

Evaluating the Arguments of Experts FAQ 1.3

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The following document was originally prepared in the FAQ (Frequently Asked Questions) format for online distribution. It concerned how one should evaluate experts when one is not oneself an expert in the subject matter being discussed. As part of this, I included a rather long section on informal logical fallacies. I have here included the entire document, but in this edition I have added a brief introduction to logic and the use of logic in theology in general.

Definition of Logic: In the very broadest sense, logic is simply a tool used to express the relationship of ideas one to another. Specifically, logic is used to evaluate arguments¹, in order to show the validity of conclusions²

There are two important concepts to consider here. The first is called *inference*, or *implication*. This simply means that if the premise of the argument is true, and if the argument is correctly constructed, then the conclusion has to be true. Hence:

Premise: All Swans are white.

Middle: Jack is a swan.

Conclusion: Jack is white

is a correctly constructed argument (called a *sylllogism*). If the premise is true, and the middle is “distributed” (that is, all the terms

are being used correctly), then the conclusion has to be true. However, all one has to do in this (quite famous, by the way) example is to produce one black swan, and then the conclusion is no longer *guaranteed* to be true. Therefore, formal logic is used to test the validity of arguments: it can prove that the argument is good, but it cannot prove that the conclusion is true (for that, we need *induction*, the investigation of the premises to see if they are true). Formal logic is also called “deductive logic.”

The second important concept in logic is *consistency*. Two ideas (propositions is the formal term in logic) can only be consistent if both are true. If a person claims to be a Christian, and yet constantly speaks and lives as a non-Christian, we would say that there is a real inconsistency. In logic, this is called the “law of non-contradiction.”

In logic, this is sometimes expressed “A cannot be A and not-A at the same time.” Fill in anything for “A”: Jack cannot be a swan and a pig at the same time...” Now, these are obvious examples to make the point, though it can get quite subtle at times.

The theological basis for logic is that God himself created human beings in his image. The Bible reveals that God is absolutely consistent (the biblical word tends to be “faithful,” though certainly other words are used to express the concept). Logic is one attempt at the human level to reflect this consistency.

Limitations of Logic: Essentially, we need to realize that logic cannot do everything. For the purposes of this class, I simply want to emphasize that if God is indeed infinite, then there are at least

1 “Argument” is here used in the technical sense as the steps necessary to prove an assertion.

2 A “conclusion” is simply what you are trying to prove in the argument.

potentially truths about God which cannot be expressed in terms of human language and logic. We also need to remember, that in addition to being finite, we are also fallible, due to sin. In other words, logic is a tool which can be used either in service to the God of truth, or in rebellion against him. Atheists are able to construct wonderful arguments and philosophies, but in the overall scheme of things, they are simply vanities.

Logicians (people who study logic) themselves often discuss the theory of logic. Any introductory textbook on logic will cover the basic issues. A very helpful book, referenced below, is John Frame's *Doctrine of the Knowledge of God*, which, while still quite brief, does go into more detail on these issues.

Often in the debates and discussions which occur in the religion oriented news groups, various experts are cited in support of one proposition or another. The natural question is then "how do I know which expert is better?" This FAQ is meant to help the non-specialist evaluate the arguments and testimonies of "expert witnesses." Although it is specifically directed toward the religion oriented news groups, the principles are useful in evaluating the remarks of an expert in almost any field.

This FAQ is "in progress" and all comments and criticisms are appreciated.

1. Should I try to become an expert myself?

1.1 One way is to become an expert oneself. In most cases this is impractical — the time and study it takes truly to become an expert in a given field of study these days is quite extensive, and this is no

less true in areas related to theology and biblical studies as it is in any other area. However, if one is really interested, one can take the time at least to obtain an introduction in order to understand the basic questions, definitions, and parameters of research which are involved. One should remember that even introductory texts to a subject are written from a particular point of view, but it is often instructive to see the author answering objections which differ from his own perspective.

2. How do I choose the best introductions to a subject?

2.1 Try posting such a question to one of the news groups in which the subject of interest is often discussed. There are also the library and the various search tools available on the Internet.

2.2 Examine the book. Look through the table of contents and read the preface and introduction. Scan the first paragraphs of several of the chapters. Does the book seem to address the questions and issues in a clear and factual manner? Does the writer acknowledge and address diverse points of view?

2.3 It never hurts to read more than one book on the subject.

3. Often somebody's credentials are listed — so what?

3.1 Credentials are usually listed to establish the credibility of the person advancing the argument. They are not irrelevant. For example, who is more likely to be right when discussing Shakespeare - the one who has a B.A. and M.A. in English, and has written a thesis on Shakespeare, or the one who has majored in Biology, and has managed to read most of Shakespeare's plays (and not all of them), and none of the Sonnets?

3.2 The credentials should be relevant to the subject being discussed,

or at least related. A Ph.D. in Physics does not qualify one to expound authoritatively on philosophy. Often, a person may have studied a subject as an ancillary discipline to his or her main field, so that the physicist has studied a fair amount of math and science, or the church historian has had a better than average introduction to Old Testament studies.

3.3 The entire credentialing process, especially in the United States, assumes that the individual who possesses the credentials has been evaluated by those who are competent in his field. Has the individual obtained his degrees from accredited institutions which have high academic standards? Or has he gotten them from a degree mill or little known institutions? This does not automatically disqualify a person: one can buy a good product from a bad store, but it should give us pause as we consider the individual's claims.

3.4 Nevertheless, credentials are often the most trumpeted when one has the weakest arguments. This is particularly the case, it seems, in news groups.

4. What if 2000 experts agree with one side, and only 2 agree with the other?

4.1 The problem is that the two might be right. It has happened before in the history of scholarship!

4.2 However, it is unlikely. The usual assumption is that the minority position is the minority position for a reason. One way is to evaluate how the other experts react to the minority position over a period of time. If the minority position begins to gain ground, it may be that a "paradigm shift" is in the making.

5. How can I weigh the evidence presented by experts?

5.1 This can be difficult if one lacks a knowledge base in the subject (see point 1). One suggestion is to take the time to verify the facts the experts are using in support of their arguments. One can try to find a "neutral" third party who discusses the issues and utilizes the same facts.

6. How do I evaluate the actual arguments which the experts are using?

6.1 I am glad you asked. In a sense, all the comments listed above are preliminary. It is possible even for a non-expert to spot logical fallacies and bad arguments, if one knows what to look for. The following are drawn principally, but not exclusively, from 2 sources.

John Frame, *The Doctrine of the Knowledge of God*, (Phillipsburg, NJ: P&R, 1987), p. 242-301.

D.A. Carson. *Exegetical Fallacies*, (Grand Rapids: Baker, 1984), p. 91-126.

The definitions are reworded and the examples are usually my own, and I have provided several not addressed in either source. Another helpful resource is the alt.atheism FAQ "Constructing Logical Arguments," though it is very incomplete. I have restricted this FAQ to a discussion of the fallacies involved in arguments. If one is interested in a broader discussion of the proper use of logic in arguments, then Frame has a good introduction.

6.2 Argument by assertion. This involves simply making a statement and providing no supporting evidence. The most frequent fallacy in news group discussions! This is somewhat natural — often people in such discussion are simply spouting their opinions. However, when an expert is arguing his or her case, one expects more. If called

upon, the expert should be able to support the conclusion with evidence and valid arguments. Failure to do so may indicate that the individual does not have support for the position.

6.3. Threat of force. This sounds bad, but the usual form is “if you do not accept this argument, something bad may happen to you.” For example, someone may argue “If you do not accept the King James Bible as the only valid translation, you will not be accepted in this church.” The fallacy here is fairly obvious - that one will experience unpleasant consequences for rejecting an argument does not mean that the argument is true.

6.4. Ad hominem. A very popular debate tactic, the ad hominem seeks to debunk the argument by attacking the person who holds the argument. There are subcategories:

6.4.1 Comparative or abusive. This attacks the argument by attacking the people who have held the argument. For example “You should not believe in Christianity, because some Christians have killed people who disagree with Christianity.” The problem with this is that it doesn’t prove that Christianity is true or not: it simply proves that some Christians have behaved badly. This is similar to the false dichotomy argument, or the excluded middle — what caused some groups to kill others for disagreeing with them might be their *misunderstanding* of Christianity.

6.4.2. Circumstantial ad hominem. This assumes that an argument should be believed or disbelieved because of special circumstances.

Because you are a Harvard student, you should study more.

Since your denomination supports abortion, how can

you criticize mine for supporting abortion?

6.4.3 Character assassination. This fallacy seeks to undermine an argument based on some alleged flaw in the individual’s life, or that because the individual has flawed arguments elsewhere, his or her arguments here are bad.

Because Bruce Metzger does not hold to the inerrancy of the Bible, all of his scholarship is false and unreliable.

There were communists and liberals involved in the translation of the RSV. Therefore, the translation cannot be trusted.

6.5 Argument from silence. This argument claims that something is true because it has not been proven false, or vice versa.

The New Testament does not address the issue of abortion. Therefore, abortion is permitted.

This fallacy often operates at the semantic level, i.e., because something is not mentioned by name therefore nothing contributes to the discussion. In the case of the argument above, other considerations would come into play, such as the New Testament’s positive support of the Old Testament definition of “personhood” and “life.”

6.6 Appeal to emotion. This tends to evoke emotional responses of the reader or hearer to the proposition, usually by using “loaded” terms, or by making associations and connections which are either positive or negative. It usually takes the form of presenting one’s arguments in the best possible light, and one’s opponents’ in the

worst.

The democratic platform is dynamic and progressive, just the thing to lead us triumphantly into the 21st century!

Fundamentalism is in reality a species of neognosticism which maintains rigid theological conclusions having no relevance to the real world.

Note how appeal to emotion can be used to bolster other weak arguments, such as argument by assertion, or ad hominem. Making people like or dislike a proposition does not prove the truth or falsity of the proposition.

6.7 Appeal to authority. See point 3 above. In reality, all of us depend on authorities all the time, once we are satisfied that the person really is an expert on the subject. False appeals to authority would include celebrity endorsements (just because Michael Jordan likes the shoe does not make it the best product). Authorities who contradict themselves, misuse evidence, or use fallacious arguments are also suspect. Often it takes another expert to point this out.

6.8 Causality. People often try to argue based on a misunderstanding of cause and effect (which David Hume argued could not really be proven to exist, but we'll ignore that for the moment). There are several types.

6.8.1 False cause, or *post hoc, propter hoc* (after this, because of this). Because two things are closely associated temporally does not mean that they are related. The relationship must be proven by showing further factual connections.

Every time you visit a city, there are car accidents there. You jinx!

When Clinton was elected, the crime rate dropped several percent.

6.8.2. Genetic fallacy. This assumes that the original state of something and the current state are necessarily the same. Again, this cannot simply be assumed, but must be proven with additional evidence, because development and change do occur.

Because the Greek word originally meant "immerse," the meaning must be the same in the New Testament (ignoring that words can sometimes change meaning over the course of time).

The human tendency to look around corners stems from the fact that we evolved from apelike creatures who were often hunted by large predators (another false disjunction as well: the behavior could be a conditioned response).

6.8.3 Aristotle distinguished the following types of causes, and one still sees these distinctions being made in theological and philosophical argumentation, though infrequently at the popular level.

Efficient (that which makes something happen - the popular definition).

Final (the purpose for which something happens).

Formal (most essential quality that makes something what it is).

Material (that out of which something is made).

Occasionally, one sees someone using the concept of “cause” ambiguously when a more precise definition would help.

6.8.4 Oversimplification of Cause. Often an effect can have multiple causes and contributing factors.

This country is in the fix it's in because the Supreme Court _____ (fill in your favorite pet peeve).

Economics is the sole explanation for World War II.

6.9 Generalization. Similar to 6.8.4, one should always be wary of arguments which use the word “all” followed by some sort of predicate characterizing the “all.”

All pit bulls are vicious.

Hitler was motivated by a fallacy: “All Jews are evil.”

6.10 Complex question. This fallacy gives you two or more for the price of one - questions that is. It combines questions that really ought to be considered separately and may or may not be related.

Are you one of those unthinking atheists? (It should be 1) “Are you an atheist?” and 2) “Are atheists unthinking?”).

6.11 Equivocation. This means that terms are not being used consistently throughout the argument.

Some dogs have fuzzy ears. My dog has fuzzy ears: therefore, my dog is some dog (“some” is being used in two different senses).

6.12 The part for the whole, or composition and division. This fallacy assumes that what is true of a group is true of an individual, or vice versa.

Mark comes from a church which teaches that being a democrat is the unforgivable sin. Therefore, Mark believes the same thing.

Because Christ commanded the church to evangelize the whole world, therefore, I must evangelize the whole world.

6.13 Denying the antecedent and affirming the consequent. Sorry about the “formal” logic terms, but most people can intuitively spot these:

Presbyterians believe in predestination. John is not a presbyterian, therefore he does not believe in predestination (even if the premise is true, the conclusion may be false).

If the power goes out, the computers will go out.
The computers are off, therefore, the power
is out.

In more popular terms, this could be called “negative or positive inference.” In other words, we cannot assume from a positive proposition that the negative is true, nor from the negative proposition that the positive is true. It must be proven, since there are usually external qualifications which may prove the assertions false or true.

6.14 False disjunction, or misuse of the excluded middle. The excluded middle simply means that a proposition is either true or not true. The problem arises when there is a third or multiple alternatives to the assertion. A famous one cited in the alt.atheism.faq is C.S. Lewis’s argument in **Mere Christianity** (I paraphrase)

Jesus was either God, or a liar, or a lunatic.

A third possibility is that the gospels give us a completely false, revisionist perspective on Jesus, so that we don’t even know whether or not anything we read about him is true. Another example:

You either support the program of our pastor, or you
are not a Christian.

The individual who fails to support his pastor may have cogent reasons for not doing so which have nothing to do with his spiritual state.

6.15 Failure to make or observe valid distinctions. This fallacy assumes that because two things are alike in some aspects, they are

therefore alike in all aspects.

Because children and adults have equal rights before
the law, they therefore should be allowed to
vote and drink.

This ignores that children do not have the intellectual and emotional maturity to make informed decisions, or the physical capacity to handle alcohol in even moderate amounts.

6.16 Appeal to selective evidence. The individual only cites evidence which supports his own viewpoint, and ignores evidence which does not. A competent, honest scholar will seek to interact with views which are contradictory to his own position, limited only by space and the overall purpose of his work.

6.17 Invalid syllogisms. Often we intuitively know that an argument is wrong. Reducing the argument to a syllogism will sometimes help. It may be that the premise of the argument is not truly universal in fact. The famous:

All swans are white.

Jack is a swan.

Therefore Jack is white,

is an obvious example (although valid in form, all one has to do to prove the argument false is to produce a black swan). An example that Carson (p. 100) offers:

No false teaching possesses inherent authority for
the church.

Some teaching is false teaching.

Therefore, no teaching possesses “inherent” authority for the church.

The minor term is distributed in the conclusion, but not the premises. There is a big jump from “some” to the implied “all.”

6.16. The world view, or “my frame of reference the only frame of reference” fallacy. This interprets facts and material arising from one world view in terms of another world view.

The shaman claimed that he believed in the biblical resurrection from the dead, but he meant that all people eventually come to life as spirit-beings . . .

which is quite different from the biblical view of a bodily resurrection. However, it can get very subtle. Good authors can so write as to get you to at least conditionally accept their presuppositions, so that in the frame of reference in which they are writing, their conclusions and interpretations make sense, but still may not be appropriate to the original context. This fallacy is frequent in literary and biblical interpretation.

6.17 Confusion of truth and precision. This fallacy arises from our actual use of language. The statement “I am a man” and “I am a male homo sapiens 37 years of age” are both true, but one is far more precise than another. This is the fallacy behind the alt.atheism.faq’s argument concerning the precise dimension of the Bronze Sea in 1 Kings 7:23.

6.17 The non sequitur. This is a conclusion which is not supported by or related to the argument and evidence which is provided. Some are easy to spot. Others are based on false premises or confused thinking that are not easy to untangle.

Paul teaches that there is no distinction between male and female, and therefore would permit women to teach in the church.

The argument does not follow because it does not specify what Paul means by “no distinction between male and female,” and this must be addressed before the conclusion is drawn.

6.18 Circular Argument. Many will point out that there is a sense in which all thought is circular, i.e., we all argue from certain presuppositions which cannot be ultimately proven to everyone’s satisfaction. However, in most of our arguments, some principle (evidence) external to the argument has to be applied to validate the argument.

The existence of chaos indicates that God doesn’t exist.

Why do you say this?

Because chaos is proof that God doesn’t exist.

6.19. Straw Man. Another favorite. This involves responding to an argument that the individual never actually made, or so reconstructing his argument that it is really something else. This should be distinguished from drawing valid unstated conclusions and inferences from a person’s arguments, but the honest scholar will make it clear that this is what he is doing, whereas the straw man is represented as the other’s argument without qualification.

7. Concluding remarks.

The purpose of this FAQ, as stated above, is to aid the reader in evaluating the arguments and evidences provided by experts in support of their contentions. Future editions of the FAQ (there will be at least one more iteration) will include a bibliography and a brief definition of logic and a discussion of its proper use in argumentation.

I would also like to make several observations that I couldn't fit in above. Much of the above simply formalizes what is intuitive and obvious to anyone who has a modicum of education. In evaluating

the arguments of experts, one should also consider the tone and style that the writer is using. Is it excessively rhetorical? Is there a real nastiness or hostility? Such stylistic marks may reveal an unhealthy bias on the part of the writer which harms rather than helps his case. Does the writer use the techniques of propaganda, or does he provide evidence combined with valid arguments in support of his position, interacting fairly and soberly with diverse points of view, including alternative interpretations of the evidence? Does he quote his opponents fairly and not out of context so that he subtly changes their arguments? One should also beware of a writer who depends heavily on debunking the arguments of others without concomitantly proving his own.

Few persons care to study logic, because everybody conceives himself to be proficient enough in the art of reasoning. But I observe that this satisfaction is limited to one's own ratiocination, and does not extend to that of other men.

—Charles Sanders Peirce,

It is not because God is irrational that we cannot comprehend him; it is because God is rational, and in the nature of the case, ultimately rational...

—C. Van Til