

The Ethics of Science and Law

By Jim Blackburn

I am pleased to be here today to talk about ethics in the context of science and the law. We who practice environmental law are quite privileged to work in a part of the law where science and law interact on a daily basis. Anyone who practices environmental law encounters science and engineering on daily basis, whether it be wetlands ecology, atmospheric physics, assimilative capacity modeling, surface water hydrology or the fate and transport of groundwater contaminants.

My experience with science has been one of the most rewarding aspects of my legal career. When I started law school, there was no such thing as environmental law. The first environmental law course came to UT Law School when a visiting professor from Berkeley taught something that was really more akin to water law than environmental law. However, because of my fishing and hunting background, I was hooked. After that point, I took every course that I could in law school that even closely resembled environmental law. I took an international

law seminar and wrote a paper on the Law of Pollution of the Oceans and made the lowest grade in my class and then won the first American Trial Lawyers National Environmental Law Contest with that same paper. Later, I parlayed that paper into an EPA Fellowship to study Environmental Science and Engineering at Rice and I have never been the same since.

I found something in science and engineering that I did not find in law and that was respect for truth. It is not that truth is absolute in science. In fact, truth does change over time because science continually challenges truth. However, there is also respect for the end result of the search for truth. There is a belief that pursuit and discovery of knowledge – of answers to the riddles of life and the human condition – is worth something. It is not all grey. There is black and white. But more than that, there is a belief and respect for the outcome.

I have been privileged to work my entire career with science. I teach in the Civil Engineering Department at Rice where I am the Director of the University-wide minor in energy and water

sustainability. I am currently researching severe storms and how to address them. I have learned to work with air and water chemistry, geology, soil science, bay and estuarine ecology, fish and shellfish and whooping crane life cycles and carbon, nitrogen, phosphorus cycles. I have written algorithms for computer models and have an understanding of how these subjects fit into the practice of environmental law. And it has been rewarding to me. This is who and what I am as a professional – an environmental lawyer. Not just any lawyer but an environmental lawyer and proud of it.

I have also watched with concern as I have seen science and engineering abused over and over in the legal process. I have watched how we treat expert witnesses on both the plaintiff and defendant side of the docket. For many practitioners, science and engineering are to be manipulated to make arguments and are not respected for their fundamental truths. And let me be clear – I do not think that one side or another holds the moral high ground here. We all suffer from this malady which I believe to be an issue of legal ethics at its core.

I can remember with absolute clarity a day when this process was clearly revealed to me. I was never really good at making money in this business, but it wasn't for lack of taking a run at it a time or two. I was encouraged by a defense lawyer to become a toxic tort plaintiff lawyer because – as he explained – I knew more about the science than most everyone in the business. This was the late '80s and Mary Carter and I had been together for a year or two and even though she had agreed to work with me for no money, I felt some obligation to score a dollar or two. I had been contacted by some plaintiff lawyers from San Antonio who had a case in West Texas involving groundwater contamination and health effects. The problem was, although there was certainly underground contamination, there was no evidence of that anyone was sick because of it. I explained this to the lawyers who wanted me to work with them and they told me “Don't worry about that. We'll get one of those \$1000 an hour doctors from the East Coast and take care of that problem”. That was my first exposure to absolute disdain for truth in the legal process and it bothered me deeply.

I was reminded about that experience recently when I appeared in a Houston federal courtroom attempting to get a temporary injunction. I had had a decent morning but after lunch the Judge started asking questions about one of the key issues in determining whether or not a temporary injunction was appropriate. It had to do with irreparable harm. I had argued irreparable harm one way, but the Judge's question focused on a different perspective. And when he asked me if I felt that irreparable harm would occur under his scenario, I told him no, I did not think it would, given the way he asked the question. A few minutes later, he surprised me by complementing my candor, my truthfulness. He told me that I was a fine example for the bar. And all I did was honestly answer his question about a technical issue.

Why is that we as lawyers merit surprise and perhaps even applause from Judges because we are truthful? Have we become so jaded that truth is without meaning? Is everything for sale in the legal profession? So where does truth belong in environmental law?

I find this issue particularly troubling because I think we work in an area where there is tremendous public trust and public responsibility. While I don't demean the importance of money, we are not only working in dollars and cents. We are working in an area of law that directly implicates human lives and human safety. Our cases and clients can literally change human and ecological systems, affecting the very stuff upon which humans and animal life depend. We buy and sell and transport water, taking it from one region, delivering it to another, perhaps allowing the enjoyment of St. Augustine grass in the desert, perhaps bringing an invasive species from one river system to another.

Through all of my years, I have heard very little discussion or debate about the ethical obligations of environmental lawyers. And I am not sure if I would be here talking about science and law and ethics if it were not for the politicization of science to such a great extent. We lawyers may practice politics, but the practice of law is distinct from the practice of politics. They are not the same, although we often seem to get that confused. They are distinctly different.

In politics, truth – at least as far as science is concerned – seems unimportant. Unfortunately, we are living in a time when certain scientific realities are truly inconvenient. There are over seven billion of us humans on the planet and there are more coming all the time. There are very real shortages of water and food in many parts of the world, including the United States. There are major health problems from pollution. There are human and ecological changes occurring daily that affect water and mineral and carbon cycles. We are ever changing our Earth and many of these changes are truly life threatening. Many should be redirected if not absolutely stopped. This is our milieu. This is where we practice law and I believe it to be among the greatest callings. But it requires honesty and ethical principles.

What would any of us do if we were practicing environmental law in the time of Columbus or Copernicus. (Slide 2) Of course, prior to Columbus's trip across the Atlantic, the Earth was believed to be flat. I guess Columbus was involved in the ultimate experiment. He survived the corner of the Earth and returned to tell about it. But it certainly

revolutionized commerce and science. And how about Copernicus, being revolutionary enough to dispute the religious construct that the Earth was the center of universe when he published just before his death in 1593 his scientific theory that the Earth circumnavigated the sun rather than the system circulating around the Earth. (Slide 3). What a heretic, except, of course, he was right, but his truth was very inconvenient for existing theology and social norms.

So let's fast forward to Texas in 2011 where the Texas Commission on Environmental Quality attempted to censor Dr. John Anderson's paper on Galveston Bay which, among other things, put forth factual data about sea level rise in Galveston Bay. (Slides 4 and 5). This was not a piece about theoretical musings. This was a report of measurements in our backyard and the attempt was made to prevent this information from being published. Perhaps burning at the stake is not far away. (Slide 6)

And by the way, don't forget that the key case on groundwater law in Texas muses that groundwater is incapable of precise management

because its analysis and evaluation involves the occult. (Slide 7) No kidding. Our Texas Supreme Court precedent on groundwater is concerned that we cannot and should not manage groundwater because its evaluation involves water witches.

After getting myself appropriately incised over water witches and heresy, I decided to check into the rules of the State Bar of Texas about the ethical obligations of lawyers relative to science and truth in the courtroom and what I found was quite interesting. The starting point is the Rules of Professional Conduct. Rule 3.03 concerns “Candor Toward the Tribunal” and is quite clear about our duties as attorneys. According to section (a), a lawyer shall not knowingly (1) make a false statement of material fact or law to a tribunal, (2) fail to disclose a fact to a tribunal when disclosure is necessary to avoid assisting a criminal or fraudulent act, (4) fail to disclose to the tribunal authority in the controlling jurisdiction known to the lawyer to be directly adverse to the position of the client and not disclosed by opposing counsel; or (5) offer or use evidence that the lawyer knows to be false. This is an interesting set of

rules. They are worthy of some discussion. But I would like to put these rules in context.

Science and law plays out harshly in today's courtroom. *Daubert* and *Robinson* have created a whole new dynamic – a dynamic where reputations are impugned and an atmosphere of fear and loathing dominates. Every expert is open to attack as a potential liar. Every aspect of proof is subject to challenge as to credentials and methodology. The courts developed these rules for good reason – the abuses were substantial and the stakes are high. But somewhere in this process, we have lost sight of truth. (Slide 12).

Judge Janis Jack has written one of the most comprehensive and compelling cases regarding the practice of science in the courtroom. In the case of *In re Silica Products Liability Litigation*, Judge Jack pronounced that

"Repeatedly, the diagnosing doctors testified as to their blind (and, as it happens, unfounded) faith that other physicians had taken the necessary steps to legitimize their diagnoses. By dividing the

diagnosing process among multiple people, most of whom had no medical training and *634 none of whom had full knowledge of the entire process, no one was able to take full responsibility over the accuracy of the process. This is assembly line diagnosing. And it is an ingenious method of grossly inflating the number of positive diagnoses.“

She continued stating:

"If nothing else, this MDL illustrates the mess that results when lawyers practice medicine and doctors practice law. In almost all of these cases, one vital requirement for the diagnosis of silicosis—the taking of occupational histories—was performed absent medical oversight by the lawyers or their agents or contractors. More generally, the lawyers determined first what disease they would search for and then what criteria would be used for diagnosing that disease. The lawyers controlled what information reached the diagnosing physicians, stymying the

physician's normal ability to ask targeted follow-up questions and perform follow-up exams".

That was a bad situation and it was addressed by the court. On the other hand, well qualified experts working well within their expertise employing proven methodologies are routinely drawn and quartered in the Daubert challenge process. We don't burn our heretics at the stake, we simply Daubert them to death. (Slide 15).

What are the ethical limits on Daubert challenges? When does it move from trial by fire to public humiliation? Is anyone who steps into court fair game for a challenge regardless of the merits of the challenge? It is demeaning and mean to challenge the integrity of a witness. It should be reserved and used selectively rather than upon every individual foolish enough to step into a courtroom and offer themselves as an expert. The process is vicious beyond need and utility. And in the process, have we lost sight of truth?

Going back to ethical rule 3.03(a): Is a trumped-up Daubert challenge a "false statement" before the court in violation of

Prohibitions 3.03(a)(1) or (a)(5)? What are the ethics of attempting to disqualify a young and inexperienced expert testifying well within the bounds of methodology and peer-reviewed science as opposed to simply cross-examining that expert about the use of science and methodology? I think that these are important issues that will become more and more important as we get further into the role of science in our day to day activities.

Or consider a circumstance that we recently encountered in a groundwater dispute. There are now approximately 96 groundwater districts covering full or part of 172 counties throughout Texas. (Slide 16). Although the bulk of groundwater districts have existed for decades, more recent actions taken by districts and legislative directives have now positioned the court system to address the boundaries of their authority as well as proper permitting procedures. This is unlike the TCEQ, TRRC or PUC, where many of these issues have been addressed. These districts (with their commendable and dedicated, but non-legally trained board members) are wading in new territories. Adding to the

difficulty, appeals from groundwater district actions are heard by local state district courts as opposed to Travis County District Court which hears most Texas APA appeals from agency decisions. These rural state district courts often have no experience with the Texas APA. What is the responsibility of counsel in informing Districts and these less exposed courts to the well established concepts of administrative law. We have just encountered a situation where we believe that opposing counsel misrepresented state law on multiple issues to the tribunal in violation of 3.03(a)(4) which requires counsel to be forthcoming to court about authority vis a vis the case pending before the court. This example was in a standing context. As lawyers, we are obliged to tell the truth both with regard to facts and with regard to law. Interesting.

And to make matters even more interesting, there is the point that we are practicing a type of law that has been classified as “public welfare” law. Criminal case law is clear that general rather than specific intent is applicable to various environmental statutes, including RCRA, CERCLA, Clean Air Act and Clean Water Act because violation of

these statutes implicates the public welfare. In other words, the subject matter of these statutes is sufficiently dangerous to human health and property that requirement for mens rea – the criminal guilty mind – no longer applies. If you are working with these hazardous materials and substances, then you are held to higher standard of behavior.

It would seem that same would be true of lawyers who practice under public welfare statutes. Should we be held to a higher standard than other lawyers? Do these ethical rules about “failure to disclose a material fact to a tribunal to avoid assisting in a fraudulent or criminal act” take on a new meaning in the context of practicing public welfare law? What does tribunal mean in this context?

Take for instance the situation involving a heavy metal that is classified as RCRA hazardous waste and for which a clean-up standard exists. Assume that it is discovered that toxic metal has been deposited – through air pollution - into the yards of over a hundred homes within the deposition zone of air pollution. Assume that you have been given that information as counsel. And assume further that there are children

playing in these yards, getting their hands dirty and putting those dirty little hands into their mouths. Any ethical responsibility here? What amount of job creation or economic development justifies such a scenario? What are the ethical obligations not to overstate these often relied on benefits? Or to not over-consider our fees?

In a recent case of ours, opposing counsel put on a witness who testified that if we got our desired remedy, it would result in more than 6 billion dollars of lost economic activity within a particular watershed. However, the basis for this expert testimony was a false premise fed to expert by opposing counsel. This situation raises a major ethical issue relative to an attorney putting on evidence that was clearly false, e.g., contrary to the facts actually put into evidence in the case. On the other hand, the testimony was reported in the newspaper which may have been the intent of offering the evidence in the first place. We perhaps should have, but did not, seek sanctions in this situation for violation of the ethical rules. One thing was clear – an honest presentation of potential

impacts of our proposed remedy was the last thing on the mind of opposing counsel.

No area gets me more excited than does climate change. Aaagh – the politicians are having a field day on this issue. But what is the science here? And what role, if any, do we as environmental lawyers have in this public discourse.

An interesting starting point would be to subject the climate change discussion to a Daubert-like review. There are really two issues with climate change – is the climate changing? And is the changing climate caused by humans through greenhouse gas emissions? These are two distinct inquiries that are often wrongly lumped together.

When these issues are viewed through the lens of the Daubert review, it becomes quite revealing. The Intergovernmental Panel on Climate Change (IPCC) has determined that “warming of the climate system is now unequivocal”. Period. Now unequivocal is a strong word; it means absolute, unqualified, unambiguous. Only slightly less strong is the IPCC’s statement on the cause of climate change which is

that “Most of the increase in global average temperature since the mid-20th century is *very likely* due to the observed increase in anthropogenic GHG concentrations”. Very likely means with greater than 90% confidence. And if you don’t believe international panels, the National Academy of Sciences and American Geophysical Union have endorsed both conclusions as have 98% of the peer reviewed literature according to Ron Sass, my science mentor.

Climate change as both fact and theory has received overwhelming endorsement, yet we cannot speak of climate change in TCEQ hearings. Until recently, the Texas Water Development Board refused to consider it, even though it promises to play havoc with water development throughout the 21st century in Texas.

Climate change could be a critical aspect of our future livelihoods – our public welfare in many ways. (See Slides 17-22). Frankly, the most important thing that we can do for our children and for those who come after us is to denounce the politics that prevent us from even talking about these issues. We are environmental lawyers. We have a

responsibility to society. We are better trained than any other group to bring these issues to forefront and I think we are shirking our responsibility if we do not step up and speak up about this incredible problem that we need to start addressing now. For if we don't do it, who will? Certainly not politicians.

So in conclusion, I'm here to say that it means something to be an environmental lawyer, to work for the public welfare, to take a stand to bring forward the truth to those tribunals where we practice and where we live. Ultimately, truth in science and in law is important.