Probe Survey 2020 Report 5: Sexual Attitudes and Religion vs. Science

Steve Cable continues his analysis of Probe's 2020 survey of American religious views moving over to consider their response to sexual mores of today and how they navigate religion and science.

The previous reports on Probe Survey 2020 were primarily focused on religious beliefs and practices. In this report, we will look at how these beliefs impact Americans as they deal with sexual issues and with navigating the relationship between religion and science. In general, the survey results confirm a continuing degradation in Americans', and particularly Born Again Protestants', view of sex within a heterosexual marriage. We find that fewer than one in five Born Again Protestants affirm a biblical view in this area. On the other hand, Americans still tend to consider religious views at least as important as scientific positions in establishing their beliefs.

American Sexual Attitudes and Behaviors

We asked four questions regarding sexual attitudes and behaviors in this survey.

1. Sex among unmarried people is always a mistake: from Agree Strongly to Disagree Strongly

2. Viewing explicit sexual material in a movie, on the internet, or some other source is:

    a. To be avoided
    b. Acceptable if no one is physically or emotionally harmed in them.

c. A matter of personal choice
d. Not a problem if you enjoy it
e. Don't know

3. Living with someone in a sexual relationship before marriage:

a. Might be helpful but should be entered into with caution.
b. Just makes sense in today's cultural environment.
c. Will have a negative effect on the relationship.
d. Should be avoided as not our best choice as instructed by God

4. People attracted to same sex relationships are:

a. To be loved and affirmed in their sexual choices.
b. To be avoided as much as possible.
c. To be accepted while hoping they realize there is a better way.
d. To be loved and told God's truth regarding our sexual practices.

First, let's see how the different religious affiliations impact the answers to these questions.

Sex Among Unmarried People

First, let us establish the biblical standard for sexual relations outside of marriage. Is there clear teaching on this topic? Consider Jesus' discussion in the Sermon on the Mount where He said, "You have heard that it was said, '**Do not commit adultery**.' But I say to you that whoever looks at a woman to desire her has already committed adultery with her in his heart."{1}

In 1 Thessalonians 4:3, Paul writes, "For this is God's will: that you become holy, that you keep away from sexual immorality." And then in 1 Peter 2:11, Peter writes, "I urge

you to abstain from the passions of the flesh, which wage war against your soul." It is very clear that the biblical standard calls for all sexual relations to occur within a marriage between one man and one woman.

Results from the first question are plotted in Figure 1. As shown, here and in the next three graphs, we will look at those ages 18 through 29 next to those ages 40 through 55 to see if there are differences based on age. If there is a trend or variation seen in the 30 through 39 age group, then that one is also shown as seen for Born Again Protestants in Figure 1.

The graph shows the older group of Born Again Protestants is much more likely to Strongly Agree that fornication is always a mistake than the youngest group, dropping from almost one half to a little over one quarter, 46% to 29%. **Over two thirds of Younger Born Again Protestants have adopted the common view of the culture** that sex and marriage are not necessarily related. Note that even among the older group, **less than half of them strongly agree that sex outside of marriage is always a mistake**.

Looking across other religious affiliations, we see that the vast majority said they Disagreed or Strongly Disagreed with this statement{2}. They generally believe that sex outside of marriage by unmarried people is not an issue. This is particularly true of the Unaffiliated with close to 90% (nine out of ten) disagreeing.

How have these views changed among born again young adult individuals over the last decade? Looking at the GSS survey from 2008, we find that over one in three (37%) Born Again Christians ages 18 through 29 agree with the statement, "If a man and woman have sex relations before marriage, I think it is always wrong." Now in 2020, we find that over one quarter (27%) of Born Again Christians agree that it is always wrong. Although the questions asked were not identical, they are

close enough to indicate that the drop of ten percentage points is a significant decline in young adult, Born Again Christians who take a biblical position on sexual activity outside of marriage.

Pornography.

The second question deals with views on the acceptability of viewing pornographic material. What does the Bible tell us about feeding our minds with sexually immoral material? Jesus tells us in Matthew 15:19, "For out of the heart come evil ideas, murder, adultery, sexual immorality, theft, false testimony, slander." We are warned in 1 Corinthians 6:18, "Flee sexual immorality! Every sin a person commits is outside of the body but the immoral person sins against his own body." And further in Ephesians 5:3, "But among you there must not be either sexual immorality, impurity of any kind, or greed, as these are not fitting for the saints." Clearly, avoiding sexual immorality in all forms includes avoiding explicit sexual material.

The results are shown in Figure 2. Once again, we see that Born Again Protestants are much more likely to say that we should avoid exposure to such material. Both the younger group and the older have more than 50% who say it is "to be avoided." However, the data also shows over four out of ten Born Again Protestants believe it is usually okay. Given what we know about the negative effects of pornography on healthy living and relationships, this result is surprising.

All the other religious affiliations have only a small percentage of people who think that explicit sexual material should be avoided. Only about one in five Other Protestants and Catholics affirm that pornography is to be avoided. Once again, the Unaffiliated lag those affiliated with some religion having only about one in twenty (5%) that think pornography should be avoided.

For those who are not Born Again Protestants, around 10% to

20% say that such material is okay if no one is hurt in them. These people fail to realize that the person being hurt by these materials is themselves and their loved ones. More surprisingly, the vast majority of these people selected "a matter of personal choice" or "not a problem if you enjoy it," implying that if people are shown being harmed in this pornographic material, that is perfectly okay if you enjoy it or want to put up with it.

Living Together Before Marriage

What does the Bible tell us about living in a sexual relationship before marriage? In Colossians 3:5, Paul states, "So put to death whatever in your nature belongs to the earth: sexual immorality, impurity, shameful passion, evil desire, and greed which is idolatry." The current philosophy of "try before you buy" is popular but totally contrary to biblical instruction for a rich, fulfilling life. This philosophy clearly "belongs to the earth."

The third question examines views on whether it is a good thing to live together in a sexual relationship before committing to marriage. The results are summarized in Figure 3. This is another question where Born Again Protestants show a significant difference based on age. The older group, 40 through 55, shows almost 60% who say that it should be avoided as instructed by God. The younger group, 18 through 29, shows only 40% with the same viewpoint. Across all age ranges only about one half of Born Again Protestants say that this practice should be avoided. So, even among this group, over half believe that it is okay and might be helpful.

Once again, this question reveals a stark difference between Born Again Protestants and all other religious affiliations. Other Christian groups show **much fewer** than one in five adherents who believe this practice should be avoided. And we see the Unaffiliated lead the other viewpoint, with about nine out of ten of them saying the practice "might be helpful" or

“makes sense in today’s culture.”

Same Sex Relationships.

The fourth question deals with how people react toward those who profess to have a sexual attraction towards those of the same gender. What does the Bible say about same sex relationships? Let’s consider the instruction from 1 Corinthians 6:9b-11, “Do not be deceived! The sexually immoral, idolators, adulterers, passive homosexual partners, practicing homosexuals, thieves, the greedy, drunkards, the verbally abusive, and swindlers will not inherit the kingdom of God. Some of you once lived this way. But you were washed, you were sanctified, you were justified in the name of the Lord Jesus Christ and by the Spirit of our God.”

The verse above tells us two things. First, that someone who is given over to homosexual activity (like those given over to idolatry, sexual immorality, and greed) are not true followers of Christ. Even in Paul’s era, many were apparently saying they would inherit the kingdom of God and so Paul begins the statement by saying “Do not be deceived.” But it also clearly states that such a one can be washed, sanctified and justified in Jesus Christ. As Christians, we should love them and tell them the truth that God has a better way for their life.

Note that our question does not distinguish between those experiencing same sex attraction and those actively involved in living out their attraction through homosexual activity. Both categories of people need to be loved and told the truth.

The results for this question are summarized in Figure 4. As shown, we see some difference based on age for Born Again Protestants. However, it is not as pronounced as for the question on fornication above. Looked at as a group between age 18 and 55, less than one half of Born Again Protestants selected loving them and telling them what the Bible says

about homosexual practices.

Once again, all other groups are much less likely to take a biblical position. However, when we add in the answer about "accepting them while hoping they find a better way', the other religious groups (excluding the Unaffiliated) show almost four in ten who desire them to find a better way.

Note that Other Protestants are most likely at 20% (about one out of five) to say they would try to avoid people attracted to the same gender.

Combining Questions for Born Again Protestants.

How many Born Again Protestants take a clear biblical view of all four questions concerning sexual attitudes and behaviors? Results are shown in the adjacent chart. The chart begins with results by age for the first question concerning fornication. As you move to the right, additional questions are added to the questions already addressed to the left. Thus, the bars on the right include those who took a biblical position on all four of the questions.

Clearly, ones in the older group are more likely to take a biblical view on sexual behavior. In fact, on the far right, we see that those 40 to 55 are twice as likely as those 18 to 29 to hold to a biblical view. However, more important, is that over 80% of the younger ages and over 75% of the oldest ages do not hold to a biblical view on these combined topics regarding sexual behavior.

To understand how disturbing these results should be, consider **Born Again Christians with a biblical view on sexuality as a percentage of the entire United States population. The results are 2% for 18 through 29, 3% for 30 through 39, and a whopping 6% for 40 through 55**. In other words, a slim remnant of adults in America hold to a biblical view of sexuality. A secular view promoting no relationship between sexual behavior and marriage and no limits on satisfying one's lusts currently

dominates our national thinking.

Don’t Do What You Say You Will Do.

We will address this topic more fully under Topic 10 but it is relevant to thinking about the Combining Question topic above. We asked this question:

When you are faced with a personal moral choice, which one of the following statements best describes how you will most likely decide what to do?

One of the answer choices is “Do what biblical principles teach.”

Almost half (47%) of Born Again Protestant young adults (18 through 39) selected that answer. They would follow biblical principles in making moral decisions. Yet as just seen, only about 15% of Born Again Protestant young adults selected biblical principles on all four questions regarding sexual behaviors.

Although we can’t be certain, it appears that many Born Again Protestant young adults either don’t know what topics are covered under moral choices OR they don’t know what biblical principles teach OR both. Clearly, almost half of Born Again Protestant young adults think that they are choosing to think biblically about moral choices, but most of them are not living the way they think they are.

Responding to These Results on Sexual Attitudes

All of the results presented above show that a large majority of young adult, Born Again Protestants do not adhere to a biblical position on topics related to sexual morality. The data also shows that when Born Again Protestants enter the world of higher education and secular careers, they are surrounded by an even greater majority of people who believe that pretty much anything is acceptable in the area of sexual

relations. Among other conclusions, we can be sure that these two data points tell us that while young adults were involved in church as teenagers, they were not adequately taught the basics of Christian doctrine in the area of sexuality and did not receive a good explanation as to why the Christian attitudes are much, much better than the free license rampant in our society today.

Christian teaching on sexuality must occur more frequently from the pulpit, in bible studies, in small group times. If we think that parents as the only source of information are sufficient to set up young Christians to be an example of godly sexuality, the data says “not so fast.” However, we do not equip parents to discuss these matters with their children. We cannot allow their peers to set the bar on acceptable behavior.

American Attitudes Concerning Science and Religion

We included three questions probing people’s views on the relationship between science and religion. The first question relates to any apparent conflicts between current scientific theories and their beliefs based on their religion. From the answers, one can tell whether the respondent puts more credence in current scientific theories or in their religious beliefs. The question is:

Question #1: When apparent conflicts appear between science and religious teachings, one should:

1. Ignore science, accepting that when science learns more it will agree with your religion.

2. Examine your religious teachings to determine if the scriptures are in conflict or it is just someone’s interpretation of the scriptures that

conflict.

3. Change your religious views to align with current scientific views.

4. Abandon your religion as being false.

The first two answers are consistent with a Basic/Enhanced Biblical Worldview, reflecting 1) a view that their scripture is informed by a higher source of truth than simple science can draw upon, 2) a recognition that generally accepted scientific viewpoints have often changed over time, and 3) on the type of scientific questions being addressed here, there are in most cases a variety of theories supported by different groups of scientists. The second answer includes the possibility that the person's holy scriptures do not directly address the topic at hand, but that some religious leaders have inferred a position on the topic from their interpretation of scriptures.

The second two answers, i.e. 3 and 4, reflect a view that scientific teaching communicates truth that religious teachings are unable to counter. The third answer results in a religious viewpoint that will vary over time as scientific ideas gain or fall out of favor in the scientific community.

As shown in the figure, the majority of American young adults do not accept that science is infallible (by supporting answers 3 or 4). Less than 10% of Born Again Protestants selected one of these answers. And even among the Unaffiliated, less than half of them selected an answer where scientific theories trump other sources of beliefs.

At the same time, those who selected a view that ignores science all together (answer 1) were a small minority as well. Less than one in five (20%) of the Born Again Protestants and slightly over one out of ten for the other religious groups.

So well over 50% of all religious groups selected answer

number 2, showing a willingness to go against science but also a desire to meld the views of science into their religious views. We did not ask a follow up question as to what they would do if they determined there was an unresolvable conflict with the current position supported by most scientists. There are not many unresolvable conflicts if one is willing to adopt a position supported by a reputable minority of scientists, e.g. intelligent design.

Question #2: My understanding of human origins is the result of:

1. Using the Bible alone with no regard for the findings of science.

2. Using science to better understand what the Bible teaches us about origins.

3. Not sure

4. Accepting a completely naturalistic view, i.e. no intelligence involved in the process.

Note these answers follow a similar pattern to those of the first question, but now they are applied to a specific question where many people assume there is no meeting ground between science and religion.

The answers are shown in the adjacent graph. On this more specific question, the percentage of each religious group that is going to look at the Bible alone for their understanding hovers around 30% for all religious groups but plummets to under 8% for the Unaffiliated.

Conversely, only the Unaffiliated show more than three out of ten who “accept a completely naturalistic view” (choice #4). Born Again Protestants show only about one out of eight who select such a view. This result is amazing given the concerted push by some educators to force our students to accept a

completely naturalistic view of creation. However it is consistent with the current state of the research on the origins of man, including new reports from 2021.{3}

The majority for each group of people selected "Not sure" or said they would use science to help them better understand what the Bible teaches.

Question #3: All real scientists believe that science is the only source of real truth.

The potential answers ranged from Strongly agree to Strongly disagree and included Neither agree or disagree.

First note that if we strictly define real scientists as individuals meeting these qualifications—1) a Ph.D. in a scientific field, 2) actively involved in the field, and 3) published in reputable scientific journals—we will find many scientists who agree that there are other sources of truth outside of science. So, we can say with confidence that **the statement in question #3 is objectively, verifiably not true**. However, there are certainly some believers in scientism [the belief that science is the only way to know ultimate truth] who claim the statement is true. They accomplish this trick by claiming that anyone who does not believe that science is the only source of real truth cannot by definition be a real scientist.{4} In other words, they use circular reasoning.

But there is certainly a movement to instill scientism as the favored viewpoint in society.{5} How successful are these proponents of scientism? Looking at the answer shown in the adjacent chart will throw some light on this question.

We would like to see the answer: Strongly Disagree. This answer aligns with the objective truth discussed above. But what we find is that only one out of five (20%) of Born Again Protestants profess this view. Among Other Protestants and Catholics only about one out of twenty (5%) profess this view. Adding some uncertainty by adding those who say they Disagree,

increases those amounts to two out of five (40%) for Born Again Protestants and one out of five (20%) for Other Protestants and Catholics.

Those who agree with the statement range from one out of four (25%) Born Again Protestants up to nearly one half (almost 50%) of Other Protestants and Catholics. Clearly, the proponents of scientism have done a good job of skewing our understanding of who scientists are and what they believe.

Combining the Questions

What do the results look like when we combine these questions? In our opinion, there are a number of different answers that could be consistent with a biblical worldview. Starting with the strictest view of relying on the Bible rather than science and then adding in those who would look at the results from science to obtain a clearer understanding of what the Bible teaches or those areas where the Bible is silent. Then, we add in their view on scientism which as already discussed is demonstrated by a long list of scientists who disagree to be false, thus being a source of strong disagreement.

The results from this comparison are shown in the adjacent figure. The first thing to notice is that the percentage of Born Again Protestants who take a more fundamental position, i.e. science should be ignored as a source of information, is low for one question and goes down to only a few percentage points when all three questions are combined.

The right hand side of the chart considers all combinations of answers that reflect a commitment to biblical truth above current scientific theories combined with a willingness to consider what science has to offer. As shown, the combination of the first two questions has a large percent of Born Again Protestants, ranging from 55% for the youngest age group and growing to over 65% for the older age group. Since only a

minority of Born Again Protestants stated Strongly Disagree that all scientists are adherents of scientism, when we add that question to the mix on the far right, we see less than one in five take a Biblical position on all three.

Effect of a Basic Biblical Worldview.

A natural question to ask is, “Does having a Basic Biblical Worldview correlate with having a biblical view on these science issues?” We can look at this question by comparing Born Again Protestants with a Basic Biblical Worldview with Born Again Protestants without a Basic BWV. The results are shown in the adjacent figure.

At a top level, we can see a correlation between a Basic Biblical Worldview and a biblical understanding of the relationship with science. This correlation appears to be strongest with those ages 18 through 29. We see that those with a Basic Biblical Worldview are about twice as likely to have a biblical view on all three of the questions related to science.

Responding to These Results on Science and Religion

As we can see from the first two science questions above, the majority of Americans do not buy into the idea that the only real source of truth is science. They don’t believe that scientific positions automatically take precedence over their religious beliefs. Perhaps one factor supporting this stance is an understanding that scientific hypotheses and positions have changed fairly often over the years, particularly in the areas of the origin of life and the role of evolutionary processes on our current bounty of life forms. Certainly, it is not the public school system which has attempted to promote concepts which current day scientists studying the field do not support.

However, Americans do have a skewed view of scientism, with a vast majority believing that all real scientists support this

religious concept. This position is a little surprising given that the view is demonstrably false.

In one area, sexual behavior, even American Christians have thrown out the teaching of the Bible. At the same time, they are resisting the call to make science the ultimate source of truth.

Notes

1. Matthew 5:27-28
2. There is also a small number of those answering Don't Know included in the number of those who do not state that they Strongly Agree or Agree Somewhat with the statement.
3. In March, Nobel Prize-winning physicist Brian Josephson declared that "intelligent design is valid science." In April, researchers writing in the journal *Current Biology* asked whether Darwin's "tree of life" should "be abandoned."
4. See for example: Daniel Dennett, Breaking the Spell, 2006.
5. See for example the book by J. P. Moreland, *Scientism and Secularism*, 2018.

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"Is Quantum Physics Legitimate or Spiritually Dangerous?"

Michael, thank you so very much for your insightful articles about Reiki. My father was an excellent medical doctor and surgeon and after retiring, he was led into Reiki and he is always trying to push this on us. His three adult Christian

children all have known from the start that this was not of the Lord and have rejected it. Now he is advocating Quantum Physics as the answer to life even though he claims to be a Christian. Have you written anything about Quantum Physics or can you give me just a couple of scriptural reasons why it is off-base? I imagine that they are the same as the reason for Reiki.

Thanks for your kind and encouraging letter. I'm glad to hear that the article on Reiki was helpful to you. Concerning quantum physics, this is a legitimate and highly-developed branch of contemporary physics. Any difficulties with quantum physics would not be due to the legitimate scientific work being done. However, difficulties with quantum physics do arise, and these can usually be traced back to two sources of origin.

In the first place, the vast majority of people who mention quantum physics have very little idea of what it is they're actually talking about. They may have read a popular-level book or two on the subject (or they may not have even done that). With this bit of new knowledge they may then make all kinds of far-fetched and dubious claims. The problem is, they usually don't know what they are talking about and it is difficult for anyone to challenge them (because not many people have a deep enough knowledge of this important field of physics to do so). In particular, quantum physics has been embraced by many non-Christian Eastern religious movements (or religious movements influenced by such philosophies) as a means of showing that physical reality is paradoxical, or illogical, etc. This often fits in with their religious claims, but many of these views are based on misunderstandings, misappropriations, and misinterpretations of quantum physics—and hence are not to be accepted uncritically.

Secondly (and this is very important), there are MANY DIFFERENT interpretations of what the mathematics and

experimental science behind quantum physics is actually telling us about the nature of physical reality. This is terribly important to understand, but sadly, most people are not aware of this. Many of the "wild and crazy" ideas which people propound with an appeal to quantum physics are based on a particular interpretation of the mathematical and physical evidence. But the problem with this is that there are numerous competing interpretations, each one of which adequately accounts for the data, but many of which would NOT result in the same strange views of the physical world. And here's the kicker: we do NOT know which interpretation is the right one! Hence, as you can easily imagine, many of the strange ideas which are based on a particular interpretation of quantum physics may be incorrect, simply because the interpretation upon which these ideas are based is incorrect!

For more on quantum physics from an informed Christian perspective, please check out some of William Lane Craig's materials on his website here. These are the search results from "quantum physics" on his website. Craig is a world class Christian philosopher and theologian, who is intimately acquainted with the issues in contemporary physics. You might also want to refer your father to Craig's work. His website has scholarly and popular-level articles, podcasts, debates with leading atheists, etc. I would highly recommend Craig's work.

I hope this is helpful. May the Lord richly bless you in your service for Him!

Shalom in Christ,

Michael Gleghorn

Posted Nov. 28, 2012

Theology vs. Science or Theology plus Science?

Appendix A: Theology vs. Science or Theology plus Science?

Note: This is one of two appendices for Steve Cable's article Are We Significant in This Vast Universe?

Are science and religion mortal enemies, or collaborating partners, or denizens of different realms with no common ground? Is the ultimate objective of science to unmask the fictitious myths behind all religions freeing mankind to pursue a rational utopia as espoused by Daniel Dennett{1} and other atheist academics? Or should we subscribe to the prevailing Western view of a clear secular vs. sacred split, segregating out thoughts so that science and theology are not allowed to deal with any topics which intersect?{2} Or will unbiased scientific inquiry lead us to a deeper appreciation and understanding of our Creator as espoused by early formulators of the modern scientific method, such as Isaac Newton, as well as many respected researchers, such as leading nanotechnologist, Dr. James Tour, who stated, "I stand in awe of God because of what he has done through his creation. Only a rookie who knows nothing about science would say science takes away from faith. If you really study science, it will bring you closer to God."{3}

The current view promoted as dogma by many in academia is that acceptable, genuine science is based on a theological presupposition, namely, that any possibility of intervention by a transcendent Creator or other non-physical entity must be

excluded from consideration in evaluating possible explanations for any phenomena observed in the physical world. It is ironic that Carl Sagan, one of the popular promoters of this dogma, would take fundamental issue with his own dogma when he wrote,

> A central lesson of science is that to understand complex issues (or even simple ones), we must try to free our minds of dogma and to guarantee the freedom to publish, to contradict, and to experiment. Arguments from authority are unacceptable.{4}

In a similar fashion, a common viewpoint promoted in some theological circles is that theology trumps science in any areas in which they have an intersecting interest, i.e. a viewpoint that looks only at the Bible without allowing its interpretation of Scripture to be informed by the findings of science. From this viewpoint, science is at best a limited field of study looking at only a small part of reality, and at worst is spending large amounts of resources studying an illusion masquerading as reality. It is assumed that science cannot provide insights to help deepen our understanding of theology.

I propose that both of these viewpoints share a common shortcoming of prejudging the result before examining the evidence. Both scientist and theologians should be free to follow the evidence where it leads, whether the evidence comes from observation of the physical aspects of our universe, or from philosophy and logic, or from divine revelation.

One area where this clash of viewpoints is reaching a fever pitch is in the field of Intelligent Design science. Researchers in this emerging field say, let us follow the evidence where it leads. If the makeup of the physical realm includes evidence of an intelligent designer, let’s admit it and pass the information on to the theologians. If the physical makeup is more indicative of the handiwork of random

variations and natural processes, let's cite it and pass that information along as well. As demonstrated in the 2008 documentary, *Expelled: No Intelligence Allowed*, these researchers are facing stiff opposition and even persecution from the defenders of the scientific establishment. Ironically, but not unexpectedly, the more we learn about the fine tuning required to support life, the history of our planet, and the complexity of living organisms, the more the evidence aligns with the presence of an intelligent designer rather than the results of random, undirected processes. As one scientist observed,

> [O]n whatever volume scale researchers make their observations – the universe, galaxy cluster, galaxy, planetary system, planet, planetary surface, cell, atom, fundamental particle, or string – the evidence for extreme fine-tuning for life's sake, and in particular for humanity's benefit, persists.{5}

As Christians, we need not fear science. If the Bible is revelation from our actual Creator, it will not crumble in the presence of scientific studies into the nature of our universe. We do need to be concerned about agenda-driven science which is focused on manipulating scientific results and the popular public perception of those results to prove a predetermined theological point, whether it is atheism or a particular interpretation of the Bible.

If God is the Creator of the universe and the Bible is revelation directly from God, then accurate observation of the universe will ultimately prove to be consistent with His revelation. By combining the general revelation of science with the special revelation of the Bible, we should be rewarded with a greater understanding of the nature of our Creator and His intentions for mankind.

Notes

1. Daniel Dennett, *Breaking the Spell: Religion as a Natural Phenomenon* (New York: Viking Press, 2006).
2. Nancy Pearcey, *Total Truth: Liberating Christianity from Its Cultural Captivity* (Wheaton, IL: Crossway Books, 2004).
3. Candace Adams, "Leading Nanoscientist Builds Big Faith," *Baptist Standard*, March 15, 2000.
4. Carl Sagan, *Billions and Billions: Thoughts on Life and Death at the Brink of the Millennium* (New York, Random House, 1997).
5. Hugh Ross, *Why The Universe Is The Way It Is* (Grand Rapids, MI: Baker Books, 2008), 124.

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Only Science Addresses Reality?

Dr. Ray Bohlin comments on the hubris of Drs. Coyne and Cobb in their op-ed in Nature*, in which they claim that only science addresses reality. Religion, they say, must be silenced. This alarming sentiment has already met reality in California.*

Would it surprise you to hear that churches may eventually be prohibited from teaching any ideas contrary to Darwinian evolution? "No way!" you say. "The Constitution guarantees freedom of speech! The first amendment guarantees that Congress can pass no law restricting or promoting any religious exercise!"

Well, yes the Constitution does that, but be patient with me and I'll show why the answer to the opening question could be "yes."

In the current issue of Nature, probably the most prestigious science journal in the world, a letter to the editor appeared in the August 28, 2008 issue on page 1049. Two well-known evolutionary biologists, University of Chicago's Jerry Coyne and University of Manchester's Matthew Cobb wrote the letter to complain about a previous editorial expressing hope that the Templeton Foundation, which funds research into the relationship between science and religion, might bring about some helpful resolutions.

Coyne and Cobb couldn't disagree more:

> We were perplexed by your Editorial on the work of the Templeton Foundation…. Surely science is about material explanations of the world—explanations that can inspire those spooky feelings of awe, wonder and reverence in the hyper-evolved human brain.
>
> Religion, on the other hand, is about humans thinking that awe, wonder and reverence are the clue to understanding a God-built Universe…. ***There is a fundamental conflict here, one that can never be reconciled until all religions cease making claims about the nature of reality*** (emphasis added).
>
> The scientific study of religion is indeed full of big questions that need to be addressed, such as why belief in religion is negatively correlated with an acceptance of evolution. One could consider psychological studies of why humans are superstitious and believe impossible things….
>
> …***You suggest that science may bring about "advances in theological thinking." In reality, the only contribution that science can make to the ideas of religion is atheism*** (emphasis added).

Coyne and Cobb clearly state that religion has no authority to make claims about reality. If science is allowed to persist in this audacious distortion of religion and science, then any kind of teaching that is critical of any aspect of

naturalistic evolution would be considered a negative influence on society as a whole. Religion is seen as crossing its constitutionally protected borders.

Biology teachers constantly complain now that what they teach about evolution is contradicted by the churches their students attend. This is obviously quite frustrating. If science is the only branch of knowledge that is allowed to make claims about reality, then religious teachings should not be allowed to interfere.

You may still be thinking that I'm taking this too far. Consider though that the California state university system already refuses to give credit for high school science courses that include anything beyond naturalistic evolution. Many Christian private school graduates in California are finding that their science courses are not accepted at state universities. Essentially that means you don't get in unless you can make those credits up by taking junior college science courses that meet the evolution-only standard.

State governments may easily decide that they need to help these religious school graduates out by requiring that these religious schools not be allowed to teach religious material that contradicts state-mandated standards. It's a violation of the separation of church and state, after all!

If you ever questioned the importance of the evolution/Intelligent Design controversy, I hope you see the point now. Unless we can convince a sufficient minority in the science community that science is limited and the subject of origins is one of those limitations, we may not be able to legally teach students anything about creation or Intelligent Design.

While Coyne and Cobb certainly don't represent all scientists, they are not alone! Trust me. I watched a video recently of Jerry Coyne making a presentation at a scientific meeting

where he basically made the very same claim. NO one objected. He was applauded enthusiastically. Watch it for yourself here. While the whole lecture is worth watching, the last eight minutes when he presents a slide with just the word "Religion" is the key segment.

Coyne and others are trying to establish what Nancy Pearcey called the fact/value split in her book *Total Truth*. To Coyne science is based on fact. Only material explanations are allowed in science since religion is based on personal values and have nothing to do with facts. Therefore if you try to inject your personal values (Creation, Intelligent Design) into the world of facts (science) this is a violation of the rules of science. It's not allowed.

According to Jerry Coyne speaking in the video, the only way to increase the acceptance of evolution is to reduce or eliminate the influence of religion. The two are incompatible! Coyne is unable to see that he also has a worldview, materialism, which influences how he interprets the data of science. He erroneously believes he is being objective about his interpretation.

This is a cultural battle as well as a scientific battle. For more information and resources from Probe to help you educate yourself and others about evolution and Intelligent Design see browse our articles at www.probe.org. If we don't "tear down strongholds" like this, we may find ourselves behind impenetrable, silent walls.

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A Doctor’s Journey with Cancer

When you suddenly learn you might have only 18 months to live, its a good time to sort out what really matters in life.

Last December, Yang Chen, MD, dismissed an aching pain under his shoulder as muscle strain. Five weeks later, as the pain persisted, a chest x-ray brought shocking results: possible lung cancer that might have spread.

A highly acclaimed specialist and medical professor at the University of Colorado Denver, Yang knew the average survival rate for his condition could be under 18 months. He didnt smoke and had no family history of cancer. He was stunned. His life changed in an instant.

I wondered how I would break the news to my unsuspecting wife and three young children, he recalls. Who would take care of my family if I died?

Swirling Vortex of Uncertainty

When I heard his story, I felt a jab of recognition. In 1996, my doctor said I might have cancer. That word sent me into a swirling vortex of uncertainty. But I was fortunate; within a month, I learned my condition was benign.

Yang did not get such good news. He now knows he has an inoperable tumor. Hes undergoing chemotherapy. Its uncertain whether radiation will help. Yet through it all, he seems remarkably calm and positive. At a time when one might understandably focus on oneself, hes even assisting other cancer patients and their families to cope with their own challenges. Whats his secret?

I learned about Yangs personal inner resources when we first

met in the 1980s. He worked at the Mayo Clinic and brought me to Rochester, Minnesota, to present a seminar for Mayo and IBM professionals on a less ponderous theme, Love, Sex and the Single Lifestyle. With the audience, we laughed and explored relationship mysteries. He felt it was essential that people consider the spiritual aspect of relationships, as well as the psychological and physical.

Later he founded a global network to train medical professionals how to interact with patients on spiritual matters. Many seriously ill patients want their doctors to discuss spiritual needs and the profession is taking note.

Reality Blog

Now a patient himself, Yang exhibits strength drawn from the faith that has enriched his life. He has established a websitewww.aDoctorsJourneyWithCancer.netto chronicle his journey and offer hope and encouragement to others. The site presents a compelling real-life drama as it happens.

As a follower of Jesus, Yang notes biblical references to Gods light shining in our hearts and people of faith being like fragile clay jars containing this great treasure. He sees himself as a broken clay jar through which Gods light can shine to point others who suffer to comfort and faith.

As he draws on divine strength, he reflects on Paul, a first-century believer who wrote, We are pressed on every side by troubles, but we are not crushed. We are perplexed, but not driven to despair.

A dedicated scientist, Yang is convinced that what he believes about God is true and includes information about evidences for faith. Hes also got plenty to help the hurting and the curious navigate through their pain, cope with emotional turmoil, and find answers to lifes perplexing questions about death, dying, the afterlife, handling anxiety, and more.

With perhaps less than 18 months to live, Yang Chen knows whats most important in his life. He invites web surfers to walk with me for part, or all, of my journey. If Im ever in his position, I hope I can blend suffering with service while displaying the serenity and trust I observe in him. Visit his website and youll see what I mean.

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"Is Faith Fact, or Are They Opposites?"

A fellow Christian friend and I recently got into a discussion over faith and facts, and I would like your opinion on the subject. It started by her asking me "Is faith fact?" Well I replied yes, because our faith is grounded in the fact of the resurrection, our faith has to be based on something true or our faith is in vain. She was arguing faith is not fact and it takes faith to believe in the resurrection in the first place and she said because we walk by faith not sight that facts are a "worldly" way of doing things. I feel the Bible teaches fact and reason as being viable and complimentary to faith. I would appreciate your biblical opinion on this subject.

Facts and faith are different things, and both are necessary. In Acts 17 and 1 Corinthians 15 Paul exhorts his readers and listeners toward an examination of the facts. Paul clearly believed that the facts of creation, Jesus' life, death, and resurrection, made his case for the deity of Christ reasonable. Facts rarely prove a point but they do indicate its reasonableness. (That is why in a court room you are asked to convict beyond a "reasonable" doubt, they don't say beyond any doubt). What matters in faith is the object of our faith.

I can believe the sun will not rise tomorrow, but the facts argue that this is not a reasonable faith. The same is true of our faith in Christ. I cannot prove that he lived, died, and rose from the dead, but I can gather facts of history which make that conclusion not only reasonable, but I believe, compelling. Based on my faith in the reality and person of Jesus Christ, I also have faith in the truth of what he said about spiritual things and future events. There are few facts if any to back up his statements, only those which verify his person and events which are significant enough to believe whatever he said, but there are no specific facts to back up his claim that He will come again.

I hope this helps.

Ray Bohlin

Probe Ministries

The Enlightenment and Belief in God

The skepticism and relativism seen in our society today didn't just pop up out of nowhere. They received new life during the era of the Enlightenment. Rick Wade provides an overview of this important period.

 *This article is also available in Spanish.*

We are often tempted to think of our own day as truly unique, as presenting challenges that others have not known. Among other challenges, Christians in the West today have to deal with a foundational philosophical matter: namely, the question

of the possibility of knowing truth. The mindset in our society today is either one of skepticism or of relativism. Skepticism says there is truth but we can't know it; relativism says there *is* no fixed truth. These mindsets affect all claims to truth, of course, but they are especially significant for Christians as we seek to proclaim the Gospel to others and hold onto it ourselves in these days of uncertainty.

Is the challenge of the loss of truth new? Not at all. There have been periods of skepticism throughout the history of the West. In this article we'll take a look at the era known as the Enlightenment, that period in the history of the West extending from the late 17th through the 18th centuries. What we'll see is that the very issues we're dealing with today were problems three centuries ago. Of particular concern to us will be the knowledge of God.{1}

Before looking at the Enlightenment itself, let's take a brief look at the mindset preceding this extraordinary era.

Prior to the Enlightenment, believing in God in the West was like believing in the sunrise; the answer to all the big questions of life *was* God (whether a given individual was inclined to *obey* God was another matter). The Bible was the source of knowledge about Him, especially the Old Testament, for there one could learn, among other things, the history of humankind and the divine purposes. Even political questions were to be solved by the Old Testament.

Everything was understood to work according to God's plan. The events of history were not chance occurrences, but events that served to carry out God's will. The universe was fairly young, having been created by God about 4000 years before Christ, and it was kept in operation through God's immediate involvement. The earth was at the physical center of the universe; since man was the highest level of creation, clearly God's purposes were centered on him.

For some people this picture of the world made for a comfortable home: nice and neat and orderly. However, the world was a mysterious and sometimes frightening place. This, along with the generally held belief in "that Last Judgment where many would be called but few chosen,"{2}

produced in some a pessimistic outlook. "'Certainly there is no happiness within this circle of flesh,' said Sir Thomas Browne, 'nor is it in the optics of these eyes to behold felicity.'"{3}

Although the various major landmasses of the earth were known, other civilizations were not. Europeans knew little about other cultures. It was easy to believe that theirs was the highest civilization.

With the rise of science and the discovery of other civilizations came a new way of thinking about "God, man, and the world." Let's look at these briefly.

A Shift in Thinking

Science

In the Renaissance era, the world started getting bigger for Europeans. Knowledge increased rapidly, and from it followed major changes in life. The various strands of change merged in the Enlightenment, culminating in a new way of looking at the world.

A major shift took place in the world of science with the development of the ideas of such people as Francis Bacon (1561-1627). Bacon, an English philosopher and statesman, abandoned the classical deductive way of understanding nature handed down from Aristotle, championing instead an experimental, inductive approach. He rejected the authority of tradition, and provided "a method of experiment and induction that seemed to offer an infallible means of distinguishing truth and error."{4}

Although science was later to become the source of confidence for people in the West, in the early days scientific discoveries were unsettling. For example, the invention of the telescope resulted in the overturning of Aristotle's theory of the universe in which the earth, and hence man himself, was the center. Aristotle taught that the universe was a series of concentric spheres, one outside the other. "Copernicus and his successors shattered this world," says historian James Turner.{5}Now man was understood to live on a tiny planet flung out into a space that had no center. It was a time of great confusion. In the words of poet John Donne, "'Tis all in pieces, all cohaerence [sic] gone.'"{6}The discovery that we aren't at the center of the universe made people wonder if we are truly significant at all.

More disturbing than this, however, were geological discoveries.{7} It appeared that the earth was older than the current understanding of the Old Testament, which seemed to some to say the world was created about 4,000 years before Christ. The Bible had long been the authority on such matters. Could it be wrong? To question the Bible was to question Christianity itself. Because Christianity provided Europeans' their basic worldview, such questions were extremely troubling. *Exploration*

Voyages of discovery had a profound impact on Europeans' view of their place in the world and of their Christian beliefs. Discoveries of other civilizations made Europeans wonder if their Christian civilization was truly any better than any others. China was a particular problem. It apparently predated European civilization, and possibly even the Flood! Like the Europeans, the Chinese saw *themselves* as the center of the world. And China wasn't Christian!

Other more primitive societies presented their own difficulties. For example, reports of how gentle and loving

American Indians were made people wonder about the doctrine of "original sin." They wondered, too, if it could be that God would destroy such people as these in a Flood.

Furthermore, if other civilizations were able to function without Christian beliefs, maybe Christianity itself wasn't so significant, at least on the cultural level. Maybe it was just one religion among many.{8} Norman Hampson concludes that "The intellectual challenge of non-European societies [were] a much more direct and fundamental challenge to traditional Christian beliefs than any which seemed likely to come from the scientists."{9}

Thus, the discoveries of science and of voyages first disrupted Europeans' orderly world, and then made people doubt the significance of their religion itself.

The New Cast of Mind

Shift in Knowledge Let's look more closely at changes in thinking that developed during the Enlightenment.

In the early 17th century, French philosopher René Descartes (1596-1650) formulated a very rationalistic philosophy. His primary goal was to produce a logically certain argument for the existence of God. To do so, he employed what has come to be known as the *method of doubt*. Descartes believed we were to doubt any idea that wasn't "clear and distinct." The only idea he could hold in such a manner was that he himself existed. Hence the phrase, "I think, therefore I am." From there Descartes developed his philosophy in a logical, rational manner. He even approached nature from a deductive, rationalistic perspective. Beginning with general principles and known facts of nature, Descartes would deduce what the rest of nature should be like.

Although Descartes' way of looking at the world was overthrown by the experimental approach, his philosophy in general had a

profound impact. He is considered by some to be the first modernist philosopher, for he looked for certainty in knowledge within the individual, not from an outside authority. Reason became more important than revelation.

Sir Isaac Newton (1642-1727) was an immensely significant figure in the developing world of science. His discovery of the law of gravity showed that nature could be understood by man. Man would no longer be at the mercy of an unknown world. Newton's work was so significant for understanding nature that Alexander Pope was prompted to write, "Nature and Nature's laws lay hid in night, God said 'Let Newton be!' and all was light."{10}

John Locke (1632-1704) was another major thinker in the Enlightenment era. Historian Norman Hampson says, "the new currents of thought all seemed to flow together in [him]".{11} Locke believed that knowledge by experience is superior to that which is accepted by belief and trust – "the floating of other men's opinions in our brains," as he called it.{12} He rejected the theory of innate ideas taught by Descartes, believing instead that our minds begin as blank slates to which is added knowledge by experience. Locke carried this approach into the realm of human nature and morality. He believed that "moral values arose from sensations of pleasure and pain, the mind calling 'good' what experience showed to be productive of pleasure."{13} Although Locke was a Christian, he set the stage for a naturalistic understanding of morality.

New Optimism

This new way of looking at the world, of listening first to experience rather than to tradition and the church, was a major characteristic of the Enlightenment. James Turner calls this a "new cast of mind." No longer were people to be dependent upon the Church to tell them about their world. Now they could learn about it in other ways.

In time the unsettling first wrought by scientific discovery was replaced by an "unprecedented optimism" based on the confidence in man's ability to "shape his material and social environment."{14} There was "a gradual and complex shift in the intellectual climate," Norman Hampson says. "As science seemed to establish itself on an impregnable basis of experimentally verified fact, doubt and confusion eventually gave way to self-confidence, the belief that the unknown was merely the undiscovered, and the general assumption—unprecedented in the Christian era—that man was to a great extent the master of his own destiny."{15}

Secularization and the Church

The findings of science had profound effects on people's thinking about God and their religion during the Enlightenment. However, science wasn't alone in this. Other forces were at work pushing Europe into a new secularism.

The Beginnings of Secularization

As temporal rulers consolidated their power in Europe, the political power of the Church waned. Fragmented feudal kingdoms began to merge together into nation-states and assumed more power over the people. The Reformation sped up the secularization of politics as governments distanced themselves from the warring churches to maintain peace.

Capitalism and technology furthered the separation as they weakened the hold the Church had on the populace. Before the printing press was invented, for instance, the Church heavily influenced the flow of information in society. But now "the printing press effectively ended church regulation of learning."{16} Other secular institutions arose taking up more of people's lives in areas not governed by the Church. Trade, for example and all it involved— travel, the establishment of businesses, banks and stock exchanges- -added more institutions that were outside the control of the Church. As

James Turner says, “The church’s words, though still formidable, competed with a widening range of alluring voices that . . . did not have the church’s vested commitment to defend Christianity.”{17}

Secularization didn’t *necessarily* undermine Christianity, however. People might actually have developed a firmer faith as a result of being able to read about and discuss the faith. It could be that “with worldly ambitions curtailed and legal powers short, the churches exercised deeper spiritual influence.”{18} Nonetheless, in society the voice of the Church grew weaker.

The Church

The new experimental cast of mind had profound effects on religion and the Church. Religion now came under the same scrutiny as other areas of thought. Doctrine drew greater attention since it suited the new concern with rational and orderly thought. Mystery was downplayed, and tradition lost significance. The new intellectual mood called for individuals to think matters through for themselves, and as a result, people began to divide over doctrinal differences. If “clear and distinct” ideas were what should be believed, as Descartes taught, then the individual person took on an authority previously held by tradition or the Church.

The Protestant Reformation played a major role in the fracturing of the Church and its loss of power. According to Norman Hampson, rival claims to leadership in the Church contributed most to the decline of its intellectual authority in society. If church leaders couldn’t agree on what was true, who could? Although cutting edge thinkers were satisfied that traditional attitudes and assumptions should no longer prevail, they were not able to come up with clear alternatives. “The picture,” says Hampson, “was one of a confused *mêlée*.”{19}

Church leaders began "revising belief to fit the new intellectual style. . . . The very meanings of 'religion' and 'belief' began subtly to change . . . during the Middle Ages religion involved not so much assent to doctrines . . . as participation in devotion, particularly communal ritual. Religion was more a collective than an individual affair and collectively it came closer to a system of practice than a parcel of tenets, while individually it meant more a person's devoutness than his adherence to a creed."{20} In the Enlightenment, however, doctrines became more important than practice for some, and the result of doctrinal debates was the breakup of the Protestant Church into multiple denominations.

The Bible itself was subjected to the new way of thinking. First, since all texts of antiquity were now open to question, the Bible too became subject to rational scrutiny. Which parts were to be accepted as historically accurate and which rejected? Second, since scriptural teachings were no longer to be accepted simply on the basis of authority, specific matters were brought up for debate – for example, the matter of the reality of hell.

Frenchman Richard Simon (1638-1712) subjected the Old Testament to such scrutiny. His book, *Critical History of the Old Testament,* was the first to examine the Bible as a literary product. He treated "the Old Testament as a document with a history, put together over time by a variety of authors with a variety of motives and interests, rather than a divinely-revealed unity."{21} Although his work was condemned across many Christian denominations, the die was cast, and others continued the same kind of analysis.

Political separation from the Church, new means of learning, the loss of tradition, dissension in the churches, doubts about Scripture—these things and more served to turn attention more to the secular than to the sacred.

Belief in God

Nature and God

All of this – the findings of science and exploration and the new experimental way of thinking, along with doubts about the validity and significance of Church teaching – took its toll on belief in God.

One concern was the relationship of God to nature. Newton believed God had to be actively involved in nature because the laws he discovered didn't seem to work uniformly throughout the universe. God had to keep things working properly.{22} For those like Newton, the findings of science were exhilarating; they saw them as God's means of ordering His world. "Even those few minds who had entirely given the universe over to orderly natural law," says Turner, "still needed to assume God's existence. For natural laws themselves presupposed a divine Lawgiver."{23}

Nonetheless, a distance developed between God and nature since nature was now understood in terms of natural laws that were comprehensible to men. René Descartes had believed that nature was to be understood in terms of ultimate realities. Thus, he kept science, theology, and metaphysics together. The new experimentalism of Bacon and Newton, however, separated them. "The modern conception of the natural world, understood as clearly distinguished from and even opposed to an impalpable spiritual world, was being invented," says Turner.{24} God was withdrawn more and more "as nature came to be understood . . . as governed by God through secondary causes."{25} He didn't disappear; He just adopted a new mode of operation. A mechanistic strain in science suggested a more impersonal Deity. God began to be thought of as a "divine Engineer."{26} Thus, scientists stopped concerning themselves with metaphysical answers. They looked to nature to explain itself.{27}

Now that God didn't seem to be necessary to the operation of the world, some began to doubt His reality altogether. Prior to the Enlightenment, atheism was a "bizarre aberration" for well over a thousand years in the West. One writer said that, "As late as the sixteenth century, disbelief in God was literally a cultural impossibility."{28} One couldn't explain the world without God. Growing vegetation, intellectual coherence, the orbits of the planets, the existence of life itself, morality—these and other issues all found their roots in God. With science now able to explain how the world worked, however, doubts about God began to rise. Belief in His existence now rested more on the idea of Providence, the beneficial acts of God on our behalf. It was believed that the earth was made for man's happiness, that there was a morally meaningful order to things, and there had to be a God to explain this.

However, with time there developed a more pessimistic view of nature, which lessened the force of Providence. Nature produced poisonous plants and dangerous animals as well as good things. In the words of the poet William Blake:

> Tiger! Tiger! Burning bright
> In the forests of the night,
> What immortal hand or eye
> Dare frame thy fearful symmetry?{29}

While there was obviously no wholesale abandonment of belief in God, the foundations for belief seemed to be eroding. And when God's existence became debatable, says Turner, "the center fell out of Western intellectual life. If divine purpose did not undergird the cosmos, then whole structures of meaning collapsed and new ones had to be built up, brick by precarious brick."{30}

Natural Religion—Deism

Norman Hampson notes that, with the splintering of the Church

in the Reformation, and with the pressure of looking at everything in terms of the new cast of mind, churches began making concessions in their teachings. “When the churches were prepared for so many concessions, and seemed encumbered rather than sustained by such dogma as they retained, there was a tendency for the educated to drift by easy stages from Christianity to natural religion.”{31} Natural religion, or Deism, was religion divorced from the supposed “superstition” of revealed religion such as Christianity. Human reason unaided by revelation, it was thought, could lead thinking men to the truth of God. Deism was a very basic, not highly elaborated theistic belief. God was “a kind of highest common denominator of the revealed religions.” In fact, some thought all the major religions worship the same God!{32} Natural religion was the religion of all mankind. It was centered on man, and it bound all men to a common moral law. Living right counted more than right doctrine. As Pope said,

> For Modes of Faith let graceless zealots fight;
> He can’t be wrong whose life is in the right.{33}

Apologetics

The need to prove the truth of Christianity would scarcely have crossed the mind of a medieval preacher.{34} “The known unbelievers of Europe and America before the French Revolution,” says Turner, “numbered fewer than a dozen or two.”{35} Now the possibility of an intellectually grounded atheism was very real. Fear of unbelief prodded Christian apologists into action.

There were four possible responses to problems created for belief by the many new ideas: to be ignorant of them, to firmly reject new ideas, to accept the new thinking but keep religion autonomous, and to recast Christian beliefs in terms of the new ideas. The latter was the route Deists and others took. “Reason and observation gave always the most certain knowledge of any reality that lay outside our minds,” says

Turner. “Belief for its own good must therefore be fitted to the new cast of mind.”{36}

Some, like the Quakers, believed that belief in God eluded rationality. “On the contrary, the rationalizers insisted, belief in God was entirely reasonable and plausible,” says Turner. “And they trimmed it accordingly where its reasonableness seemed shaky. They played down creeds in general and mysterious doctrines in particular. Truth could not be obscure. They repudiated the metaphysical flights of scholasticism, both Catholic and Protestant, in favor of common-sense arguments grounded in palpable reality. Truth must be plain to see. . . . The use of science soon became a phenomenally popular apologetic tool.”{37}

Morality assumed greater importance as a test of the truth of the faith. As secularization pushed religion more to the private sphere, “emphasis fell increasingly on inner religiousness rather than externalities of ritual. Cultivation of a clean conscience, then, seems to have become a more common test of inward sanctity, a measure of how close one stood to God.”{38} Religion grew more preoccupied with everyday behavior.

This was important in apologetics, because it allowed an escape from concerns about divisive doctrinal concerns and the uncertainties of new philosophy. It had universal appeal. Human nature and conscience worked like natural law: they revealed the moral law in us as natural laws showed God’s rational wisdom in nature. Turner comments:

> Ethics and physics confuted the atheist and confirmed the reasonableness of Christianity. The rational man demonstrated God and everything essential to religion . . . through the marks that Deity had left in this world, ready for reason and observation to discover. Only the fool stumbled into the pit of atheism or the mumbo-jumbo of mystery. . . . Good morals and a small clutch of plain,

> rational beliefs kept the Christian safe from unbelief and guided him to eternal reward.{39}

This attitude shaped the thinking of subsequent generations of apologists. Perhaps they did stave off atheism for a while. Turner tells us, "These believers . . . had come to terms with modernity and had refitted belief to sail in its waters. With much of the incomprehensibility and mysterious taken out of it, belief in God was now based more solidly in morality and rationality; that is, in tangible human experience and demonstrable human knowledge. Confusion and uncertainty, apologists might rationally hope, would now give way to a new confidence in reasonable and moral religion."{40}

Conclusion

In the Enlightenment, people were shaken by a new way of thinking that challenged the simple acceptance of tradition and religious authority, but their confidence was restored through science and technology. Today, people are shaken by the loss of *this* confidence. We are seeing now that putting our confidence in our own ability to understand our world and fix it provides a shaky foundation. The need today is for both a reminder that truth *can* be known—ultimately through God's revelation in Christ- -and modesty in our knowledge, which recognizes that we do not now, and never will, know everything.

Notes

1. For an overview of the shift in thought from the premodern to the postmodern, see Todd Kappelman, "The Breakdown of Religious Knowledge," Probe Ministries, 1998, available on Probe's Web site at www.probe.org/the-breakdown-of-religious-knowledge/.
2. Norman Hampson, *The Enlightenment* (New York; Penguin, 1968), 21.
3. Quoted in Hampson, 21.

4. Hampson, 36.
5. James Turner, *Without God, Without Creed: The Origins of Unbelief in America* (Baltimore: The Johns Hopkins University Press, 1985), 14.
6. John Donne in Turner, 15.
7. Hampson, 25.
8. Cf. James M. Byrne, *Religion and the Enlightenment: From Descartes to Kant* (Louisville: Westminster John Knox, 1997), 15-16.
9. Hampson, 27.
10. Pope, quoted in Hampson, 38.
11. Hampson, 38.
12. Locke, quoted in Hampson, 40.
13. Ibid., 39.
14. Ibid., 23.
15. Ibid., 35.
16. Turner, 11.
17. Ibid., 13.
18. Ibid., 12.
19. Hampson, 31.
20. Turner, 23.
21. Byrne, 11.
22. Hampson, 77.
23. Turner, 27.
24. Ibid., 38.
25. Ibid., 37.
26. Ibid., 36.
27. Hampson, 76.
28. Turner, 2.
29. William Blake, quoted in Hampson, 94.
30. Turner, xii.
31. Hampson, 103.
32. Ibid., 104.
33. Alexander Pope, quoted in Hampson, 105.
34. Turner, 8.
35. Ibid., 44.
36. Ibid., 29.

37. Ibid., 29-30.
38. Ibid., 31.
39. Ibid., 32,33.
40. Ibid., 34.

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Human Genetic Engineering

Although much has occurred in this field since this article was written in 2000, the questions addressed by Dr. Bohlin are still timely and relevant. Is manipulating our genetic code simply a tool or does it deal with deeper issues? Dealing with genetic engineering must be done within the context of the broader ethical and theological issues involved. In the article, Dr. Bohlin provides an excellent summary driven from his biblical worldview perspective.

What forms of genetic engineering can be done in human beings?

Genetic technology harbors the potential to change the human species forever. The soon to be completed Human Genome Project will empower genetic scientists with a human biological instruction book. The genes in all our cells contain the code for proteins that provide the structure and function to all our tissues and organs. Knowing this complete code will open new horizons for treating and perhaps curing diseases that have remained mysteries for millennia. But along with the commendable and compassionate use of genetic technology comes the specter of both shadowy purposes and malevolent aims.

For some, the potential for misuse is reason enough for closing the door completely—the benefits just aren’t worth the

risks. In this article, I'd like to explore the application of genetic technology to human beings and apply biblical wisdom to the eventual ethical quagmires that are not very far away. In this section we'll investigate the various ways humans can be engineered.

Since we have introduced foreign genes into the embryos of mice, cows, sheep, and pigs for years, there's no technological reason to suggest that it can't be done in humans too. Currently, there are two ways of pursuing gene transfer. One is simply to attempt to alleviate the symptoms of a genetic disease. This entails gene therapy, attempting to transfer the normal gene into only those tissues most affected by the disease. For instance, bronchial infections are the major cause of early death for patients with cystic fibrosis (CF). The lungs of CF patients produce thick mucus that provides a great growth medium for bacteria and viruses. If the normal gene can be inserted in to the cells of the lungs, perhaps both the quality and quantity of their life can be enhanced. But this is not a complete cure and they will still pass the CF gene on to their children.

In order to cure a genetic illness, the defective gene must be replaced throughout the body. If the genetic defect is detected in an early embryo, it's possible to add the gene at this stage, allowing the normal gene to be present in all tissues including reproductive tissues. This technique has been used to add foreign genes to mice, sheep, pigs, and cows.

However, at present, no laboratory is known to be attempting this well-developed technology in humans. Princeton molecular biologist Lee Silver offers two reasons.{1} First, even in animals, it only works 50% of the time. Second, even when successful, about 5% of the time, the new gene gets placed in the middle of an existing gene, creating a new mutation. Currently these odds are not acceptable to scientists and especially potential clients hoping for genetic engineering of their offspring. But these are only problems of technique.

It’s reasonable to assume that these difficulties can be overcome with further research.

Should genetic engineering be used for curing genetic diseases?

The primary use for human genetic engineering concerns the curing of genetic disease. But even this should be approached cautiously. Certainly within a Christian worldview, relieving suffering wherever possible is to walk in Jesus’ footsteps. But what diseases? How far should our ability to interfere in life be allowed to go? So far gene therapy is primarily tested for debilitating and ultimately fatal diseases such as cystic fibrosis.

The first gene therapy trial in humans corrected a life-threatening immune disorder in a two-year-old girl who, now ten years later, is doing well. The gene therapy required dozens of applications but has saved the family from a $60,000 per year bill for necessary drug treatment without the gene therapy.{2} Recently, sixteen heart disease patients, who were literally waiting for death, received a solution containing copies of a gene that triggers blood vessel growth by injection straight into the heart. By growing new blood vessels around clogged arteries, all sixteen showed improvement and six were completely relieved of pain.

In each of these cases, gene therapy was performed as a last resort for a fatal condition. This seems to easily fall within the medical boundaries of seeking to cure while at the same time causing no harm. The problem will arise when gene therapy will be sought to alleviate a condition that is less than life-threatening and perhaps considered by some to simply be one of life’s inconveniences, such as a gene that may offer resistance to AIDS or may enhance memory. Such genes are known now and many are suggesting that these goals will and should be available for gene therapy.

The most troublesome aspect of gene therapy has been determining the best method of delivering the gene to the right cells and enticing them to incorporate the gene into the cell's chromosomes. Most researchers have used crippled forms of viruses that naturally incorporate their genes into cells. The entire field of gene therapy was dealt a severe setback in September 1999 upon the death of Jesse Gelsinger who had undergone gene therapy for an inherited enzyme deficiency at the University of Pennsylvania.{3} Jesse apparently suffered a severe immune reaction and died four days after being injected with the engineered virus.

The same virus vector had been used safely in thousands of other trials, but in this case, after releasing stacks of clinical data and answering questions for two days, the researchers didn't fully understand what had gone wrong.{4} Other institutions were also found to have failed to file immediate reports as required of serious adverse events in their trials, prompting a congressional review.{5} All this should indicate that the answers to the technical problems of gene therapy have not been answered and progress will be slowed as guidelines and reporting procedures are studied and reevaluated.

Will correcting my genetic problem, prevent it in my descendants?

The simple answer is no, at least for the foreseeable future. Gene therapy currently targets existing tissue in a existing child or adult. This may alleviate or eliminate symptoms in that individual, but will not affect future children. To accomplish a correction for future generations, gene therapy would need to target the germ cells, the sperm and egg. This poses numerous technical problems at the present time. There is also a very real concern about making genetic decisions for future generations without their consent.

Some would seek to get around these difficulties by performing gene therapy in early embryos before tissue differentiation has taken place. This would allow the new gene to be incorporated into all tissues, including reproductive organs. However, this process does nothing to alleviate the condition of those already suffering from genetic disease. Also, as mentioned earlier this week, this procedure would put embryos at unacceptable risk due to the inherent rate of failure and potential damage to the embryo.

Another way to affect germ line gene therapy would involve a combination of gene therapy and cloning.{6} An embryo, fertilized *in vitro*, from the sperm and egg of a couple at risk for sickle-cell anemia, for example, could be tested for the sickle-cell gene. If the embryo tests positive, cells could be removed from this early embryo and grown in culture. Then the normal hemoglobin gene would be added to these cultured cells.

If the technique for human cloning could be perfected, then one of these cells could be cloned to create a new individual. If the cloning were successful, the resulting baby would be an identical twin of the original embryo, only with the sickle-cell gene replaced with the normal hemoglobin gene. This would result in a normal healthy baby. Unfortunately, the initial embryo was sacrificed to allow the engineering of its identical twin, an ethically unacceptable trade-off.

So what we have seen, is that even human gene therapy is not a long-term solution, but a temporary and individual one. But even in condoning the use of gene therapy for therapeutic ends, we need to be careful that those for whom gene therapy is unavailable either for ethical or monetary reasons, don’t get pushed aside. It would be easy to shun those with uncorrected defects as less than desirable or even less than human. There is, indeed, much to think about.

Should genetic engineering be used to produce super-humans?

The possibility of someone or some government utilizing the new tools of genetic engineering to create a superior race of humans must at least be considered. We need to emphasize, however, that we simply do not know what genetic factors determine popularly desired traits such as athletic ability, intelligence, appearance and personality. For sure, each of these has a significant component that may be available for genetic manipulation, but it's safe to say that our knowledge of each of these traits is in its infancy.

Even as knowledge of these areas grows, other genetic qualities may prevent their engineering. So far, few genes have only a single application in the body. Most genes are found to have multiple effects, sometimes in different tissues. Therefore, to engineer a gene for enhancement of a particular trait—say memory—may inadvertently cause increased susceptibility to drug addiction.

But what if in the next 50 to 100 years, many of these unknowns can be anticipated and engineering for advantageous traits becomes possible. What can we expect? Our concern is that without a redirection of the worldview of the culture, there will be a growing propensity to want to take over the evolution of the human species. The many people see it, we are simply upright, large-brained apes. There is no such thing as an independent mind. Our mind becomes simply a physical construct of the brain. While the brain is certainly complicated and our level of understanding of its intricate machinery grows daily, some hope that in the future we may comprehend enough to change who and what we are as a species in order to meet the future demands of survival.

Edward O. Wilson, a Harvard entomologist, believes that we will soon be faced with difficult genetic dilemmas. Because of

expected advances in gene therapy, we will not only be able to eliminate or at least alleviate genetic disease, we may be able to enhance certain human abilities such as mathematics or verbal ability. He says, “Soon we must look deep within ourselves and decide what we wish to become.”{7} As early as 1978, Wilson reflected on our eventual need to “decide how human we wish to remain.”{8}

Surprisingly, Wilson predicts that future generations will opt only for repair of disabling disease and stop short of genetic enhancements. His only rationale however, is a question. “Why should a species give up the defining core of its existence, built by millions of years of biological trial and error?”{9} Wilson is naively optimistic. There are loud voices already claiming that man can intentionally engineer our “evolutionary” future better than chance mutations and natural selection. The time to change the course of this slow train to destruction is now, not later.

Should I be able to determine the sex of my child?

Many of the questions surrounding the ethical use of genetic engineering practices are difficult to answer with a simple yes or no. This is one of them. The answer revolves around the method used to determine the sex selection and the timing of the selection itself.

For instance, if the sex of a fetus is determined and deemed undesirable, it can only be rectified by termination of the embryo or fetus, either in the lab or in the womb by abortion. There is every reason to prohibit this process. First, an innocent life has been sacrificed. The principle of the sanctity of human life demands that a new innocent life not be killed for any reason apart from saving the life of the mother. Second, even in this country where abortion is legal, one would hope that restrictions would be put in place to

prevent the taking of a life simply because it’s the wrong sex.

However, procedures do exist that can separate sperm that carry the Y chromosome from those that carry the X chromosome. Eggs fertilized by sperm carrying the Y will be male, and eggs fertilized by sperm carrying the X will be female. If the sperm sample used to fertilize an egg has been selected for the Y chromosome, you simply increase the odds of having a boy (~90%) over a girl. So long as the couple is willing to accept either a boy or girl and will not discard the embryo or abort the baby if it’s the wrong sex, it’s difficult to say that such a procedure should be prohibited.

One reason to utilize this procedure is to reduce the risk of a sex-linked genetic disease. Color-blindness, hemophilia, and fragile X syndrome can be due to mutations on the X chromosome. Therefore, males (with only one X chromosome) are much more likely to suffer from these traits when either the mother is a carrier or the father is affected. (In females, the second X chromosome will usually carry the normal gene, masking the mutated gene on the other X chromosome.) Selecting for a girl by sperm selection greatly reduces the possibility of having a child with either of these genetic diseases. Again, it’s difficult to argue against the desire to reduce suffering when a life has not been forfeited.

But we must ask, is sex determination by sperm selection *wise?* A couple that already has a boy and simply wants a girl to balance their family, seems innocent enough. But why is this important? What fuels this desire? It’s dangerous to take more and more control over our lives and leave the sovereignty of God far behind. This isn’t a situation of life and death or even reducing suffering.

But while it may be difficult to find anything seriously wrong with sex selection, it’s also difficult to find anything good about it. Even when the purpose may be to avoid a sex-linked

disease, we run the risk of communicating to others affected by these diseases that because they *could* have been avoided, their life is somehow less valuable. So while it may not be prudent to prohibit such practices, it certainly should not be approached casually either.

Notes

1. Lee Silver, *Remaking Eden: Cloning and Beyond in a Brave New World*, New York, NY: Avon Books, p. 230-231.
2. Leon Jaroff, Success stories, *Time*, 11 January 1999, p. 72-73.
3. Sally Lehrman, Virus treatment questioned after gene therapy death, *Nature* Vol. 401 (7 October 1999): 517-518.
4. Eliot Marshall, Gene therapy death prompts review of adenovirus vector, *Science* Vol. 286 (17 December 1999): 2244-2245.
5. Meredith Wadman, NIH under fire over gene-therapy trials, *Nature* Vol. 403 (20 January 1999): 237.
6. Steve Mirsky and John Rennie, What cloning means for gene therapy, *Scientific American*, June 1997, p. 122-123.
7. Ibid., p. 277.
8. Edward Wilson, O*n Human Nature*, Cambridge, Mass.: Harvard University Press, p. 6.
9. E. Wilson, *Consilience*, p. 277.

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The Coming Revolution in

Science

The Design Inference



True scientific revolutions that impact more than a single discipline rarely occur more than once a century. Newton's *Principia,* published in the 17th century, truly qualifies. Darwin's *Origin of Species,* published in 1859, also belongs on the list. Standing in the wings, ready to join these esteemed works and perhaps even overturn the latter, stands William Dembski's *The Design Inference*.{1} This impressive work published by the distinguished Cambridge University Press outlines the mathematical principles necessary to distinguish intelligently caused events from natural events.

ust listen to some of the comments from the dust jacket of the book from secular philosophers and mathematicians. One wrote, "Dembski has written a sparklingly original book. Not since David Hume's *Dialogues Concerning Natural Religion* has someone taken such a close look at the design argument." Being put in the same sentence as David Hume is no small potatoes. Mathematician David Berlinski warns, "Those who agree with its point of view will read it with pleasure, and those who do not will ignore it at their peril."

Dembski has rigorously detailed the key trademark of intelligent causes, what he calls *specified complexity.* The term *specified* refers to the notion that an event conforms to an independently given pattern. Complexity refers to an event

of small probability. For instance, people win improbable lotteries all the time. The odds are usually in the millions to one. But when the number of tickets purchased is considered, nobody questions the legitimacy of *someone* holding the winning ticket. This would be an event of small probability without any specification. Somebody will win, but nobody can predict whom. But let's propose that the same person wins the same lottery three times in a row! Suddenly there is an independent pattern and we immediately become suspicious that more than just chance is involved. We now have an event of extremely small probability that also conforms to a pattern or is specified. The most likely cause for such an event is that someone has intelligently tampered with the lottery.

Dembski boldly suggests that these same principles can be applied to the question of the origin of life and other evolutionary questions and still maintain the integrity of science. While Dembski has been sharply criticized by the evolutionary establishment, to their discredit, their critiques have been largely emotional and dismissive. No one has successfully challenged the heart of his thesis.

Now before you decide to run out a get a copy, please be advised that this book is not for the casual reader. Loaded with technical jargon and symbolic logic, you had better haven eaten your mental Wheaties before tackling this one. But Dembski has written a scaled down version, which I will now discuss.

Hasn't Science and Philosophy Ruled Out Design?

William Dembski's groundbreaking book, *The Design Inference* from Cambridge University Press, is highly technical. Dembski has therefore written a follow-up book titled, *Intelligent Design: The Bridge between Science and*

Theology,{2} which is more accessible to the general reader. *Christianity Today* has named it their 1999 Book of the Year in the "Christianity and Culture" category.

Listen to a few sound bites from comments of those recommending Dembski's *Intelligent Design*. A quantum chemistry professor from the University of Georgia says, "William Dembski is perhaps the very brightest of a new generation of scholars." A professor of philosophy from the University of Texas says, "William Dembski is the Isaac Newton of information theory." Another university professor proclaims "If Dembski is right, and I believe he is, then it is unscientific to deny the existence of God." Wow! Unscientific to deny God! Do you think that comment is rankling a good number of evolutionary biologists? Finally, another University of Texas professor of government goes further by claiming that "Dembski strengthens the case for saying that our deepest moral inclinations not only look designed, they are."

Let me now begin to satiate your curiosity by telling you a little more about this groundbreaking work. The book is divided into three parts. In the first part Dembski gives a historical backdrop to the current controversy over design. In academia, the design argument has been considered dead for over 150 years. Dembski identifies two major reasons for this demise of design. The first was the continual attack on miracles, which culminated in the 18th and 19th century. Dembski cogently explains that their arguments don't work.

The second blow to design came from Darwin's *Origin of Species*. Darwin dismissed the prevalent British natural theology of his day by not so much refuting it, but by announcing that it simply wasn't scientific. Dembski quotes evolutionary philosopher David Hull, "He dismissed it not because it was an incorrect scientific explanation, but because it was not a proper scientific explanation at all." Darwin's faulty conception of science is still with us and Dembski sets out to refute it.

The criteria used by the British natural theologians were naive in the sense that they believed that design was self-evident. This led to far too many false positives, that is, assignments of design that were later proved to be naturalistic. The design argument was forced to retreat. In the second part of *Intelligent Design*, Dembski articulates the principles laid out in his *The Design Inference* for the general reader.

What Does a Theory of Design Look Like?

Having told you about Dembski's work and the impact it is beginning to have, I will summarize Dembski's prescription or cure for the rule of naturalism in science.{3}

No one in the design movement as far as I know seeks to invoke God at every turn as an explanation for natural phenomena. So why bring God into the picture at all? For most scientists, God is only a hypothesis, and an unnecessary one at that. But beyond the ordinary operation of nature is its order. Dembski references Einstein's remark that the most incomprehensible thing about the universe is that it is comprehensible. This order must come from outside the universe or from within. But science tells us today that the only allowable answer is that it comes from within. This naturalistic philosophy has become a form of idolatry. Nature becomes the do all and end all. As Dembski says, "Rather it is a matter of investing the world with a significance it does not deserve."{4}

Naturalism is pervasive in the culture. Even most Christians think and live naturalistically without realizing it. So how can naturalism be defeated? What is needed, says Dembski, is a means of detecting God's actions in the natural world. In other words there must be a reliable way to distinguish natural causes from intelligent causes. Some sciences already employ such methods such as forensic medicine, cryptography, archeology, and even the SETI program, the search for extraterrestrial intelligence. SETI depends on the ability to

distinguish an intelligent message from space from the surrounding radio noise. This can be done without necessarily understanding the message or knowing the message sender.

This brings up another crucial point of intelligent design. Dembski says that intelligent design is theologically minimalist.{5} By this he means that intelligent design empirically detects design without speculating about the nature of the intelligence. This is crucial to answer the critics who accuse design theorists of simply wanting to bring the Bible into science. If one detects design or concludes that a particular natural phenomena contains the necessary earmarks of design, that's all that needs to be said. One can personally reflect on the nature of this intelligence, but it is not a part of the scientific test.

Dembski calls for a new generation of scholars open to pursuing intelligent causes in the universe. Here at Probe we're committed to helping find, select, and train such potential scholars to take part in a true scientific revolution.

Does Intelligent Design Offer a Bridge between Science and Theology?

In this review and summarization of Dembski's insights let's now explore the future Dembski foresees for the dialogue between science and theology.{6}

Of course most within the scientific community see no future at all for such a discourse. Most within modern academia hold to either of three models that Dembski labels as conflicting, complementing, or compartmentalizing. Most of us are very familiar with the conflict model. Most who call themselves rationalists or secular humanists would subscribe to this view. Basically they see science as having explained all of reality and that there is no room for theology at all. I once attended a conference where a theology professor was so

intimidated by this view that he said that theology was a dead discipline and would cease to exist in twenty years.

Stephen J. Gould, a Harvard paleontologist, and the National Academy of Sciences have advocated the compartmentalization view. Basically they maintain that science and theology inform different parts of reality—science the realm of facts and theology the realm of morals and faith. There is no conflict and also no dialogue between the two. It is also not hard to see that this view basically rules theology out of any important discussions about real facts. Theology inhabits only the fuzzy world of morals, which must be relative if naturalism rules in science.

Similar is the complementarity view, which essentially states that science and theology can actually inform the same reality, but their language is so foreign to the other that no meaningful discourse can take place. Both are necessary to give a complete account of reality, but you can forget about the two ever talking to each other.

In one way or another, each of these three views will eventually rule theology as irrelevant to the important questions and a fully naturalistic science will eventually be the wellspring for all useful information and discourse. But as you might expect, Dembski offers a fourth view and argues that it is the only proper view of the two disciplines.

Dembski compares science and theology to two different windows that view the same reality. Since the windows are different, they gain a different perspective. But since they are viewing the same reality, what is seen from each window can in many cases be meaningfully related. Both science and theology may on occasion, be capable of further explaining observations from each window. He offers the current discussion concerning the cosmology's Big Bang and theology's act of Creation as an example. If the Big Bang is true, then Christianity's theology of creation *ex nihilo* is a better explanation than

naturalism's attempt to explain something from nothing.

There is much more work to be done here as Dembski readily admits, but the tone and direction is very refreshing.

What Are the Standard Objections to Design in Science?

There is the potential of the intelligent design movement bringing about a revolution in science. I have summarized the work of William Dembski, a double Ph.D. in philosophy and mathematics with a Master's of Divinity thrown in for good measure. In the appendix of his much acclaimed book, *Intelligent Design: The Bridge between Science and Theology*, Dembski investigates several of the more common objections to intelligent design. To conclude this review I will examine one of these objections.

Dembski states the first objection this way, "Design substitutes extraordinary explanations where ordinary explanations will do and thereby commits a god-of-the-gaps fallacy." Those believing that God used evolution as His means of creation usually voice this objection. This view is motivated by the tremendous history of naturalistic science in explaining very difficult natural phenomena by natural means. This often occurs after someone has claimed that God was necessary to explain a particular observation. Isaac Newton thought divine intervention was necessary to explain the irregularities of planetary orbits. It was eventually shown that these irregularities were periodic and not random and thus explainable by natural law.{7}

Newton was widely criticized for this view, and many Christians fear that appealing to design now will end up in ridicule later when natural processes may also explain contrivances of intelligent design later. While this fear is understandable in the light of history, there are considerable differences. Design does not claim to simply explain what we

do not understand. Rather, intelligent design is attempting to demonstrate a real solution to problems based on what we know about design, not what we don't know about natural explanations.

Besides, if we believe that the laws of nature are incapable of producing certain natural phenomena, such as the genetic code of DNA, just how long are we supposed to keep looking for a naturalistic solution instead of looking elsewhere? This puts shackles on scientific inquiry and stifles new ideas. Certainly we should attempt to exhaust all known naturalistic possibilities before pursuing a design answer. But fear of failure should not be our deterrent. There is always risk in proposing new scientific ideas and hypotheses. The risk is that you just might be wrong. But this has never permanently hindered the proposal of a new idea. Failure should be a constant risk in science. Otherwise nothing new will ever be discovered.

"Not all gaps are created equal. To assume that they are is to presuppose the very thing that is in question, namely, naturalism."{8} William Dembski has issued a strong challenge through his books and more are to follow from others dealing with the philosophy and science of intelligent design. The next several years should be very exciting indeed.

Notes

1. William A. Dembski, *The Design Inference: Eliminating Chance by through Small Probabilities* (Cambridge, England: Cambridge University Press, 1998).

2. William A. Dembski, *Intelligent Design: The Bridge between Science and Theology* (Downers Grove, IL: InterVarsity Press, 1999).

3. Ibid., 97- 121.

4. Ibid., 101.

5. Ibid., 107.

6. Ibid., 187- 210.

7. Nancy Pearcey and Charles Thaxton, *The Soul of Science: Christian Faith and Natural Philosophy*, Wheaton, IL: Crossway Books, 1994), 91-92.

8. Dembski, *Intelligent Design*, 245.

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Darwinism Takes a Step Back in Kansas

Has Oz Returned to Kansas?

Suddenly, the mere mention of the Kansas State Board of Education in most educational and academic circles brings derisive giggles and sneers. In August the Kansas State Board of Education voted to remove references to macroevolution from state science testing standards. A wave of revulsion gripped the nation's media. In *Time* magazine, Harvard University paleontologist Stephen J. Gould trumpeted, "The board transported its jurisdiction to a never-never land where a Dorothy of the new millennium might exclaim, 'they still call it Kansas, but I don't think we're in the real world anymore.'"{1} Gould further belittles honest concerns about the teaching of evolution by proclaiming: (1) no other nation

has endured any similar movement (this makes us look bad overseas); (2) evolution is as well documented as any phenomenon in science (it is perverse to call evolution anything but a fact); and (3) no discovery of science can lead us to ethical conclusions (believe what religion you want, science doesn't threaten you).

That's a pretty scathing reaction. Let's see what else we can find.

Here's one from nationally syndicated columnist Ellen Goodman of the *Boston Globe*.{2} Ms. Goodman declared that "removing evolution from the science curriculum is a bit like removing verbs from the English curriculum. Evolution can still be taught, but it's no longer required, it won't be tested, and it will be discouraged." (However, natural selection, variation, and microevolution will still be recommended and tested.) Later she decries the fact that "In 1925, creationists dragged a young biology teacher, John Scopes, to the courtroom for the infamous 'Monkey Trial.'" Actually it was the ACLU that dragged Scopes into the courtroom. He couldn't even remember if he had actually taught evolution. They needed a "volunteer" to defend to test the new Tennessee law. (See Phillip Johnson's *Defeating Darwinism By Opening Minds,* 1997, IVP, Chapter 2 for the real story of the Scopes trial and its shameful portrayal in the play and film, *Inherit the Wind*.) Goodman also pontificates that "there is no serious scientific dispute about the fact of evolution." Notice that Ms. Goodman indicates that evolution is a fact, therefore beyond question. She also cleverly indicates that if you dispute evolution, you must not be a serious scientist.

In the Seattle *Post-Intelligencer*, Sean Gonsalves laments, "Educated people everywhere are still in shock over the appalling ignorance displayed by the Kansas state board of education that voted two weeks ago to effectively remove evolution and the 'Big Bang' theory from the state's science curriculum. Is there still a science curriculum in Kansas?"{3}

Well, those unruly, ignorant anti-evolutionists really seem to have overstepped their bounds this time! You would think that we would be cowering in the corner somewhere after all the abuse from such heavy hitters, but no, actually, we're quite ecstatic. I have given you only a small example of the media and science firestorm, but it is just more of the same. While nobody enjoys being the butt of jokes and verbal abuse, what is significant are two things. First, the Kansas board has dealt Darwinists a severe blow by not mandating creation, thereby eliminating Darwinist's usual rallying cry of science versus religion. They have simply searched for a more objective means of presenting evolution. That's tough to argue against. Second, Darwinists have been flushed out into the open. Flimsy, *ad hominem* attacks, appeals to authority, and question begging have been brought out in the open for all to see. The Kansas State Board of Education has unintentionally raised the stakes in the decades old creation/evolution discussion.

What Really Happened in Kansas?

Given the reaction to the decision by the Kansas State Board of Education you would have thought the six board members who voted for the new standards in a close 6-4 vote were part of some dastardly plan to underhandedly bring God into the classroom. Also seemingly at stake was the reputation of the whole state of Kansas if its citizenry did not rise up in revolt against such an irrational decision. Apparently, Kansas had been set back decades in science literacy.

Well, what actually happened in Kansas? What did the board actually do and why? It is important to realize that the Kansas board authorized a 27-member panel of scientists and science educators from the state to revise the current state science testing standards. These standards do not mandate what can and cannot be taught, only what likely will be included on state science tests. What the board received was a highly

prejudicial document making evolution the single unifying concept to the state's biology standards. When board chairwoman Linda Holloway asked the committee representatives for evidence of macroevolution they essentially replied, "We're the experts, and that will have to do."{4} What that means is that she received no evidence, just an admonition that, with their position as scientists, she should just trust them.

Rather than turn the Kansas high school classrooms into a propaganda machine for materialist philosophy, the board decided to amend the standards to maintain microevolution—natural selection acting on genetic variation—but not macroevolution¾the claim that microevolution leads to new complex adaptations and new genetic information. They also left it up to the individual school districts to determine how much or how little evolution to teach. Evolution was *not* removed from the curriculum, as so many news stories reported. Creation was not mandated, Darwin was not banned, and evolution was not censored.

What this *does* do is leave open to school districts the opportunity to teach the surging controversy surrounding evolution. Actually, what many in the intelligent design movement would have preferred, if possible, is to teach more evolution, not less. Meaning, let's teach not only the evidence for evolution, but also the mounting evidence calling the naturalistic creation story into question. Students should be familiar with evolution. It is the major story of origins within the scientific community. But in the interest of a true liberal education, the serious questions regarding evolution should also be included. Students should be allowed the privilege of weighing the evidence for themselves, not just accepting it because their teacher tells them to.

This is really where the threat to the scientific community lies. The more doubt about evolution that's allowed, the trickier the educational landscape becomes for a fully

naturalistic, materialistic approach to education.

In the past, the media barrage over such an anti-evolutionary decision has been decidedly one-sided. What is significant this time is that the Kansas board has received some rather hefty and significant support from invited articles, guest columnists, and op-ed pieces in prestigious news outlets such as the *Wall Street Journal*, the *Washington Post*, the *Chicago Tribune*, and the *Washington Times*. The debate is indeed changing.

Some Surprising Support for Kansas Board of Education

Amidst the unusual rancor and indignation from the media and scientific community following the decision of the Kansas State Board of Education, many have missed the small, yet significant, support the board has received for the spirit of their decision: namely, to try to find a way to disrupt the universal agenda to present scientific naturalism as the only possible explanation of where we all came from.

On August 16, 1999, the *Wall Street Journal* published an article by UC Berkeley law professor and Darwinian critic, Phillip Johnson.{5} Johnson quotes a Chinese paleontologist who openly criticizes Darwinism as wryly commenting that "In China we can criticize Darwin but not the government. In America you can criticize the government but not Darwin." After summarizing the frantic response of scientists and educators, Johnson commented, "Obviously, the cognitive elites are worried about something a lot more important to themselves than the career prospects of Kansas high school graduates."

Johnson pointed out that evolution is the main scientific prop for scientific naturalism, a philosophical system that leaves God totally out of its picture of reality. Quoting well-known scientists such as Carl Sagan, Richard Dawkins, Stephen J. Gould, and Richard Lewontin, Johnson makes clear that this is

the real battle. Allowing evolution's flaws to be detailed in classrooms would allow a broader discussion of fundamental assumptions. Johnson concluded optimistically, "Take evolution away from the worldview promoters and return it to real scientific investigators, and a chronic social conflict will become a chronic intellectual adventure."

A few days later, the *Washington Times*{6} chided the rest of its media cohorts for a vast overreaction and actually cited evidence that calls Darwinism into question. The friendly editorial concluded with "No one, and certainly not the Kansas Board of Education, is saying that evolution should not be taught; it remains the prevailing scientific theory of creation. Rather, some healthy agnosticism and scientific open-mindedness on the matter would seem to be in the best interest of everyone curious about the greatest mystery of all." Hear, hear!

The *Chicago Tribune*, while openly critical of the action of the Kansas Board of Education, also criticized previous actions of the National Association of Biology Teachers concerning evolution.{7} The association initially used the words *unsupervised* and *impersonal* to describe the evolutionary process. These clearly non-scientific terms were eventually and reluctantly removed by the association, who explained they didn't think the terms would be construed negatively, which the *Tribune* called either a lie or clear demonstration of scientific fundamentalism.

Finally, the *Washington Post*{8} printed an article by Jay Richards, senior fellow and program director of the Discovery Institute's Center for the Renewal of Science and Culture. The CRSC is currently the only think tank I know of that openly supports and endorses intelligent design. Richard's final point, "Fairness and objectivity in the science classroom require that teachers teach the controversy, not deny its existence," is fair, lucid, rational, and appealing. "Teach the controversy" has become a rallying cry. You are bound to

hear it more and more. The debate in Kansas has resulted in similar debates around the country, to which we now turn our attention.

Darwinism Assailed in Other States

Following the recent decision by the Kansas State Board of Education the teaching of evolution was big news around the country. In Kansas there were roundtable discussions, lectures, and debates. Some were in academic settings, such as the University of Kansas and Washburn University, some were in churches, and some were sponsored by a humanist skeptic organization. The American Association for the Advancement of Science (AAAS) was prompted to publish their own statement deploring the action taken by the Kansas Board of Education.{9}

You might think that all the negative publicity would cause other states to back off any changes in their own science curriculum. But apparently, all this publicity has encouraged other school boards to chart their own course or adopt the methods of other states before them.

The Oklahoma State Textbook Committee voted to adopt a disclaimer to be placed on the inside cover of all biology textbooks. Unhappy with the propaganda-like treatment of evolution in the majority of textbooks they looked at, the committee needed the disclaimer to be able to recommend a sufficient diversity of biology texts for the state. While arguably not the best statement on the subject, the disclaimer labels evolution as controversial, a separation of microevolution and macroevolution, and encourages students to study hard, keep an open mind, and perhaps they can contribute to the origins discussion in the future. Nothing is said about creationism, intelligent design, or any other theories. Basically the statement wants students to think critically about evolution.

What has been missed in the newly swirling controversy about the disclaimer in Oklahoma is that it is nearly a direct copy of the disclaimer adopted by Alabama over two years ago which has not been challenged in court. However, instead of mentioning the obvious connection, journalists attempted to draw parallels to a Louisiana school district directive that was recently struck down because it specifically mentioned creationism. The two disclaimers are not related, but in the attempt to make it look as bad as possible, the chosen tactic is to mislead.{10} Once again, a very reasonable, but not perfect resolution was dismissed as simply another attempt to smuggle creationism into the public schools.

Meanwhile in West Virginia a similar controversy hit the news. The Kanawha County Board of Education is considering a resolution that would allow for the teaching of theories for and against the theory of evolution. It soon came to light that Illinois and Kentucky had previously passed resolutions similar to the one in Kansas. Commentary and editorials were appearing in major and local newspapers across the country taking sides in a suddenly public and heated discussion. Clearly, something has changed. The usual evolutionist hand-wringing is sounding more like whining and the previously unheard-of support for a revision of the instruction in evolution is suddenly receiving a cautious but receptive ear in important academic, educational, and media circles. While it must be kept in mind that all of these “victories” are relatively small and can be easily overturned, nonetheless their simplicity, objectivity, and legal savvy are raising eyebrows that paid little attention before.

What Does All This Mean?

The flurry of nationwide activity concerning the teaching of evolution in our public school systems, while noteworthy, is not terribly new. This battle has been going on for over three decades, but with seemingly little change. However, this time,

as I have documented, there has been surprising support and very public discussion over the last few months. Phillip Johnson and others have been invited or allowed to offer their impressions and rebuttals in newspapers, journals, and magazines across the country. Public lectures, debates, and roundtable discussions have been offered before large crowds.

Something has definitely changed. I think we can isolate the change in two places. First some of the cherished, misleading evolutionary explanations are being rebutted openly and decisively in these public discussions. Second, the public is becoming better educated on the issues involved and they are less intimidated by the evolutionary rhetoric.

One of the favorite lines used to dismiss critics of evolution is to label them as religious zealots and fundamentalists. Religion and science, says this argument, have nothing to say to one another so you can't bring religion into the science classroom. Stephen Gould states the case in his usual journalistic style, "Science and religion should be equal, mutually respecting partners, each the master of its own domain, and with each domain vital to human life in a different way."{11} Elsewhere it becomes plain that Gould means that science deals in facts and religion in the intangibles of morality and such. This is seen more and more as condescending nonsense. Other evolutionists like Douglas Futuyma readily admit that, "By coupling undirected, purposeless variation to the blind, uncaring process of natural selection, Darwin made theological or spiritual explanations of life processes superfluous."{12} The negation of a theological principle is itself, a theological principle. Besides, any theory which purports to explain where we came from will contain the seeds of ethics and morality.

Robert E. Hemenway, chancellor of the University of Kansas, tried to say that the Kansas decision is a rejection of science altogether.{13} But when you actually read what the Board of Education did, they actually expanded the coverage of

evolution from the previous standards and required students to know a very decent description of Darwinian evolution.{14} Skepticism is healthy in science. The new standards actually promoted questioning and critical thinking. This kind of obfuscation was not so easily foisted on the public.

The educational effort of many organizations over the past several decades has begun to yield citizens surer of themselves and not so easily intimidated. Seeing articles appearing in major news outlets like the *Wall Street Journal*, the *Washington Times*, and the *Chicago Tribune*, as well as appearances on CNN, have galvanized popular opinion and provided means to critically counterattack the bluster of the opposition.

Although the coverage has not always been accurate and completely positive, and the actual decisions by education boards have not always hit the mark, the net effect has been a major opening up of the debate. Change has been accomplished in these few months that would have ordinarily taken years. As mentioned previously, the phrase "teach the controversy" will be found more and more in the public discussion. That's exactly what needs to happen.

Notes

1. Stephen Jay Gould, "Dorothy, It's Really Oz, 1999," *Time* vol. 154, no.8 (August 23, 1999), 59.

2. Ellen Goodman, "Those Ever-Evolving Creationists," *Boston Globe*, Aug. 19, 1999, A19.

3. Sean Gonsalves, "Kansas School Board Fighting the Wrong Theory," *Seattle Post-Intelligencer*, August 24, 1999, A11.

4. Jeremy Johnson, "Media Pigeonholes Board into Stereotype," *Kansan*, August 19, 1999.

5. Phillip E. Johnson, "The Church of Darwin," *Wall Street*

Journal, August 16, 1999, A14.

6. “Editorial, Kansas Conundrum,” *Washington Times*, August 19, 1999, A16.

7. Steve Kloehn, “In a Word, Kansas Tries to Make Evolution Go Away,” *Chicago Tribune*, August 20, 1999, 10.

8. Jay Richards, “Darwinism and Design,” *Washington Post*, August 21, 1999, A19.

9. “AAAS Statement on the Kansas State Board of Education Decision on the Education of Students in the Science of Evolution and Cosmology,” *Science*, vol. 286 (November 12, 1999), 1297.

10. Diane Plumberg, “Panel Plunges State into Debate about Evolution,” *Daily Oklahoman*, November 12, 1999.

11. Gould, 59.

12. Douglas J. Futuyma, *Evolutionary Biology*, 3rd ed. (Sunderland MA: Sinauer Assoc., 1998), 5.

13. Robert E. Hemenway, “The Evolution of a Controversy in Kansas Shows Why Scientists Must Defend the Search for Truth,” *Chronicle of Higher Education*, October 29, 1999, B7.

14. Jonathan Wells, “Ridiculing Kansas School Board Easy, But It’s Not Good Journalism,” *Mitchell (South Dakota) Daily Republic*, October 14, 1999.

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