

A forum for Christian school educators

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## In the beginning... God created dinosaurs



## Can Science Move Mountains?



Some time ago, I e-mailed an astronomer I know to ask him whether he would write an article for the *Christian Educators Journal*. The topic I assigned him was, "Does a study of the universe make God look bigger or smaller in your eyes?" The man did not immediately reply so I asked him again. This time I got the following reply:

"Sorry for the tardiness ... I was agonizing. You perhaps don't know that after a tremendous struggle and a great sense of loss, I gave up the simple 'faith of the fathers' about 12 years ago. Although I could write a detailed account of why and how, I resolved never to write anything that could lead anyone to lose something so comforting, consoling and joyful."

I was deeply saddened by this answer. I had thought of him as a Christian because he professed to be one for many years. He had gone far in the area of astronomy, to the point where he was at one time director of an international observatory. I was struck by his honesty and his desire not to lead others along the same path he had taken. He regretted what had happened to himself, yet he seemed helpless in doing anything about it. It was as if the study of the universe had shrunk his view of God to the point where he no longer could believe. Or were there other factors at play in his personal life? Having faith or not having faith is such a mystery. Who can predict the way human beings respond to the same information, the same revelation?

### Numerous stars

I was able to contact another astronomer whom I know to be a Christian. He was not able to find time to write an article then. Perhaps later. I had heard him speak at a slide show of pictures taken by the Hubble Space Telescope, where he told us about the immeasurability of space and constellations. He had said that if you hold up your thumb with arm outstretched, the space of your thumb covers a million galaxies. If you hold up a pinhead that way, it covers 3,000 galaxies. We are talking galaxies, folks, not planets and stars, but groupings of stars. It's enough to make your head spin (which it does anyway ... around the sun).

It made me think of a Bible story. When God said to Abraham that he would make his descendants as numer-

ous as the stars in the sky, he wasn't asking Abraham to look through the Hubble. No way will humanity, let alone Abraham's seed, ever reach the number of stars that this 12-ton spacecraft telescope photographs from day to day. God was talking naked-eye stuff. And, of course, he was using hyperbole, because the children of Abraham will never become as numerous as the sand on the seashore either.

But let me return to the slide show presentation. It left a deep impression on many of us who attended. How vast the universe is, and how small and insignificant we are on this little planet called Earth! Is it this discontinuity that makes scientists lose their faith? The scholar who spoke at the slide show and who told us that the universe is about 14 billion years old said that instead of losing his faith he had become a believer. In fact, what really convinced him that God is the creator of all things was the birth of his child. Something so perfect and delicate could not have come about by chance, he felt.

One can reach the same conclusion by thinking about Earth. How can it be that we human beings, animals and plants live on earth in relative calm while the rest of the universe experiences incredibly violent storms, temperatures of a million degrees Kelvin, and huge fields of X-rays that would fry an elephant in milliseconds. How can it be unless there is a divine being who thought things through?

### Overwhelmed by size

I can, however, understand why some scientists lose their faith. We know from astronomers that the universe is expanding. At least, scientists who embrace the Big Bang theory argue that an explosion occurred 14 billion years ago, causing everything to expand, including space.

Our knowledge of the universe is expanding too. In micro-electronics we have made giant strides as computers become more efficient and powerful and the Internet provides instant communication.

In late June of 2000, two teams of scientists announced that they had compiled a working draft of the human genetic code. "This information has significant implications on human life — from fighting diseases to solving environmental problems, to sending astronauts to far-



reaching galaxies,” said Dr. Yousef Haj-Ahmad, professor of biological sciences at Brock University in St. Catharines, Ont., in an article in *Surgite* (Brock University’s quarterly journal, Fall, 2000).

He adds: “In my opinion, the biotech revolution is more powerful than the micro-electronic revolution. The biotech revolution is going to change the way we live on this planet. It is going to change the way we essentially look at the surrounding universe. It is extremely powerful. It will affect our world economy, people’s habitat, people’s health, etc.” Notice that this man is impressed by the power of technology, and well he should be. But the question is: Who unleashes all that power?

## The power of idolatry

These are exciting times for human beings. But they are also unsettling and destabilizing times. For believers, the challenge may be greater than ever. Jesus asked the question in Luke 18:8: “When the Son of Man comes, will he find faith on earth?” This question is very much apropos as we see evidence in our societies that faith is being swept away by the gods of science and technology.

Of course, it is not science or technology itself that sweeps away faith, nor the amazing discoveries, however impressive they may be. Only the *beliefs* in science and technology, only those attitudes that elevate science and technology to the level of gods, challenge faith. Christians need never be afraid of new discoveries. This is our Father’s world and nothing in that world can separate us from the love of God that is in Christ Jesus our Lord (Romans 8:38,39). We have it black on white.

But we do see that Christians, too, are being influenced by the religious impact of a secular approach to science

and technology. Chuck Colson and Nancy Pearcey warn against this in their book *How Now Shall We Live?* (I highly recommend this book to Christian educators as it presents an amazingly strong Reformed perspective on culture.) They write: “The dominant view in our culture today is radically one-dimensional: that this life is all there is, and nature is all we need to explain everything that exists. This is, at heart, the philosophy of naturalism, and not only has it permeated the classroom curriculum, but it has also been expressed widely in popular culture, from Disney World to television nature shows to children’s books” (p. 52).

Francis Bacon is reported to have said: “A little science estranges a man from God. A lot of science brings him back.” This may sound a little simplistic, but there is something to it. It is true that scientists are more open today to the probability of a designer/creator than they were in the previous century because they know more. The Big Bang theory, which many Christians decry, points to a beginning and an end and thus undercuts the idea of an infinite universe that has no beginning and end, i.e., no Creator. “When it comes to the origin of life, science is squarely on the side of creation by an intelligent agent. We have nothing to fear from the progress of science,” say Colson and Pearcey (p.79), and they provide ample evidence.

If I had a bent for factual detail and repetitive research (which I don’t) I would love to be a teacher of science in the Christian school. But I think I would look at and touch a baby from time to time to keep me sane – to remind me that, in spite of all the test tubes and experiments, I am not in control.

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# Reading the Cosmos and Unfolding the Wisdom of God

by Dennis R. Danielson

*Dennis Danielson is professor and Associate Head of English at the University of British Columbia in Vancouver. His recently published The Book of the Cosmos, a critical collection of "western cosmology's greatest hits" from the Bible and ancient Greece to the present, was chosen as an Amazon.com book-of-the-day in July 2000 and as an alternate selection for The Library of Science book club. This anthology's one hundred first-hand writings (accompanied by what Science News calls Danielson's "eloquent commentary") are accessible to general readers from high school level on up. The Book of the Cosmos is published in hardback by Perseus Publishing (590 pp.; US\$35).*

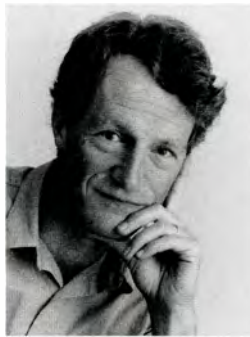
How should Christians respond to current scientific theories about the origin of the universe? What are these theories? Do they offer a challenge to Christian faith? And how scientific are they anyway?

Before I tackle these questions, let me begin by confessing that, as a Christian and an intellectually engaged person, I find cosmology — theories of the universe — fascinating and inspiring. So naturally I want my students to join in the adventure of thinking deeply about the cosmos and of listening to the voices of others who have done the same.

At the same time, I want them to share my conviction that this line of study can be not only exciting, but also God-honoring. John Calvin in his commentary on Genesis tackles the issue of whether astronomy harmonizes with the Word of God. For example, how do we respond when we read (in Gen. 1:16) that God "made two great lights" in the sky — and then we hear the astronomers telling us that in fact Saturn is greater than the moon?

## No contradiction

Calvin answers that Genesis is speaking "in a popular style" for the benefit of "ordinary persons." Astronomers, by contrast, with their more specialized knowledge, come at things from a different angle. They pursue what nowadays we might call a different "discourse." Yet, says Calvin, there is no contradiction; and



Dennis Danielson

astronomy is to be neither "reprobated nor ... condemned, because some frantic persons ... reject whatever is unknown to them. For astronomy is not only pleasant but also very useful to be known;

it cannot be denied that this art unfolds the admirable wisdom of God."

This view of creation as a mirror of God's greatness finds support in the venerable tradition that regards God as the author of "two books": Scripture, and Nature. For reading the Bible, Calvin promoted what is sometimes called "the analogy of faith": If you come to a difficult passage, you should interpret it in the light of Scripture as a whole. This assumption concerning the internal consistency of Scripture can be similarly applied to both of God's "books" taken together. Thus, Thomas Campanella, a seventeenth-century Dominican friar, defended Galileo by declaring that science, like biblical scholarship, reveals God's truth — and "one truth does not contradict another truth." Because they are works by the same Author, nature and the Bible *must* be read as harmonizing with each other.

Now, some four hundred years later, Calvin's and Campanella's words still provide sound guidelines for the

Christian's approach to theories of the universe. If we heed them, we'll avoid getting "frantic" and rejecting things we just don't know about. Even more importantly, we'll look constructively for ways in which cosmology (along with all the other disciplines) "unfolds the wisdom of God." And we'll be emboldened in this task by the recognition that no truth can be shaken by any other truth.

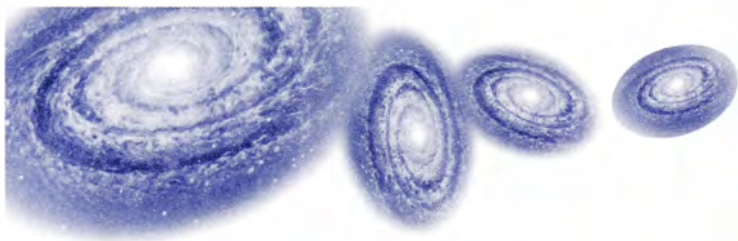
## Freeze-framed photo

So what theories of the universe are being promoted today? Here I'll focus on only a few aspects of the really big one, often called the Standard Model or, more popularly, the Big Bang theory of cosmic origins.

In one sense, Big Bang theory doesn't begin at the beginning. It begins, observationally, with the discovery by Hubble and others in the 1920s that the galaxies of the universe appear to be moving farther and farther away from each other, and that the farther a galaxy is from us, the faster appears to be its rate of recession.

So the cosmic situation is like this: Suppose someone lets off a hand grenade, and that at a certain length of time after the detonation you photograph all of the grenade fragments in such a way as to capture their instantaneous velocity. From this freeze-framed picture and your knowledge of the fragments' velocity, you could extrapolate backwards and estimate with considerable accuracy the elapsed time between detonation and the instant you took the photo. In the same way, knowing the rate of galactic recession together with the galaxies' present distance from each other allows us to estimate how long ago the materials contained in the galaxies were no distance at all from each other. As a Belgian clergyman proposed in the early 1930s, the entire universe constituted (perhaps not for long!) a "primal atom" of almost infinite





density.<sup>1</sup> Then it exploded.

This is a highly simplified version of the story accepted by a huge majority of practicing astrophysicists and cosmologists today. I'm not really sure if it does any more, or less, than other scientific theories to compel or prevent belief in God. And yet Big Bang cosmology does most emphatically raise the issue of the *beginning*. Various earlier theories, from Aristotle in ancient times to "Steady State" theory in the mid-twentieth century, conceptualized the universe in such a way that it needed *no* beginning. Surely such theories made life more comfortable for thoroughgoing atheists. But today, the issue of "cosmogony" — the origin of the universe — simply can't be avoided.

### Just-so condition

Neither can the question of the "fine tuning" of the universe. It is widely recognized today that life is predicated on the existence of carbon, and that carbon is synthesized only under conditions of extreme pressure and temperature deep within stars. Nor would carbon be produced at all except that the "resonance" of one of its three component particles is exactly right to permit it to combine with the other two within the  $10^{-19}$  second window-of-opportunity that it has to do so.<sup>2</sup>

So we carbon-based beings would not even be here without those laws or without those furnaces we call stars. However, why should the universe contain stars in the first place? To answer this, we have to go back to the Big Bang. Like any explosion, the Big Bang involves some force propelling matter outward from a starting point. And in this case it has to be an unspeakably large force, for it must overcome a contrary force: that of the mutual gravitational attraction of the entire stuff of the universe at very close quarters! Moreover, if the force is not great

enough, everything will pretty quickly collapse back on itself. Or if it is too great, everything will scatter so thoroughly, and with such diffusion, that gravity will have no chance to draw various "clumps" of stuff together again and so form stars.

The knife-edge balance between the explosive force and gravitation is only one among many critical parameters. All of the interrelationships among the four forces — gravitation, electromagnetism, and the strong and the weak nuclear forces — must be just so. But the product of all of these "knife-edge" fine-tunings gives us an answer to the question I posed a moment ago: Why should there be stars in the universe? The answer is that there shouldn't be, and that the existence of stars is mind-bogglingly improbable.

### Impossible odds

One relatively non-controversial estimate of the odds against the existence of stars is made by cosmologist Lee Smolin: Perhaps ... we should ask just how probable is it that a universe created by randomly choosing the parameters will contain stars. ... The answer, in round numbers, comes to about one chance in  $10^{229}$ .

To illustrate how truly ridiculous this number is, we might note that the part of the universe we can see from earth contains about  $10^{22}$  stars which together contain about  $10^{80}$  protons and neutrons. These numbers are gigantic, but they are infinitesimal compared to  $10^{229}$ . In my opinion, a probability this tiny is not something we can let go unexplained. Luck will certainly not do here.<sup>3</sup>

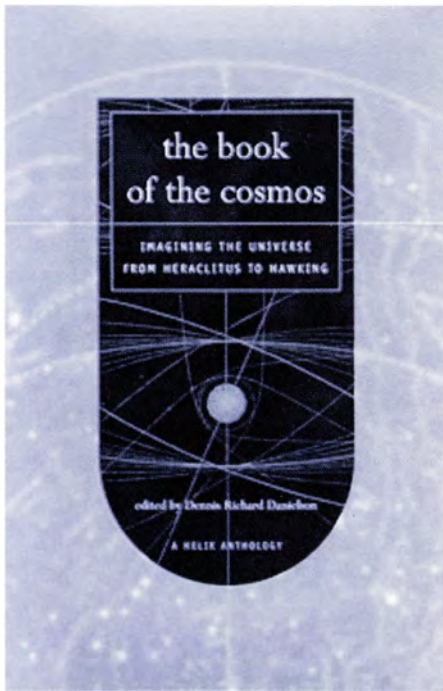
It is no surprise, then, that Smolin — although he is an atheist — heads this section of his book "The Miracle of Stars." As one scientist remarked to me recently, "10<sup>229</sup>-to-one-odds" has a simple equivalent expression in ordinary English: *impossible*.

So what's an atheist cosmologist to do? Smolin's adventuresome but not very compelling maneuver is to postulate that the laws of physics themselves are not really random but that they have evolved through many trial universes in a kind of Darwinian progression, with new universes bursting into existence within black holes, beyond our observational horizon.

### Lucky find

Sir Martin Rees, England's Astronomer Royal, likewise postulates many trial-and-error universes across an entire "ensemble of universes."<sup>4</sup> His core idea is most simply rendered by an analogy: Suppose you come to work wearing a new suit that fits you exactly, even though you happen to have quite an unusual build. Your co-workers naturally assume your suit was made to measure. But you explain to them that, no, with a bit of luck, and with thousands of suits in the shop to choose from, you found one that fit just right. Similarly, Rees's hypothesis of the "multiverse" — a veritable infinitude of universes like bubbles in a super-cosmic foam — allows us to behold a single *apparently* tailor-made universe without having to conclude that it was purposely made to measure. On this view our universe is still pretty special; but, given those racks and racks of other universes, one that fits like ours isn't terribly surprising.

I'm not ridiculing Smolin's or Rees's efforts to make sense of the virtual impossibility of our universe's being "just so." But their strenuous, hugely speculative attempts do indicate how very seriously they regard the fine-tuning of the cosmos *and* how powerfully they are motivated to avoid the inference that our universe was created "tailor made." And what is most ironic, I think, is that atheistic cosmologists' desire to avoid "the-



ology” or “mysticism” — things they don’t consider scientific — often lead them to generate theories or make pronouncements which themselves can’t be called scientific in any rigorous sense.

I’ve already cited Smolin’s “big bangs within black holes” idea and Rees’s “multiverse” speculation. But I’m also thinking of Steven Weinberg’s famous statement that “the more the universe seems comprehensible, the more it also seems pointless.”<sup>5</sup> The claim may sound like a scientific conclusion, but actually it is a *philosophical* conclusion, one that flows quite logically if divine purpose is read out of the story from the very beginning. Stephen Hawking’s famous “no boundary” hypothesis similarly, and inevitably, leads to his no less famous question: “What place, then, for a creator?”<sup>6</sup> When atheistic cosmologists thus intentionally and “philosophically” read God out of the picture at the beginning of the story and then present theistic creation as *scientifically* unacceptable, I am inclined (despite my respect for them) to question their rigor and even possibly their honesty.

### Made for humanity

There is one more “explanation” of our wildly unlikely universe that many, including some Christians, find attractive:

the so-called “anthropic cosmological principle.”<sup>7</sup> This principle begins by acknowledging what is called a “selection effect.” What human beings perceive is a function of both the object of perception *and* the filter of human perception itself. Accordingly, the anthropic principle, in its “weak” formulation, points out that physical theories of the cosmos must take into account the fact that the cosmos contains carbon-based physicists — a fact that leads us right back to the necessary fine-tunings of the universe already alluded to. This logical (and actually remarkably useful) observation lies at the foundation of the anthropic principle.

However, in spite of the undoubted value of reflecting on the existence of “cosmic coincidences” and of physicists, we should beware twin perils of the anthropic principle. One peril is mere banality: “Hey, of course we observe the universe to be fine tuned just as it is. If it weren’t, we wouldn’t be here to observe it.” The other is hubris: “WE are the purpose of the universe.” Or, in the slightly more modest words of Freeman Dyson, “The universe must have known that we were coming.”<sup>8</sup> This approach opens the way to what I would call an “argument from design without a Designer” — a kind of materialist pantheism. Nevertheless, the anthropic cosmological principle — especially through the work of John Barrow and Frank Tipler in their fat book of the same name<sup>9</sup> — has helped to put questions of design back on the table. It has also highlighted the fact that this cosmos contains beings who are capable of reflecting on the *meaning* both of the cosmos and of their own lives, and whose existence is predicated on a *scientifically* inexplicable series of staggering coincidences.

Thus, some of the major features of Big Bang cosmology support a healthy chal-

lenge to atheistic materialism and perhaps at the same time create a happy opportunity for Christians and other theists to re-invigorate their conviction that the cosmos declares the glory of its Creator. If we seize that opportunity, then in some measure this art too may unfold the admirable wisdom of God.

### References:

1. See Georges Lemaître, “Did the Expansion Start from the Beginning” in *The Book of the Cosmos: Imagining the Universe from Heraclitus to Hawking*, ed. Dennis Danielson (Cambridge, MA: Perseus, 2000), Chapter 66.
2. See Owen Gingerich, “Do the Heavens Declare,” in *The Book of the Cosmos*, Chapter 85; and John Gribbin, *Companion to the Cosmos* (Boston: Little, Brown, 1996), p. 408.
3. Lee Smolin, *The Life of the Cosmos* (New York: Oxford UP, 1997), pp. 43-46.
4. Martin Rees, *Before the Beginning* (Cambridge, MA: Perseus, 1997), Chapter 10 and *passim*.
5. Steven Weinberg, *The First Three Minutes* (New York: Basic Books, 1977), p. 154.
6. Stephen Hawking, *A Brief History of Time* (New York: Bantam, 1988), p. 141.
7. See Charles Colson and Nancy Pearcey, *How Now Shall We Live* (Wheaton, IL: Tyndale House, 1999), pp. 61-67.
8. Quoted from Martin Gardner, “Intelligent Design and Phillip Johnson,” *Skeptical Enquirer* (Nov. 21, 1997): 17.
9. John Barrow and Frank Tipler, *The Anthropic Cosmological Principle* (Oxford: Oxford UP, 1986).



# Adam and the Dinosaurs

by Steven J. Stegink and Gordon J. Van Woerkom

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"Did Adam name the dinosaurs?" Greg asked at the door, as I excused the fifth-period biology class. Gulp! The class had just finished a biology/geology timeline review sheet. The sheet related to a description in their textbook of fossils (plants, animals and human beings) and the age of rock layers containing the fossils. As usual, Greg had completed the worksheet quickly and would undoubtedly achieve a perfect score on the upcoming quiz of the material. But I knew he did not agree with worksheet and textbook statements about the age of rock layers and fossils. Greg had told me before that he thought the earth and its rocks were about 6,000 years old, and fossils were no older than that either. So his question would not be answered easily. My mind quickly considered different scenarios and possible responses.

My first choice, "No. Adam did not name the dinosaurs because Adam was not alive when dinosaurs lived." Greg was sure to challenge. He'd say; "That can't be right. The Bible says that God brought the animals to Adam to be named. Dinosaurs are animals, right? Adam must have named them. Therefore dinosaurs and humans lived at the same time. Not

millions of years apart like the worksheet and textbook said." If pressed, I knew Greg was fully able to direct me to Genesis 2:19-20:

*"So from the soil Yahweh God fashioned all the wild beasts and all the birds of heaven. These he brought to the man to see what he would call them; each one was to bear the name the man would give it. The man gave names to all the cattle, all the birds of heaven and all the wild beasts" (The Jerusalem Bible. The Reader's Edition, 1968).*

## A pickle

In response to his use of Genesis 2, I could ask Greg how all the animals got to Adam. Likely he would say that birds flew and that cattle and wild beasts walked to Adam. After that I could ask, "Greg, how did whales, fishes and other water animals get to Adam for their names?" Greg might say, "Adam went to the water!" I would then point out that the Bible says that God brought the animals to Adam. Greg would undoubtedly retort with, "Well, then, God brought them to Adam by a miracle." We would be at a stalemate.

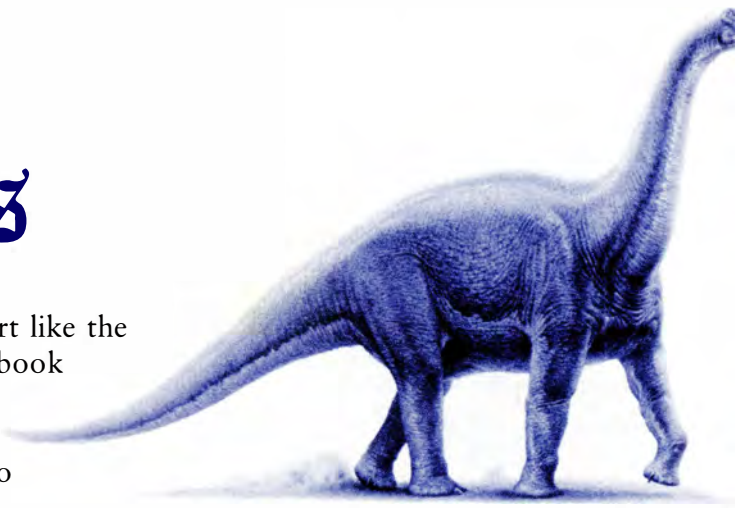
I could answer Greg with "You're asking that question because of a misunderstanding of the creation story." I would explain that Genesis 1:20-25 records how God made animals before making Adam. Therefore, the Genesis 2 description may not be how creation happened. There is no strong reason to conclude that Adam named

any or all of the animals. When the Genesis 2 passage says that Adam named the animals, it may be just a way of saying that Adam is master of animals in the sea, on the earth and in the air. But did I want Greg taking home the message that I thought Genesis 2 was not literal, word for word?

I was in a pickle. How could I help Greg understand and accept that the Bible opens with two different creation stories? I didn't feel honest letting him use parts of Genesis 2 and parts of Genesis 1 without realizing the passages are not identical with each other, at least the parts describing the creation sequence of animals and of Adam. In Genesis 1, Adam is created after animals. In Genesis 2 Adam is created before animals.

Aha! I could say, "No. Scientists during the 18<sup>th</sup> century began naming the dinosaurs." Clever though the response might be, Greg's likely comeback would be: "If the Bible says Adam named the animals and birds, then Adam must have named the dinosaurs, too. The name just was not the scientific name that scientists use today. After all, that is what has happened to the names of other animals. Like you told us, the scientific name for the cow is *bos taurus* and for the golden eagle it is *aquila chrysaetus*. Stuck again.

After all this mental give-and-take,



I waffled. Finally, I answered, "That is a mystery Greg! The Bible does not tell us exactly. So we may never know." Greg left for lunch.

### My discomfort

As Greg walked away, I wondered why Christians study and teach biology. Sure, studying anatomy and physiology is important for training competent nurses, doctors, dentists and other health-care professionals. Studying ecology is valuable for understanding and predicting the impact that humans have on an environment. Studying cell biology and genetics are essential for learning how to modify harmful genes and for tracking genes from parent to offspring.

Studying evolution is useful for tying biology together. Evolution explains similarities in the visual anatomy of the wide variety of organisms on earth. Evolution clarifies the distribution of organisms among earth's continents. Evolution provides a model for understanding how gene changes (specifically, in DNA, which is the chemical material of genes) may change the appearance and behavior of organisms. As appearance and behavior are modified over time, some organisms survive as they adapt to environmental change. Other organisms, not able to adapt, die in large

numbers. In some cases those organisms leave fossils that record their existence.

In spite of knowing these good reasons for studying biology, I was troubled. Why was I, a Christian biology teacher, uncertain and uncomfortable telling Greg that dinosaurs lived, but not when Adam lived?

I accept that God's revelation in the cosmos (all things created and maintained by God) provides evidence that the earth and the heavens have existed for billions of years. Life in many different shapes (plant, microbe, and animal) grew, developed and changed during that time. The dinosaurs flourished about 200 million years ago. They disappeared from the record of life about 65 million years before humans started, grew and developed. Humans (*homo sapiens*), or, as I think of them, the *Adams* — female and male — were late bloomers. *Adams*

have been around for about 0.5 million years. The evidence of God's cosmic revelation has been, and continues to be, described by biology, chemistry, geology and physics.



### A long process

I do not think that God's revelation in the Bible is intended to tell us (the *Adams*) the mechanism God used, and continues to use, in the creation process. We might say that the mechanism is one in which "Yahweh God fashioned man (the *Adams*) of dust from the soil" (Genesis 2:7). But, "fashioned" does not explain the process in a concrete manner. Furthermore, I am intrigued by the possibility that God may have molded and remolded shapes before using a form leading to our human ancestors and, eventually, to us. For example, in Jeremiah 18, the prophet described God as a potter who starts over when a clay vessel is ruined during formation:

*"So I (Jeremiah) went down to the potter's house; and there he (the potter) was, working at the wheel. And whenever the vessel he was mixing came out wrong, as happens with the clay handled by potters, he would start afresh and work it into another vessel, as pursers do. Then this word of Yahweh was addressed to me, 'House of Israel, can not I do to you what this potter does?... Yes, as the clay is in the potter's hand, so you are in mine...'"* (Jeremiah 18:3-6, The Jerusalem Bible. The Reader's edition,

1968).

A Revised Standard Version Bible translation more forcefully described God's action with a vessel not shaping up as desired. In the RSV the pot-





ter (God) was linked directly with the formation of the unsuitable vessel. For example:

"...and there he [the potter] was working at his wheel. And the vessel he was making of clay was spoiled in the potter's hand, and he reworked it into another vessel, as it seemed good to the potter to do" (Jeremiah 18:3b-4, RSV, 1952).

Jeremiah's imagery encourages readers to conclude that God took time creating. He may have started, stopped, and restarted with new material or different shapes of used material.

Because of how I understand God's revelations in the cosmos and in the

Bible, I think that God's creation was not a single event in ancient history. God's creation activity continues daily. Fossils, among other things, give evidence of God's activities.

I'm not alone in thinking that God continues to create. For example, John Calvin writes a word-picture of God's creative activity. Calvin says, "To make God a momentary Creator, who once and for all finished his work, would be cold and barren, and we must differ from profane men especially in that we see the presence of divine power shining as much in the continuing state of the universe as in its inception (*Institutes of the Christian Religion*, 1.16.1).

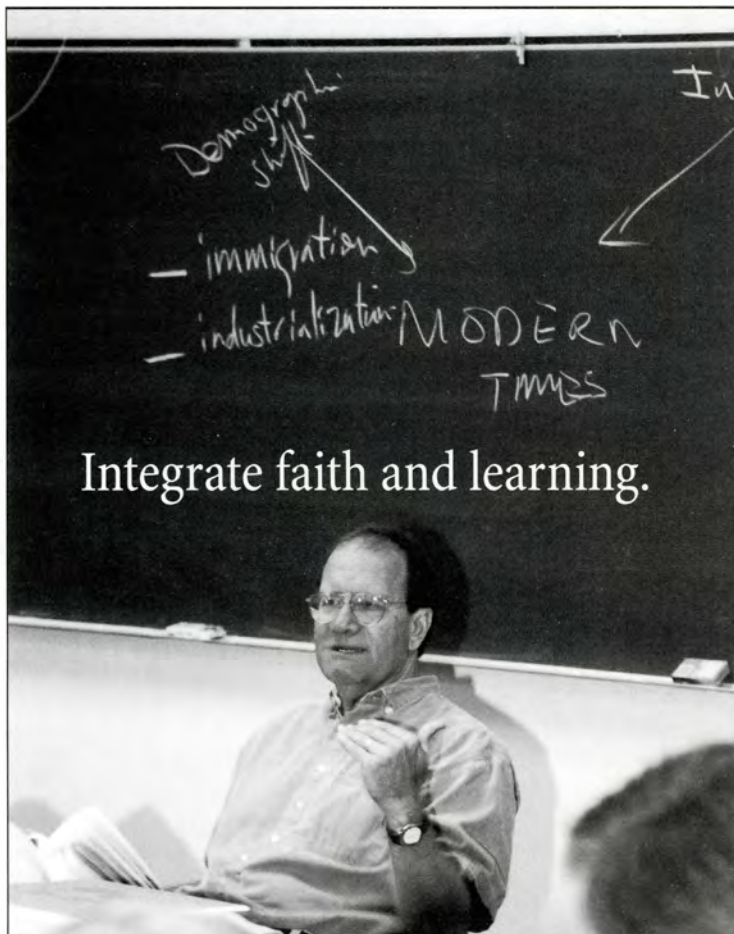
Calvin's description is consistent with the imagery of God's activity described in Jeremiah 18:3-6.

The buzzing bell warning of the beginning of sixth period startled me. I walked into my classroom smiling. The next time I'm asked if Adam named the dinosaurs I'll answer "No."

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constructive review of this article.



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# Reformed Christians and Hi-Tech Phobia

by Charles C. Adams

*Charles Adams teaches engineering at Dordt College in Sioux Center, Iowa.*

"We live in the age of high tech. The signs are everywhere, from Hollywood to Wall Street, from Washington, D.C., to fabled Silicon Valley. Newsstands display stacks of science and computer magazines. Windows of electronics stores are piled high with new products. Foreign policy experts attempt to come to terms with 'Star Wars.' Engineering stands at center stage.

Employment of engineers has been increasing at a pace nearly double that of other professions and three times as fast as that of the overall work force. More than 100,000 new students are crowding into American engineering schools each year, double the number of a decade ago. One of every five male college freshmen says he would like to be an engineer." (The quotation above is from the introduction to Samuel Florman's new book, *The Civilized Engineer*.)

The fact that technology is a major force — indeed, a defining characteristic of our age — is, I'm sure, not news to anyone. But what surprised me was the last sentence: "One of every five male college freshmen says he would like to be an engineer."

## Striking disparity

As an engineering educator here at Dordt College for the last eight years, this simply has not been my experience. At first I wondered whether

Florman was exaggerating. But a closer look reveals that he has documented his claim as coming from a report by the Office of Technology Assessment and summarized in an article published in the *New York Times*.

So why the disparity between what I perceive and what apparently is the normal attitude of American college-age young people? On the surface the answer is quite simple. My experience is with a small subset of American college-age young people — those originating from the Reformed Christian community. But, of course, I still must ask "why?" Why should the attitude of Reformed, Christian young people, particularly those who have attended Christian schools, be different from their public school peers with regard to technology, especially when they share so much in common in other areas of life?

I would like to suggest three possible answers to that question and argue that, although I generally applaud non-conformity and distinctiveness on the part of Christian young people, in this case I think that the difference is in the wrong direction — we Christians ought to be more enthusiastic about technology than the average American, not less.

## False dichotomy

The first reason I believe that Christian young people do not look as quickly to technology as a vocation has to do with what C.P. Snow called the "two cultures" problem in his book *The Two Cultures*. That problem is the erroneous belief that there exist two

cultures in our world or, at least, in our academic world: the technical culture and the humanities culture. Traditionally there has been an antagonism between these two cultures. Technically trained people have looked down on the humanities as being of little practical use and, conversely, people trained in the humanities have generally seen technology as abstract and inhuman and technologists as insensitive, pragmatic and dehumanized. This false dichotomy has been semi-institutionalized in the existence of liberal arts colleges on the one hand, and colleges of science and engineering on the other.

The problem we have as Reformed Christians becomes apparent when we consider the nature of Christian colleges. Think of the ones you know: Dordt, Northwestern, Calvin, Trinity, Hope, Redeemer, the King's and even the broader evangelical schools such as Wheaton: all of them identify themselves as liberal arts colleges. These schools are not only the intellectual nurturing communities for a large majority of Reformed Christians, but they are also training centers for almost all Christian school teachers. And even though as Reformed Christians, because of our holistic biblical view of creation, we know that the two cultures problem is a false one, we nonetheless cannot help but be affected by it and, in turn, help perpetuate it.

## Practical reductionism

A second explanation for the rela-



tive disaffection of Reformed Christian young people for science and technology has to do with an inconsistency between what we practice and what we preach as our world view. We may say that Christ is Lord of every area of life, that Christians are called to service in every sphere of creation, and that religion is not some special compartment of life but is our moment-by-moment walk before the face of the Lord; but, nevertheless, we live as if there exists a spiritual dimension to life, usually identified with morals, ethics, and theology, as well as a neutral and second-best dimension of life, one which includes such activities as science and technology.

We may say it in words, but in our communal heart we Reformed Christians have failed to see that serving the cause of the Kingdom as an engineer, lawyer, or businessman can be just as holy as serving as a missionary, minister, or Christian school teacher. In other words we are Reformed in word only. In deed we are one with our fundamentalist brothers and sisters.

### No confidence

A third reason why Christian young people are not turning the world of technology and science upside down is somewhat related to the second. Since we see that area of life as neutral, we don't believe that we have anything special to bring to it as Chris-

tians. Since we lack a prophetic vision for reforming technology and directing it to service for the Kingdom, we also lack confidence in our ability to make any difference.

Technology, like any other calling, requires commitment. But commitment, in order to grow, needs to be fertilized by the confidence that our commitment will make a difference. As Christians we have no communal self-confidence that our work in the areas of science or technology will be any more valuable than that of the non-Christian. Seeing it as neutral, we are deaf to the Word of the Lord for technology. Not only do we not know his will for the areas of energy, elec-

tronics, and eugenics, but we don't even believe that it exists.

### Cry for healing

In summary, three of the reasons why Reformed Christian young people are not studying engineering with the same communal enthusiasm as their non-Reformed or non-Christian peers are these: they lack confidence in their ability to make a difference, they do not see it as in any way related to their Christian faith, and they have been one-sidedly influenced by the humanities pole of the two cultures dichotomy.

It's time Reformed Christians begin practicing what we preach. There's a high-tech world out there crying for healing and direction. Only those who hear the word of the Lord are capable of bringing the gospel of redemption to the world. But to do so we must be filled with the Spirit and have the confidence that our work will not be in vain. We need to begin building that confidence when our children enter kindergarten if we expect them to take up their Kingdom high-tech tasks when they become adults.

#### Reference:

1. Samuel Florman, *The Civilized Engineer*, (New York: St. Martin's Press, 1987)



# “Slouching Toward Bedlam”

My Christian Textbook Says It.

## *I Believe It. That Settles It.*

by Jan Kaarsvlam

*Jan Kaarsvlam is finishing out a difficult year at John Calvin Christian School in Montana's beautiful Yaak Valley. Because of some misunderstandings with the school board regarding what he meant by "A Reformed approach to bowling," Kaarsvlam's contract has not been renewed. For next year, he has accepted a job teaching English at the newly opened Heritage Christian School near Thief River Falls, Minnesota.*

The snow outside the windows of the faculty lounge fell in big wet flakes that melted as soon as they hit pavement but that coated the athletic fields with a frosting appropriate to the day before Christmas break was to begin. The students in the hallways were trading gifts and laughter, but in the lounge, faculty members who, like their students, were gorging on candy and cookies, were considerably more intense.

"Well, isn't this supposed to be a Christian school?" Sam Toomer demanded. Sam taught biology. "Well, isn't it?"

"Of course, Sam, but what makes the school Christian?" Physics teacher Zelda Roberts spoke from the far end of the table. For once everyone seated at the table was involved in the same discussion, a discussion that stemmed from a proposal brought by a group of parents to the education committee of the school board. The parents requested that the school make an effort over the next two years to replace all secular textbooks with Christian textbooks. One week earlier the school board had asked the school's curriculum committee, a group of the department heads, for feedback on the proposal, and now it seemed that was all the faculty talked about.

Zelda continued, "I do not believe that the textbooks are what make a Christian school Christian. The Christian school derives its Christian character from the teachers. I believe that a good teacher can take the most secular of books and teach from it in a Christian context. The converse is also true: the most Christian of books can be taught in a very secular fashion."

"Maybe," Sam said, "but why not use books that reinforce what we're about rather than books that contradict it. For example, in my biology class, I think it would be

wonderful to have a book that begins from the same premise as mine — namely, that we are in the hands of a loving Creator God who has carefully designed the universe. Most science books today are thoroughly grounded in naturalism. God, or even the suggestion of the possibility of a God, has no place in them. I always feel bad telling the students that what they are reading isn't true."

"Yeah, yeah, I know exactly what you're saying," said Rex Kane. With his pinky he picked at a piece of fudge stuck in his molars. "I have to deal with the exact same problem, day in, day out."

Sam stared at Rex. "You teach Phys. Ed., Rex. You don't even use textbooks. How can this problem possibly apply to you?"

"Hey, hey, we're all in this together," Rex said as he reached for another cookie.

Sam turned back to Zelda, trying, along with everyone else, to ignore Rex. "I guess I'd just like to see a little consistency."

Science teacher Gerry Oldenhoff leaned across the table. "Sam, the problem with these Christian textbooks is they lack rigor. Have you ever read some of these textbooks? They're full of factual and theological errors. This school is about pushing students to achieve academically. God deserves excellence. I just don't see Christian textbooks helping us promote that."

"Yeah," put in John Kleinhout. "Besides, where does the education committee think they're coming from, telling us what textbooks to use?"

"Well," Cal Vandermeer responded, "*we do work* for them."

"Sure," said Kleinhout, "but that doesn't make them experts." He leaned forward conspiratorially, a position he often assumed when talking to other teachers. "I'll tell you right now, this whole proposal has nothing to do with books. It has to do with us. These parents don't trust us, and I'll tell you what — I'm offended. They don't trust me to do what's right in the classroom."

"I don't think you're being fair," Carrie Wellema said. "From what I understand, this has nothing to do with lack of trust. Parents just feel that we spend a lot of money on textbooks, and currently we don't have any sort of process we follow to do that."





something, so she took the initiative. "Are there really only two choices, well-written worldly textbooks or inaccurate, misleading, Christian textbooks? If so, that's pretty sad."

Maxwell Prentice-Hall, the newly hired counselor, spoke up. Maxwell was an idealist, he had two last names, and he grew up in Louisiana. These

"I agree," Vandermeer said. "It is easy to turn this into a personal issue, but I don't think that is accurate, nor is it productive. Still, the issue bothers me, and this is why. This is a school that comes from the Reformed background. We are, at least by my understanding, trying to teach students not only about Christian doctrine, but also about the culture that surrounds them. Only when they understand that culture do students have the ability to go into the world and transform it. Many Christian textbooks come from a separatist worldview, one that encourages Christians to huddle in their own little enclave and let the world slip. I'm afraid that using books that encourage that sort of separatism only moves us further away from where we should be philosophically."

Toomer shook his head. "That's all fine and well, Cal, but I still have trouble using a biology book so thoroughly saturated by naturalism. There's a difference between informing our students of other worldviews and preaching those other worldviews. I just worry about how much naturalism my students are soaking up without their or my knowing it. How can we tell when we've crossed the line from informing them about the surrounding culture into tempting them to join it?"

Carrie Wellema saw that Rex Kane was about to say

facts made him a bit of an enigma to many of his colleagues at Bedlam.

He said, "Maybe that's just God telling us we need to write our own textbooks."

Cal Vandermeer laughed. "That's good, Max, but I don't have the time to do all the things my job currently requires."

"Maybe the board would give us a sabbatical or something," Max mused with a dreamy look in his eyes.

"You know," Rex Kane blurted as the bell rang, "this whole thing reminds me of that classic Christmas story *It's a Wonderful Life*. You know, the one with the angel trying to get his wings."

Everyone had begun to rise from the table, but they paused, staring at Rex and awaiting an explanation.

"You know, the scene where Jimmy Stewart's about to jump off the bridge, but then the angel jumps first."

Rex stared knowingly and awaited a response. The others stared blankly. Finally Rex shrugged and grabbed two more cookies for the road.

"I don't know," he said, waving a dismissive hand. "It just reminds me of that, okay?"

Befuddled, the teachers made their way out the door to the sugared-up students and their Christmas break.

# “Compromise in Governance?”



Clarence Joldersma

**Clarence Joldersma**, assistant professor of education at Calvin College, Grand Rapids, Mich., has asked a five-member panel a question about Reformed perspective. The panel consists of:

**Pam Adams**, assistant professor of education at Dordt College, Sioux Centre, Iowa;

**Lois Brink**, curriculum coordinator and media director at Grand Rapids Christian High School, Grand Rapids, Mich.;

**Johanna Campbell**, executive director of the Christian Teachers Association of British Columbia, Langley, B.C.;

**Tim Hoeksema**, principal of Holland Christian High School, Holland, Mich.;

**Tony Kamphuis**, history and business teacher at Smithville District Christian High School, Smithville, Ont.

Another governance issue. As our schools grow, we also increase “district staff” to manage and develop funds for our programs. How do these folk, so far removed from the classroom situation, keep in touch with teachers and learning settings? How do they balance the decisions that court donors, that grow programs, and that pay our expenses with small and significant classroom staff?

And what about the servant administrator, caught between demands to have an active agenda and a charismatic leadership style, so appealing to our society, on the one hand, and to be a reflective educator, servant, and caring supporter to staff and students, on the other. How can such an administrator develop a community of shalom as envisioned in *A Vision with a Task*?

What kind of governance does our Reformed perspective support? Is it first of all relational, covenanting, serving? (What does the Lord require?) Is this naive? Is it possible?

Should we be asking: What virtues are most important in each role?

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## Clarence Joldersma:

*How does our Reformed Christian perspective affect the governance, business management, and development of our schools?*

## Lois Brink:

As I think about our Reformed view, I have more questions than answers about school governance. In West Michigan, we are faced with a number of political funding issues that challenge our control of the schools. One is about making use of “shared time teachers” from the public school in our Christian classrooms. This free teaching staff allows us to expand our academic program. Some would say that this option is important because it leads to good stewardship of our funds. But what about our covenant with parents and students? These teachers are not able to keep our promises to ourselves and our parents about transmitting a Christian world and life view in the classroom.



## Tim Hoeksema:

Lois gives us plenty to think about. The shared time issue is extremely interesting. Early on, the Christian schools that chose to be a part of it were quite roundly criticized. Now, as dollars have tightened, the early critics have become full participants in the program. They all have some pangs about participating, but the opportunity seems too great to pass up. I’m glad I’m just a principal and don’t have to make those big superintendent decisions!



The voucher plans and proposals being bandied about are also interesting and have some connection to our Reformed perspective. What do we give up to get government money? How much compromise is there or will there be? The Canadian experience on this issue is longer and maybe more instructive. And then there is **MARKETING**. I’m not sure how that relates to our Reformed world view, but it seems a necessity if Christ-centered education will remain viable and affordable in the future. Like Lois, I have far more questions than answers.



### **Pam Adams:**

Both Lois and Tim bring up the issue of vouchers and fear of state intervention. Public education is one of the few monopolies in North America. School choice advocates want to give back to parents the responsibility for educating their children. They want the freedom to choose from a range of options. They are asking for a pluralistic system of education over a majoritarian one. I think we can wisely look to Jim Skillen and the Center for Public Justice (CPJ) for an informed, Reformed voice on this issue.



The Center argues that parents have primary responsibility for educating their children rather than the state. The "savage inequalities" in our educational system cannot be ignored when we see what is happening to many inner city schools. When we think of vouchers, we Reformed Christians need to look outside our own needs to see the alarming need of so many poor children in our nations. I am pleased with Christian Schools International's new initiative to help struggling schools both in North America and around the world and the involvement of CPJ with similar types of schools.

When considering an equitable choice system, Richard A. Baer, Jr., a professor at Cornell University, suggests that vouchers be inversely adjusted to family income (Skillen, 1993). In Iowa where the average cost of education is about \$4,500, a poor family might receive a voucher of \$7,000 to allow this family power to bid for their child's education. A middle class family might receive only \$2,500 requiring personal contribution to tuition. Children with handicapping conditions would receive larger vouchers to reflect the greater expense their education entails. These vouchers should be given to parents and not directly to schools. Voucher money should cover transportation, books, and uniform expenses because these expenses might hinder the poor from being able to participate in choice.

The call for vouchers does not mean that non-government school supporters should be looking primarily for a hand-out or a way to make their lives easier. All of us bear the responsibility for educating American youth in an equitable manner.

### **Johanna Campbell:**

As I read the original question, I immediately think of the Christian schools in British Columbia, in which many denominations are represented. The SCSBC schools did begin as a result of a Reformed perspective, but to use the word "Reformed" while talking to parents would exclude many. I prefer using the words "biblical perspective," even though I do believe the Reformed perspective has greatly influenced "our" schools. Maybe an excellent topic would be to define "Reformed perspective" because I see that it means many different things to many parents and principals. Even being in the US or Canada will make a difference as to how that phrase is defined.



As I search the Scriptures, I see that our Lord certainly taught us to serve one another in love as opposed to "lord-ing" it over one another. That is why I see a system of checks and balances in our schools, one in which each body, board or committee seeks to serve, admonish, build up, strengthen the other. I like Lois' three words: relationship, covenant and service. As a result of this submitting to one another, we strive to build community and relationships, where all serve to build up the body and so glorify the Giver of the Body. And so I see Boards, principals, teachers and students striving, by the grace of God, to govern for the benefit of all, using their gifts (of money or whatever else) to share the burdens of running a Christian school to the glory of God.

### **Tony Kamphuis:**

Johanna gives us an important reminder about being "Reformed." However, let me raise a further general point. In terms of finance, it seems to me we can acknowledge the legitimate interest of the State in the proper functioning of our Christian schools. The State also, because of the system we have at present, needs to assume some responsibility for allowing parents and guardians the opportunity to have real choice in the education of their charges.



Christian schools don't provide real choice anymore if they no longer have the authority to admit whom they will, hire whom they will, or teach (within the "reasonable parameters" of the State's interest — a literate populace) what they will. Schools that sacrifice control of their affairs in those areas say, in effect, that their perspective has nothing to do with those areas. That would be a troubling admission.

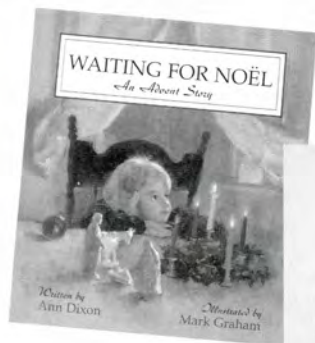
In terms of governance, I wonder what Joanna means by saying "Boards, principals, teachers and students striving, by the grace of God, to govern for the benefit of all ...." That seems to cloud things in terms of who is responsible for which roles in our schools. To me, the Board governs while the staff implements. When the Board tries to implement things directly, we end up with the awkwardness of group micro-management. When the staff tries to govern, we end up with a group only indirectly responsible to the membership trying to steer the ship. I think the traditional style of governance used by most Christian schools in Ontario, Canada, burns out some very visionary school members who would otherwise be

exactly those you would want on your Board. Some form of the Carver Model (which I understand is more common in US schools) looks to avoid those difficulties.

#### Lois Brink:

The issue of board governance is one that we struggle with as well. Particularly, we struggle to articulate the role of the school board in schools where there is a district superintendent and staff or a school where there are several building administrators. The parent board brings advice and perspective to these administrators and takes back to the school community an understanding of issues and decisions. This group is involved in the governance of the school in a less than authoritative leadership role, and that role sometimes feels insignificant to board members. But I see this role of communication and reflective understanding as being critical to the "power sharing with parents" and supportive of our learning community. Is this Reformed? Certainly this kind of governance provides a servant role for all involved.

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# Green Grass, Flesh as Grass and the Work of Our Hands

by David Schelhaas

*David Schelhaas is a professor of English at Dordt College in Sioux Center, Iowa.*

In his well-known essay "On Fairy Stories," J. R. R. Tolkien writes: "The human mind, endowed with the powers of generalization and abstraction, sees not only *green grass*, discriminating it from other things (and finding it fair to look upon), but sees that it is *green* as well as being *grass*. But how powerful, how stimulating to the very faculty that produced it, was the invention of the adjective: no spell or incantation in Faerie is more potent."

When I first read this some years ago, it hit me full force between my brown eyes. It is a statement that is at once patently obvious and amazingly profound. Tolkien in his praise of the adjective calls our attention to something we all know. When we talk and write, we use these words that bring color and shape and fragrance and texture and hundreds of other qualities to our minds. We use adjectives.

Adjectives are so much a part of us, so much a part of being human, that we can't even imagine a world with only nouns and verbs. Yet how barren our language and our lives would be without adjectives. What a gift it is that we may not only lie down in pastures but that we may recognize them as *green* pastures. How trivial and limiting to say that an adjective is merely a modifier, something that changes a noun slightly. Call it, rather, a transformer. That pasture is not merely pasture – it is fresh, lively, lovely, luxu-

riant, verdant, rich, nourishing, fruitful, fragrant, pleasant, wholesome; it is, in short, green.

Does a sheep see a *green* pasture? I doubt it. I don't mean that he is color blind – though he may be. What I mean is that I do not think he is able to separate *green* from pasture. As far as we know, a sheep does not have the human capacity for generalization



and abstraction. Nor does he have a language that even remotely resembles human language. The adjective *green* is as incomprehensible to a sheep as the doctrine of predestination. Only humans, with their innate capacity for language, can lie down in *green* pastures. We ought to acknowledge that, occasionally take off our shoes, and recognize that the *green* pasture we stand in is holy ground.

## Name-giving task

In "On Fairy Stories," Tolkien moves from his praise of the adjec-

tive to suggest that incantations in faerie land are not that much different from adjectives in the real world. "The mind that thought of *light*, *heavy*, *gray*, *yellow*, *still*, *swift* also conceived of magic that would make heavy things light," that could take the green from the grass and make it a deadly green upon a man's face. He is speaking of imaginative writing, of humans as myth makers and writers of fantasies. He calls people who make up stories and myths sub-creators.

We Reformed Christians might be a bit uneasy with Tolkien's word, "sub-creator," but we ought to be completely at ease with the idea of humans as makers of metaphors and poems and stories. After all, the very first task our Creator God gave to Adam was the naming of his creatures. Adam's task was not one of scientific categorizing; he had to "make up" names for these creatures. We read in Genesis 2, "He [God] brought them to the man to see what he would name them; and whatever the man called each living creature, that was its name." What a remarkable picture. Can you picture our Creator God standing off to the side, eagerly and curiously watching and musing as Adam gets to work: "Oh, *skunk*, good. *Hippopotamus*, perfect. *Yellow-bellied Sap-Sucker*, well, a bit of a mouthful, but accurate."

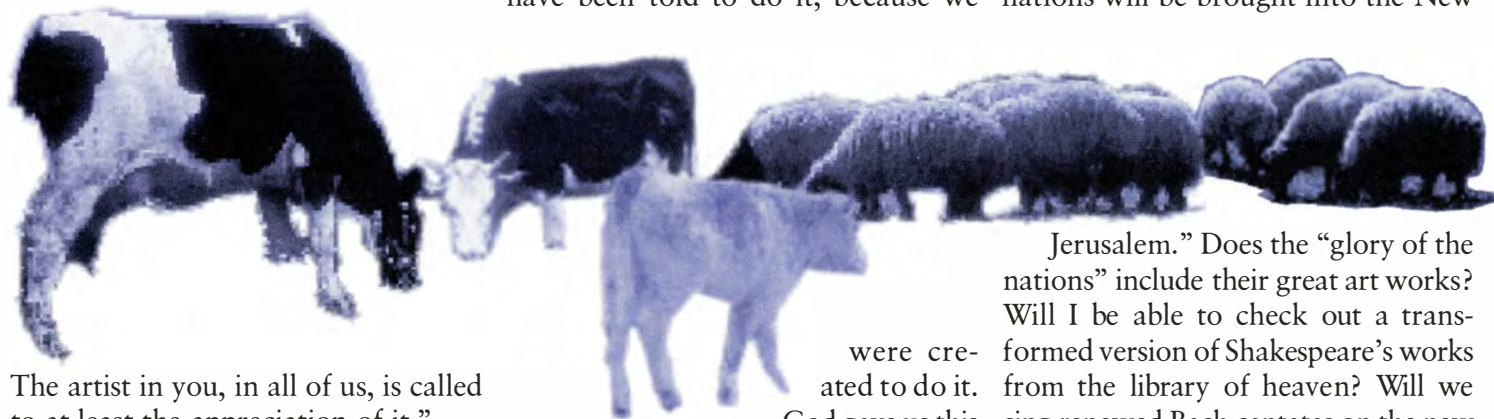
In a sense, all language is metaphor – words that stand for things. We say *giraffe* and the word becomes a substitute for the long-legged, long-necked creature eating leaves from a

eucalyptus tree. And so, in giving names to the creatures, Adam was making metaphor. In a slightly more poetic sense, the Psalmist who wrote "God is my Shepherd" used metaphor in an attempt to name something about the nature of God. In a 1948 *Banner* article, Dr. Henry Zylstra says: "Words are poems really. This name-giving is artistic work. Adam was called to it.

stronger than factual truth.

From the very beginning, one of the primary human tasks has been to "name" the things of the earth, not only the creatures, but the events and the thoughts and the feelings of living in creation — our deepest hopes and joys and fears and sorrows. We do it to give praise to our creator God. We do it out of obedience, because we have been told to do it, because we

that if the naming of things in the first Eden was important, it will be equally important in the second Eden. However, until now I have never thought much about the possibility that some of the "sub-creations" of humankind — the bridges and buildings and machines and art works -- might also survive in the life to come. Yet in Revelation 21 we read that "the glory of the nations will be brought into the New



The artist in you, in all of us, is called to at least the appreciation of it."

### Metaphors surpass the facts

Now, here's a strange thing about this name-giving and metaphor-making: Sometimes the made-up name, the comparison, while literally false, carries a truth that is stronger than the factual. For example, the Psalmist says, "All flesh is grass." Taken at face value, that simply is not true. After all, our flesh is not green, is not composed primarily of chlorophyll, and is not thin and stalky. Yet "All flesh is grass" is a powerful statement of truth about the human condition. Like grass, we will all fade, die, decompose and return to the earth. Some Bible translations say, "All flesh is mortal" and while that seems more literally true, for me it lacks the power, the vividness, the immediacy of "All flesh is grass." The same can be said for fiction. These made-up stories — though they are not literally true — if they are done well, can speak to us with a power that is

were created to do it. God gave us this

capacity to put nouns and verbs and adjectives and adverbs together in ways that enable us to praise him.

### Enjoy fiction forever?

Zylstra concludes his essay with the hope that Christians who read novels may "discover God and life" in them "so that [they] may enjoy him forever." He is, of course, echoing the answer to the first question of the Westminster Confession. But I wonder if he is suggesting as well that the perceptive reading of great literature can contribute to one's eternal delight. And if the reading of literature has eternal consequences, is it possible that some literary works themselves, transformed and renewed by the refining fire of Judgment Day, may become eternal?

I have frequently professed my belief that the natural creation -- soil and waterways and creatures and plants -- would not be destroyed on Judgment Day, but renewed; I have thought also

Jerusalem." Does the "glory of the nations" include their great art works? Will I be able to check out a transformed version of Shakespeare's works from the library of heaven? Will we sing renewed Bach cantatas on the new earth?

How all of this will unfold in the new heaven and earth boggles the mind. It will, I think, remain mystery until that day. So I will wait. Eagerly and curiously. And while I wait I will try to do good work -- in my garden, in the classroom, at my computer.

Psalm 90 is virtually a hymn to the transience of humans and their endeavors: "You turn men to dust.... They are like the new grass of the morning ... by evening it is cut down and withered.... The length of our days is seventy years, or eighty." Yet in spite of all this dust and death and withering, the poem ends with a prayer for permanence: "Establish the work of our hands for us — yes, establish the work of our hands."

It is a fitting prayer with which to end this meandering reflection about language and literature in this world and the world to come.



# Multimedia

## — a Multitude of Learning Opportunities



by Jasper Hoogendam

*Jasper Hoogendam is a teacher at Knox Christian School in Bowmanville, Ontario, and the Ontario Alliance of Christian Schools Master Teacher for Computer Use.*

As a classroom teacher, I strive to reach each of my students, with their various learning styles and diverse areas of interest. I do not expect my classroom activities to be as engaging as the latest *Nintendo* game. I readily admit I don't have the same charisma as their cultural heroes. While I try to ignore these competing interests, I hope that my students will gain some appreciation for the human ingenuity of modern bridge designs or will come to understand the forces which shaped and influenced the lives of the Protestant reformers.

To capture the students' interests in our classroom topics, I must compete by making the learning experience both engaging and challenging. To succeed I need to communicate in the "language" our students speak. While we as adults can get excited about the most recently published novel, we realize our students speak a different "language" when we overhear them express excitement about the latest CD release of *Age of the Empire*, which can be played over the Internet with several trends at the same time.

### In tune with mission

To help you meet the challenge, I pose the question: Is multimedia authoring part of your teaching future? Are you wondering what it is?

Are you avoiding it with fear or distaste or embracing it with joy?

I challenge you, when you are considering multimedia authoring software for your classroom, to examine a school mission statement similar to one published by the Ontario Alliance of Christian Schools: "The mission of the elementary Christian school is nurturing the habits of the Christian and in an interactive environment sensitive to the needs of the whole child" (*Using Computers to Learn*, p. 2).

We need to find out how a powerful tool such as multimedia authoring can further the aims of educating the whole child. At the same time we must realize that "computer technology should be used only if it helps the school to better achieve its goals" (*Ibid*, p. 6). It is easy to become mesmerized with the technology and find excuses to use it. We do not want to be part of what Jamieson McKenzie calls "a boondoggle of enormous proportions" as he laments the gold mine which schools have spent on hardware and software without the staff training to make effective use of the learning opportunity computers afford (<http://fno.org/mar98/flotilla.html>). Just because students love working with computers and are motivated by their presence, that is not reason enough to use them in the classroom.

When we approach the use of multimedia authoring tools as another part of God's creation, whether it is developed by Christians or non-Christians, we can approach it with a clearer purpose. "For everything God

created is good, and nothing is to be rejected if it is received with thanksgiving, because it is sanctified by the word of God and prayer" (I Timothy 4:4). This requires prayerful work as we explore software titles like *Hyperstudio* by Roger Wagner (reviewed below).

### Learning styles

Multimedia authoring potentially has much to offer if we accept the generalization that "schools, by and large, emphasized the numerical, logical, scientific, and verbal modes of knowing. Regrettably, that means they have often neglected other modes such as the interpersonal and aesthetic one" (Van Brummelen, p.105). By using multimedia authoring as a learning and teaching tool, we will definitely meet the needs of many students who do not fit as well in this predominate type of classroom learning. At the same time, we challenge students who are comfortable with the prevailing classroom learning mode to expand their understanding.

When we examine Howard Gardner's ideas on multiple intelligences, we readily identify several intelligences that dovetail with the use of multimedia authoring, the use of which creates an engaging vehicle for communication. Recognizing that "students experience life in a multi-sensory way, the computer technology opens new ways of conveying the multi-sensory nature of their experiences and learning" (*Using Computers to Learn*, p.10). The various media – text, sound, graphics, anima-



tion, video – although they do not employ all five senses – do give students the opportunity to develop a number of different modes of knowing or intelligences. The following are identified by Gardner: linguistic – reading and telling stories; spatial –

thinking in images and pictures; musical – appreciating the message conveyed through sounds, both musical and otherwise; interpersonal – being a leader among peers as well as communicating feelings and motives. All these intelligences have a way of being engaged while students participate in multimedia authoring.

Multimedia projects lend themselves to developing a community of learners and, because they tend to be major undertakings with topics too broad for one person to complete, the use of them requires cooperative learning skills on the part of the students (*Using Computers to Learn*, p.110). However, small projects are also possible, and worthwhile.

### Steps to take

The different phases of a project can illustrate how computer activity lends itself to cooperative group effort.

#### Webbing:

When a topic is first selected it is helpful to brainstorm or conduct a webbing activity. The ideas which relate to the topic are suggested and organized according to how they might flow from one to the other.

#### Defining limits:

The project needs to be limited to ideas and questions relevant to the chosen topic. Discard the irrelevant.

#### Locating information:

Sources of information need to be identified. This could include interviews with specialists, Internet resources, electronic encyclopedia and print material.

#### Delegating responsibility:

If the topic is tackled by a group, each student should take responsibility for part of the web of ideas.

#### Collecting and organizing:

As information is found, pictures are saved to disk, and notes are typed with a word processor. Then the information must be organized in a manner which helps answer the main questions of the project.

#### Mapping the presentation:

A flow chart is developed to identify what information, sounds, graphics, text or animation goes on each card of the presentation. The links between the cards need to be determined.

#### Executing the presentation:

The cards need to be assembled. The graphics, text, sound clips and other information must be organized in a manner which helps explain the topic.

#### Presenting:

The finished presentation may be shared with a group of students, a whole class or put on the school network for students to peruse on their own.

As the full process requires students to use many different skills, both technical and social, it becomes evident that many different modes of learning are being used. It is important that the teacher monitors the whole undertaking and teaches additional lessons to help students acquire the skills that appear to be lacking.

### Conclusion

Students find multimedia authoring programs an engaging way to learn. They enjoy the challenge of the me-

### Sample project

A multimedia project engaging students in several modes of learning.

As part of studying the topic "Simple Machines," my students at Knox Christian School in Bowmanville, ON, were engaged first of all in learning six principles associated with tools and other simple machines. After learning about the three types of levers, single, double and moveable pulleys, inclined planes, wheel and axle, the screw and the wedge, they went about making their own "invention" with at least two moving parts. The inventions were displayed as part of a hands-on demonstration. The inventions were also packaged or wrapped as part of the study of "Packaging." Once the inventions were completed, students created a multimedia presentation of their invention using "Hyperstudio" by Roger Wager. The presentation included a title card identifying the inventor and the name of the invention. The second card included a description of the invention and how it works. A third card gave an explanation of the principle of simple machines which was used to work the invention. A fourth card included either a drawing of the invention or a scanned photo of the invention. Each student's work was linked to a class index page. Students could view each other's work anywhere on the network by following the links on the index page.





dia, the seemingly limitless possibilities, the satisfying results which can be presented in a “language” they speak, and they are exhilarated by the power they have to create, form and mold this digital media.

As teachers use this media, they will no longer feel as if they are at a disadvantage in trying to compete with video games and other cultural icons which many students find very important.

Furthermore, the teachers who have students working with multimedia presentations find that their work is superior in several ways. Students who use them have a strong sense of organization, how information is linked and ordered. They are particular about the appearance of each card — both the placement of the graphics and the text. And, finally, those students are better able to talk about their work and answer questions posed by their peers.

### References:

1. Ontario Alliance of Christian School. 1999. *Using Computers to Learn*. Ancaster, Ont.
2. Harro Van Brummelen. 1994. *Steppingstones to Curriculum*. Seattle, Washington: Alta Vista College Press.
3. Howard Gardner. 1993. *Multiple Intelligences — the Theory in Practice*. New York, N.Y.: Harper Collins Publisher.

### Hyperstudio CD Review

by Jasper Hoogendam

Hyperstudio by Roger Wagner. A MAC and Windows hybrid CD. El-Cajon, Cal.: CCT Core Curriculum Technologies. \$50.00 per copy. [Http://www.hyperstudio.com](http://www.hyperstudio.com).

“Hyperstudio” is a multimedia authoring program designed for elementary and high school use. A simple example of one of many uses is a poem project. The poem is composed by the student and presented in text form with a choice of font, size and color. The poem is enhanced with the use of graphics drawn by the student or imported from another source. The poem can be enjoyed more by having the student record the poem with a microphone. Such a poem becomes a multimedia experience for the viewer.

The tools used in the example are just part of the capabilities students have when they use “Hyperstudio.” Students can also import video clips, digital photos and prerecorded music and sounds. With the variety of tools included in this software, the learning and presenting possibilities for students are limited only by one’s imagination.

A project designed using “Hyperstudio” is organized into cards (one screen view) which are grouped into a stack (a file of cards). To move from one card to another card the student must create a link or a button. A card may have more than one button, giving the viewer or reader a choice as they explore the topic. Buttons can also be designed to automatically link the viewer to an Internet site. While basic projects can be carried out with relative ease, there are many challenging projects to motivate older and more capable students.

This software can function as a learning tool in two ways: firstly, students learn by planning, researching and organizing their information; and, secondly, students learn by viewing the completed projects.

About

# Prayer Rugs *and* Evil Spirits

by Frank DeVries

*Frank DeVries is a retired Christian school principal who lives in Nanaimo, B.C.*

When Celia and I married in May of 1953, neither of us had ever heard about a “honeymoon.” We were very much in love, and all that mattered to us at the time was being together in our own cozy rented apartment. We forgot about what we would have perceived as extraneous hoopla. If anything, on the morning following the wedding ceremonies, our honeymoon consisted of walking from Murphy Road in Sarnia, Ontario, to Christina Street downtown for a coffee and a donut. Even if we had been aware of “honeymoons” in those early days after emigrating from the Netherlands, financially there would have been no opportunity whatsoever for any kind of romantic get-away to some far-off tropical isle.

However, in the late eighties and early nineties of the previous millennium, an opportunity for exotic travel presented itself. Teachers from across the province of British Columbia were invited to apply for government grants which would enable them to visit any Pacific Rim country of their choice. This opportunity was offered to provide cultural enrichment for teachers for use in classroom teaching. After viewing the options, I chose Malaysia. It was with considerable alacrity that I applied. When some few weeks later I learned that my application had been approved and that two-thirds of my total trip expenses

would be funded by the government, my mouth started to water just thinking about street hawkers selling various kinds of sate, and market stalls offering the real Nasi and Bahmi Goreng.

I made a beeline to the bank in order to secure for myself a line of credit sufficient to cover the expense for an additional globe trotter: after many years I was going to take Celia, now a pre-school teacher and childcare worker in her own right, on a belated honeymoon!

Originally the trip was scheduled for a group of 42 teachers. But upon learning that part of the trip would consist of traveling in dug-out canoes into the interior of Borneo and sleeping overnight in a Dayak longhouse (the Dayak people were the former headhunters of Borneo), 30 teachers changed their minds. They chose other destinations, leaving only 12 provincial teachers to make this trip, with Celia and I being the only Christian school teachers.

## Traditional and strict

The flight down was relatively uneventful, though long — 23 hours to Singapore, with only a brief stopover in Seoul. After a restful night in a plush Singapore hotel, we took a morning flight out to Kota Kinabalu on the island of Borneo, our destination. During our three-week stay we visited the two Malaysian provinces there, Sabah and Sarawak. We saw many towns and cities, places, shrines, mosques, temples, beaches, plantations, markets and other sights too

numerous to mention. It would be an immense task to try to describe in any detail all we saw and experienced. However, we being teachers, schools were, of course, of paramount interest to us, and we visited many of them. One of these was the Sekolah Alam Shah, an Islamic secondary school.

We were warmly greeted by the staff, all of whom spoke English. The school was one with a student body of well over 700 students, 98 per cent of whom were Muslims. They were taught by 47 teachers, most of them female, with 30 support staff. The curriculum emphasized the traditional three Rs, classrooms were spartan in nature, and the school library was only sparsely supplied with what seemed to us truly ancient books. Soon we learned that besides the language of the land, Bahasa Malaysian, all students were required to study two additional languages. One of these had to be English, the other either Arabic, Japanese or French. As a result, all graduates of the school will know three languages. On Fridays, the Muslim “Sunday,” all students wear black hats. It was of interest to see a number of rooms with prayer rugs neatly laid out on the floor for student use four times daily. Yet, in a later interview with the deputy minister of education, in response to a question, it was equally interesting to hear that the Islamic religion is just a subject in the school, and has no bearing on any of the other subjects that are taught.

To give you a “feel” of the place, the following announcement by the principal, which I will reproduce ver-





*The playground: reddish clay-like mud without any playground equipment*

batim, will be helpful:

"Smoking is prohibited and recognized as breaking the school rules. Anyone caught can/will undergo a severe corporal punishment or be suspended. If any student notice signs of someone smoking (e.g., smell, cigarette butts) in places like toilets or staircases, please report the matter immediately to the party concerned (prefects, teachers)."

### **Large classes**

One of the several elementary schools we visited was the one serving the children of Menkabong, a fishing village, located about 30 kilometers south of Kota Kinebalu, in the northwestern tip of the province of Sabah. Before entering the school, we

were warned by our guide under no circumstances to point with a finger to any of the children.

When we arrived, the first thing we saw was the playground, which, to our spoiled western minds, was hardly deserving of the name. Imagine a bare, undulating field of reddish, clay-like mud without any playground equipment, some bushes on the sides, with at the far end a small covered play area, protected from rain by the ever-present sheets (in South East Asia) of rusted corrugated iron. One could only imagine what the place would look like after one of the frequent cloudbursts during the wet season.

Right beside the school, with downspouts running into the building, was a metal structure upon which were

fastened two large holding tanks — their source of fresh water. Inside, the building was immaculately clean, and all children here were neatly dressed in school "uniform," consisting of white tops, black skirts or shorts and, difficult to believe, sparkling, clean white shoes. Whenever we entered classrooms, the children stood. Here, too, besides Bahasa Malaysian, the learning of English as a second language was mandatory. We were always greeted with a friendly, "Hello, teachers from Canada."

Classes were large, with often as many as 50 or 60 children per room seated at long tables, or, as in the primary classes, on woven mats on the floor. Many of the children in the higher grades had beside them on the

table a vacuum bottle filled with water, from which now and then they would take a sip. In front of the class was a blackboard with above it a number of words in the Malaysian or English language. All children had a pencil and a workbook. There was no evidence of extra books, artwork, charts or maps on the wall.

### Few tools

Before we left Canada, we had already been told that lack of educational materials would likely be the case in this Third-World country, and it had been suggested to us that if we so wished we could take along some modest school supplies for the children. This we had taken to heart, and all of us came loaded with pens, pencils, erasers, rulers, and a large variety of other items for use in the school. In addition, we passed out balloons, and many British Columbian and Canadian pins and flags. We spent a fair bit of time speaking with the children and looking at their work. Invariably, all children were most polite and helpful, and communication was easy and pleasant.

We met with the staff in a dark, sparsely furnished staff room. Here we were informed that during times of teacher shortages, or when there were larger than expected enrollments, teachers were required to perform double duty. During such times, two different classes would be held consecutively, with the teacher having to teach two sessions, thus doubling their teaching time. As well, teachers could be sent out anywhere



*Pre-school kids run up and down ladders with break-neck speed.*

in the province without having any say in the matter. When so ordained, they simply had to move or lose their job. Upon inquiry, we also learned that Malaysian children who are born with mental or physical handicaps are spirited away by the government into private, state-run schools to receive special education. They are never seen in public. We were told that the main reason for this is the “shame” that is attached to having given birth to a child that isn’t “normal.”

### No land tax

After our visit to the school we went to the Menkabong village itself. Whereas the school was built on dry land adjacent to it, this village was built on poles set in the tidal flats of the South China Sea and could be reached only via a planked walkway that wound around the 500 or so

houses there. All homes were built on poles made of “ironwood.” We were told that, because of the high density of this wood, these poles stay functional for well over 60 years, even in salt water. Having been built this way solely for the purpose of not having to pay a land tax, these villages can be found along many of Borneo’s shores.

The walkway was about four feet wide, with a pipeline fastened in the center which supplied water for the homes. The piping frequently hampered our walking, but when I later asked someone from the village why it hadn’t been attached to the bottom of the walkway instead of to the top, I got a perfectly sensible answer: in case of a leak it would be difficult to get at for repairs. Since the walkway had frequent gaps and no railing and was, in many places, suspended well



over 20 or 30 feet above the tidal flats, we made our way slowly and gingerly. Not so those who lived there. Even little pre-school kids skipped and ran all over the place at breakneck speeds, running up and down ladders to play in the mud, having a great time doing what kids do best anywhere: play.

The structure of the homes was basic, with most of them having roofs of thatch or corrugated iron. The floor of each house had a hole somewhere, of which residents availed themselves to get rid of all human and other waste matter. This again is washed away twice daily by the great

of Menkabong believe, consists of a community of evil personified in a single head with long entrails dangling from it. This Balang Balang goes from home to home, entering by crawling through the customary smoke vents located on both ends of the roof, and then sucking the amniotic fluid from any pregnant woman's womb, in this way killing both the baby and the mother-to-be. Now in order to prevent this evil entity from entering their homes, the owners take the horns of a water buffalo or, lacking that, two wooden slats, and insert these into the smoke holes in a cross-like fashion. It

is thought that should the Balang Balang then try to enter a home its entrails will get tangled up in the crossed horns or slats, thus preventing it from coming in. Animism runs rampant in Malaysia, flourishing especially in rural areas.

### Need for deliverance

Our trip to Malaysia was a wonderful adventure. Never will we forget the experience of stepping out of an air-conditioned airplane and airport into the sauna-like atmosphere of Singapore, for the first time ever viewing walkways lined by palm trees and sweet-smelling Bougainvillea. Never will we forget floating in the warm waters of the South China Sea, above us stars and constellations we had

never seen; nor will fade from our memory the haunting sounds of the night-time calls to prayer by the *mu-ezzins*, or the cackling calls of the *gekkos*. We will always remember seeing, on many occasions, Buddhists, Hindus, and adherents of Islam, the young as well as the old, with poignant sincerity worship their gods. But perhaps more often than anything else, we still today reflect on the lives of the children of Menkabong village who, after school, have to go home, there to be warned regularly by their parents about the fearsome Balang Balang.

We as God's people are often asked to pray for those who do not know the Lord, for those who live in fear and who are unaware of a Jesus who came to die to set us free from fear, and to give us peace. For Celia and me that need for prayer and spiritual enlightenment took on a new and urgent meaning when we visited the people of Menkabong. The children we visited then are now teenagers and young adults. What has happened to them? Do they, as well as untold others in Malaysia, still live in fear of the scary spirit world they perceive to be all around them?

May God help us find avenues through which, in evermore expanding and in new and exciting ways, we all can be bearers of the Good News to the peoples of the world, to identify and combat pagan spirits, and to help establish his peaceable kingdom everywhere.



*The evil spirit goes from home to home, crawling in through smoke vents*

tidal flush.

But what really startled us was a belief in the Balang Balang. Again our guide, before we entered the village, warned us not to point at anyone, for it is thought by village residents that when a stranger points at them the Balang Balang will flow through that person's finger into the person pointed to.

The Balang Balang, so the people

# Query

*Tena Siebenga-Valstar is a former teacher and principal working on her Ph.D. thesis. If you wish to submit a question for this column, send it to her at 168 Windsor Dr., Fort McMurray, Alberta, T9H 4R2 or e-mail her at: valstar@telusplanet.net*



*Tena Siebenga-Valstar*

## Too Many Labelled IPP?

### Question #1

Individual Program Plans (IPPs) seem to be given so freely these days. Are too many children labeled and given an IPP? Can some of the lack of progress in school be attributed to lack of parental support rather than a learning problem? When I give spelling words, the student doesn't seem to get help at home.

### Response:

An IPP is a written plan to guide the education of a student with disabilities and describes how the educational program is developed, implemented and reviewed. One of the guidelines for IPPs indicated seven essential components: a summary of student strengths and needs; annual individualized outcomes; specific individualized outcomes; recommended services (educational strategies, special materials/equipment, human resources); responsibility areas; review dates; and signatures.

The IPP may include any or all of the following: deletion of curriculum outcomes, same general curriculum at a significantly different and specified outcome level or the addition of new outcomes through the planning process. My experience with an IPP for a student with significant disabilities was that the program planning team (administrator, teacher, teacher's aide, parents and specialists) met to communally determine what would best help the child in his schooling. In this case the parents were intimately involved in the process, and there was definite support from the parents.

One resource suggests that parents answer the following questions: What is your child's history? What is your dream for your child? What is your nightmare? I have not encountered any parents who ultimately did not love

their child and want the best for the child. Usually the response to the last two questions involves a high level of emotion. The cooperative process requiring and involving the parents in the planning would hopefully ensure their continued involvement in the implementation. Should that not be the case, the convener of the team meetings may have to call for more frequent reviews than originally planned.

I have always found that whether one is dealing with academic or behavioral challenges, the frequent team meeting with parents and sometimes with the student certainly maintains a high level of effective communication and results in everyone again focusing on what needs to happen for the greatest benefit to the student. A team meeting and the resulting IPP, or its review, is a constant reminder that teachers cannot do the task alone; all share in the responsibility of educating the child.

Are too many children labeled and given IPPs? I believe we are far more aware of learning challenges today than we were some years ago and more equipped to handle them, whether that be through knowledge of a specific syndrome or learning situation or the availability of resources.

## Monitor the Special Needs Child

### Question #2

Why do students who have Individual Program Plans have to write the achievement tests? We already know these students are not at grade level.

### Response:

As indicated in the previous response, an Individual Program Plan is a written plan to guide the education of a student with disabilities and describes how the educational program is developed, implemented, and reviewed. By achievement tests I understand you to mean the standardized tests issued by a state or provincial Department of Education to establish and maintain standards, to monitor students' gain over time, and to assist in improv-



ing the quality of education for students. Although there is much controversy regarding standardized tests, if these are to improve schools and help children, then there must be an assurance that the standards are appropriate, the tests fair, and the implementation reasonable.

Alberta Education indicates that although the testing situation should be standardized as much as possible, individual students' needs should also be given consideration. If it is documented in the Individual Program Plan that a student requires special provisions for taking a test, these provisions will be granted, provided a request is submitted at the appropriate time to the superintendent. Special provisions available include: visually impaired student using audiotape version of the test; learning or physically disabled student using audiotape version of the test; additional writing time; scribe; large print version; braille version; reader; sign language interpreter; and taped response. Students may use a computer if they desire.

These are provisions granted by the Alberta Department of Education, but I would think that similar provisions would be granted by other departments of education. If these provisions did not meet the needs of the child for whom you have concerns, I suggest you contact (in this order) your IPP team convener, principal, superintendent and, if necessary, the Department of Education representative.

If achievement tests truly are meant to monitor the student's gain over time, you should be able to see the maintenance of, increase, or decrease in student ability over a number of years. From this the team should be able to continue, or revise what they are doing with the student.

the parents talk about the teachers in a negative way. What do I do?

### **Response:**

You appear to have a rather unpleasant situation – certainly one where the love of Christ is not coloring actions. Christ's first and greatest commandment to us is to love God above all and our neighbor as ourselves. Keep that foremost in your mind. I suggest that you listen carefully to what the student is saying, but only if it is said with the intention that you hear it. If something is said to you by the student or if another student asks for clarification, respond truthfully and factually. There are, however, situations that are not the student's concern and you can also indicate that. One must pray for and use much judgment in dealing with a situation such as this.

Depending on the nature of the comment, it is at times best to ignore it. If, however, the situation persists and affects the classroom atmosphere, you may clearly indicate that out of love and concern for others, the topic will not be part of your classroom. You may consider speaking privately to the student, and the involvement of the principal might become necessary. If all of the children from one family are speaking in this manner, the principal may decide to talk with the parent, citing specific situations.

When a student belittles another student or shows disrespect to a fellow classmate, the teacher has the responsibility to teach the student that all are worthy of love and respect. Because we are made in the image of God, we are dishonoring the image of God when we show disrespect for our neighbor. Students should be given opportunity to discuss how they can build one another up, rather than tear one another down. I would expect that your school has a policy or guideline to deal with a situation where a student shows blatant disrespect for the teacher.

It is unfortunate if this situation has gone on for some time. It is best to deal with a situation such as this when it begins, when there is still an opportunity to deal with the conflict and seek reconciliation. Too often lack of communication or poor communication causes a little incident to grow rapidly.

## **Talking Out of Home**

### **Question #3**

I have some students who appear to be "big tattletales." The moms are telling their kids too much in terms of what they do not like about the teachers, other students, and the school in general. The way I see it is this — some kids are responding to teachers in a negative way because

# Readers' Response

## Reducing Order to



I would like to comment on the sentence or two that appears in the October issue of the CEJ, in the article entitled "Seeking Order in Chaos." William Boerman-Cornell and Jeffrey De Vries assert, "As literary critics both Christian and secular are quick to point out, authorial intention is beside the point. It does not matter what the writer intended to say; it only matters what he, in fact, did say" (p. 3).

Book VI of Homer's *Iliad* includes the episode of Hektor, arrayed in full battle gear, including his great bronze helmet with a horsehair plume, encountering his young son and reaching out to take him into his arms. The child, not recognizing his father, recoils in fear and runs in panic to his nurse. Whereupon Hektor removes his helmet, immediately mollifying the child.

The reader has no difficulty reaching back in time over 2000 years to appreciate this poignant scene. Similarly, Moliere used to read his plays to his servant woman, having discovered that her responses were a reliable guide to the responses of his audience.

But the French linguist/philosopher Jacques Derrida has tried to teach us that language is unstable, that we cannot really know what authors intend, and that a literary composition can do little more than challenge the reader to apply his own meanings to the print before him or her. I have heard papers read at the MLA and other conferences which asserted that what Shakespeare declares in his play *Henry V* is that "Imperialism stinks," that every line of Prince Hal in *Henry IV* is fraught with double meanings, and that Hamlet means just the opposite of what he actually says. I like to think that my protests spoke for most of the people in the room.

But this point of view has now entered the pages of the CEJ. It is not surprising, probably, but the assertion must not go uncontested. The example of Tagore's poem, approximating sentiments of some Psalms, does require some sophistication by way of explanation. If we believe that God has imprinted on our consciousness a sense of his divinity, it should not surprise us that people respond in this way. I wrestled with Tagore in a graduate course, and, though it is true that he sometimes stands on tiptoe reaching for high truths, his work as a whole (and at some

level one must deal with the whole body of his work) does not speak for the God of our faith. Whether God derives pleasure from those instances is for him to decide.

Seek and find

It is true that a literary work derives its life from a cultural and social milieu, and that, although we can reconstruct that milieu in large part, we can never do so with perfect accuracy. But only a failure of nerve can prevent us from agreeing about the basic intent of an author's work. Virgil makes it very explicit that he is writing a literary constitution for the Roman Empire. Dante tells us that his purpose is evangelical — to turn the hearts of his readers from the path that leads to destruction to the path that leads to life. George Eliot's program was to demonstrate that people can be good without God. And Solzhenitsyn set out to challenge the Communist version of history and to inform his countrymen of the heinous crimes being committed against Russian citizens to further the socialist cause. Can you imagine a conversation between him and Derrida, as the latter tries to play his games with this literary prophet? Flannery O'Connor has it right: "The novelist renders his vision so that it can be transferred, as nearly whole as possible, to the reader."

Let us not go gently into the murky paths of deconstructionism. The price for not acknowledging the author's purpose — and to discern that purpose is usually not as difficult as these practitioners assert — is to lose sight of the deeper currents of the work — the spiritual realities, and affirmations, and humanizing purpose which animate the novel or play.

Reading and writing are communal enterprises. They cannot function without reciprocal faith in the possibility of communication. The opening words of John's gospel surely have some bearing on the high calling of language and language arts: "In the beginning was the Word, and the Word was with God, and the Word was God." Equipped with such a manifesto, maybe it's time for someone to launch a post-deconstruction period. Who will lead the way?

Steve I. Van Der Weele  
Grand Rapids, Michigan



# Thinking Thirteen

## And I Will Fill It

by Nancy Knol

*Nancy Knol teaches English and religion at Grand Rapids Christian High. She has spent most of her teaching career in middle school and is co-author of the book Reaching and Teaching Young Adolescents.*

One of my most vivid memories of all my school years has to be kindergarten. I remember the dark green-black linoleum squares with splashes of white mixed in. I remember the long dark wooden tables with matching chairs. When you pulled yourself up to the table you saw a single drawer before you. I remember eagerly pulling the drawer open the first day. As a result, the first words I can recall my teacher saying to me were strong words of reprimand for disobeying the instructions she had just given regarding opening that drawer. I had been too excited to listen.

One wall of our classroom returns to me now. It held large black and white posters with Bible verses printed on each one. One oversized letter of the alphabet began each verse. I remember in particular the letter "O" with a baby girl perched in a high chair, her mouth a sweet circle of anticipation. A hand came off the edge of the photo, holding a spoon with something — I always thought it was applesauce — for the baby to eat. The verse read: "Open your mouth wide and I will fill it." My sister told me what it said. I couldn't read yet, but I wanted to.

My teacher had written her own Bible story book, and people spoke highly of it and her storytelling prowess. My mother had told me this before I began school, and I was thrilled — I loved stories. But I remember finding the floor hard and the time long as we sat in little rows before her. My mind wandered, and she had to call me back often.

Years later, this same woman — well into her 80s now — was invited to show at our church slides of her trip to the Holy Land. Slide shows have never held much appeal for me, but I came. Something that needed closure drew me. David, a Downs Syndrome adult, came too. Unlike me, he loved these shows. He sat near the front and ran his hand impatiently through his hair until we began. He was full of questions. And suddenly, I saw a connection between David and my eager kindergarten self during the presentation that morning.

The scene from many years back replayed itself in my mind, and I was able to watch myself in David coming before my

teacher. His restlessness disconcerted her. She even told him to "just sit and listen now" at one point. His questions were not part of her agenda. Questions came at the end of the program. Her voice was still strong, no-nonsense, authoritative; this voice alone sent me racing back to that small, active, undisciplined free spirit in that carefully ordered classroom. "Open your mouth, and I will fill it...." But the spoon she offered remained suspended, and I remained hungry.

She was a good teacher. The people gathered there that morning were attentive and interested. But she limited her audience to those who colored inside the lines she drew. And David — and I — failed miserably in that regard. It made me want to look again at how I managed my own middle school classroom. What new lures must I cast out to catch those who missed the first one? Silently I thanked my teacher for successfully offering me a valuable lesson about my own teaching so many years after kindergarten.



Nancy Knol  
Column Editor



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# Book Review

Edwin S. Gaustad, editor. 1997. *Memoirs of the Spirit*: Grand Rapids: Eerdmans. 356 pages.

Reviewed by Steve J. Van Der Weele, Professor of English (emeritus), Calvin College.



Steve J. Van Der Weele

If history, as some have it, is the working out of the religious affirmations of nations, this anthology should be of enormous help to the teacher of American history. In fact, the value of a history text could well be judged by the number of writers of religious autobiography which the author of a history text includes in his narrative.

This book has much to commend it. The editor's helpful introduction prompts us right off to reflect on the dynamic interplay of memory, autobiography (especially religious autobiography), and history. Providing a full-page photograph of almost every contributor is another pleasant amenity. And there is little to quarrel about with Gaustad's choice of selections of religious expression from America's founding to the present. The anthology as a whole reminds us that American religious history is not exhausted by the Puritan experience or the fundamentalist-modernist controversy of the twentieth century.

The book contains selections from four to eight pages each of the religious odysseys of 26 public figures, whose influence has gone beyond the personal. The effect of reading these selections is cumulative; all of them, as the editor explains, show how these odysseys have become part of the fabric of American history.

Whose voices do we hear in this anthology? We begin with seventeenth-century Mary Rowlandson and Puritan Jonathan Edwards and end with our contemporaries -- Billy Graham, Jimmy Carter, William F. Buckley, and Maya Angelou among them. The editor includes Benjamin Rush, "The Patriot" (he gives each individual an identifying title), who incisively diagnoses the limitations of his colleagues' deism, and the frontiersman Peter Cartwright, who relates fascinating stories about his work as a Methodist circuit rider, assignments which sometimes overlapped with the established churches in the town.

Orestes Brownson's account is valuable for several reasons. He ran the gamut of religious options, finally settling on Catholicism. Moreover, he addresses the dynamics of the Americanization of the typical immigrant. Such a person would arrive with the mentality of the oppressed and culturally impoverished. He or she would, however, respond in due time to the heady opportunities which this new land afforded. Other Catholic voices are included as well; Gaustad is generous in his inclusions here. John

Lafarge, editor of the *America* magazine, Dorothy Day (identified as "The Pacifist"), Mary McCarthy (a lapsed Catholic), Thomas Merton, and Richard Rodriguez speak with rich nuances about their struggles with the Catholic hegemony.

Understandably, voices representing minorities are heard loud and clear through the selections. Frederick Douglass, the escaped slave, gets to say, "The slave auctioneer's bell and the church-going bell chime in with each other." A bruised but courageous slave, he cites the glaring contradictions between what the Scriptures call for and the slave holder's religion. Benjamin Mays, spiritual guide of Martin Luther King, makes much the same point, observing that his research disclosed no record of a church voice raised in protest against lynching in the most reputable newspapers of the South published between 1880 and 1910.

The anthology would be incomplete without Black Elk's expression of betrayal by the white man in broken treaties and brutal repression. The voice of a Jehovah Witness is heard, as is the Yogi, the Mormon, and the Buddhist. The Protestant clergymen are the right ones: Harry Emerson Fosdick, Reinhold Niebuhr and Billy Graham. Isaac Mayer Wise speaks for the Jewish Reform Movement.

One may well ask, Do we have here a smorgasbord of religious options? Does the work promote the current notion that spirituality is good because it is inclusive, religion is bad because it is exclusive? The defense against this interpretation, as I have already indicated, is to see the collection as expressing an integral part of American life -- as displaying the main beliefs which have structured the nation's religious life throughout the centuries. No doubt a parallel anthology of Canadian public figures giving expression to their religious odysseys would be quite different.

In any case, at a time when some history textbooks devote more space to results of the Olympic Games than to the Great Awakening of the eighteenth century, this collection serves as a wake-up call for all serious people to acknowledge history as an expression of man's inherently religious nature. It needs to straddle the history and the religion department of the library.



