right alone, but they cannot both be right at the same time.

2# How about this statement: 9 is smaller than 1. Is this a contradictive statement?

This statement is not contradictive because it doesn't contain two opposing sub-statements. However, this statement is "false" because it contradicts (or it does not comply with) the agreed mathematical concepts.

But if we look in the field of management, there is a concept that is called "synergy", which describes the group cooperation in which the effort that has been done by the group (as a whole) is larger than the combined single efforts of the group members. The classical analogy for it: synergy happens when "1 + 1 is much larger than 2".

Therefore, the accuracy of a statement in a subject depends on the body of knowledge related to that subject.

3# What about the "meaningless combinations" (meaningless expressions, meaningless collection of words)!

For example: squared circle, circular square, cubical sphere, Noisy silence, silent noise, successful failure, etc.

These combination of words does not have any meaning. However, we can choose a meaningless combination and make a definition for it. For example, "Standing Waves" might seems to be a meaningless combination, but physicists have made a very clear logical definition for this expression, and whenever we see this expression, we just take it out and put in its definition.

This might be applied to "Squared Circle": Suppose a student of philosophy have opened a coffee shop near the university and named it "The Squared Circle Cafe". So, the combination of this expression is still meaningless as there is no specific logical definition for it. But the whole expression is now a "Name" for a specific thing, which is (in this case) a cafe, which actually might become a center for some genius philosophers who want to discuss the possibility of the impossible.

So, the conclusion here is that meaningless expressions will continue to be meaningless unless a clear logical definition has been formed for it, or if the whole expression became a "name" for a specific thing.

4# Let us return back to the X statement (let X be larger than 9 and smaller than 2), and let us suppose a person (and let him be Sam) is really convinced that this statement is true, and the appeared contradiction is just due to our limited mind and limited comprehension abilities.

Sam here is using the comprehension argument (or you can call it: the comprehension ticket). He is trying to use this argument to justify the apparent contradiction in the X statement. However, if an argument can be used by anyone to justify anything then this argument is useless and without any value.

Equally, if Sam want to use this argument to justify the apparent contradiction in his statement, then he needs to accept others to use the same argument to justify the contradiction in their statements.

This is the <u>comparison approach</u> which is very effective in countering logical fallacies. For example, suppose Sam is arguing with the following logic: Paul is from London, London is in England, Peter is from England, therefore Peter is from London.

Now, if Sam couldn't (or won't) recognize the fallacy of this logic then we can use a fair point-to-point comparison like the following: Apple is a fruit, fruit is a plant, rice is a plant, therefore rice is a fruit.

Therefore, by fair comparison: if Sam wants to use the comprehension argument for justification, then he needs to allow others to use the same argument for their justifications.

5# Let us return back to Sam and his X statement. Suppose Sam truly believe that the X statement can be accurate, and the appeared contradiction in the statement is not valid. He has a reference to support his belief which is a verification from Peter who is a genius scholar and a well-known mathematician.

Let us analyze the following discussion between Sam and Ali:

> #Sam: The contradiction in this statement is not valid.
> #Ali: how do you know that?
> #Sam: Because Peter the mathematician has said that there is a valid solution for this statement.
>
> #Ali: Did Peter write about this?
> #Sam: No.
> #Ali: did you hear Peter speak about this?
> #Sam: No.
> #Ali: How do you know that Peter have discussed this matter?
> #Sam: In one of his private gatherings, Peter has told his friend about this matter, this friend told his friend, and this friend told my friend, and my friend told me.
>
> #Ali: What is the name of Peter's friend?
> #Sam: I don't know.

#Ali: what is the name of the friend of the friend?
#Sam: I don't know.

The issue here is that Sam depends on a verification that is based on anonymous sources. So, the question would be: does Sam have a strong and solid information that can support his claim about the invalidity of the apparent contradiction in the X statement?

Now ... If Sam does accept anonymous witnesses to justify apparent contradictions, then he needs to accept others to do the same in justifying their apparent contradictions. This is the comparison approach for examining possible logical fallacies.

6# Some might regard Sam to be silly in believing that the X statement has a valid solution, but he might not be: I have a friend who is really smart, and he is a professional manager, and he truly believes that the Earth is flat, and the Sun is orbiting Earth. I was astonished to know this, but I later realized that there are numerous people who believe the same, and they have groups and foundations. As we might think that these people are naive, they also have the same thought about us.

It should also be noted here that the most innovative discoveries in history were carried out by individuals who decided to disbelieve some of the things that normal rational smart people of the time did believe in.

The believe system (what things you believe, why you believe these things, and how did you come to believe in them, etc) is a very bizarre system in human beings. This system doesn't necessarily follow a logical path, and there are many factors that shape this system including materialistic benefits.

So, if Sam and Ali have a belief difference and they started to look deep to the root of this difference, then it is likely that the root is just a single statement that one them thinks it is valid while the other thinks not. Some of the belief differences might not be reconciled, but I do think that gaining the ability to recognize logical fallacies would at least raise the quality of debate, which might reduce the gap between differences. But this ability requires serious training.