## **Critical Thinking**

## By Steven Ball Professor of Physics

One particular skill college professors like to see in their students is critical thinking. The idea of students coming to class and passively absorbing information from a lecture is not what college is all about. If that were all there is to a college education, one could just as well stay at home and receive an education by gathering information via websites, books, magazines, or even the television. However, it is one thing to gather information and quite another to actively consider its truthfulness, its value, and scope of application, all with a specific goal in mind. In coming to college, you can expect professors to invite you to participate in the thinking process with the goal of achieving a deeper level of understanding. An emphasis on critical thinking is especially important at a Christian college, where students are to become leaders who will engage a secular culture with certain truth claims. Let us consider what is involved in critically thinking about a problem and illustrate it with some examples.

First, we note that any claim to truth will not be threatened by a closer look. Anything true will remain true upon a careful investigation. Any claim to truth that refuses a close examination may have something to hide that will weaken its claim. This is especially true regarding matters of faith, where it may not be possible to "prove" something beyond a shadow of doubt. A confident claim to truth will nonetheless invite us to carefully examine it and see whether it stands up to reason.

We begin our examination of any truth claim by carefully distinguishing observations from any impressions or interpretations on our part. We must be willing to first focus only on the unvarnished evidence, without jumping to conclusions of how to interpret it. This requires us to seek first person sources and to reconstruct as accurately as possible the setting in which the truth claim takes place. We may need to ask many questions before proceeding. Often, this in itself can clear up confusion and invite some level of agreement before continuing.

In attempting to make objective observations, we should consider our vantage point as compared to the vantage point of others examining this same claim. If we can attempt to put aside biases or unnecessary assumptions that can distort our perception, it will greatly aid our ability in the process of critical thinking. Others may understand it differently because of their background. It behooves us to recognize differences in our vantage point and attempt to view the truth claim from a different perspective. This in itself may help us to see things that we would not have seen otherwise.

As we attempt to interpret our observations, we must consider the context of the truth claim. Who is making the claim? At whom is it directed? What surrounding influences are relevant to its origin? If the truth claim is part of a larger work or set of claims, we consider what lies before or after the item of interest and look for patterns. There may be many contextual perspectives to consider, and for us to have confidence in the claim, we should find that it is an appropriate fit to the bigger picture. A claim taken inappropriately out of context rightfully loses its credibility. Self-consistency is a very important part of examining any truth claim.

Finally, how does the truth claim stand up to standards of truth we accept? If it passes the self-consistency test, we ask further questions. Does it agree with other relevant observations or established criteria of truth and reason? Does the truth claim lend itself to any particular tests that could either confirm it or falsify it? This may be the most difficult part, because it does involve judgment on our part as to what standards to apply. However, if we have done a good job in making observations and applying reasonable interpretations, we may find that it is not so formidable to choose appropriate standards, especially when several different standards are all telling us the same thing.

What I have just described, a student of science may have already noted, appears to be very similar to the widely accepted scientific method. A student of history may recognize it as a method of historical research. This process of critical thinking is widely applicable to many kinds of problems, wherever establishing the truth is involved.

Consider how we would use critical thinking to solve a crime. An expensive item was stolen from a house that seemed fairly secure. Our goal is to find out who did it, and hopefully recover the stolen item. No evidence of a break-in can be found. How should we proceed? Can we establish if the house was routinely kept locked? We would want to ask some questions of those who are known to have keys to the house. Are all keys accounted for? Of those found with keys, do any have a motive for stealing the item? What other clues can be found in and around the house? When was the item first observed missing? Did the family or neighbors observe anything out of the ordinary, shortly before or after the crime? We check local area pawn shops for the item. After these and numerous other questions are answered, hopefully we have a list of suspects. Now we need to find out more about each one. Do they have an alibi on the date the item disappeared? Is there more than one person involved? Do the testimonies of these persons match up or agree with the known evidences? Do we have strong enough evidence to arrest someone? Assuming we have the right person, can we find additional supporting evidence? Is the evidence now beyond reasonable doubt? To avoid blaming an innocent person and to find the guilty party, critical thinking is crucial to the entire process.

Regarding matters of faith, critical thinking is essential for demonstrating whether faith has a rational and evidential basis. Leading theologians have promoted a process of critical thinking to aid in our understanding of scripture<sup>1</sup>. This is not merely an intellectual exercise. Critical thinking enables us to establish that doctrines central to the Christian faith are based solidly on scripture, reason, and available evidences. We find that these doctrines stand up to a careful examination. Hard questions are welcome, since solid answers await them.

One doctrine central to the Christian faith is the resurrection of Christ, described in all four of the gospel accounts. Different details are found in the various accounts. If our goal is to establish how solid the case for the resurrection of Christ really is, we need to do some critical thinking. Let us place ourselves in the position of the skeptic, one who can rightfully insist that the burden of evidence should fall on the one making a case for someone rising from the grave. Are the gospel accounts historically reliable? Were any of them actually written by eyewitnesses? Were there any eyewitnesses who were not followers of Christ? Can differing details from the accounts be legitimately reconciled? Do other passages from the Old and New Testaments concur with these accounts? Is the resurrection of Christ actually a fulfillment of Old Testament prophecy? What other evidences support the resurrection? Did Jesus really die on the cross? Was his tomb truly empty on the third day? Are there any other plausible explanations for the accounts and evidences? Do the lives of those who witnessed Jesus alive suggest conspiracy, hallucinations, or the truth of the resurrection? Questions like these form the basis of several books written by former skeptics who found compelling answers<sup>2</sup>. Indeed, the resurrection of Christ has a strong basis in scripture and all available historical evidences. Anyone wishing to examine this in detail is invited to do so.

Andrew E. Hill & John H. Walton, <u>A Survey of the Old Testament</u>, Zondervan, 1991.

<sup>&</sup>lt;sup>1</sup> Howard & William Hendricks, <u>Living by the Book</u>, Moody Press, 1991.

 <sup>&</sup>lt;sup>2</sup> Frank Morison, <u>Who Moved the Stone?</u>, Faber & Faber limited, 1930, Zondervan, 1958.
Josh McDowell, <u>Evidence that Demands a Verdict</u>, Here's Life Publishers, Inc., 1972
Lee Strobel, <u>The Case for Christ</u>, Zondervan, 1998.

At the other extreme, some doctrines form the basis of cults. Cults are characterized by doctrines derived by taking scripture out of context, emphasizing obscure points that are not central to the text, or by claiming "divine revelations" that have no scriptural basis. Cults succeed in keeping control over its members by discouraging them from critical thinking. Questions prompted by thinking individuals on particularly sensitive matters are not welcome, indeed viewed as a clear sign of "lacking faith". Invariably, each cult has a leader who has won over the confidence of its members as a great spiritual authority, who is no longer subject to human accountability. Unfortunately, there are numerous examples of this practice.

The Branch Davidians, a group occupying a ranch near Waco, Texas from the 1930's until their tragic ending in 1993, is a case in point. An offshoot of the Seventh Day Adventists, it attracted followers with their emphasis on prophecy, simplicity, and an austere lifestyle. A young man who called himself David Koresh took over leadership of the group in 1988. A wide spectrum of followers came to live at the "Mount Carmel" compound to deepen their spiritual journey, including many educated and successful professionals from several countries where Koresh had given sermons. However, it appears from accounts of his former followers that establishing the credibility of Koresh by applying critical thinking was sorely lacking<sup>3</sup>. They gathered whenever Koresh gave impromptu messages lasting many hours, without interruption or questioning. His followers seemed not to have cared if respected theologians, past or present, agreed with his messages. His focus on the "end times" and apocalyptic prophecy made it difficult to check their validity. His claim to be a messianic figure was directed at those already firmly committed to his teachings, not to the outside world. Even the promiscuous lifestyle of Koresh, which should have raised suspicion, went mostly unquestioned. Those who dared to disagree were the enemies of the faith. Standards of truth appear to have been reduced to

<sup>&</sup>lt;sup>3</sup> David Thibodeau and Leon Whiteson, <u>A Place Called Waco: A Survivor's Story</u>, PublicAffairs, 1999.

nothing more than the teachings of Koresh, who demanded the undivided loyalty of his followers. In the aftermath of their violent ending at the hands of the FBI, the outside world finally learned the shocking reality of his cultic control over his followers.

However, lest we decide that there are only two categories of doctrines, those central to the Christian faith and those that form the misguided basis of cults, let us think again. Critical thinking can help us avoid a dogmatic insistence on doctrinal matters that do not have clear support from scripture, reason, and available evidences. In any healthy community of believers, there will always be room for disagreement on such issues. The freedom to exercise critical thinking allows for the worshipping of God with the heart, soul, and mind. A community of believers that refuses its members freedom of personal conviction on these matters does harm to its members and its message. Even the central message of Christianity is tainted in the eyes of nonbelievers who perceive that Christians are not allowed to question dubious doctrinal matters.

Regardless of its controversial nature, let us look as objectively as we can at a hot topic in many Christian communities today, the age of the Earth. For some it has become a test of orthodoxy, holding that the Bible clearly shows us that the age of the Earth is around 6000 years. Usually, this claim accompanies an argument against evolution, in favor of creation. Once again, critical thinking leads us to question the basis of this claim. Is the length of time in which God accomplished creation a clear teaching of scripture? This doctrine is derived from the account of creation given in Genesis 1, in which God speaks into existence all of creation over six days. We note that the Sun does not appear until day 4. This leads us to question what constrains the length of the days before the Sun appears. Are there differing interpretations for these days promoted by respected theologians<sup>4</sup>? How might the original Hebrew audience have understood

<sup>&</sup>lt;sup>4</sup> <u>The Genesis Debate: Three Views on the Days of Creation</u>, ed. David G. Hagopian, authors Duncan, Hall, Ross, Archer, Irons, Kline, Global Publishing Services, 2000.

this account? What important contextual considerations help us understand the purpose of Genesis 1? Specifically, is there a purpose for the 7-day format of creation that is independent of the actual time frame? It appears there are many important considerations that should be addressed before we can claim a clear doctrinal teaching from scripture on the age of the Earth. Critical thinking also urges us to check for external evidences. Does science support a 6000 year-old Earth, or a much older Earth? Do the evidences from astronomy, cosmology, geology, and radiometric dating suggest a consistent answer to this question? Do we consider the evidences from nature trustworthy? These considerations caution us against making a strong case for the age of the Earth as a clear message of the Bible. If it is not central to the Christian faith, focusing on it becomes a needless distraction.

In these examples, we see the value of critical thinking. It takes us beyond merely the gathering of information, and helps us pursue a clear goal. It begins with using our observation skills before rendering judgment. We learn to ask appropriate questions. We consider how our perspective may limit us and how a different perspective might help us view the information more clearly. We examine the context of the truth claim to aid our understanding. Finally, we rely upon established standards of self-consistency, reason, and independent checks to establish the validity of a truth claim. This can serve to expose the weakness of unsupported claims or to establish the strength of well-supported ones. The process of critical thinking also helps us to move beyond empty side issues to the central issues at stake. For a Christian, critical thinking is essential to one's credibility, especially if one wishes to engage an unbelieving world with the central messages of the Bible.