

AAAS Session C: Advocacy in Science: Models for the Future
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An Overview of Key Issues in Advocacy

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Although I am an anthropologist and a member of the Committee for Scientific Freedom and Responsibility, I do *not* claim to speak for the CSFR nor for anthropology. But I can tell you why in 2005 I proposed advocacy and science as a crucial topic to be addressed, and why I believe the CSFR has worked on it for the past several years.

We are all aware of cases of bad science for good causes, and good science for bad causes. We know of cases in which advocacy by scientists has been primarily based on a wish for gain, either financial or in reputation. But for many, these are not the reasons they do it. When I first thought of advocacy by scientists as a crucial issue, it was the result of observing engagement in advocacy for human rights by scientists over a number of years. I observed cases in which scientists acting as advocates, sometimes in areas outside their expertise, based their advocacy on too little research, insufficient data to substantiate their conclusions, the manipulation of reports or people to support the scientists' own agendas, poorly presented materials, and even outright plagiarism, as well as actions that could harm those studied—all presenting their scientific credentials. In many of these cases, the causes were good; the conduct of science was not. It also became clear that increasing numbers of scientists are in fact engaging in advocacy. In my own field, I found an absence of guidelines, and of databases that could usefully relate to these cases; and, further, an absence of education on how to do advocacy well. In discussions with my colleagues from different fields on the AAAS CSFR, it became evident that many scientific fields lack sufficient data on the practice of advocacy as well as guidelines for how to conduct it.

The penalties for loss of scientific excellence while engaging in advocacy are many, including loss of credibility, the politicization of science, and failure in protection of the integrity of science (problems that Alan Leshner mentioned in his address to the CSFR in September of 2005). It also can lead to unsubstantiated conclusions and harm to the very causes advocated.

I found that, despite the reality that increasing numbers of our students were going into advocacy work, there was little instruction on how to do advocacy well, and when to and not to engage in it. In view of these problems, I proposed that advocacy was a major issue of current importance for the AAAS to address in a systematic way because the AAAS is the major overarching organization for science, and because, like many of its member scientific organizations, it has embraced advocacy for science, scientists, and various crucial scientific causes, among them evolution in science education, stem cell research, sustainable development, environmental policy and climate change. Moreover, AAAS is committed to the teaching and dissemination of scientific information.

The issue of Advocacy and Science was adopted by the CSFR as the focus of its annual 2006 and 2007 topical meetings, and of a session at the 2008 AAAS annual meeting for which our moderator, Joe Perpich was one of the organizers. The CSFR and the excellent AAAS staff has worked long and hard on the issue of advocacy and science, and presenting fair hearing for advocates and those opposed to scientists becoming involved with advocacy. They have also proposed advocacy and science as a project for funding for further study.

Let me clarify at the outset, that I am *not* advocating that all scientists, or even most scientists, should engage in advocacy or that those that do so should do so on a continual basis. Rather, I propose that when advocacy is done by scientists, as scientists, it should be done well; using good methodology, and drawing conclusions in keeping with that methodology rather than presenting conclusions that are not the result of scientific study as if they were science. To this effect, I'm proposing databases and guidelines for the practice of advocacy, and that we incorporate the teaching of advocacy and mentoring in our science curricula.

There are many reasons why scientists may fear engagement in advocacy. Many believe that scientists are non-judgmental while advocates employ value judgments. This ignores the fact that the work of scientists is based on value judgments of what to study—which may be influenced by what is valued enough to warrant research funding, which theoretical and methodological approaches to use, which findings to publish and where. In my own field of anthropology, the basic guideline is “do no harm”—clearly a value statement. Those in the scientific community who eschew advocacy because they believe it involves value judgments that affect objectivity ignore the prevalence of values in the usual conduct of scientific inquiry. The very decision for or against advocacy work is itself a value judgment.

- **Databases**

One basic need in decisions about whether and how to address the issue of advocacy and science is the availability of good databases on the subject, which are either lacking in many disciplines or not provided in any systematic way.

It would seem useful to have databases on best practices, as well as information on problems encountered in the practice of advocacy. Each institution's or organization's data base on this would contribute to our general knowledge. This could in turn form a basis on which to move toward the establishment of general guidelines that overarch different scientific fields and institutions. Data collected and evaluated from different points of view in a global context would be very valuable. Good information on how advocacy has been practiced by scientists and the results of this would be especially useful in formulating guidelines.

- **Guidelines**

Another major question pertaining to practice of advocacy is whether we need guidelines for scientists engaging in advocacy. If so, should this be up to specific scientific organizations, left to the individual scientist, or would a general set of guidelines

encompassing the different sciences and even science in different countries be useful? If so, how should we go about formulating these guidelines, and who would be in charge of this? Guidelines could perhaps come from a colloquium or forum in which the different sciences and engineering organizations would be represented. The AAAS could be the facilitating organization.

Which scientific organizations have guidelines specifying when a scientist should or should not engage in advocacy, and guidelines for how advocacy should be conducted by scientists? A symposium on advocacy at the AAAS 2008 annual meeting showed that some organizations or associations which include various scientific fields and subfields do specify guidelines, and in some cases, even have sanctions for violations; however, others have neither. For example, the Code of Ethics of my own discipline of anthropology leaves such decisions to the individual anthropologist. There are other organizations that do the same. Is that enough in the world of today? If not, then guidelines for when to or not to engage in advocacy and how to do it in keeping with good methodology are needed to guide scientists who do engage in it.

Any guidelines must allow room for creativity and flexibility. Problems arise when too rigid views of what can and should be done are applied. Examples of this would be insistence of using bio-medical models, double-blind studies in research or other pre-test/post-test control group comparisons, which render some more qualitative methods used in social science and community-based studies impossible, or requirements designed to protect the rights of human subjects, such as documents of informed consent by human research subjects who fear signing such documents (refugees would be a case in point), or who are non-literate and cannot read the documents they are asked to sign. Examples of insistence on these methods come from actions of Internal Review Boards supervising scientific research on human subjects. Concerns of this kind must be taken into account in formulating any guidelines.

- **Professional Scientific Responsibility: Are we ever responsible for engaging in advocacy as scientists? If so, when and how? Are there times when as scientists we should not engage in advocacy?**

Guidelines could be used to help in deciding whether a scientist has an ethical (and professional) responsibility to engage in advocacy, as well as specifying circumstances when she or he should not do so. Issues of this kind often divide scientific organizations. For example, the issue of whether or not anthropologists should become involved with the military has produced a major division in the discipline. Of course, any scientist may engage in advocacy as a private citizen, when their employment does not preclude it. The problem I am addressing is rather when the scientist engages in advocacy while using their credentials as a scientist. It is then that concerns about including sound methodology, openness, accessibility and dissemination of results arise.

Is there a time when as scientists in the face of impending disaster we become prisoners of our own silence? The cases are many and differ for different disciplines. In anthropology, being present in the field during humanitarian crises in which the

knowledge of the anthropologist gained through fieldwork could reduce trauma or even save lives would be one example involving a decision about responsibility to engage. My own work on refugee issues has led me to become an advocate from time to time. This has not interfered with my research as an anthropologist when I am not involved in advocacy. Scientists presenting in the first CSFR topical meeting on advocacy in 2006 raised the concern as to why movie stars and politicians with no expertise, rather than scientists, should be a major source of scientific information on important scientific problems and actions to be taken.

Becoming involved in advocacy can sometimes raise issues of transparency, that is, the scientific dictum of making our methods apparent, making our data and research results available, and disseminating our work. A major current debate in anthropology is whether an anthropologist should engage in work on issues involving armed conflict with the military, with the intention of helping non-combatants. Transparency in research and open distribution of findings could become issues in cases in which work with the military precluded open communication of data and results. Many cases involving transparency in anthropological field research are even less clear cut. Confidentiality and informed consent become issues in protecting the rights of humans being researched.

An important question is raised by engagement in advocacy. That is:

- **When does a scientist or social scientist engaging in advocacy cease to be a scientist?**

My own field of anthropology has, through its history, experienced problems with this issue. Clandestine research and action led to major disruptions in the field of anthropology, which caused many professional anthropologists to shun involvement in advocacy for a lengthy period of time following two major projects in the 1960s and 70s: one in Latin American funded by DOD, another involving Southeast Asianist anthropologists working with the U.S. Agency for International Development, in which anthropologists, in some cases, misrepresented their funding sources and the nature of their research, or indirectly harmed those they studied. Despite the fears that this caused for years about anthropologists' involvement in any applied work, the situation has changed dramatically. Many anthropologists now engage in advocacy. New problems arise with regard to this. What are the specific guidelines that might lead a scientist to not engage in advocacy as a scientist or social scientist in a particular situation? Could these be specified as part of a set of general guidelines?

- **Go Global**

Current science operates in a global context of which we are increasingly aware. Therefore it would make the most sense to consider the establishment of guidelines for advocacy, the provision of databases, and the teaching of advocacy in global terms. It seemed to me when I proposed the topic to CSFR, as it still does, that there should be guidelines on advocacy not only in a specific discipline, but in our increasingly interdisciplinary world, in science more generally. There tends to be a deconstruction of boundaries everywhere, as people, ideas, goods, and technologies rapidly cross the once more rigorous borders between nation-states. Turf-maintaining boundaries between

disciplines fade as interdisciplinary efforts become common ways to address complex problems. In this same way, boundaries between advocacy and science may also be less rigid. I suggest that the global context and global participation are important.

Clearly, including them will be a difficult process. However, if including scientists and scientific organizations from all over the world is to be attempted, it would best be done at the outset—so the benefit of information and different ideas can be incorporated rather than imposed later. Moreover, the more globally-organized and globally-oriented it is from the beginning, the more likely it is to be successful in achieving participation and commitment of scientists abroad. As scientists operate in an increasingly global sphere, we should aim at establishing databases, guidelines, and education globally.

It is probable that various sciences, social sciences, engineering and technological organizations included in the AAAS would be a reasonable starting place. The AAAS works through many scientific organizations, and much of what can be done will depend upon these organizations furnishing information on how advocacy is and could best be handled. Although a number of scientific organizations lack databanks, guidelines, and educational programs, some have these in place. These include the American Psychological Association and the Association of Professional Biologists of British Columbia, which presented their models for handling advocacy at the 2008 AAAS annual meeting in the session on “Advocacy in Science: Opportunities, Limits, Responsibilities, and Risks.” Others could begin to address the issue, if they deem it important.

For some time, U.S. scientists have been working in other countries in teams with scientists from those countries. The AAAS meeting with Scientists in Beijing, China on issues of importance to science, including advocacy, may furnish a beginning model for moving forward internationally on Science and Advocacy. I propose that it is wise to keep guidelines, databanks, methods and curricula for teaching and mentoring open to include global contributions as well as future changes in theoretical and methodological models and knowledge from further research.

The Training/Education/Mentoring of Future Scientists

One of the major aspects of advocacy in science is, I think, how to do it well, and how to avoid the pitfalls of engaging in advocacy. More attention must be paid to training the next generation of scientists who will engage in advocacy as scientists no matter what we think or do. It is not too early to start to have greater inclusion of training on advocacy in college curricula, internships, and other mentoring. The establishment of major databases and guidelines will be of help in doing this. Young scientists are in fact doing advocacy work as scientists whether we agree that as scientists they should or should not. For the sake of science in the future they should be trained to do this well.

- **Monitoring and Sanctions**

Perhaps a more thorny issue than the others just discussed is the issue of monitoring and possible sanctions for abuse of science in advocacy. Who decides, who monitors, and what, if any, sanctions can be applied is a major problem, especially since it is imperative

to maintain creativity and flexibility and include different approaches. The issues raised in the discussion of guidelines are a case in point.

- **Summary**

My proposal in summary is that a database including key cases of good and bad practices of scientists engaged in advocacy be established. I would propose that in so far as possible this would be done not only on a local basis but with global issues in mind, that is--to echo a term used by Alan Leshner--“glocally.” Early inclusion of scientists internationally would obviate some of the problems likely to occur later, on who has the right to decide on which guidelines, data, monitoring, sanctions, or methods of teaching and dissemination before such problems occur. Guidelines would be established to ensure good practice for good causes and to avoid bad practice. These should include whether, when and how scientists should or should not engage in advocacy *as scientists*. If such guidelines could eventually be global as well as applied to specific local contexts and American scientific organizations, that would more realistically relate to the global level on which scientists work. With guidelines and data, the teaching of advocacy could then be incorporated into curricula and mentoring throughout the sciences to better prepare those scientists who will engage in advocacy for their future work.

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