

**THE CHALLENGES OF ENVIRONMENTAL CITIZENSHIP**

**2011 Birkett Williams Lecture  
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**Introduction**

Thank you, Professor Knight, for that introduction, for arranging for this presentation tonight and for your hospitality today.

I'm pleased for personal reasons to be in Arkansas. Arkansas is one of only two states in the U.S. I have not previously visited. From the little I've seen so far today, there's a lot I've missed!

It's also a pleasure to be here because a number of my personal conservation heroes hail from Arkansas.

Perhaps, you think I'm referring to Bill Clinton? Dale Bumpers?

Actually, not.

I was thinking first of Jim Wood, who represented the Arkansas Wildlife Federation as their delegate to the National Wildlife Federation, for which I worked for 21 years and of which I was President for nearly eight years. Jim has worked tirelessly to protect the White River and his tenacity has been an inspiration to me.

And I was thinking of Don Hamilton, an attorney from Little Rock and former member of the NWF national board of directors. Don worked for many years on efforts to protect the Buffalo River, alongside such conservation heroes as Joe Nix. I've known of Joe by reputation before my visit and now have had a chance to meet him. Joe, thanks for being here tonight and thanks for your services to conservation and your community.

One of the most rewarding aspects of my thirty years in the environmental movement is the opportunity to know and admire individuals like Jim, Don and Joe all across America who give so generously of their time and talents to protect the natural places they know and love. Their lives exemplify the kind of service about which I'll be talking tonight.

I'm honored to give the Birkett Williams Lecture this year, especially after I did a little research and learned that the Birkett Williams endowment was created to "extend the concepts of a liberal arts education *beyond the classroom environment* [emphasis added]." While I plan to spend some time

tonight reflecting on the importance of what happens in the classroom, much of my talk will focus on Ouachita Baptist University's role and responsibility for what happens beyond the *classroom* environment to protect our *natural* environment and to create a sustainable society.

OBU's eager acceptance of this broader responsibility is impressive and inspiring. The J. D. Patterson School of Natural Sciences mission statement commits the school to "emphasize[] the methods of science as *it prepares all students for informed citizenship*" [emphasis added].

OBU has it just right with this focus. *Preparing all students for informed citizenship* is the key to solving our environmental problems and meeting our sustainability challenges. And, as I'll discuss in a moment, informed engagement by people of faith in environmental policy is especially important right now.

So, this evening, I'd like to reflect on three challenges for OBU in "preparing its students for informed citizenship" on environmental and sustainability issues:

1. Teaching and learning
2. The campus as community
3. Responsibility to engage in the world

### **Teaching and Learning**

Preparing students for informed citizenship involves, of course, the teaching and learning that happens in classrooms here and at other colleges and universities across America. What happens *in the classroom* is more important than ever.

The National Council for Science and the Environment recently observed, "[t]he ecological crisis is a crisis of mind, which makes it a challenge for those institutions which purport to improve minds. It is, in other words, an *educational crisis*."

A few years ago the National Environmental Education and Training Foundation summarized a decade of public opinion surveys by the Roper Organization. This report found "a persistent pattern of environmental ignorance [in the United States] even among the most educated and influential members of society." The report estimated that only 1% to 2% of American adults could be considered environmentally literate and found little difference between the average American and government and business leaders.

It's critical that OBU and other colleges embrace the challenge of ensuring that all their graduates are environmentally literate.

In the past, managers and policy makers could assume the general public had a basic level of understanding about the natural world. Most people grew up on farms or in settings where they learned important lessons through their daily interactions with nature. Today, in our ever-more-urbanized society this is no longer so.

Today, people don't understand such simple concepts about nature as these:

- *Water runs downhill.* Most people live their lives unaware of the watershed they inhabit. They have no sense of the impacts of what runs off their lawn, what they pour down their drains or flush down their toilets.
- *Animals need homes too.* Many people who enjoy viewing birds in their backyards or other wildlife in cities or suburbs don't understand the concepts of an animal's habitat, range and migratory patterns. They don't understand that healthy habitats are required across ecologically meaningful landscapes or those birds and animals will disappear.
- *Animals and people share the same homes.* In our high-tech society of modern conveniences most people do not understand that their fate is tied to the health of the environment. Many believe that protecting natural landscapes and functioning ecosystems is a luxury.
- *There is no such thing as away.* Most people don't understand the basics of energy and materials flows or the fundamentals of total life cycle analysis. They have an "out of sight, out of mind" attitude toward the wastes they produce.

These, and other, basic lessons once intuitively learned must now be explicitly taught in the classroom.

As important, however, is reintroducing students to the natural world through *experiential* learning, getting out of the classroom with field studies and other direct experiences of the natural world. In part, the "crises of mind" highlighted by the National Council for Science and the Environment is a consequence of our culture and the way in which most children grow up, in urban or suburban settings, inside much of the time, and preoccupied with electronic devices, video games, etc. In his book, *Last Child in the Woods*, author Richard Louv has described a new ailment, "nature-deficit disorder," that is afflicting our youth. Michael Pyle wrote in his book, *The Thunder Tree*, that the "extinction of experience" of the natural world, not the extinction of species, is the greatest environmental threat.

Finally, as OBU considers its teaching responsibilities, it's important to focus on how classes are taught. The current model of the American university is built around disciplinary specialization and an accompanying fragmented and highly autonomous institutional structure... to put it simply, around the three "D's" of disciplines, deans and departments.

This structure rewards specialization and compartmentalization among faculty and students. It teaches much about a little. As Wendell Berry points out in his book, *Life is a Miracle*, the biggest drawback to intellectual inquiry in America is its inherent reductionism. By reducing the scale of what we study to make it small enough to understand, we ignore most of everything. And the most dangerous reductionism, warns Berry, is "thoughtlessness of consequences."

Educating for sustainability is inherently interdisciplinary. As Wynn Calder and Richard Clugston of University Leaders for a Sustainable Future have observed, it means "learning how to solve several problems at once." Meeting the challenge of interdisciplinary learning is a direct challenge to how universities are organized and the current incentives of the tenure system. Faculty must be rewarded

with promotions and tenure for breaking out of their disciplines and for an integrated approach to sustainability.

The importance of interdisciplinary and experiential learning is why I was so impressed to learn about the “On The Ouachita” course team taught by Professors Tim Knight, Byron Eubanks and Mike Reynolds – a scientist, a philosopher and a kinesthesiologist – how’s that for interdisciplinary learning! It includes classroom learning in an interdisciplinary setting along with shared outdoor experiences. As OBU finalizes its new strategic plan this summer, I would challenge you to consider how to build on this example, to make environmental literacy a goal for all students and to include experiential education as an important component.

### **The Campus Community**

The second challenge to OBU is practice what it preaches. Beyond educating environmentally literate students in the classroom, the university functions as a community and within a larger community. Universities are responsible for the sustainability of their operations and business practices. Many colleges and universities across the country are making major changes in their operations, often responding to student interest in sustainability.

Over the years, I’ve had many opportunities to work with various colleges and universities on the issue of “sustainability.” NWF’s Campus Ecology program, which has reached over half of America’s colleges and universities, was founded during my tenure. NWF published the first “State of the Campus Environment” Report Card and NWF has continued working with colleges and universities by deploying campus organizers across the U.S.

I have also worked with the American College and University President’s Climate Commitment, an organization that includes over 800 college and university presidents who have committed to reducing their schools’ global warming pollution and becoming “carbon neutral.” The ACUPCC’s next climate leadership summit is June 23-24 in Washington, DC, and I would encourage OBU to send a representative.

The good news is that many colleges and universities are learning that they can save money by becoming more energy efficient, less wasteful and more sustainable. I know from talking with Vice President Brent Powell that OBU’s sustainability policy<sup>1</sup> has its roots in confronting increases in the University’s utilities budget. As Brent explained to me, this cost-reduction initiative quickly “turned into an environmental effort to save energy.” Many other schools have started down the path of sustainability for similar reasons and it’s great news that you can do good by doing well.

I know OBU is justifiably proud of earning a #1 ranking from *U.S. News and World Report* for four years in a row. I challenge you tonight to add to this honor scoring an “A” on the sustainability report card prepared by National Wildlife Federation or other third-party reviewers of campus sustainability.

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<sup>1</sup> OBU Environmental Stewardship Policy (Sept. 11, 2008);  
<http://home.obu.edu/green/documents/EnvironmentalStewardshipPolicy.pdf>

## The Responsibility for Environmental Citizenship

Beyond the campus community, OBU aspires to improve the larger community and it's clear that the commitment to service here is more than just words. It's impressive that last fall's Tiger Serve day was the most successful ever with approximately 800 students participating. It's impressive that many OBU graduates are involved with public policy, including a number of OBU graduates serving in state elected offices and, of course, one of your own, Governor Huckabee, ran for president – and may do so again.

The responsibility for service to solve environmental challenges arises in part from the acquisition of knowledge. The more you know, the more you are called upon to act. The great ecologist and conservationist, Aldo Leopold, wrote this more than fifty years ago:

One of the penalties of an ecological education is that one lives alone in a world of wounds.... An ecologist must either harden his shell and make believe that the consequences of science are none of his business, or he must be the doctor who sees the marks of death in a community that believes itself well and does not want to be told otherwise.

Leopold went on to warn those with knowledge to beware that they “do not become undertakers of the mysteries at which they officiate.”

Each of you is here tonight, in part, because of your knowledge – or interest in knowing more -- about the natural world and our shared environment. And so, each of you in this room – every administrator, faculty member and student – faces a simple choice: *will you be an undertaker or will you be a healer of the Earth?*

This challenge is especially important to those with scientific knowledge, who are often hesitant to engage in the sometimes-messy public policy process. A few years ago *Science* magazine asked eminent scientists if advocacy diminishes their credibility? Stuart Pimm, an ecologist involved in Everglades restoration, summed up the sentiments of many of the respondents by saying, “I have a moral responsibility as a citizen to *make people aware of what the science means* [emphasis added].”

And, for you, people of faith, the responsibility to engage in public policy to protect the environment and promote sustainability is especially important.

As stated in the Ouachita Green Initiative:

“we should be, and are, concerned about protecting our world. As a Christian institution *we are obligated to be good stewards* of God's creation and the resources He has given us. All of us in the Ouachita community should be interested because it is simply the right thing to do. Calvin DeWitt summarizes our obligation for creation care in his book “Earth-Wise.” Our ultimate purpose is to honor God as Creator in such a way that *Christian environmental stewardship is part and parcel of everything we do*. Our goal is to make tending the garden of creation, in all its aspects, an *unquestioned and all-pervasive part of our service to each other, to our community, to God's world*. [emphasis added].

I understand Cal DeWitt has spoken here at OBU and I'm pleased to follow in his footsteps. I know Cal. Like him, I grew up in Grand Rapids, Michigan. I attended Calvin College where he has taught. And I have worked with Cal on a number of national environmental policy issues, including protection of the Arctic National Wildlife Refuge – about which I'll say more in a moment.

The need for Christian voices in environmental policy debates is particularly important right now. For reasons I'll discuss in a moment, these voices are often lacking. Even worse, political leaders who purport to speak for or appeal to Christians, particularly conservative Christians, are taking strident anti-environment positions. This trend is clear in the current Congress and among aspirants for the Republican presidential nomination.

Consider the issue of climate change and these two examples:

Earlier this week the on-line journal, *Politico*, had a featured story on presidential candidate Tim Pawlenty's reversal of his position on climate change. *Politico* quoted Pawlenty as saying this about climate change policy on the Laura Ingraham television show last Monday:

I've made a mistake. I think cap-and-trade would be a ham-fisted, unhelpful, damaging thing to the economy. It's misguided. I made the mistake. I admit it. I'm not trying to be cute about it. I just come out and tell you it was a mistake.

According to *Politico*, Pawlenty has been trying for more than a year to distance himself from his work on climate change as governor, including his signature on a 2007 law that forces an 80 percent cut in Minnesota's greenhouse gas emissions by midcentury.

And, last December Mike Huckabee denied in a blog post on his political fundraising site, Huck PAC, his long-standing support for a mandatory cap-and-trade program to reduce greenhouse pollution. Here's what he said in this posting:

In a recent internet post, a contributor makes the claim that I supported cap-and-trade in late 2007 while running for President. To put it simply, that's just not true.... This kind of mandatory energy policy would have a horrible impact on this nation's job market. I never did support and never would support it – period.<sup>2</sup>

However, when he spoke at the Clean Air Cool Planet conference in Manchester, NH, on October 13, 2007, Huckabee was unequivocal in his support for “cap and trade of carbon emissions.” Here's what he said then:

The one thing all of us have a responsibility to do is to recognize that climate change is here, it's real. What we have to do is stop pointing fingers about who's at fault and saying whose responsibility it is to fix it and recognize it's all our fault and it's all our responsibility to fix it.... I also support cap and trade of carbon emissions. And I was disappointed that the Senate rejected a carbon counting system to measure the

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<sup>2</sup> [http://www.huckpac.com/?Fuseaction=Blogs.View&Blog\\_id=3332](http://www.huckpac.com/?Fuseaction=Blogs.View&Blog_id=3332)

sources of emissions, because that would have been the first and the most important step toward implementing true cap and trade.<sup>3</sup>

To be fair, Republicans who aspire to the presidency are not alone in their doubts about climate change and about a federal cap-and-trade policy to address it. Polls show increased skepticism among the American public of climate change and declining support for federal legislation to address it. Even more troubling, as demonstrated by Governors Pawlenty and Huckabee, the issue has become increasingly partisan and polarized along ideological lines.

Christians, especially conservative Christians, are critical to preventing this polarization and to helping find common ground on sensible policies to avert this greatest of all environmental threats. But, why are these voices relatively few? Why do Christians increasingly “hide their light under a bushel” when it comes to speaking out on environmental policies?

Cal DeWitt in his book *Earth Wise* identifies some of the “stumbling blocks to creation care and keeping” that has led to Christians’ reluctance to engage on this issue. First, he suggests that it may have more to do with discomfort with environmentalists than with a lack of concern or commitment. DeWitt points out that many Christians find environmentalists to be “New Age” or, even, “pantheistic” -- that is, worshipping the creation, instead of the Creator.

Second, DeWitt suggests that many Christians, especially conservative Christians, equate environmentalism with big government and an anti-free market agenda.

Let me address that last concern first. One of the most significant changes I’ve seen in my career is the extent to which businesses have embraced environmentalism and sustainability. Many companies have gone green because it makes good business sense. For example, major companies have banded together in the World Business Council for Sustainable Development and have partnered with environmental groups to form the U.S. Climate Action Project to advocate federal cap-and-trade legislation.

As to the first concern about the nature of environmentalism, I’m not here to defend national environmental groups. However, I can tell you from personal experience that their leadership and staff are a diverse group, many of whom have a deep-seated faith-based perspective. For example, my successor as President of NWF, Larry Schweiger, is an avowed evangelical Christian who has worked with Cal DeWitt at the Au Sable Institute – a Christian environmentalists’ think tank. In any event, it doesn’t make sense to choose one’s policy position based on the personality traits or philosophies of one’s allies in the policy process. Tactical alliances do not imply endorsement of your allies’ world views.

But which of the world’s many ills warrant attention first! Over the last few decades we’ve tended to view environmental problems as a laundry list of ills; air pollution, water pollution, hazardous wastes

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<sup>3</sup> <http://wonkroom.thinkprogress.org/2010/12/16/huckabee-cap-and-trade/>;  
<http://www.slate.com/blogs/blogs/weigel/archive/2010/12/15/yes-mike-huckabee-backed-cap-and-trade-in-2007.aspx>

disposal, loss of agricultural land, sprawl, the collapse of fisheries, declining numbers of wildlife, and so on.

It's all so confusing, how do we know on what to focus?

Here, too, I like Cal DeWitt's approach. He focuses on "Seven Degradations of Creation" (or they might be called a Christian Environmentalist's "seven deadly sins")

1. Alternation of Earth's Energy Exchange (global warming and ozone depletion)
2. Soil and Land Degradation (pesticides and herbicides)
3. Consumption, Waste and Ecosystem Dysfunction
4. Land Conversion and Habitat Destruction
5. Species Extinctions (citing MEA and Sylvia Earle)
6. Global Toxification
7. Human and Cultural Abuse

Using DeWitt's taxonomy of sins, I'd like to comment briefly on four issues.

### Climate change

I've already mentioned climate change to illustrate the ideological polarization of our discourse on environmental issues. But there are a few additional observations I'd like to make about this, the first of Cal DeWitt's seven degradations of creation.

It is the overwhelming consensus of scientists that climate change is happening and that it's primarily caused by humans. Scientists from around the world have come together to say what the science means and to warn policy makers of the need to act now to stabilize, and over time reduce, emissions of greenhouse gasses. This consensus has been obscured by well-funded disinformation campaigns and by lazy journalism that ill serves the American public. Lazy journalism seeks superficial objectivity by quoting an opposing view for every statement about the risks of climate change. It means that a small minority of climate skeptics get disproportionate attention.

My second observation concerns the demonization of "cap and trade," as demonstrated by Governor Pawlenty and Governor Huckabee's frantic back-tracking. It actually is a free market idea proposed by economists and adopted by the first Bush Administration to deal with acid rain – and, it worked. Have you heard about acid rain recently? The reason you likely haven't is the progress we've made to reduce sulfur dioxide emissions from power plants thanks to the cap-and-trade provisions of the 1990 amendments to the Clean Air Act. Cap and trade lets businesses decide the best way to reduce their emissions, including paying someone else to reduce their emissions more if it's more cost effective.

Finally, even for the skeptics, one doesn't need to believe in climate change to believe that many of the measures needed to address it make sense for other reasons. Switching to domestically produced renewable energy sources is good for national security and the economy. Building more fuel efficient cars saves money and makes American car manufacturers more competitive in emerging markets like China, which currently has stricter auto efficiency requirements than does the U.S.

## Species Loss

Second, a few words about the global loss of species, DeWitt's fifth deadly sin. I must admit, I'm still trying to assimilate yesterday's story about a new *Nature* magazine article warning that the Earth may be entering its sixth phase of mass extinction. According to the report, "current human actions ... are producing conditions that could lead to the kind of "perfect storm" that has been coincidental with past extinctions." As if that weren't frightening enough, the authors also warn that "the present rate of species' decline far outpaces that of previous mass extinctions. "

With the biblical story of Noah, the loss of species has special resonance for many Christians. Led by groups such as the National Religious Partnership for the Environment, a diverse set of faith-based groups have organized rallies calling for the protection of endangered species and have lobbied on Capitol Hill to oppose efforts to gut the Endangered Species Act.

## Arctic National Wildlife Refuge

Third, I want to mention the reemergence of proposals to open up the Arctic National Wildlife Refuge for oil and gas exploration. Protected originally by President Eisenhower, this Refuge in northern Alaska is the largest intact ecosystem left in North America. Among other things, it includes the birthing grounds for the Porcupine caribou herd, which, when it leaves the Refuge on its annual migration is a primary food and cultural resource for the Gwich'in people. The calving grounds in the Refuge have such spiritual significance to the Gwich'in that they never go here and they have led a nationwide effort to maintain its protected status.

The Gwich'in are the last culturally-intact subsistence-based Native American culture in the United States. Opening the Arctic National Wildlife Refuge to oil and gas exploration will destroy their culture and way of life; that's why this has become a national, and global, human rights issue. It illustrates DeWitt's seventh deadly sin of human and cultural abuse – as well as a few other sins.

And, it may interest you to know that the Gwich'in are your fellow Christians – an estimated 90% of them are Episcopal. The first missionaries to the region were Episcopal and faith found root in this remote outpost of the continent. That's why the Episcopal Church has taken a stand opposing oil and gas drilling in the Refuge. Having lobbied on Capitol Hill on this issue with the Bishop of Alaska, Mark McDonald, I can tell you that Christian voices have made all the difference. Like the plight of Christians in Darfur, the Christians among the Gwich'in are remote, poor by our standards, and far from centers of power. That's why the voices of fellow Christians means so much to them.

## Shale Gas Development

Finally, I want to speak to an issue closer to home: shale gas development, especially using the technique known as hydraulic fracturing. This technique involves injecting water and chemicals under high pressure underground to fracture shale formations and release the trapped natural gas. Thirty to seventy percent of the contaminated water that is injected returns to the surface along with the gas.

The good news is that advances in this technology have increased enormously the recoverable reserves of natural gas in the U.S. Last November, the U.S. Energy Information Administration reported that “Shale Gas Development Drives U.S. Natural Gas Proved Reserves to Highest Level Since 1971.” While Louisiana led the nation in additions of natural gas proved reserves, Arkansas (Fayetteville Shale) and Pennsylvania (Marcellus Shale) were next, nearly doubling their reserves.

The even better news is that gas burns cleaner than coal. Given the nuclear accident in Japan, natural gas will likely be a critically important transitional fuel for the next few decades in combating climate change as we make the long-term switch to renewable energy sources.

But is Arkansas ready?

Current estimates are the approximately 7,000 wells already drilled in the Arkansas basin will be far exceeded by the 14,000 wells projected for the Fayetteville Shale Formation.

There are a variety of problems with the hydrofracking technology including the enormous amounts of water it uses and the proper treatment and disposal of the contaminated “produced” water that comes back to the surface with the gas. There are environmental and property rights issues with the disturbances on the surface that accompanies drill pads, pipelines and access roads. By my count, this practice could constitute three of DeWitt’s seven deadly sins!

Now, I’m not trying to persuade you that hydrofracking is bad and should be banned. But, it’s important to know that Congress has created loopholes in the federal Safe Drinking Water Act and in the Clean Air Act so that hydrofracking is not reviewed like every other activity that injects chemicals underground or has potentially hazardous air emissions. As a result, some states like New York and regional bodies like the Delaware River Basin Commission have put a moratorium on any more hydrofracking until companies disclose the chemicals they are injecting underground and appropriate environmental safeguards are in place.

Sound stewardship teaches us to “look before we leap.” With respect to hydrofracking, we’re leaping first and then looking to see what happens. Sensible policy and good stewardship suggest we develop environmental safeguards, require companies to disclose the chemicals they’re mixing in with the injection water, and then move forward to develop this important, domestic energy source. Last month the Arkansas Public Policy Panel called for these measures and I urge you to take a look at their report and to become involved in this issue in your backyard.

### **Conclusion**

Well, I’ve talked tonight about OBU’s role and responsibilities as an institution. I would like to end by talking about the power of individuals – the power of a single teacher as a mentor who can transform lives and encourage students to find careers of service.

This resonated deeply with me because I had a teacher who became my inspiration and a mentor for my career. He is Joe Sax, whom I had as a law professor at the University of Michigan more than twenty five

years ago. He's known as the "father of environmental law" and wrote many influential books and articles. More important, he inspired me and an entire generation of environmental lawyers who went on to work with environmental advocacy groups or serve with government environmental agencies and in other leadership positions.

I was thinking about Joe Sax in listening to Tim Knight a few weeks ago talk about Joe Nix and his impact on this University and on his students, like Tim, during his teaching career. When I talked with Joe later and asked him about his career accomplishments, he spent more time talking about former students like Professor Knight and Allen Burton, who is now the Director of the Cooperative Institute of Limnology and Ecosystems Research at the University of Michigan.

Funny how mentors like Joe Nix almost always talk about students of theirs who went on to do great things instead of the great things they have done. Anyone who's had a teacher like a Joe Sax, Joe Nix, Tim Knight, Byron Eubanks, or Mike Reynolds, appreciates the significance of their lives and the gift of themselves they gave to their students and colleagues.

In the final analysis, an institution like OBU is only as good as its people. It's the people who will tend the garden of creation and pass on that sense of stewardship. It's clear that this is a place made up of such people, a place that nurtures and encourages students to become effective environmental citizens and stewards of our Earth.

Thank you again for the opportunity to be with you this evening

