

How to lose your political virginity while keeping your scientific credibility.

David E. BLOCKSTEIN
Committee for the National Institute for the Environment

The purpose of this paper is to provide an introduction for conservation biologists to the legislative political process, to discuss some of the personal choice issues that conservation biologists must face in deciding to become politically active, and to suggest ways that scientists can contribute to the political process while maintaining their scientific credibility.

Many conservation biologists and other scientists shy away from the political process. The reasons for this range from unfamiliarity with the legislative and other political processes, to concerns that their science will somehow be compromised, to the dissatisfaction that many Americans feel with the political system. Yet, there are many reasons of self-interest and interests of the biota we study and are concerned about for conservation biologists to become educated and involved politically.

Brosnan (1999 - this volume) presents some of the differences between scientists and decision-makers. Elected officials or politicians are a special class of decision-makers whose profession is to make decisions based on their perceptions of the views of the people who elect them. As one member of Congress put it to me, "I vote for a living". Not only do legislators vote for a living, but their ability to earn a living as an elected voting representative depends upon their ability to convince the voting public to select them for this job. Their accountability occurs every two or six years when they request that their employers grant them a job extension.

As one can imagine, elected officials have many cultural differences from scientists. Their job description includes making decisions, choosing among alternatives, allocating resources that are usually insufficient for the task required, balancing or choosing among competing values and interests, and ultimately reaching compromise with individuals who profess and represent differing values.

Given this, why should conservation biologists become politically active? As Congressman Maurice Hinchey (D-NY) stated to the League of Conservation Voters at their 1999 Earth Day gathering, "without politics, there is no conservation; without politics, there is no wilderness." Wilderness has existed since the earliest days of the planet, when all was wilderness. But until wilderness in the United State was protected by an act of Congress, and until individual wilderness areas were set aside, wilderness was not safe. It is also safe to say, that although legislation alone will not conserve biodiversity, without politics, there will be no biodiversity.

What can scientists offer to the political process? Scientists have much to contribute, including:

- Specialized expert knowledge.
- Critical thinking.
- Data and interpretations.
- Credibility.
- Independence.

- Wisdom

Each of these is a valuable commodity that can help the decision-making process.

Further, it is our scientific responsibility having the attributes listed above, to contribute them to the political process. Most scientists are recipients of public funds for our research. As part of the social contract by which society supports science, we are obligated to provide some pay back by sharing the fruits of our knowledge with society.

For conservation biologists, our professional responsibility is even deeper. In concluding his term as president of the Society for Conservation Biology, Tom Lovejoy wrote an essay, entitled, Obligations of a Biologist (Conservation Biology Vol. 3:329-330, 1989). I keep this essay above my desk. He pointed out that we biologists have a responsibility to use our science, and to speak out as advocates for biodiversity.

Our professional responsibility is a public responsibility. It is also a moral responsibility. The ethics of human civilization compel that if we see a person who is injured, we have an obligation to help. Those who have first aid or medical training have a particular obligation to use their specialized knowledge to help the injured. Physicians have codified this ethical professional responsibility as the Hippocratic oath.

Perhaps we conservation biologists should have a similar oath. It is more complicated, because our patients are often not individuals. Yet, if we see a planet or an ecosystem or a biota that is being injured, we have an obligation to help. If our special training allows us to see something and understand something better than the average person, our obligation is even greater to use that knowledge. I don't think that any conservation biologist would argue that we should be doing nothing; indeed anyone who self-identifies as a conservation biologist, has made a professional commitment to dedicate themselves to helping heal our embattled planet.

The dilemma that many of us face comes when we consider the concept of advocacy. I argue that there is a continuum from data to advocacy (Fig. 1). Collection of data and interpretation of data in a scientific setting is, of course, what all scientists do.

Figure 1.

Data ⇌ Interpretation ⇌ Advice ⇌ Counsel ⇌ Advocacy

Yet many of us are uncomfortable extending this approach to questions of policy and management. Admittedly, it is much messier. Science is never straight forward and applications of science to policy are even less so. The answer to the policy question is never "found in Table 1.

There is always a need for interpretation as well as data. The application of science involves use of judgment. Yet, who is better qualified to provide this judgment than scientists? Many scientists believe that at some point on this data to advocacy continuum there is a line that we should not cross. If exists, the line is certainly gray, and scientists disagree on where to place that line. Many will say that it is a slippery slope. Each scientist should find a place where he or she

personally feels comfortable and should not be critical of other scientists whose personal values may put them at different points along the continuum.

Advocacy has a bad reputation among some scientists. The dictionary definition of an advocate is "one that pleads the cause of another". What is wrong with pleading the cause of another, particularly if the other (biodiversity) can't plead its own case? If conservation biologists are not advocates for biodiversity, who will be? Are we not to be blamed if we walk away from the scene of the crime/accident and do not help in any way?

A legitimate concern among scientists is that if we become advocates, we somehow tarnish our credibility. Credible is defined as: "capable of being believed". Like virginity, credibility can only be lost once.

There is a perception among scientists that if we "go beyond our data" and interpret, recommend, counsel or even advocate, that somehow our credibility is tarnished. We need to examine this perception, and ask who is judging our credibility? The peer review process does not discriminate as to whether author has been an advocate or has visited his congressman or has been on the board of an environmental group. However, a tenure and promotion committee might.

Politicians, on the other hand, expect scientists to have an agenda. They are suspicious of anyone who says they don't. However, they generally have high expectations that science as a process will provide answers that they can trust. Despite the pedestal that scientists have placed ourselves upon, nobody expects scientists to be infallible.

Here are a few guidelines on how to maintain scientific credibility while going beyond presentation of data.

1. Follow the facts.
2. Obey the "rules" of science -
 - A. Base interpretation upon data and conclusions that are peer-reviewed.
 - B. Explain how conclusions are reached.
 - C. Present margins of error .
3. Present caveats.
4. Identify uncertainty.
5. Help to distinguish between uncertainty and guesswork.
6. Minimize hyperbole.

As pointed out by Lovejoy (1989), "If we explain what we are doing, we in no way compromise our scientific credibility" .

Now that I've answered the second part of the question on my title, let's go to the first part, losing your political virginity. Without being too graphic, there are three main methods:

1. Do it yourself.
2. Do it with a group.
3. Pay someone else to do it for you.

Doing it yourself

A recent editorial in *Science* (1998) framed the question as the scientifically illiterate politician versus the politically clueless scientist. That may be only a slight exaggeration. All Americans, other than those living in Washington DC, have two elected senators and a congressman. These people work for the public. Their ability to keep their jobs depends on keeping the public happy (or at least the majority of the people who actually vote). There are also a host of local and state elected officials who also work for the public, who may even be more accessible, whose areas of responsibility have even a greater effect on a day-to-day basis, and who hear from scientists even less frequently. Although I very much agree with the adage, "think globally, act locally", my focus here is on conversations with congressional representatives and senators, but the lessons apply broadly and probably in other countries too.

The first thing to know is that these people are very busy and have lots of demands on them. However, they also have staff who work for them whose job it is to supply the best possible information on issues to their bosses. Staff are generally young (just out of college) and don't have much scientific background - freshman biology class may be their last formal education in science. Each congressional office has one (or rarely more) legislative assistant who handles environmental issues. Staff like to talk to scientists because scientists give them information. Information is the currency of Washington (money is too). Information is power. Scientists have it. However, Washington has an oral culture. Staff are not interested and don't have time to read your thesis or a pile of reprints. As painful as it may be to scientists, a one page summary is the most that they will read.

There are many resources for scientists who want to speak with Congressional people. Harold Hansen, former staff director of the House of Representatives science committee, stated that the first two commandments are to "know thy Congressman (personally)" and to "know about thy Congressman". William Wells (1997) who has made a career of helping scientists work with politicians has come up with 17 cardinal rules for scientists working with Congress (Figure 2 - at the end of this manuscript). A whole industry has developed to provide information about Congress. The best publications are those by the National Journal company, including the *Almanac of American Politics* (M. Barone and G. Ujifusa 1997, National Journal, Washington, DC). The League of Conservation Voters provides environmental profiles of members of Congress and compiles an annual scorecard of their voting record (www.lcv.org). These and many other resources are available on the world wide web. In addition to the Library of Congress Thomas system (www.thomas.loc.gov), there are a host of resources, including (<http://legislators.com/gc>).

Doing it collectively

One of the best vehicles for scientists to provide information to policymakers is through their scientific professional societies. These societies have differing philosophies regarding advocacy. Most of the big societies recognize that it is necessary to be advocates. Biomedical societies and others hire lobbyists to represent them in the constant chase for the federal dollar and to help get

across the perspectives of their members. The Society for Conservation Biology (SCB) is a bit more gun shy. Lacking a Washington, DC office, SCB is largely irrelevant to the national decisionmaking process on natural resource issues. SCB is a member of the American Institute of Biological Sciences (AIBS), which has a Washington, DC presence, but is just reactivating their public policy program after several years. The ornithological societies have joined together to form a new organization, the Ornithological Council, which has a mission to provide scientific information about birds to decisionmakers and others needing this information.

The American Association for the Advancement of Science (AAAS) has a substantial public policy program. AAAS rarely takes stands on issues. Through its public policy program, AAAS provides valuable resources to educate scientists about the political process and to educate politicians about science. For more than 25 years, AAAS has coordinated a Congressional Science Fellow Program. This program provides scientists with an incomparable year-long experience working as a scientific expert on a congressional staff. The experience is career-changing and life-changing more most fellows, including myself. Now many former fellows occupy important positions in national science policy, in the government and outside the government. Fellows are sponsored by individual societies. SCB has co-sponsored fellows from time to time.

Doing it anonymously (Paying someone else to do it)

It is important to understand that many scientists simply do not feel comfortable speaking with Congressional staff, writing letters, testifying, serving on public policy committees or other personal means of participating in the policy process (I hope that they do, at least, vote). These people can still contribute to improving the connection between science and decisionmaking. They can follow the time-honored method of helping to fund those who are more skilled in speaking out for their interests. Financial contributions are generally anonymous and thus can not be said to harm anyone's' scientific credibility.

Some scientific societies, such as The Wildlife Society, have a surcharge to their society dues to operate their public policy programs. My Congressional Fellowship was cosponsored by AIBS and the then American Society of Zoologists (now Society for Integrative and Comparative Biology), which financed their part of my fellowship by voluntary contributions of individuals above society dues. The Ornithological Council is financed by membership fees from its member societies and voluntary contributions by individual ornithologists.

Most conservation biologists belong to one or more environmental groups. Many of these groups have a strong scientific basis. Although they are generally very effective politically, there is also a broad width of the political spectrum which reacts negatively to most of these groups.

Finally, scientists, like any other citizen can add their drops to "the mothers' milk of politics". Campaign contributions can be given individually to the candidate of one's choice, or they can be bundled with other contributions through political action committees, principally the League of Conservation Voters or the Sierra Club both of which take active parts in election campaigns.

However one approaches it, conservation biologists have a responsibility to take advantage of the opportunities offered in our democratic system and use them for the conservation of biodiversity.

Figure 2. 17 Cardinal Rules for Working with Congress

1. Convey That You Understand Something about Congress.
2. Demonstrate Your Grasp of the Fundamentals of the Congressional Decision - making System.
3. Don't seek Support of Science as an Entitlement.
4. Don't Convey Negative Attitudes about Politics and Politicians.
5. Perform Good Intelligence Gathering in Advance.
6. Always Use a Systematic Checklist.
7. Do Your Homework on the Issue or Problem.
8. Timing is Vital.
9. Understand Congressional Limitations.
10. Make It Easy for Those in Congress to Help You.
11. Keep the "Bottom Line" in Mind.
12. Use Time-----Yours and Theirs-----Effectively.
13. Remember that Members and Staff are Mostly Generalists.
14. Don't Patronize Either Members or Staff.
15. Don't Underestimate the Role of Staff in Congress.
16. Consider and Offer Appropriate Follow-up.
17. Remember That the Great Majority of Members and Staff Are Intelligent, Hardworking, and Dedicated to Public Service.

From Working with Congress: A Practical Guide for Scientists and Engineers
William G. Wells, Jr. The American Association For The Advancement of Science 1993