

THE RELIGION-AND-SCIENCE DISPUTES



A Detailed Discussion Outline for Congregation, Curriculum, and Classroom

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GENESIS-AND-SCIENCE PRESENTATION GOALS

1. To demonstrate
 - ▶ why the religion / science disputes will not go away;
 - ▶ why the origins issues will endure;
 - ▶ and, more specifically, why the evolution debates will persist.
2. To recognize the (at least) six different sets of fundamental foundation presuppositions in science and religion that "set up" these discussions, each set moving the discussion in a different direction.
3. To foster dialogue among us regarding to what extent participants in the congregation and students in the church's secondary and post-secondary schools should be inducted into the religion-and-science disputes.

Introduction

This outline for discussion is designed to guide participants through the major distinctions and sources of dispute involved in the religion-and-science controversies. The approach used here is not polemic or argumentative. While it assumes a Biblically conservative perspective, the contents do not assume that only one posture toward the issues is possible and correct. The outline does not presume to solve the disputes. Rather, it seeks to clarify where and why thoughtful Christians (and non-Christians) disagree on so many matters related to Genesis, Scripture, science, and origins issues.

The presentation was originally prepared as part of a larger Genesis 1 - 11 curriculum for adult instruction in the congregation. It has since been revised for delivery at conferences and in the college classroom. The content has been reviewed by colleagues teaching in theology and in the sciences. They have found it a helpful summary of the issues with content adaptable to their own instruction.

Though extensive at 18 pages, this outline is not exhaustive. The reading available today on science and religion is enormous. (A thorough bibliography is kept on the worldwide web at www.ctns.org/information/bibliography.html. Their bibliography is divided in to basic, intermediate, and research levels.) The outline presented here features most of the key themes addressed more thoroughly in the literature. The chief value of this presentation is that it serves as an overview and inventory of the several factors on which the science-and-religion discussion takes different turning points. The turns and directions of the conversation depend on what the participant pre-supposes about such factors as the definition of science, Biblical interpretation, and the role of theological traditions. The chief virtue of the outline is that it is accessible to the non-expert. The outline will help participants learn and navigate the discussions, identify differences in assumptions, avoid talking past each other, and clarify their own views.

Genesis-and-Science Perspectives

Naturalism: reality = space, time, matter, energy, and the physical laws that govern them. Anything supernatural is not real.

Philosophical naturalism: the only rational framework for determining all truth.

Methodological naturalism: an investigative style that employs a naturalistic view of the world but is not philosophically bound to it.

1. A "closed universe" view that is limited in discussing origins.
2. More compatible with an obsolete steady-state, eternal universe view.
3. What's a "law"? (as in physical law or law of nature)
4. Scientists who are Christians operate with methodological naturalism.
5. Some accuse meth. naturalism of denying God's intervention.
6. Darwinism is usually but not always associated with naturalism.
7. Religion and science may be viewed as conflicted or as complementary.

Creationism: God is the *active* agent for the origin of the universe *and* the natural history of the earth, its life, and man as both a material and spiritual being with a soul. Today this view often seeks to harmonize a literalistic interpretation of Gen 1 with the geological and astronomical data.

Literal Day view: the 6 days (Heb, *yom*) of Gen 1 are 24 hr days

Aged Appearance view: 6-24 hr days with stellar distance & geologic strata in place for a fully functioning universe

Day/Age view: the days are metaphors for geologic periods

Day-Gap view: the days are 24 hr days separated by long ages

Aeon-Gap view: day 1, rebellion of angels; reconstruction in days 2-6.

1. Until 1960, most conservative Christians subscribed to a day/age view.
2. Creationism now largely synonymous with the creation science group.
3. The creation science group advocates a literal day view.
4. 1970: the group began an equal time w/ evolution campaign in schools.
5. Religion usually viewed as conflicting with mainstream science.

Theistic Evolution: God is the undetected agent for initiating and perhaps guiding creation; evolution is his process for creating.

God's activity can't be confirmed or disconfirmed by science but his work can be recognized by faith through "the two books" of Scripture and nature.

Guidance view: God's natural laws and properties guide nature toward life and humankind.

Intervention view: This perspective starts with the guidance view but includes God's adjusting natural processes along the way without miracles since he governs the natural laws.

1. Many conservative Christians embraced th. evol. until about 1920.
2. Th. evol. takes a metaphorical view toward interpreting Genesis.
3. Geological and cosmological "deep time" are compatible w/ Bible.
4. God works behind the scenes in ways we should not presume to understand.
5. God is the "first cause" and "unmoved mover" -- thus, many associate theistic evolution with deism.
6. Science and religion are "non-overlapping magisteria" (NOMA) neither complementing nor conflicting: two different ways of knowing.

Intelligent Design: Physics and origin-of-life research have now exceeded the simplistic assumptions of 19th and 20th century science, demonstrating an inexplicable fine-tuning in the universe and irreducible complexity in the biochemistry of life. The evidence does not prove God but qualifies the design-in-nature argument as a genuine research project.

1. Evolution may or may not be credible, but it is not a rationally sufficient, coherently complete account for life.
2. The laws of nature and constants of chemistry and physics overwhelmingly point to a natural predisposition for life: "the anthropic principle."
3. God is a God of reason, and we should not be surprised to see that "his invisible nature, namely, his eternal power and deity, has been clearly perceived in the things that have been made" (Rom 1:20).
4. Critics claim that ID is "creationism in a cheap tuxedo."
5. Science & religion, more than complementary, are highly integrative.

The Two Realms View: Scripture declares that God has two kingdoms or realms--the "left" (world) and "right" (Christ's).

Some of God's handiwork can be seen in this world but most of it remains hidden until the end of the age. Meanwhile, we in our vocations actively pursue the interests of both until God brings all things together (Eph 1:10).

1. Through science we know the earth orbits the sun and other temporal facts (though science reminds us that most of its claims are tentative).
2. Through revelation we know God's salvation history and saving work of the Gospel; and that both realms intersect in the work of the Gospel.
3. Most of God's activity and truth remains hidden (*deus absconditus*) in both the order of creation and the order of salvation.
4. Science and faith remain in tension, sometimes complementing, sometimes conflicting; i.e., *simul iustus et peccator* (as all must be).
5. Thus, as proper pursuits of each realm, science and faith are always in both dialogue and dispute--and this is how we love our neighbor!
6. The two realms view is not popular with most Christians and gets bad press with the public.
7. Science and religion are simultaneously conflicting *and* complementary: not just Rom 1:20 but also Rom 7 and Rom 8:18-25. Occasionally, they also may be integrative.

Moulds' comment on the two realms view: This approach is most in keeping with conventional Lutheran theology and its concepts of the two kingdoms, spiritual righteousness and civil righteousness, and the Christian's vocation or calling both to faith in Christ and servanthood in the world. This view 1) keeps in check the triumphalism of religion--as though religion could dictate terms to the institutions of this fallen world. It also 2) limits the claims of those institutions to less-than-absolute and final. And this view 3) promotes the study of creation for all possible temporal good, even while it constantly contains that study as penultimate and subject to a revealed moral and spiritual reality. As part of this world and the human condition, science will always be a great good flawed by sin.

Most Lutherans don't seem to subscribe to this application of their theology. Why not? What *do* they think about science?

Religion-and-Science Models

Several arrangements of the relationship between science and religion have been suggested but all are variations of these four logical possibilities:

1. Conflict: this familiar but historically recent model was developed after Darwin by both a few atheistic Darwinists (c. 1880) and a few literalistic Christians (c. 1920). This view portrays either science or religion as the single authoritative source for knowledge and truth about reality. One trumps the other depending on which camp you belong to.
2. Complementarity: dates back at least to Francis Bacon (d. 1626) and shared by most of the church until the conflict model emerged. This view recognizes two authoritative "books," both from God--Scripture and nature--for knowing about creation. Scripture focuses on the divine while nature focuses on the temporal and each complements and balances the other. If they seem to clash, we adjust our view of nature by revising our science or waiting for new evidence; and we adjust our view of Scripture by considering how God has accommodated or simplified his infinite and eternal Word for our temporal and finite intelligence (an insight from Augustine).
3. Interactive: science and religion are not "two separate books" each with its own truths. Rather, this view says they are activities of the same mind processing and integrating information to synthesize some world view. Conservative Christians regard the Bible as divinely revealed information. They regard science as the study of natural information but from the same divine source as the Bible. These sources are not merely aggregate (x + y) and complementary but are integrative, each informing the other.
4. Independence: Science and religion do not conflict, complement, or interact. This view says they are "incommensurable." Each are radically different "views" or "models" in themselves, each different in methods, kinds of inquiry, kinds of data, and kinds of questions, science asking how and religion asking why. Religion and science are compartmentalized into a self-contained world of natural laws and self-contained world of spiritual laws (or NOMA: "non-overlapping magisteria").

TRUE and REAL and EXPERIENCE

How does what's out there get in here?

Adam: Hey, let's call that one a hippopotamus!

God: Why "hippopotamus"?

Adam: Because it looks more like a hippopotamus than anything else we've seen so far!

The Correspondence View: our experience and perception match up with reality in a 100% one-to-one correspondence sort of way. What you see is what we've got. Our experience and perceptions are both real and true.

- The Biblical text, what it says about the world, my reading of the text, and my experience in the world all correspond and mesh to give me the real picture.
- Science and its methods give us an accurate (or at least increasingly accurate) picture of what's real and really out there.

The Relativistic View: our experiences and perceptions differ (a little? a lot?) from person to person and culture to culture, and one person's truth and reality is not another person's truth and reality.

- The Bible offers a version of life that may be compelling for many people whose experiences are similar to those in the Bible, but not for all people.
- Science is one way that some people prefer to think about their experience, but others prefer a mystical or commonsense or some other way.

The Pragmatic View: we count only those experiences and perceptions as true and real which enable us to function in everyday life, improve our conditions and society, further our inquiry, and help us predict outcomes--that is, that are practical and "work." ("Higher" truth claims are impractical in our diversity.)

- The Bible is a true and useful book insofar as it gives us some moral principles for living together and sharing some interesting stories in common.
- Science is the chief (but not only) way by which we add pragmatic truths and advance our technical expertise for improving our lives and society.

The Coherence View: our experience and perception may more or less correspond to the world out there, but we contain all this within language. We affirm what's true and real by how well a statement or expressed belief fits or coheres with our language system of other statements that use those words and expressions. Whether "God made the world" is true relies on how we use the words "God," "made," and "world" in our other expressions.

- The Bible corresponds in the most important ways with what's "out there" and is coherent in its themes and how those themes inform our worldview. *
 - Science corresponds in many (but not all) ways with what's "out there" and continues to add discoveries and revise its theories for greater coherence. *
- *These are sympathetic applications that some will challenge.

The Articles of Faith in Science

Like all human activities, science employs assumptions and presuppositions about reality that cannot be confirmed. Rather, the conclusions and confirmations of science depend on the assumptions being valid. Four assumptions or principles of science are widely acknowledged either as "common sense" or so necessary that without them science is not a coherent, meaningful pursuit.

1. **The Uniformity of Nature:** the laws of nature operate in the same way in all places and at all times. No one is allowed to change or bend the rules. This principle enables us to apply logic, develop explanations, and make predictions. (Notice this article of faith makes some folks nervous about miracles.)
2. **The Simplicity of Nature:** nature is economical, operating in as simple and elegant a way as the phenomenon permits. Though the results may be complex (a hurricane), the underlying concepts (Boyle's ideal gas law) are spare and minimal, often expressible in simple formulas, e.g., $PV = RT$. (Notice that science has so far been thwarted in discovering the most basic, simple explanations for gravity, magnetism, and human consciousness.)

3. **The Comprehensibility of Nature:** nature is uniform and simple but also systematic and organized so that it is interconnected in understandable ways. It's not just a bunch of little pictures, but there's a BIG picture to see. What's more, humans possess the capacity to apprehend the picture, small and large. (Notice this human element involves key questions about what this capacity is [consciousness, rationality, logic, etc.], whether the capacity is sufficient to apprehend the picture, and whether this capacity itself is part of an only-material nature and reality or part of something beyond nature.)

4. **The Lawfulness of Nature:** the events of nature must conform to and obey patterns of relationship that govern the matter and energy in the event. That is, matter and energy must follow the rules and can't cheat. For example, light must always travel at the same speed in a vacuum. (Notice this assumption raises the question, "Where did the laws come from?")

So What's a Theory?

- Is evolution a theory? Is it *just* a theory? Is it a scientific fact? Is it true? Much of the Genesis-and-science disputes revolve around how the term "theory" and related words are used. Especially at question is the "cash value" of theory or what a theory should do and not do.
- ✓ Should it explain the world and, if so, how broadly or narrowly?
 - ✓ Should it predict similar activity in the world (weather, motion of planets, human behavior)?
 - ✓ Should it just organize our experience in models that assist us in living?
 - ✓ What methods in collecting, selecting, and organizing facts, coming to conclusions, and making predictions are permissible in "doing" theory?
- The Genesis-and-science debaters definitely use the word "theory" in different ways, but they hardly ever tell us this. Its different use in the same exchange adds to our confusion, and some definitions are more helpful than others. Consider the differences, virtues, and problems of the following definitions, all currently in circulation.

Alternate Definitions of Theory:

1. A conclusion verified by a set of facts by which we can explain and predict similar or related facts.
Problems: A set of facts can lead to two reasonable but different conclusions. What's a fact? What counts for verification? An as yet undiscovered exception might change the conclusion.
2. A predictive explanation of the facts that must be testable, has the potential to be shown as incorrect, but remains active until disconfirmed.
Problems: What's a fact? What counts as a test of that explanation? How much reality must it explain? How many alternate explanations can co-exist with it? And what about weird yet logically and internally coherent explanations (I was abducted by space aliens) that can never be disproved?
3. An explanation that works well though not perfectly within a larger set of other explanations and theories about the world but depends on an accepted view of the world (or "paradigm"). This theory can be revised and improved within that accepted worldview until too many anomalies show up. At this point, the conventional theory and the new findings become "incommensurable," and the conventional theory (often along with other theories) goes into crisis until enough participants change their worldview. Then a new and radically different theory prevails. Examples include an earth-centered to sun-centered solar system; the mechanical universe of Newton to the electro-magnetic universe of Einstein; the coherent mathematics of Euclid to the paradoxical and a-logical mathematics of today (see B Russell, K. Godel).
Problems: Does this definition of theory really matter in work-a-day science? What exactly is a "paradigm" or ruling world view? Does doing theory really have to make a good fit with one's religion and worldview? And don't many scientific conclusions like the laws of gravity remain intact across most all worldviews?

4. A network of ideas, including some ideas about what can't be directly observed (such as subatomic particles), that provides a plausible account of something going on in nature. This network of ideas "crunches" information by using principles or formulas, interprets the crunched results, and comes up with some insights or laws about how things in nature work.
Problems: How can we be confident about any principles, formulas, or insights about things we can't directly observe? Don't our insight and laws depend on how we collect and interpret information? We can't prove or disprove theories in the everyday sense of those words.

5. (This definition of theory is probably the most useful and least troublesome.)
A model or visualization about something in nature that combines what we can observe and what can't be observed--either because what can't be observed is too small, large, or complex. This visualization uses some image or model we already know and understand (gas molecules as billiard balls, rays of light as trains on tracks) as an analogy we can manage. Then as in #4 above, we assemble a network of ideas to crunch, interpret, and formalize.
Problems: Isn't this all somewhat imaginary? What happened to "truth"? Won't our insights change as we change visualizations or re-draw the diagram of our model?

Some Points About "Theory"

- > We all have and use our own pet theories every day to manage life.
- > Clearly, lots of definitions and ideas are in circulation.
- > A theory is not just an opinion or haphazard guess.
- > A good theory can be very practical: we prefer to live with anesthetics, air conditioning, and liberal democracy rather than without them.
- > A theory includes and balances several parts and pieces such as collecting information, interpreting it, drawing insights, and making analogies, pictures, and diagrams. None of these is very "absolute" or "certain".
- > Evolution fits some descriptions and definitions of theory but not others.

So What is Science?

The word "science" comes from the Latin, *scio*, to know. We often speak about science as if it were one defined and agreed-upon enterprise of acquiring knowledge. And, for most working scientists, it is as they use widely accepted lab and math methods to pursue their research. And, like the rest of us, they understandably get a bit impatient when non-experts tell them their business. But as with all human endeavors, there are controversies, and some science controversies do involve the rest of us, such as the environment, beginning-and-end-of-life issues, and what to teach children. And in matters of controversy, we raise questions about the definition and nature of the institution involved, whether that be government, church, family, the economy, or science.

1. The Empirical Science View: This oldest version of modern science was proposed by Francis Bacon (1561-1626). Science sets aside all prejudices, presuppositions, and assumptions. It objectively collects data from nature and, through the rational process of induction, it infers logical explanations and generalizations from the data. To objectively collect data, science uses experimentation (as in a laboratory) that others can replicate as a reliable way to confirm the data and results, verify a theory, and yield knowledge, certainty, and truth. This view remains popular and is often cited as a way to insist that evolution is not a theory and is not scientific. However, empirical science is no longer regarded as an adequate view by either anti- or pro-evolution scientists.
2. The Falsification View: The empirical approach that seeks only to confirm data merely collects supportive evidence and is guilty of the confirmation bias. Only that which is empirically testable but can also be shown as mistaken is real science. Real science seeks to disprove or disconfirm ("falsify") its claims. We can never test every possible instance of an idea, but we can approach certainty. After rigorous but unsuccessful efforts to find fault with an idea, we can then be reasonably sure it's true. Granted, science has a an element of non-objective human choice in selecting what data to consider

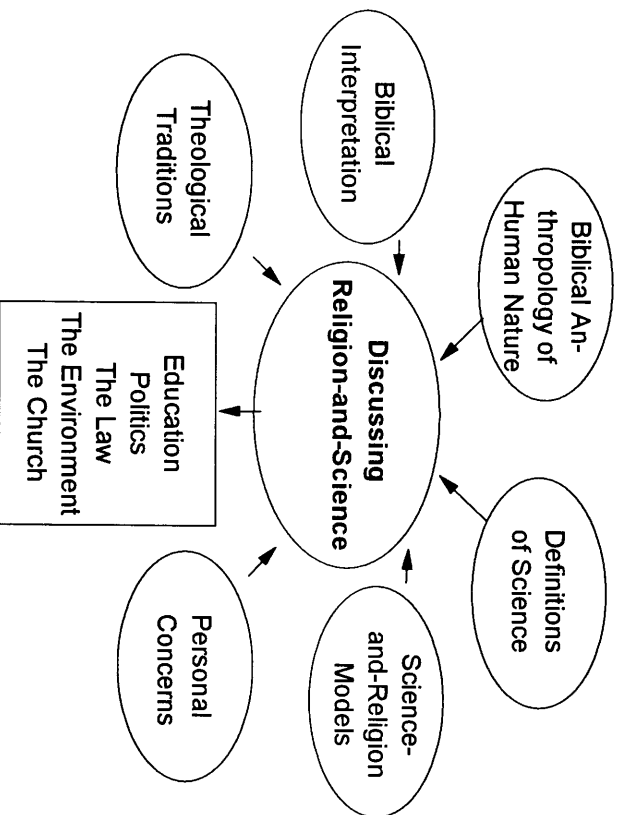
and how to consider it, but continued and sufficient theory-checking will minimize this subjectivity. This view is in wide circulation and is sometimes used to point out that since claims about evolution cannot be tested in the lab and are not falsifiable, evolution is not good science. Others respond that archaeology, anthropology, and history use only minimal lab and falsification methods, but their conclusions are generally accepted.

3. The Advancing Theories View: Science includes empirical research, the scientific method, and disconfirming its claims. But science is not an increasing pile of certain truths. It is a fits-and-starts process of webbing-together a network of facts, multiple methods, already-reliable theories, insights, educated guesses, luck, and a few blind hopes. By combining rigor with creativity, science takes 3 steps forward and 2 backward to gain greater understanding of the natural world around us. Science makes gains when theories across seemingly unrelated areas combine to better explain each other, as when Einstein predicted gravity's ability to bend light. By this view, evolution may or may not be valid, but its ideas will be modified by "cross-pollination" from other similar and very different kinds of study.

4. The Explanatory Models View: Science includes the scientific method and the physical, literal facts (the moon orbits the earth, water freezes at 0 degrees Celsius) and theories this method yields. But it is more. Science crafts comprehensive, imaginative accounts of how complex processes in nature work and how different complex processes work together. These accounts can't be demonstrated in a laboratory or confirmed or disconfirmed by evidence from studying the area of only one complex process such as fossil records in rock strata or the genetics of a fruit fly. These accounts are real and valuable science because they generate fruitful (or potentially fruitful) projects for inquiry just as an orchard is not merely one tree but an entire ecosystem for producing fruit. Evolution [is / is not] real science because it [is / isn't] a productive account for how nature works.

5. The Science Educators' View: Science is a human activity of systematically seeking natural explanations for what we observe in the world around us.
6. The Intelligent Design View: Science is a systematic method of continuing investigation using observation, experiment, measurement, theory building, testing of ideas, and logical argumentation to lead to better explanations of natural phenomenon.

THE PARTS AND PIECES OF ORIGINS ISSUES Why Discussing Genesis and Science is Do-able but Challenging



MAN'S NATURE NOW? Alternate Biblical Anthropologies

Our beliefs about the human condition after sin and our current relationship with God and with nature will powerfully influence what we believe about science, rationality, and the capacity and limits of human reason. Consider, for instance, this excerpt from mathematician William Dembski:

If humanity's chief truth consists in God's reconciling the world to himself through Christ, then theology should not be just one more discipline among others. All disciplines find their completion in Christ and cannot be properly understood apart from Christ. Christology tells us that the conceptual soundness of a scientific theory cannot be maintained apart from Christ. Christ is the light and life of the world. All things were created by him and for him. Christ defines humanity; the world, and its destiny. It follows that a scientist, in trying to understand some aspect of the world, is in the first instance concerned with that aspect as it relates to Christ. (from *Intelligent Design: the bridge between science and theology*, 206, 209)

Now consider the following different position statements about human nature and its capability after the fall into sin (and which one might fit Dembski):

1. We are spiritually flawed but, despite sin, God has sustained our reason and rational abilities so that we can detect his handiwork in nature and become aware of him as preparation for being receptive to his grace.
2. Through both science and theology, humankind makes cumulative progress to increase and enlarge the human spirit and usher in the kingdom of God.
3. By the Holy Spirit we, the Body of Christ, gain spiritual insight and renewed wisdom for living, become that "city on a hill," and lead our society to goodness and greatness in God through education, science, etc.
4. Our reason is now spiritually corrupt and turns us only away from God toward self-reliance; but despite sin, reason does serve us in matters on which our spiritual well-being does not depend--gov't, science, commerce, etc.--and by which we can serve our neighbor.

A Fine-Tuned Universe? Frequently Cited Examples

1. Modern scientists assumed an eternal steady-state universe until 1965 when the discovery of cosmic background radiation convinced most of a big bang.
2. Einstein, working prior to his discovery, was reluctant about his proposal of a "cosmological constant" to account for the stability of the universe. But cosmologists have now calculated this needed factor, large enough to keep the universe from collapsing on itself, small enough to keep emerging matter from clumping together too soon to form stars. The constant is a very small number in the general relativity equations:
0.0001
Its source and nature is unknown. Anything more or less and the universe fails.
3. Stars burn hydrogen gas which releases 0.7% of its mass as energy and fuses the remaining matter into helium. At 0.8%, too much mass converts to energy and the star burns out. At 0.6%, not enough mass is converted to form helium, from which all other elements are built, including the carbon needed for life.
4. Helium (element #2) must fuse with beryllium (element #4), also formed through previous fusion, to yield carbon (element #6). Simple: 2+4=6! But in star heat, beryllium lasts only 0.000000000000001 seconds. To successfully combine in that brief, almost non-moment, the otherwise varying energies of the atoms/nuclei must be exactly the same--like the right multi-pin computer plug in the right receptacle--which, in the case of helium and beryllium, they are.
(This, to use an unscientific expression, is really weird.)

Various scientists, both theists and atheists, cite anywhere from six to twelve (or more) such parameters for the universe and life to exist. (See *Just Six Numbers: the deep forces that shape the universe* by Martin Rees, Royal Society Research Professor, Cambridge University, Basic Books, 2000.) In response to these findings astrophysicist Fred Hoyle, a non-believer, says, "I do not believe that any scientist who examined the evidence would fail to draw the inference that the laws of nuclear physics have been deliberately designed with regard to the consequences they produce inside stars." Another response to this research came in December, 2004, from Antony Flew, the chief voice of scholarly atheism for five decades, when he publicly renounced his atheism.

SELECTED QUOTATIONS (from several chief voices)

There seems to be no more design in the variability of organic beings and in the action of natural selection than in the course in which the wind blows. -Darwin
The key to overturning naturalism is design, and not just the design of the universe as a whole but design within the universe and especially within biology. -Demboski

The progress of knowledge rigidly requires that no non-physical postulate ever be admitted in connection with the study of physical phenomenon. We do not know what is and is not explicable in physical terms, and the researcher who is seeking explanation must seek physical explanations only. -George Gaylord Simpson

Darwinian evolution is not primarily important as a scientific theory but as a culturally dominant creation story. The culturally important claim is the one that substitutes a purposeless material process for the Creator. -Phillip Johnson

You clearly can be a scientist and have religious beliefs. But I don't think you can be a scientist in the deepest sense of the word because they are such alien categories of knowledge. -Oxford University chemist Peter Atkins

We cannot live simultaneously in a world of natural causation and miracles, for if one miracle an occur, there is no limit. -Harvard Paleontologist Richard Lowentian

Religion and science are mutually exclusive realms of human thought whose presentation in the same context leads to misunderstanding of both scientific theory and religious belief. -National Academy of Sciences

The NAS position is a cowardly cop-out. I think it's an attempt to woo the sophisticated theological lobby into our [evolution] camp and put the creationists into another camp. It's good politics. But it's intellectually disreputable.
- atheist evolutionary biologist Richard Dawkins

Fresh knowledge leads to recognition of the theory of evolution as more than just a hypothesis. -John Paul II

On a small scale, Darwin's theory has triumphed; it is now about as controversial as an athlete's assertion that she can jump over a small ditch. But at the macro-evolution scale, persuasive evidence has not been forthcoming. -Michael Behe, Lehigh University biochemist and author of *Darwin's Black Box*

DOES IT MATTER?

Practical Concerns About Creation Accounts

The Genesis-and-science discussion is one of the more challenging topics in Christian education--on which a lot of simplistic and less-than-helpful presentations have been presented. But we can rightly wonder, Can Christians in the congregation grasp enough of the issues to make sense of the discussion if not the answers? An answer to this question may depend on the extent to which they believe the topic matters. Here are some concerns often linked to the Genesis-and-science discussion.

1. The culture's competing creation accounts: our "grand story"
2. Christians in conflict:
 - with the culture
 - with scholarship
 - with each other
3. The purpose and use of the Bible: what is it supposed to and not supposed to tell us?
4. Using / opposing technology:
 - fertility clinics and IVF conceptions
 - beginning- and end-of-life issues
 - stem cell research
5. Science literacy and science education: What should we know and understand about science? What should we teach in school?
6. Personal concerns:
 - Will higher education undermine the faith of my children?
 - Is a career in the sciences compatible with my faith?
 - Can I agree to disagree with some of my Christian and non-Christian friends and colleagues?

TWO DEFINITIONS OF SCIENCE

A. Science is a human activity of systematically seeking natural explanations for what we observe in the world around us.

B. Science is a systematic method of continuing investigation using observation, experiment, measurement, theory building, testing of ideas, and logical argumentation to lead to better explanations of natural phenomenon.

(These are the two considered in the Kansas State Board of Education debates in 2005.)