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—Agnes Wahl Nieman, the benefactor of the Nieman Foundation

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Intelligent Design

In his opening essay, **Dan Fagin**, associate director of New York University's Science and Environmental Reporting Program, plows the common ground beneath the coverage of intelligent design and global warming. Science, he observes, is not "adept at feeding the media's craving for novelty, since the credibility of science depends on meticulous process in which each hypothesis builds incrementally on all the work that has come before. In science, nothing ever really comes out of left field. In journalism, it's our favorite position." Then we move on from his words to articles examining reporting about intelligent design.

In Ohio, where the state board of education ruled that 10th graders must be taught about the "evolution debate," including ideas such as intelligent design, **Jeff Bruce**, editor of the Dayton Daily News, explains the approaches to coverage of this issue on the paper's news and opinion pages and raises a key question about efforts to balance news coverage: "At what point in our efforts to be neutral in our news coverage do we risk becoming misleading?" **Cynthia Tucker**, editorial page editor of The Atlanta Journal-Constitution, speaks to the vital voice this page of the newspaper brings to the debate about this issue in Georgia. "We take credit for helping to turn the tide last year when Georgia's State Superintendent of Schools, Kathy Cox, proposed striking the word 'evolution' from the state's science curriculum because it is a 'controversial buzzword.'" **Diane Carroll**, a reporter for The Kansas City Star, started covering this topic in 1999, on the day when the Kansas Board of Education voted to downplay evolution in the state's public school science standards. Years of experience have taught her that "I.D. proponents tend to be very particular about how their views are presented in news reporting ... the Discovery Institute even set up a Weblog to 'educate' reporters by critiquing their stories."

Diane Winston, the Knight Chair in Media and Religion at the University of Southern California, explores the consequences of reporters' tendency to use the conflict narrative in covering this issue. "If I were an editor," she writes, "I'd ask my reporters to step back and consider how they, as purveyors of this narrative frame, might be embedded in the 'conflict' and its outcome." **Paul R. Gross**, University Professor of Life Sciences, Emeritus, at the University of Virginia, laments journalists' lost opportunities in coverage of a recent Pennsylvania court case in which parents challenged the Dover school board's decision about changing the

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school's ninth grade biology curriculum. "... it is vital," Gross argues, "that journalists make certain that readers, listeners and viewers understand exactly what did and did not happen in the course of the trial, as opposed to relying on 'he said, she said' commentators who know precisely the words to use to skirt some of these key points." **Gailon Totheroh**, science and medical reporter for the Christian Broadcasting Network, suggests that "it might help if reporters started to think about the Dover case as Scopes turned upside down ... [and] explore the ways in which institutional power can now be found in the evolution establishment opposing freedom of thought and speech in the academy." **Martin Redfern**, senior producer of the BBC Radio Science Unit in London, explains that British people regard intelligent design as a religious issue, not a scientific one. With British schools recently given "more freedom to innovate," if efforts are made to bring "religious dogma into the classroom through the back door," Redfern says reporters "will be waiting ... to lift this largely untold story into headline news." ■

Science and Journalism Fail to Connect

‘How can we expect Americans to know anything beyond what they happen to remember from science class? Journalists certainly don’t tell them.’

By Dan Fagin

Evolution is “only a theory.” Global warming is “unproven.” And science itself is “just another opinion.”

Critics of mainstream science seem to be everywhere these days, and we, as journalists, just can’t seem to get enough of them. It’s just about impossible to pick up a newspaper or watch CNN for an hour without being confronted by someone attacking ideas that most scientists think are so settled that they aren’t even worth discussing any more. Meanwhile, the topics that many scientists are working on—the almost daily advances in nanotechnology and genetics, to pick just two—are largely absent from mass-market media coverage. What’s going on?

Nearly 50 years ago, the British physicist and novelist C.P. Snow published his famous “two cultures” essay, which deplores the widening gulf between scientists and their intellectual counterparts in the arts. If Snow was alive today, I think he might have extended his argument to apply to the chasm that now exists between science and just about everyone else in society, including journalists.

No longer seen as the public figures that many were in the days of Albert Einstein and Edward Teller, scientists now are more reluctant than ever to venture out of their ivory towers. Shunning messy public controversies, they tend to communicate only to each other and through the rarified language of peer-reviewed journals. Meanwhile, far below, where the air is thicker, warring special-interest groups hurl slogans and accusations, their every fractious word amplified by media companies struggling to catch the attention of a jaded public, if only for a moment.

A few respected scientists do make it

a priority to speak out on the compelling issues of the day: E.O. Wilson and Richard Dawkins, to name two, though neither has the public profile of his predecessors. And a few mass-market media outlets still cover scientific developments in a sophisticated way: The Economist and The New York Times, to name two, though neither is as comprehensive as it once was. The best coverage, as always, comes from many niche publications, but they reach relatively small audiences. Most consumers of news never hear about the work of contemporary science: the meticulous testing, honing and retesting of hypotheses—the process that ended the Dark Ages and continues to illuminate dark corners of our world.

So we shouldn’t be surprised that about 46 percent of American adults don’t know it takes a year for the earth to orbit the sun, according to a 2004 survey by the National Science Foundation, and that more than half of Americans think the earliest humans lived at the same time as dinosaurs, not 60 million years later. But those errors of fact aren’t nearly as damaging as the widespread ignorance of what “science” is and what it isn’t. Most of us know almost nothing about bedrock scientific ideas such as the importance of being able to replicate an experiment, the meaning of statistical significance, and the use of control groups. According to the same survey, for instance, most Americans wrongly think that it’s better to test a drug by giving it to 1,000 people than to give it to just 500 and compare their health to 500 others who weren’t given the drug. It turns out that most of us not only don’t know science, we don’t even understand why it matters.

How can we expect Americans to know anything beyond what they hap-

pen to remember from science class? Journalists certainly don’t tell them. When is the last time you heard a reporter explain in print or on the air that a scientific hypothesis is elevated to a “theory” only after it is supported by overwhelming observational and experimental evidence and is widely accepted by the scientific community? Sure, evolution is a theory—and so is Mendelian heredity and Newtonian gravitation.

When is the last time you heard a journalist explain that the scientific process is not about “proving” anything? Instead, it’s about constructing a hypothesis, disproving it, and then developing a better one that offers a slightly fuller explanation of the natural world as we experience it. The cycle never stops. Science will never prove, in an absolute sense, that emissions of carbon dioxide from man-made sources are contributing to global warming, but science can show—and has shown—that no other idea comes anywhere nearly as close to explaining what’s happening to our world.

And when is the last time you heard a journalist explain that science’s supposed “weaknesses” are actually its great strengths? Always self-critical, the best scientists freely acknowledge the uncertainties that remain in even the most sophisticated theories. That’s the way science corrects its mistakes, but it is a grave shortcoming in a sound-bite world that prefers brash sloganeering. Nor is science adept at feeding the media’s craving for novelty, since the credibility of science depends on a meticulous process in which each hypothesis builds incrementally on all the work that has come before. In science, nothing ever really comes out of left field. In journalism, it’s our favorite position.

Scientific Reasoning for Journalists

We shouldn't be naive about efforts to bridge the chasm between mass-market journalism and mainstream science. The market forces driving journalism away from serious science coverage are too strong to wish away with a five-point action plan. But surely there are some steps we can take to improve coverage.

For starters, teaching journalists scientific reasoning is vital. We should give that training not only to reporters who are new to science-related beats, but also to those who cover business, politics, culture or work in just about every other corner of the newsroom, and to editors, too. In one way or another, all of those journalists cover science, whether or not they realize it.

Just as importantly, graduate and undergraduate journalism programs must offer, and even require, more science-related courses. Again, the emphasis should be on scientific reasoning, not merely the acquisition of dry facts. At New York University (NYU), I help to run a program that has been training science journalists for 24 years, but I also teach science writing to students

in the general journalism department because we believe that journalists aren't fully prepared to thrive in the professional world unless they know something about statistical analysis and the scientific method.

With this training, our goal should be to give reporters enough confidence to make reasoned judgments about the scientific legitimacy of competing arguments whenever they're doing a story about a controversial issue, whether its global warming, stem cells, intelligent design, or something else. We need to show reporters how and why to resist the journalistic perversion of Newton's third law of motion: For every assertion in a news story, there must be an equal and opposite assertion. Phony "balance" is the bane of science journalism.

And finally, we have to be obsessive about the importance of storytelling, especially in science journalism geared to mass audiences. At NYU's Science and Environmental Reporting Program, even as we teach the subtleties of cutting-edge science, we never stop talking about compelling narrative, clear explanation, and coherent organization. Because if a reporter can't tell a story, it doesn't matter how much science she knows.

In short, we need to do all we can to show reporters how, even within the tight constraints of the sound-bite society, it is possible to cover science stories in ways that do credit to both science and journalism. Once we start doing that, you can bet your Bunsen burners that scientists will start climbing down from those ivory towers, and maybe our readers and viewers won't be quite so quick to assume that all opinions are created equal. ■

*Dan Fagin is an associate professor of journalism at New York University (NYU) and the associate director of NYU's Science and Environmental Reporting Program. Now a writer of books and magazine articles, he was the environmental writer at *Newsday* for 14 years. In 2003, his stories about cancer epidemiology won both of the best-known science journalism prizes in the United States. Last summer, he was a Templeton-Cambridge Fellow in Science and Religion at the University of Cambridge. Fagin is also a former president of the 1,500-member Society of Environmental Journalists.*

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Strengthening the Line Between News and Opinion

A newspaper editor asks, 'At what point in our efforts to be neutral in our news coverage do we risk becoming misleading?'

By Jeff Bruce

As I dropped my son off at school the other day, I spied one of those plastic fish affixed to the back of a sedan in front of me as we sat queued in the parking lot. This one had the word "Truth" inside a big fish devouring a smaller fish labeled "Darwin." It served as an ironic counterpoint to a similar fishy display on my own dashboard, another big fish eating a smaller one with the words "Reality Bites" inside.

Our dueling fish are emblematic of

the debate raging across the country over efforts to instill "intelligent design," or I.D., into public school science curricula. Intelligent design is the controversial challenge to the theory of evolution being pushed by some social conservatives who seek to offer an alternative to Darwinism that is more compatible with the biblical story of creation. Intelligent design advocates argue the universe is so complex it can only be the consequence of an intelligent,

guiding influence. Critics call I.D. mere creationism costumed to sneak past First Amendment prohibitions against church-state commingling.

As this article was being written, the state school board in Kansas was nearing adoption of a plan requiring that opposing views to the theory of evolution be taught. A federal court was hearing an intelligent design lawsuit in Pennsylvania, and in my home state of Ohio, where I am editor of the Dayton

Daily News, the state board of education has already mandated that 10th graders be taught about the “evolution debate,” including competing ideas such as I.D.

I have been especially interested in the Harrisburg, Pennsylvania trial where 11 parents in the Dover Area School District filed suit in federal court to block the inclusion of intelligent design in the ninth-grade biology lesson plan. While a ruling in that court would have no direct bearing in Ohio, the judge’s decision could inform other courtroom battles as they erupt, which seems inevitable.

Reaction to the I.D. Coverage

I called Bill Toland, a reporter for the Pittsburgh Post-Gazette, who has covered the trial, as part of my research for this article. I was interested in the feedback he received from his readers. Toland said he has postulated a new theory governing the speed of news as a result of his experience. “I call it the First Rule of Journal Dynamics,” he told me. “The speed at which a story moves over the Internet is directly proportional to the number of times you mention ‘gun rights,’ ‘evolution’ or ‘liberal’ in your story.”

Like many newspapers, including mine, the Post-Gazette publishes reporters’ e-mail addresses and phone numbers with their stories. During the first few weeks of the Harrisburg trial, Toland was getting calls and correspondence from around the world. “It’s just remarkable the geography of the feedback,” he said, confessing “there were some days” when it occurred to him it would not be a “bad idea to drop the tag lines.”

While one might expect the majority of feedback to have come from I.D. proponents, Toland said he heard from both ends of the debate. His stories were dissected for liberal bias by the Discovery Institute, the Seattle, Washington



A blog about intelligent design written by Jeff Bruce, editor of the Dayton Daily News.

think tank proselytizing I.D. as part of its “wedge” strategy that seeks to displace Darwin with “a science consonant with Christian and theistic convictions.” But he was also taken to task by liberals who objected that “paying attention to the I.D. crowd at all” falsely elevated the legitimacy of their arguments.

That matches our own experience in Dayton, where letters to the editor and e-mails have poured in from readers during the past several years as the state board of education debated whether science lessons plans should include challenges to Charles Darwin’s theories of the origin of life. The board finally settled on a compromise proposal to “teach the controversy.”

“Ohio is now ground zero for the explosion of creationism that is sure to follow,” warned Patricia Princehouse, a Case Western Reserve University evolutionary biologist, when the new lesson plans were adopted. Princehouse is an organizer of scientists opposed to teaching “intelligent design.” Given recent events, her warning seems prophetic.

Some background: It has been 80 years since the so-called monkey trial in that other Dayton—Dayton, Tennessee—where John Scopes was convicted for teaching evolution. That ruling was later overturned by the Tennes-

see Supreme Court, and in 1968 the U.S. Supreme Court ruled that it is unconstitutional to ban the teaching of the theory of evolution. You might think that would have settled the matter. Think again. When I Googled the phrase “intelligent design” in late October, I found 61,900,000 entries. Impressive. Not even Jesus Christ has those numbers (26,600,000), or Genesis (32,200,000). God, of course, is well represented on the Internet with 170,000,000 listings, but even He is overshadowed by “evolution” at 227,000,000 Google hits.

The idea of science trumping God in any setting sets some people’s teeth on edge. It underscores the arguments and courtroom battles playing out over whether “intelligent design” has a place in public school classrooms. Already bubbling, the issue heated up even more earlier this year when President George W. Bush was asked by a reporter if intelligent design should be taught. His answer, I thought, was nuanced. “I think that part of education is to expose people to different schools of thought,” he said. “You’re asking me whether or not people ought to be exposed to different ideas, the answer is yes.” But his words ignited a firestorm of commentary online and in the letters columns of newspapers.

Coverage Stirs the Debate

I blogged about Bush’s comments on my newspaper’s Web site, figuring it would be a natural to stimulate comments from readers. Little did I know. The debate my observations sparked among my blog’s commenters raged for four weeks and sometimes got ugly. A sample:

Spirilis: “The entire debate is about your faith, Jen. We simply want it kept out of the science classroom. I personally don’t care if you believe that space aliens originated life on earth but you

have no right to teach your silly beliefs in a tax-supported institution. Worship whatever books you choose just quit trying to turn your fiction into my fact. I can accept that someone could want to remain ignorant but what is the benefit in keeping the future in darkness? Why do you hate the children so? ...”

Jen: “Awww, Spirilis! I expected more out of you than that! I gave you the debate you wanted and you ended it with a desperate attempt to attack my faith and my personal life; did you run out of things to say? What I gave you is science, accept it! Everything I said is true, you know it. If you think I am wrong, PROVE IT! You can’t. ... Spirilis, you pick only specifics about what you want to hear, only when it supports what you want to believe, but then you ignore all other evidences, facts and truths that discredit your precious evolution As for your personal attack on me, I refuse to even dignify that with a response; that was just pathetic on your part. Great debate, Spirilis.”

The I.D. debate also filled the letters columns of the Dayton Daily News. Some samples from just one day, September 2nd:

John Garner: “It is depressing to have the apparently atheist Dayton Daily News editors and cartoonist continue to deride the concept of intelligent design...”

Thomas Brunzman: “Recently, the Dayton Daily News reported that Harvard University is committing millions of dollars to fund a research project to determine the origin of life Given the growing discussion of intelligent design as a plausible explanation for the origin of life ... could it be that the evolutionists at Harvard feel that evolutionary theory is not as strong as they would have you believe?”

John Strukamp: “The idea of intelligent design would seem to negate the need for science to explore the as yet unexplainable. Why bother with scientific research when we accept that God just made things this way? ... Where did that notion come from, and why do some give it validity?”

Opinion vs. News Pages

The contention, raised by that last letter writer and echoed by reporter Toland’s liberal critics, that in an effort to be fair and balanced we risk distorting the picture by giving undue credence to I.D., is a slippery one. It presupposes a judgment of illegitimacy that most journalists would feel uncomfortable making for the news pages. The opinion pages, though, are another matter. We publish Leonard Pitts, Jr.’s syndicated column, which our readers rank among their favorites. Here’s his take on the question of whether students have a right to be exposed to all sides of the evolution issue, from his September 30th column:

“... for that argument to hold water, you must have more than one side. Where science and the theory of evolution are concerned, you do not. It is the overwhelming consensus of the mainstream scientific community that Darwin had it right. So pretending there is another ‘side’ to the question makes about as much sense as pretending there is another side to the Klan. It reeks of false equivalence, no-fault scholarship, judgment-free education, the bogus notion that all points of view are created equal and are equally deserving of respect.”

Irrespective of intelligent design’s legitimacy as a scientific theory, at some point numbers matter when

it comes to news coverage. And proponents of I.D. know how to draw a crowd. This movement is arriving at a time when those of us in the news media are acutely aware of the public’s perception of liberal bias. We’re familiar with the Pew Research Center for the People and the Press study showing two-thirds of Americans agree that “in dealing with political and social issues, news organization tend to favor one side.” Moreover, a 2004 Gallup Poll found that 45 percent of the American people think human beings were created by God “pretty

MIAMI VALLEY

VOICES

READERS' LETTERS, FAXES, PHONE CALLS AND E-MAILS

‘DDN’ derides intelligent design

IT IS DEPRESSING TO HAVE THE APPARENTLY atheist Dayton Daily News editors and cartoonist continue to deride the concept of intelligent design.

There should be no disagreement between true religion and true science. But is this discussion really pitting religion vs. science? Based on established scientific facts, not speculation, isn't it possible that some type of evolution has occurred with the involvement of an intelligent designer? A fundamental belief of the majority of the DDN's readers, who are members of the Christian, Jewish or Islamic faiths, is that there is an intelligent designer of the universe. A recently published Newsweek/Beliefnet poll stated that 80 percent of those Americans polled believe that God created the universe.

Evolution, without an intelligent designer, still is a scientific theory rather than an established fact, according to several scientists and medical professionals.

JOHN J. GARNER
CENTREVILLE

George Will needs to open his mind

Re "Nature not always warm, fuzzy," Aug. 28: I love reading George Will's commentary; he makes me examine the origins and foundations of my own beliefs.

I loved his musings on penicillin's love lives, grizzly predators, and the Alaskan carmin-bugger tarmed mosquito-murderer. Even a tree-hugger such as myself, viewing his thoughts with an open mind, can't help but see the truth and irony in his perspectives.

But why does he have to take a face article and fashion it against faith in a higher power and spirituality? With an open mind, Will might see that belief in the laws of natural selection may actually coexist with intelligent design. As a naturalist, I use evolution to explain how I'm here, and God to explain why I'm here.

Nature truly is grand, and so is the possibility that it was planned that way.

JOE REYNOLDS
TROY CITY

Does theory need shoring up?

Recently, the Dayton Daily News reported that Harvard University is committing millions of dollars to fund a research project to determine the origin of life.

One of the main researchers, David Liu, admits he expects the research will come up with a series of simple natural processes that heeded from the first life "with no divine intervention." In other words, his philosophical bias toward naturalistic predetermination has already excluded the possibility that life was created by a force outside the boundaries of nature.

Given the growing discussion of intelligent design as a plausible explanation for the origin of life in educational and political circles, could it be that the evolutionists at Harvard feel that evolutionary theory is not as strong as they would have you believe?

Perhaps this new area of funding is to shore up some of the weaknesses in the theory of evolution. After all, who would Harvard put millions of dollars into origin of life research if evolutionary theory already gave us a satisfactory explanation?

THOMAS BRUNZMAN
BIRMINGHAM

Gottlieb should do research

Re Martin Gottlieb's column, "Anti-evolutionists looking smug," Aug. 24: There are a few things in this piece that I don't agree with.

First, there are a lot of us who don't buy evolution from the scientific point of view. I have read Michael J. Behe's book, *Darwin's Black Box*, and while well-written and thoughtful, a better book for the subject is the one I'm reading now, Michael Denton's *Evolution: A Theory in Crisis*.

Gottlieb would do well to do some research on all the holes in the theory of evolution. It seems the people defending the theory are treating it just like a religion, and anyone disagreeing with them should be shouted down.

JOE ARMSTRONG
WILMINGTON

ONLINE EXTRA

Hucksters who jump on the eating handbag are among the latest topics on Dayton Daily News editor Jeff Bruce's blog at daytondailynews.com/10400

Science doesn't preclude God

The idea of intelligent design would seem to negate the need for science to explore the as yet unexplainable. Why bother with scientific research when we accept that God just made things this way?

Who then decides where scientific research is appropriate and where it is not?

I do not believe that scientific theories and research in any way preclude the existence of God. Where did that notion come from and why do some give it validity?

JOHN STRUKAMP
DAYTON

much in their present form” sometime during the past 10,000 years, a timeline that closely parallels the Old Testament story of creation but is at wild variance with the scientific fossil evidence.

Our newspaper’s instinctive response is to be careful, to be especially mindful of the need to be balanced. But Pitts’s objections of “false equivalence” are compelling. At what point in our efforts to be neutral in our news coverage do we risk becoming misleading? This is especially challenging with the First Amendment on the line and the role newspapers have carved out for themselves as protectors of the Bill of Rights.

Even when we strive for balance in our news columns, the passionate views expressed on our opinion pages can carry over to color perceptions of the overall newspaper. Earlier this year, the Dayton Daily News hosted a roundtable meeting with members of the community to explore their concerns about liberal bias. We followed the format established by the Associated Press Managing Editors (APME), which has pioneered the program. Steve Sidlo, the newspaper’s managing editor and a member of the APME board, and Assistant Managing Editor

Jana Collier organized the conference. The feedback from participants, who were a self-selected group of critics, clearly showed that spillover from the opinion pages tinted their perception of the paper.

Interestingly, many of these critics admitted they “shopped” the paper for signs of bias, betraying their own foregone conclusions. Still they scored some hits—a headline here, a phrase in a story there—that those of us observing the discussion agreed added legitimacy to their criticisms. The presidential election, as well as hotly debated social issues (abortion, prayer in schools, gay marriage), was among the topics that fueled their perceptions of the paper’s prejudices. We left the roundtable discussion with a renewed determination to police ourselves more vigorously, understanding how easily we can undercut our authority with even the smallest lapses in diligence.

The good news is that our readers expect us to tee up controversial topics for discussion and that newspapers and their Web sites can and do provide useful and provocative forums for these conversations—with us and among our readers. In a world of multimedia competition, it is crucial that we position

our newspapers and online sites as the ideal place for such debates to rage. In so doing, though, we should be mindful that while clearly distinguishing news and opinion in our print products is standard operating procedure, the lines can blur in the blogosphere. We need to be cognizant of this and the implications for the newspaper’s overall credibility. And we need to be mindful, as Toland discovered, that our audience is now worldwide, meaning, among other things, that there are more eyes than ever before examining us and holding us accountable.

For myself, I’ve taken that fish off my dashboard. There was a time when these sorts of decals could be viewed as friendly jousting. I think those days are gone. ■

Jeff Bruce, as editor of the Dayton Daily News, is in charge of the newspaper’s newsgathering and opinion page staffs. His weekly column is published on the News’s Sunday editorial page, and his blog appears at www.daytondailynews.com/jblog.

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Editorial Pages and Intelligent Design

‘Once upon a time, I would have been mortified at the thought of exposing my religious views to my readers.’

By Cynthia Tucker

I grew up Baptist in Alabama—the buckle of the Bible belt—so I have more than a passing familiarity with conservative Christianity. Where I come from, there’s really no other kind. Yet battles over the teaching of evolution were not a feature of my childhood. (I first encountered the controversy when I was in my early 20’s, covering suburban governments, including school boards, for *The Philadelphia Inquirer*.) Not that there was much teaching of Charles

Darwin’s theories, either. Alabama has never been known for the high quality of its public schools; I have no recollection of anything more than a passing reference to evolution in my high school biology classes.

I was a little surprised, then, when vigorous controversies over the teaching of evolution erupted around the country during the past decade. If the Scopes trial of 1925 had not quite settled the matter, I thought recent scientific

developments—mapping the human genome, genetic manipulation, cloning—had. The public might debate the wisdom of research on stem cells, but surely we all accepted evolution as a cornerstone of modern biology.

Apparently not. As a harsh and narrow Christian theology began to inject itself into public policy—first, not surprisingly, in the southern United States—the benighted forces who opposed the teaching of evolution rose

again, intimidating textbook publishers, taking over school boards, and pushing for curricula that include the teaching of “intelligent design.”

It was in Cobb County, which boasts some of Georgia’s best public schools, where anti-Darwinians staged a surprise attack on science in 2002. A group of parents successfully lobbied the school board to require stickers on new high school science texts with the following disclaimer: “This textbook contains material on evolution. Evolution is a theory, not a fact, regarding the origin of living things. This material should be approached with an open mind, studied carefully, and critically considered.”

Cobb is an affluent Atlanta suburb where most voters support Republicans, attend church on Sundays, and equate low taxes with good morals. But Cobb County is also home to many well-educated professionals who support high academic achievement, take pride in local public schools, and don’t want classrooms hijacked by pseudoscience. The Atlanta Journal-Constitution weighed in on their side—without hesitation.

Around the editorial board’s conference table, not a single member—including our most conservative colleague, Associate Editorial Page Editor Jim Wooten (a Cobb resident)—believed that evolution was inappropriate in public school classrooms. Nor was there any hesitation about our writing an editorial protesting the sticker on textbooks; this was a matter of public policy, education policy. On August 21, 2002, editorial board member Maureen Downey, who includes education policy among her areas of expertise, wrote an editorial headlined, “No faith-based science in schools.” As the debate raged on, I followed with a column on October 2, 2002, “Why pit God against evolution?” I argued that evolution doesn’t argue for or against the existence of a divine being. “The [text]book should not be controversial to any but the most narrow-minded. It does not rattle religious views unless they adhere to the literal story of the Creation in seven days,” I wrote.

At the same time, on our op-ed pages we’ve gone to great lengths to reflect the views of conservative Christians who don’t want their children taught evolutionary theory. We’ve run op-eds by parents, preachers and a gaggle of pseudoscientists using fancy words and confusing data to try to justify their views. But their views are their views—and they have every right to be heard.

Maintaining the Newspaper’s Tradition

The Atlanta Journal-Constitution has a long and storied history of support for civil rights, civil liberties, and separation of church and state. And the page has a

... we’ve written several editorials and columns denouncing efforts to either ban the teaching of evolution or to supplement it with something called ‘intelligent design’—religion dressed up as pseudoscience.

strong tradition of editorializing against any breach in that wall of separation. Our editorials in support of the teaching of evolution—a time-tested scientific theory—honor that tradition.

Moreover, as an editorial page editor who is intimately familiar with conservative Christianity, I am not intimidated by religionists who would paint me as a “secular humanist,” “anti-Christian liberal,” or “God-hating Satan-worshiper.” (Those are among the more colorful epithets flung at me by my fundamentalist critics.) Indeed, growing up Baptist in Alabama probably provided me the background to take on conservative Christians in ways that other (saner) editorialists could not or would not. I know their beliefs. I can speak their language. I can quote the Bible back at them, chapter and verse. And I do.

Once upon a time, I would have been mortified at the thought of exposing my religious views to my readers. Like many Americans, I believed my spirituality was best shared in church or Sunday School

or around the dinner table at Christmas. Editorial pages were not the appropriate places for airing my religious beliefs. But during the last decade, I’ve changed my mind. No longer Baptist—I’m now Episcopalian—I have concluded that left-leaning Christians like me have allowed rightwing Christians to take over the public square, leaving the uninitiated to conclude that they exclusively represent Christianity. So I am much more comfortable now about presenting my contrasting view of Christianity, where the topic lends itself.

Thus, my October 2nd column ended with these words: “For those on the Christian left—and I count myself a member of that steadfast, if small, group—it does not matter one whit whether God created the universe in seven days or several billion years. Nor does it matter whether she started all life in a primordial soup and set a system in motion wherein species evolved over time. Her glory is not diminished.” (I couldn’t resist having a little fun with the rightwingers by using the feminine pronoun.)

Since then, we’ve written several editorials and columns denouncing efforts to either ban the teaching of evolution or to supplement it with something called “intelligent design”—religion dressed up as pseudoscience. We take credit for helping to turn the tide last year when Georgia’s State Superintendent of Schools, Kathy Cox, proposed striking the word “evolution” from the state’s science curriculum because it is a “controversial buzzword.” Downey wrote several critical editorials, and Cox reversed herself, bringing evolution back.

No doubt we will have to continue to fight efforts of certain conservative Christians determined to launch a frontal assault on the teaching of science. The war is not yet over. ■

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In Kansas, the Debate About Science Evolves

One veteran reporter describes the complexities involved in telling this story as like entering ‘The Land of Muck.’

By Diane Carroll

Evolution entered my life as a reporter on August 11, 1999. Before that day, I’d never written a word about it. But our education reporter/evolution expert was far away with her family in a cabin rented months earlier, so for two days, as speakers made their final pleas, I observed the tension building in a packed Kansas Board of Education meeting in Topeka. Finally, the board members cast their long-awaited vote. It was close, six to four. Those who wanted the state’s public school science standards to downplay evolution had prevailed. Creationists had won a huge victory. And people noticed. After The Kansas City Star published my story about the vote, e-mails from across the world clogged my computer.

Big story, I thought. Indeed, it is, and a tough one to tell. Just how tough became clearer to me when I inherited our paper’s evolution beat in 2002.

The changes the state’s board of education made in 1999 were significant and daunting for anyone to try to describe and explain in a few paragraphs of a news story. Nowadays, this same challenge holds true for the intelligent design-inspired changes that the board approved this fall. The most recent proposal in Kansas calls for students to “learn about the best evidence for modern evolutionary theory, but also to learn about areas where scientists are raising scientific criticisms of the theory.” The proposal also calls for changing the definition of science from “Science is the human activity of seeking natural explanations for what we observe in the world around us,” to “science is a systemic method of continuing investiga-

tion that uses observations, hypothesis testing, measurement experimentation, logical argument, and theory building to lead to more adequate explanations of natural phenomena.”

Proponents of intelligent design (I.D.) contend that the current definition limits scientific inquiry because it allows only “natural” explanations. Scientists who oppose the proposed change say the new definition opens the

By the time a reporter explains the changes and describes why their supporters want them and why opponents object, readers might feel like they’ve been pulled into something akin to dirty quicksand, or what I refer to as ‘The Land of Muck.’

door to “supernatural” explanations, which have no place in science.

Those are the proposal’s highlights—and certainly these points are what will most likely appear the most in headlines as this debate is covered, though there’s more to the proposal than this. By the time a reporter explains the changes and describes why their supporters want them and why opponents object, readers might feel like they’ve been pulled into something akin to dirty quicksand, or what I refer to as “The Land of Muck.”

It’s my belief that our newspaper’s readers and its editors want students in Kansas to receive a good science education. So when proposals are put forth that cause them to feel that education is being threatened, they care. But they don’t like The Land of Muck. And with stories about evolution—and its teach-

ing in the public schools—this land can be hard to avoid, especially when reporting on daily news developments. What’s helped me get through it is learning a few things about the terrain.

Who’s Who—Or Does It Even Matter?

There are creationists, young-earth creationists, and supporters of creation science. Then there are supporters of intelligent design. Usually the ideas of the I.D. supporters match up, but even among them there are differences. When Kansas adopted its new science standards in 1999 (which a newly elected board voted out in 2001), the outcome was influenced by young-earth creationists, who interpret the Bible’s Genesis account literally and believe God created the world in six days. In their minds, the earth is no more than 10,000 years old.

In 1999, as a result of the board’s vote, questions were deleted from our state’s science assessments about the age of the earth, the big bang theory, and macroevolution, which refers to one species changing into another as it adapts to its environment. What this meant is that teachers in Kansas were no longer responsible for teaching about these scientific topics. The state’s science standards also were changed to reflect rejection of the idea that evolution is a unifying principle in the sciences. Even the definition of science was altered to having it be a discipline that sought “logical” instead of “natural” explanations, which is a difference significant to those who challenge evolution.

Creationists hold the same basic

views as young-earth creationists, but believe the earth is much older. Those who support the teaching of creation science believe the manifestations of creation can be explored scientifically. One doesn't hear the term "creation science" much anymore; today, talk centers on intelligent design, the idea that the world is so complex that it must have been designed. But the creationists are still out there, and they've rallied around I.D.

From what I can tell, creationists' motives are likely different from I.D. proponents', but it is possible their motives are the same. But this is hard to determine because neither group seems willing to say much about their motives, and this makes it difficult for a reporter to really know how to accurately characterize the motives of I.D. proponents. In Kansas, I.D. proponents like to talk about intelligent design being "objective science," but this is a term that national I.D. leaders with the Discovery Institute shy away from.

According to intelligent design leaders here, the current definition of science in Kansas promotes a "nontheistic" point of view because it allows only "natural" explanations of the world. That view, they say, promotes naturalism or materialism and eliminates the possibility that some form of intelligence played a role. They want to change this definition to include a "theistic" point of view. Combining theistic and nontheistic views, they say, will result in "objective science." As one Kansas I.D. leader puts it, "When you can detect design in a living system, the implications of that are very significant. If you conclude the system is designed, it shows life has an inherent purpose."

All of this sounds a little like the ideas espoused in the Discovery Institute's "wedge" document, an internal memo first publicized in 1999 that talks about the "devastating consequences of the triumph of materialism." The Discovery Institute has tried to distance itself from this memo and claims that the news media have misinterpreted it.

Is it important, as a reporter, to

understand these differences among those who support these similar ideas to be able to convey this information to readers?

To readers, I don't think it matters all that much, since all of these forces are in some way involved in pushing intelligent design into the science curricula. But for reporters who are covering this story, knowing the background

When all is said and done, the story is all about religion. Or the story has nothing to do with religion. Reporters hear both. So what is this story about? Surely it's about more than showing that evolution doesn't answer all the questions that scientists have about where we came from.

of these different groups and figuring where their perspectives and strategies diverge can help to cut through the confusion that seems to envelop this story. This knowledge puts a reporter on more solid ground, and that can be important to prevent the slide into *The Land of Muck*.

When Ohio adopted its science standards in 2002, the Discovery Institute put out a press release lauding the vote. Interestingly enough, so did the National Center for Science Education. How could that happen? And what did this mean? After all, the two were on opposing sides during the debate. As it turned out, each side reached a different interpretation of some compromise language that read, "Describe how scientists continue to investigate and critically analyze aspects of evolution." Attached to this clause there was a note that said this language did not mandate the teaching or testing of intelligent design.

The Discovery Institute latched onto the words "critically analyze" and claimed these words supported their push to "teach the controversy" about evolution. The National Center

for Science Education claimed that the language didn't change anything because scientists continually analyze evolution. It certainly is not unusual for opposing parties to end up in such a place, and by checking beyond the press releases—and interviewing leaders in Ohio on both sides of the issue—a clearer picture emerged. I ended up with a front-page story about the debate that went on in Ohio.

Also, bear in mind that I.D. proponents tend to be very particular about how their views are presented in news reporting. There's a lot of very specific language that some of them want to get into the public discourse, and the Discovery Institute even set up a Weblog to "educate" reporters by critiquing their stories. Even with these watchful eyes hovering over the stories we write, what reporters learn on this journey is that not even the most conscientious among us will ever get through *The Land of Muck* by parroting what people say, no matter what side of the debate they are on.

The Real Deal

When all is said and done, the story is all about religion. Or the story has nothing to do with religion. Reporters hear both. So what is this story about? Surely it's about more than showing that evolution doesn't answer all the questions scientists have about where we came from. I once pressed a Discovery Institute leader to explain the fervor behind the movement: he said the real issue was academic freedom. When I brought up the motives espoused in the "wedge" document, he responded to each of my questions with a question.

I have listened to intelligent design proponents explain their rationale for hours. I can report from those conversations that they believe in what they are saying and think they are working toward some greater good. But even if one accepts their assertion that the world was designed, where does that leave the issue? In a science classroom, if a designer is acknowledged, isn't it

time then to turn back to science?

After my years of coverage, I've reached the conclusion that the most worthwhile stories to pursue are those that shed light on the emergence of these movements and the passion driving them forward. This means also investigating how these movements are funded, at their inception and also now. Reporters also have to try to help

people to understand the motivation of those who are behind them. For example, are today's I.D. proponents part of the conservative Christian faction trying to infuse their view of religion into the public school curriculum? If so, this information needs to be part of the coverage the issue receives.

Questions such as these need to be explored. And if reporters can dig out

information to help in answering them, then slugging through the muck might just be worthwhile. ■

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When the Conflict Narrative Doesn't Fit

'Conflict does attract readers. But pursued as a virtue unto itself, it can distort news stories and skew public understanding.'

By Diane Winston

Pity the reporter assigned to cover the culture wars without the time, space or resources to do the job right. That, at least, looked like the backstory for an October 22, 2005 New York Times news story titled, "Intelligent Design Is Not for the Classroom, Cornell President Says." Armed with fewer than 500 words, reporter Michelle York recapped Hunter R. Rawlings III's nearly 4,500-word State of the University address, in which he decided to devote the entire speech he delivered to the Cornell community to an issue he defined as "the challenge to science posed by religiously based opposition to evolution." In the first paragraph of her story, York quotes Rawlings calling the campaign to add intelligent design to the science curriculum "very dangerous," noting he "denounced intelligent design 'as a religious belief masquerading as a secular idea.'" Further down, York cites recent statistics on the percentage of Americans who favor teaching creationism instead of evolution, then sums up the conflict between religion and science in a sentence or two.

The story ends with a quote from John G. West, a senior fellow at the Discovery Institute, a preeminent hub for intelligent design theory. West says a "college president is in a unique position to create an atmosphere of

free speech," but Rawlings seemed to be "fanning the flames of intolerance" and "implying that faculty don't have the right to discuss ideas."

Rawlings' mistake? Stating that the "invasion of science by intelligent design embodies ... above all a *cultural* issue, not a scientific one." York's mistake? Dumbing down a complex issue with polarizing, oversimplified and lazy reporting. But this isn't one reporter's problem. The New York Times's story—like most articles about the "clash" between religion and science—repeated the miscues and misapprehensions that have characterized coverage of this topic for almost a century.

Newsroom realities—including a shrinking news hole, more deadline pressures, and lack of in-depth knowledge—are part of the problem. But these don't justify ill-suited frames, intellectual timidity, and rote reporting that typifies much of what is written in general and on this subject in particular. What happens with coverage of this topic reflects many of the pitfalls that plague mainstream media. Journalists rely on narrative structures that mask more than they reveal and short-circuit the kinds of contextualization, sourcing and analysis that can provide new insights on hot-button issues and move public discussion forward.

Journalism, Religion and Science

The long-standing antagonism between the domains of religion and journalism is described in a recent essay, "Promoting a Secular Standard: Secularization and Modern Journalism, 1870-1930," by sociologist Richard W. Flory contained in "The Secular Revolution," edited by Christian Smith. Beginning in the late 19th century, publishers, editors and journalism educators "actively sought to minimize and ultimately undermine traditional religion," Flory argues. In its place, they advanced science, which was seen as progressive and inclusive, to be the authoritative voice for modern society. Their reasons were twofold. The first was economic: Pressure to sell advertising and boost circulation ended the need for advocacy journalism, including sectarian religious coverage. In other words, newspapers now needed to reach the widest possible public. The second reason was that an increasingly professionalized and secularized society considered legal and scientific models more prestigious than those based in the supernatural.

By diminishing the importance of faith and promoting science, journalists demonstrated that their field was "best suited to succeed religion in the

modern world,” according to Flory. He also explains that newspapers adopted the conflict narrative to improve their commercial prospects, and editors encouraged reporters to write colorful, lively stories. Charles Merz, who later became an editor of *The New York Times*, advised reporters in 1925 to make conflict a key element in their stories. He observed presciently (given the column inches subsequently allotted to clergy sex scandals), that “If theology and religion envy sex and crime and sigh for front-page space, all that theology and religion need to do is produce a good personal encounter.”

Conflict does attract readers. But pursued as a virtue unto itself, it can distort news stories and skew public understanding. Not everything fits a “he said, she said” structure, and not all arguments are epistemologically equal. As Rawlings said in his talk, evolution is a scientific theory—a hypothesis, and that is demonstrated by observation or experiment. Intelligent design is a religious belief. It is a theory according to its definition of being “an idea or belief arrived at by conjecture or speculation.” But that is a different understanding of theory than that used in science. Proponents of intelligent design obfuscate an important distinction by blurring the two meanings of theory.

That’s why Rawlings and West talk past each other: What is happening is not a conflict; it’s a disconnect.

Imposing an Ill-Fitting Narrative

So why do reporters use the conflict narrative so frequently in covering this story? It’s familiar, reliable and a lot easier than research and original thinking. In this case, it plays out the trope of a culture war, propagated by the catchy notion of a “red-state/blue state divide.” Do we think that Merz ever imagined that conflict would become the primary frame for reporting most of the news? I doubt it. In his own writings, he emphasized a newspaper’s responsibility to the pursuit of truth.

Writing for *The New Republic* in 1920, he decried the *Times*’s coverage of the Russian Revolution as “a case of seeing, not what was there, but what men wanted to see.”

The debate about the teaching of evolution and intelligent design shouldn’t

The debate about the teaching of evolution and intelligent design shouldn’t be cast, in the words of my first managing editor, as a ‘pissing match.’ Rather it’s a philosophical discussion about how we know what we know.

be cast, in the words of my first managing editor, as a “pissing match.” Rather it’s a philosophical discussion about how we know what we know. Unfortunately, many of the sources who could offer thoughtful comments on how to constructively discuss this aspect are rarely quoted. The Center for Theology and the Natural Sciences, the Institute on Religion in an Age of Science, The Center for the Study of Science and Religion, the Counterbalance Foundation, as well as numerous smaller and more religiously located groups, have worked in this field for as long as half a century. But their speakers, resources and publications are rarely cited.

For a helpful case of art reflecting—and besting—reality, reporters might watch the thoughtful treatment of the evolution vs. intelligent design debate on a recent (October 16, 2005) episode of the TV drama, “*The West Wing*.” Presidential candidate Matt Santos is dogged by reporters who want to know his position on the issue. Although his Democratic Party handlers advise him not to comment, Santos, piqued by the media’s insistent questioning, says he believes in a God, whom he assumes is intelligent. The subsequent media frenzy forces Santos to clarify his position during a meeting with parents and teachers at a local school where the issue is hotly debated.

Santos passionately describes his

faith in God. But he is equally ardent about his acceptance of science and the theory of evolution. He explains that evolution, a scientific theory, should be taught in public schools, whereas religious instruction should come from the home or a religious institution. He

suggests that those who are unhappy with that division of tasks should seek redress in the democratic process. The crowd—even those who disagreed—cheered wildly.

The Cornell University president’s speech, which made similar points, also elicited strong support. In an interview I did with him after his speech, Rawlings said he’d received “an overwhelmingly positive response,” but he would have preferred media coverage that more accurately reported the address. “I recognize the media has a tough job of summarizing arguments,” he said. “But journalists should be extremely wary of oversimplifying and emphasizing polarities instead of nuanced arguments.”

Were I still working as a reporter, I’d visit Ithaca, New York to see how issues of religion and science play out in Cornell’s classrooms, dormitories and houses of worship. I’d explore student, faculty and staff response to Rawlings’ contention that both faith and science are important to the university. Then I’d visit Ithaca itself to see whether and how these issues surface in public schools and community settings. And if I were an editor, I’d ask my reporters to step back and consider how they, as purveyors of this narrative frame, might be embedded in the “conflict” and its outcome. One step back could be the first step forward. ■

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Courtroom Testimony Offers an Excellent Road Map for Reporters

‘... the usual “he said, she said” quotes I read in press accounts have little or nothing to do with the actual issues raised by the Pennsylvania case.’

By Paul R. Gross

From late in September until early November, journalists reported on a battle being waged in a Harrisburg, Pennsylvania federal courtroom between “intelligent design” (I.D.) and the sciences of biology and geology, especially evolutionary biology. Their stories have unleashed another comber in a media-coverage tidal wave. There have been some big waves on this topic before, in Kansas, Texas, Georgia and Ohio, for example, each the result of the I.D. movement’s self-identified “wedge” initiative that has been in operation for a decade. But with the Harrisburg trial the stakes escalated, and the result has been a tsunami of attention in print and also in broadcast chatter.

Though the case concerns a small school district in Dover, Pennsylvania, this is not a mere local political challenge of the kind taking place in other states. At its core, the issue here is constitutional. The defendant in this case (the Dover school district) has mandated an official announcement be read to all ninth grade biology students that asserts—in effect—that what the state’s science standards for K-12 require on the history of life on earth (organic evolution) is incomplete and, well, just one theory and quite possibly wrong. More to the point, these words inform students that there is an alternative and, by implication, an equally sound scientific theory, even though evolution has for more than 100 years been employed in biology worldwide, including its applied sciences such as medicine, as the central organizing principle and has been recognized as such and for that long by the overwhelming majority of the world’s scientists—not

just biologists.

Backing up its announcement, the school district in effect recommends and makes available a revised edition of a creationist textbook, which has just recently had all such words as “creation” and “creationism” deleted and replaced with words like “intelligent design.” That text presents the alternative “theory”—intelligent design. Life on earth, it argues, is too complex to have arisen by chance. It must have been designed (that is, created) by an intelligent agent or agents (like, say, God) working supernaturally. No serious scientist, by the way, understands the mechanism of evolution as “chance.”

Some press accounts, and I’ve read many of them, are conscientiously evenhanded. When editors give enough column inches, some reporters have provided pretty good summaries of the broad issues and make clear that I.D. is a game being played centrally by a very small group of activists based in and supported by a conservative Christian think tank, the Discovery Institute of Seattle, Washington. Some describe in some depth this small band of activists, some of whom have science backgrounds (but not one is a recognized, contributing evolutionary biologist) and how they’ve relied on the reflex support of a vast slice of the American populace—perhaps more than half of it. (Among this half must be many people who know nothing about evolution except that it can’t be right.) Most journalists point out the magnitude of the rejection by the world scientific community of the I.D. claims, but at the same time allow I.D. proponents their say.

The problem in the reporting on this

case is a universal problem of journalism. In this case, this (manufactured) conflict is dealt with as if it was just one more story of rival claimants to the public esteem using a traditional “he said, she said” approach. The problem is that the usual “he said, she said” quotes I read in press accounts have little or nothing to do with the actual issues raised by the Pennsylvania case. At its core, this case is about a public school initiative to pass judgment on the content of science in its curriculum—in effect, about an action to *correct* what its supporters regard as an error, weakness, or imbalance in the state’s and the scientific community’s consensus.

Ignoring the Testimony

Most disappointing about news coverage of this court case is that a remarkable opportunity has been lost in the role journalists could have played in educating Americans about some of the core issues, testimony and findings that surfaced during the weeks of trial. Here are a few of the conspicuous ones:

- The primary defendant claim is that I.D. is a fully qualified scientific theory, sufficiently well developed and with sufficient *positive* evidence to back it up, such that it constitutes a serious challenge to the prevailing science of life’s history on earth. That being so, the claimants continue, this challenge must be brought to the attention of all students.
- Another major claim is that there are serious gaps and flaws in what is being taught as the current standard account of life’s history on earth. (It is

misnamed “Darwinism” even though Darwin, were he to come alive, would not recognize or understand it.) This being so, the school district argues, the flaws must be pointed out. Good science and fairness demand it. “Teach the controversy” is their battle cry.

- Opponents of these claims (the plaintiffs) pointed out that the I.D. advocates want to introduce ideas not from anything in the scientific literature or recognized by any productive evolutionary scientists, but from a program dedicated, by its own announcements, to overturning modern science and replacing it with a “theistic science.” The hoped-for theistic science is one in which conservative Christianity is an ineluctable element of every undertaking and teaching. The movement, the plaintiffs argued, is inspired and supported by a radical, sectarian religious viewpoint that is hostile to evolution and to science generally. They argue that this nonscientific and antiscientific view has been promoted by a branch of government (the defendants) into the science curriculum, and the courts have held, repeatedly, that this is unconstitutional.

Those are real issues examined in this trial, which is therefore a very important event. The decision in this case will be no less important for science education generally and for the general culture, whatever its outcome, than was that 1925 Scopes trial in Dayton, Tennessee. Given this trial’s prominence, and the issue’s significance, it is vital that journalists make certain that readers, listeners and viewers understand exactly what did and did not happen in the course of the trial, as opposed to relying on “he said, she said” commentators who know precisely the words to use to skirt some of these key points.

- Readers, listeners and viewers need to know that in the course of the

trial no evidence *in favor* of the claim of intelligent agency was offered and that those who testified for the plaintiffs, speaking for all of the life sciences, argued (and documented their argument) that no such evidence has as yet been brought forward, by anyone.

- It is also important to point out that the principal scientific witness for the defense, biochemist Michael Behe, agreed, albeit reluctantly, that there

[Barbara] Forrest used the proponents’ words that they addressed to one another and to their supporters to explode the claim of their secularist approach. Yet despite an abundance of such evidence, reporters too often take at face value the claim of I.D. proponents that their case is purely scientific and secular.

has been no evidence *for* I.D.. As he was forced to admit in cross-examination, his argument consists of incredulity—he just doesn’t believe that the standard Darwinian mechanisms can explain the complexity of living things. On the stand, he agreed that these mechanisms do work in many cases, including in some of his own, original examples of this supposed impossibility.

- It also emerged in the trial that nobody has found even one of the supposedly disabling flaws named by the I.D. proponents to be such. Quite the contrary: The strident I.D. claims of error and fraud have themselves been shown, in an avalanche of publications in scientific journals (unlike outlets used for I.D. claims) to be grossly in error. This has been reported in the primary scientific literature and in the popular literature for nearly a decade.

It is certainly true that some news coverage of this trial did illuminate the fact that scientists in evolutionary biol-

ogy (tens of thousands of them) reject the I.D. claim that there are deep and obvious flaws in Darwinism. Perhaps the most damaging testimony for the plaintiffs came, however, from expert witness Barbara Forrest, a philosophy professor at Southeastern Louisiana University, who has tracked closely the operations of the I.D. movement. In well-documented statements (written and on the stand), she demonstrated that the I.D. movement had fundamentally religious origins and purposes that were announced at the start in an elaborate plan to destroy Darwinism and materialism and that they continue to be pursued according to the “wedge” plan. In detailed testimony (and writings), Forrest used the proponents’ words that they addressed to one another and to their supporters to explode the claim of their secularist approach.

Yet despite an abundance of such evidence, reporters too often take at face value the claim of I.D. proponents that their case is purely scientific and secular.

Finally, there emerged in the course of the trial information that is as galls-funny as it is tragic. Not one school committee member among those most insistent on the importance of I.D. in the curriculum seemed to know much or anything about it or about evolution. Nor would any of them admit to having had any religious interest in this affair, despite damning evidence from the available records that there was nothing *but* religion in the arguments that preceded the school board’s decision to insert I.D.. According to their testimony, they simply took the word of the Discovery Institute’s operators that I.D. is good science and that Darwinism is false. The school district and its legal team have evinced no little pique at having been hung out to dry by the Discovery Institute.

Any journalist reading this essay will, of course, respond (correctly) by assuming that it is, or includes, spin. But the opportunity exists to go to the trial transcripts, which are available online,

to see if what I've written is accurate. (Start here: <http://www2.ncseweb.org/wp/>.) Or go to the literature on this issue, which includes the 2004 book that Barbara Forrest and I wrote entitled, "Creationism's Trojan horse: The Wedge of Intelligent Design." Do this and I can all but ensure that reporters will come to this understanding of the way things

were and are. On the other hand, read most of the press coverage of this trial and about these issues and come away with no clear sense of what this supposed conflict of scientific "alternatives" is really about. ■

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versity of Virginia, is the author of a comprehensive review, sponsored by the Fordham Foundation, of K-12 science standards issued by 49 states and the District of Columbia. The review was published by the Thomas B. Fordham Institute in early December.

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Probing Beneath the Surface of the Intelligent Design Controversy

'... to truly understand I.D., people need to look at things in ways that are different from our accustomed patterns.'

By Gailon Totheroh

On October 21st, Cornell University's Interim President Hunter R. Rawlings III gave the school's annual State of the University speech. Almost from the beginning of his talk, Dr. Rawlings attacked intelligent design (I.D.). The Cornell Daily Sun called the president's attack a "condemnation." Why would I.D. be an issue that would sidetrack Rawlings from focusing on the usual topics college presidents talk about? Rawlings explained that the threat to science and education from I.D. was too great to remain silent.

Other news reports tell of British philosopher Antony Flew's change of mind about the existence of some sort of super-intelligence being involved in creating the universe. Last December Flew, a lifelong atheist, said in a video he released entitled, "Has Science Discovered God?" that biologists' investigation of DNA demonstrates "by the almost unbelievable complexity of the arrangements which are needed to produce (life), that intelligence must have been involved." He says that he still rejects Christianity and monotheism in general, indicating that his was not so much a religious conversion as an empirical one.

From my position as science and

medical news reporter with The Christian Broadcasting Network (CBN, an avowedly evangelical Christian organization), my sense is—as stories mentioned above indicate—that there are very deep issues involved in coverage of this topic. This sense comes from my personal observations and reading during the past 20 years, as well as from my reporting experiences for nearly that long with CBN News. For example, woven into this story are such critical issues as public education, freedom of speech and religious liberty, academic censorship, the nature of science, and the essence of religion.

I believe that being well informed and self-conscious about one's worldview can help reporters to convey the bigger picture as we cover the I.D. controversy in this country. At times I fear that reporters, and I include myself, are not asking the important questions we should be asking. In part, this situation might be blamed on the dearth of awareness of the underlying philosophies connected with evolution and intelligent design. I also fear that too often, because of this lack of awareness, we use clichés and boilerplate accusations in our reporting instead of working harder to understand the issues. What this means

is that journalists might be missing or misinterpreting many stories related to our origins, design and evolution.

Reporting on Intelligent Design

I began to report on intelligent design just as the issue was entering the public dialogue. In September 1992, I first interviewed Phillip E. Johnson, the University of California at Berkeley law professor, who had written "Darwin on Trial." Johnson, whose specialty is evidence, had been on sabbatical in Britain a few years earlier and had seen and read books by the noted evolutionist Richard Dawkins. He analyzed Dawkins as being weak in evidence and claimed that he relied too much on naturalistic philosophy to make up for that absence. From my own reading about weaknesses in evolutionary theory, I was aware of some of this, but Johnson impressed me with his command of the issues. I left my interview with him with a sense that I'd now be better able to direct a critical eye toward science reporting when, for example, such events as fossil finds were in the news. In 1993, Johnson met with other scholars interested in intelligent design and they sparked what became

the intelligent design movement.

This fall an important legal case involving the teaching of I.D. in the public schools, *Kitzmiller v. Dover Area School District*, was argued in Pennsylvania. Even when a decision is reached, appeals might go on for some time, and one day it is possible this case might lead to a Supreme Court decision about whether I.D. can be taught in public schools. Even now, the testimony in this case speaks to some of the deeper issues animating public interest in this issue.

A common thread in the news coverage of this trial is dueling accusations about whether intelligent design is about religion or about science. But this thread is only one of many aspects of this story that is worthy of journalists taking a closer look. For instance, many reporters refer to the Dover trial as a repeat of the 1925 Scopes “monkey” trial, but many Americans (including some reporters) draw their understanding of Scopes from the 1960 movie “*Inherit the Wind*.” But like many movies, this one does not depict reality, as Edward J. Larson’s 1998 Pulitzer Prize-winning history of Scopes, “*Summer for the Gods: The Scopes Trial and America’s Continuing Debate Over Science and Religion*,” documented. And after I learned about this disparity, I reported about the film’s false image.

Similarly, reporters would do well to look into their overuse of other clichés that seem to be surfacing in coverage of this contemporary conflict between religion and science. Into this category I’d put the Roman Catholic Church vs. Galileo and the flat earth accusation. In his book, “*Inventing the Flat Earth*,” University of California, Santa Barbara historian emeritus Jeffrey Burton Russell describes, for example, how Darwinists marketed this myth in the late 19th century as a way of attacking critics of the theory. These historic controversies have a complexity that seems to be at variance with their common usage by journalists.

Perhaps it might help if reporters

started to think about the Dover case as Scopes turned upside down. By this I mean they might want to explore the ways in which institutional power can now be found in the evolution establishment opposing freedom of thought and speech in the academy. If reporters were willing to take an even more his-

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toric—and I’d argue relevant—leap they could help people realize how today’s issues compare with a similar debate that occurred in ancient Greece among philosophers, with the atomists (proto-evolutionists) facing off against the First Cause crowd (proto-design advocates). In doing this, reporters would help to clarify that this is a long-lived debate, one that is not likely to die out in the foreseeable future.

Complexity of Ideas

The issues at the heart of this debate are complex. In the Dover trial, the complexity is apparent. Scientist Ken Miller testifies one week about how evolution can explain the miniature machines in bacteria. Then, in the next week, biochemist Michael Behe, the author of “*Darwin’s Black Box*,” rebuts Miller’s testimony, explaining how those “machines” are products of design. Certainly it is a challenge to explain this conflicting testimony to readers and viewers as part of daily news about the trial. But this difficulty should not deter reporters from trying to learn as much as they can about the complexities of these arguments, then look for ways to convey this understanding as part of their news reporting.

My reporting on this controversy has been helped by a lot of background

reading. Early on, I read about the differences between microevolution and macroevolution, enough to know that no one disagrees with microevolution, which generally refers to small changes in existing species or gene pools, such as changes in the size of finch beaks or the development of antibiotic resistance.

By contrast, macroevolution refers to the formation of fundamentally new features and structures, such as the origin of animal’s basic body plans during the Cambrian explosion. When a scientist says evolution is a fact, he is rightfully referring to microevolution. Yet macroevolution—what generally is called the theory of evolution—is a contested issue.

Recognizing one as fact does

not confer that status on the other.

There are unanswered questions, too, about the fossil record. Study of the fossil record, for example, led the late evolutionary author Stephen Jay Gould to develop the theory of punctuated equilibrium, which posits great leaps forward in evolution in a geologically short time span. Dawkins attacked Gould on this issue. If major camps of evolutionists can’t agree on such a central issue—one that Darwin said could contradict his theory (a clear fossil record)—a reporter might well have questions, too.

When Charles Darwin’s “*On the Origin of Species*” was published in 1859, people took a type of intelligent design point of view for granted. To properly understand Darwin’s new theory of evolution, people had to think in an entirely different way. Similarly, today, to truly understand I.D., people need to look at things in ways that are different from our accustomed patterns.

When I was a graduate journalism student in 1985, a coauthor of “*The Mystery of Life’s Origin*,” scientist Charles Thaxton, spoke at Regent University. Thaxton was one of the early advocates of intelligent design. A story he told struck me with its theological and philosophical implications, and it has remained as a backdrop of my reporting. He told of a time when

he'd spoken to a biology class at Johns Hopkins University. During the first half of the period, he gave a best-case scenario for evolution. In the last half, he critiqued evolution based on the science. Despite the fact that Thaxton had mentioned nothing but science, one student went up to him afterward and said, "I now know why I believe in evolution. It's not because of the facts, it's because I hate God."

Truly, evolution and intelligent de-

sign are each connected with questions about God and both have implications for worldviews and elicit philosophical overtones. Taking those considerations seriously has been quite helpful to me in "getting under the story," as one of my journalism mentors describes it. Being aware of my own presuppositions makes me more aware of the philosophies of my sources. And delving into those might produce a wealth of story ideas as we try to have the stories we

do help readers, listeners and viewers think more expansively about intelligent design and evolution. ■

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Intelligent Design Has Not Surfaced in the British Press

At a journalism seminar, a BBC producer was 'struck by the concern about intelligent design amongst our transatlantic colleagues.'

By Martin Redfern

I've been asking a few friends who are neither journalists nor scientists—nor, for that matter, Americans—what they understand by the term "intelligent design." "Isn't that the slogan of that German car company?" one said, in a remark typical of what I often hear. In Europe, intelligent design is nowhere near the big issue that it is in North America. Serious newspapers have been giving brief coverage to the Dover, Pennsylvania court case on their inner pages, but in the popular press and on television there is not a mention made.

It's interesting to reflect on why that might be. After all, according to the U.S. Constitution, church and state are separate whereas over here, the queen is both head of state and head of the Church of England. And many schools are church schools with religious education a small but significant part of their curriculum, and a brief act of worship is an almost daily event.

But it is hard to find anyone here who thinks that intelligent design is serious science or that it should be taught as such in schools, or at least who is prepared to say so in public. The Church of England, for the most part, seems to be on the side of the biologists, and even the Catholic Church has gone on record as saying that evolution is more

from lobbyists demanding that we give equal time to creationist or intelligent design arguments. It is relatively easy to reply—almost with a stock letter—pointing out that ours is a science program, not one about religious belief. But these letters usually come through formal channels, and thus they demand time-consuming paperwork.

We presume creationists monitor our broadcasts with that in mind.

This past summer, I was fortunate to be a Templeton-Cambridge Journalism Fellow in Science and Religion, which enabled me to attend a series of seminars in Cambridge, England. Both the journalists and the speakers were

drawn from a mixture of faiths and included several atheists, but no one seemed to be pushing the intelligent design argument, and the Brits among us were struck by the concern about intelligent design amongst our transatlantic colleagues.

Whether people believe in intelligent design or not, to most Brits this is clearly a religious issue. Since there is religious education, if the topic is worthy of discussion then it seems logical that it should be discussed as part of religious education, not in biology lessons. The American curriculum does not offer that option.

than just a theory.

It might be a relatively untold story, but the evolution/creation debate regularly rears its ugly head into journalists' lives. Almost whenever we broadcast anything substantial about evolution, we get a small but significant response

One of the speakers at a seminar was Professor Richard Dawkins, well known on both sides of the Atlantic for his almost fanatical belief in evolution and his rejection of religion in all its forms. He might appear to be a fundamentalist scientist, but he does have a way with metaphors. He likened the theory of evolution to a crane that can lift complex life, including human life, up from the primordial slime. Evolution is a theory, yes, but like a crane, he says, it is built on the firm ground of established scientific observation. By contrast, invoking God as an explanation, through whatever subtle mechanism such as intelligent design, is like a skyhook: It may offer an explanation for the progression of life, but it has itself no rational supporting structure in science or observation. As William of Ockham would have put it in the 14th century, introducing God multiplies entities unnecessarily.

That logical argument, one might think, would hold true everywhere. But belief, to many British minds, including my own, defies logic. I was stunned to read in an account of a U.S. poll that “only” 26 percent of a sample of Americans believe in a literal six-day creation. For me, the figure of 26 percent would have been shocking enough, but it was the “only” that raised the hairs on the back of my neck. I would be surprised if “even” 2.6 percent of Brits held that belief. But then we do not appear to be a very devout lot. Church attendance here is low and falling—only a few percent of the population attend church on a regular basis. And those who do go are often elderly and attending services that have changed little since the 19th century.

But I suspect that our societal level of devotion is not the main reason why the issue of intelligent design has not yet become a major debate in education. Rather it could be because religious education here is already part of the school curriculum. Whether people believe in intelligent design or not, to most Brits this is clearly a religious issue. Since

there is religious education, if the topic is worthy of discussion then it seems logical that it should be discussed as part of religious education, not in biology lessons. The American curriculum does not offer that option.

Even though there seems to be no large, well-organized lobby group for intelligent design in Britain, its teachings have appeared in some of our schools. A few years ago, the government started

Such issues [as the teaching of creationist beliefs] have been reported in the British press, especially in liberal or left-wing publications such as The Guardian, but they have not become headline news. That may still happen, however.

to encourage the creation of so-called technology colleges in deprived inner-city areas where existing schools had been failing. These have been set up as partnerships between the public sector and private benefactors. Though they charge no fees, they are technically independent schools, and their benefactors get to appoint the school governors who, in turn, appoint the teaching staff.

One such benefactor is Sir Peter Vardy. He made his fortune as a car dealer and has now contributed to several schools in the northeast of England, the first of them, called Emmanuel College, is in Gateshead near Newcastle. It is clear that Vardy has sympathy for intelligent design and even for full-blown creationism. Another of the school’s directors is the Conservative peer, Baroness Cox, who, in 1988, sponsored amendments to an education reform bill stating that religious education in state schools should be “in the main Christian.”

According to The Guardian newspaper, the chief education advisor to the Vardy Foundation, John Burn, is a founder of the Newcastle-based Christian Institute that has 12 full-time staff promoting fundamentalist Christian beliefs. The head teacher at Emmanuel College suggested to a Guardian reporter that it is “fascist” to say that

schools should not consider creationist theories, while the head of science at the school, Stephen Layfield, was quoted as having urged colleagues to “show the superiority” of creationist beliefs.

Such issues have been reported in the British press, especially in liberal or left-wing publications such as The Guardian, but they have not become headline news. That may still happen, however. In October, Prime Minister Tony Blair announced that he wants all schools to have the chance to become “independent” to give them more freedom to innovate, within certain guidelines. Part of his motivation is probably to take some of the control of schools away from the local county education boards but, if there are enough rich benefactors who believe in intelligent design, some believe he could be letting religious dogma into the classroom through the back door.

And if this shows signs of happening, many other British journalists and I will be waiting with our pens and microphones at the ready, to lift this largely untold story into headline news. ■

Martin Redfern is senior producer of the BBC Radio Science Unit in London. Any views expressed in this article are his own, and not necessarily those of the BBC. Messages for Redfern can be left on the BBC Radio Science message board at www.bbc.co.uk/dna/mbradio4/F2766778. Examples of this unit’s coverage of the Dover trial are at <http://news.bbc.co.uk/1/hi/world/americas/4353524.stm>.