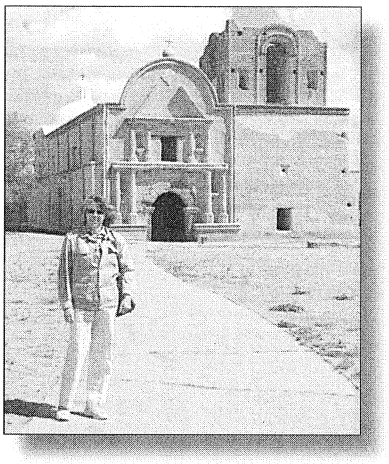
The Omer C. Stewart Memorial Award

A Generalist's Approach to Applied Anthropology: For 2006, the 14th Annual Omer C. Stewart Memorial Award[1]

Lenora Bohren[2]



I was thrilled when I learned I had been nominated for the Omer C. Stewart Award in applied anthropology for 2006. I first met Omer Stewart in the 1980s as a graduate student at Colorado State University (CSU) and continued my association with him for many years at the High Plains Society for Applied Anthropology (HPSfAA) annual meetings. I have greatly admired his work and am pleased to be associated with his name.

Receiving an award in applied anthropology is particularly meaningful to me since I am a generalist in applied anthropology. Most awards are given to specialists who have become well known in their area of emphasis, often for academic achievements such as being an outstanding teacher or having the most publications, but few are given to generalists whose achievements often go unnoticed.

What is a generalist? A generalist is one whose interests extend to several different fields, one who has mastered and integrated more than one specialty and practice as occasion demands (Nickols 2003). What makes me a generalist? My background in environmental anthropology is diverse. I have spent my career working with many issues concerning culture, technology, and the environment. They vary from global warming to a focus on how farmers and ranchers adapt to climate change, from air-quality issues to the culture of the car and driving behaviors. It is difficult to find success as a generalist because it is easy to miss opportunities to participate in relevant projects where your knowledge and expertise might be applied. To do the type of work I enjoy, I have learned that it is important to establish *networks* in order to find such *opportunities*. This often means broadening one's networks to include other disciplines and networks outside one's own area of interest. In my case, it meant including ecologists and practitioners from government agencies in order to learn about current opportunities. Once information has been compiled, it is important to disseminate it through outreach activities to reach a wider audience and, in the process, to make further contacts that can lead to future projects and new jobs.

My Story

I graduated from Pennsylvania State University with a B.A. in sociology. After graduation, I moved to New York City and found a job in personnel, now known as human resources. I worked in personnel for several companies for six to seven years. Between jobs, I took a "sabbatical" for a year and a half to travel around the world, where I learned firsthand about different cultures. (This was the beginning of my interest in anthropology, but I did not know it at the time.) When I returned, I became dissatisfied with the corporate world and began to take graduate courses at Hunter College of the City University of New York. I soon decided to attend graduate school full time but did not want to study in "The City." So I bought my first car at 28 and drove to Colorado intending to get a master's degree in sociology. I decided on Colorado State University and was soon convinced that sociology was not the degree I wanted; instead, it was anthropology. (I had taken one class in anthropology at Penn State and had not liked it because it was a huge class that focused on fact memorization, so I thought anthropology was not my "cup of tea.")

Studying anthropology at Colorado State University, I soon became interested in Native American adaptation strategies to the natural environment. I was fascinated by the variety of technologies used by different cultures to adapt to their respective natural environments. Thus began my interest in culture, technology, and the

environment. I had no idea where this fascination would lead me.

After graduation, my first job was with a CSU agricultural economist studying small and part-time farmers. I had no experience with farm culture but thought why not? I also worked with a CSU sociologist conducting studies on the social impact of energy development on the Western Slope of Colorado. I built on my knowledge of culture, technology, and the environment and was able to expand this knowledge to include understanding the decision-making process behind the adaptation strategies of a complex culture in a rapidly changing environment. I found both of these opportunities through the *networks* I had established in graduate school.

In 1982, I shifted gears again and was hired by the CSU Clean Air Center. I learned of this job opportunity from a contact I had made while working with social-impact studies. My new job was to survey diesel car owners to assess the future role of diesel passenger cars within the passenger car population of Colorado's Front Range. I again found myself in a new arena but one that still focused on environmental issues. I continued using my theoretical framework by approaching this study from the perspective of learning about the consequences adapting a technology—the car—to the American culture and environment. I discovered that people love their cars and that the car had shaped twentieth-century America. Diesel passenger car owners felt they were different from other car owners; they thought they were contributing to the health of the environment by not driving gasoline cars and planned to own diesel cars "forever" (Walker et al. 1983). However, this changed when the price of diesel fuel increased; soon they were driving gasoline-powered vehicles, and the population of diesel passenger cars quickly dropped along the Front Range. I learned that economic factors were a stronger driver concerning buying habits, at least with cars, than were environmental factors.

Lessons Learned

I thought the job at the Clean Air Center would be short term, but I continued to work there for twenty-four years and am now the director. I started with an interest in Native American adaptation but found, through *networking*, that there were job *opportunities* assessing the impacts of technology on the environment in contemporary America. As a generalist, I adapted quickly and was able to take advantage of these opportunities and found myself studying environmental issues I never thought I held an interest in, such as cars. My interest in environmental issues and my ability to adapt allowed me to take advantage of a variety of available opportunities.

At the Clean Air Center, I became the human factors expert looking for solutions to air-quality issues in terms of human behavior. I conducted studies evaluating response patterns to technological developments in the car. One of these studies was to assess the response of car owners to the "check engine" light (idiot light) on the dashboard of their car. I conducted surveys, case studies, and focus groups nationwide to assess car owners' understanding of, and response to, the light. I learned that vehicle owners were more likely to respond to the check engine light (in this case the desired response was the repair of the vehicle) if the response would lead to saving money rather than protecting the environment from harmful emissions (Bohren 1997). This study supported the assumption that economic factors are a stronger motivator for action than are environmental ones. Ah, economical America!

It is very important to share information gained from these studies through *outreach* activities, which could potentially change or influence behavior that could protect the environment. An example of an outreach activity that could influence behavior is a kindergarten through grade twelve (K–12) environmental education course I helped develop called "Cars, Cultures, and Cures." This course was designed especially to be used in middle schools/junior high schools for pre-drivers to help students see their responsibility in promoting good air quality by understanding how their driving behavior directly impacts it. The course consists of modules that can be used in science, environmental science, or mathematics classes to teach students how to calculate the effects of specific actions on air pollution (Bohren 2001). This course was accompanied by a slide show I developed on "American Car Culture." I have presented this slide show to schools, city governments, teaching organizations, and at conferences both in the United States and abroad.

Initially, I only worked part-time at the Clean Air Center, which allowed me to pursue other interests in environmental anthropology. I had the *opportunity* to work on more academic projects that had an applied emphasis. For example, I worked on a project in Africa that looked at tropical soils and biological fertility (TSBF). In this project, I worked with a multidisciplinary team. We studied the use of biological fertilizers to enhance soil fertility by cultures that needed to increase their cash-crop production in order to supplement subsistence agriculture. Chemical fertilizers would quickly deplete the fertility of already marginally productive soils and were too expensive. It was found that there were ways to increase the soil fertility using biological means, such as planting legumes, which could be integrated into a culture without affecting the cultural ethos and without causing damage to the soils or costing too much money (Bohren 2003).

While at the Clean Air Center, I decided to enroll in a Ph.D. program in my spare time. Colorado State University does not have a Ph.D. program in anthropology so I enrolled in an interdisciplinary program through the College of Forestry and Wood Science (now the College of Natural Resources). This program would allow me to expand my background to include more ecological knowledge. I received a Ph.D. in natural-resource administration with a dissertation focused on agriculture and the adaptation of farmers and ranchers to climate change. I went back to my acquired interest in agricultural adaptation. I learned that in environments where water is the limiting resource, dry-land farmers and ranchers use similar strategies to adapt to climate, while irrigation farmers use different strategies. The determining factor was the availability of water. Earlier research by John Bennett (1969) found that adaptation strategies of farmers were quite different from those of ranchers and were driven by ethos rather than environmental issues.

While working on my dissertation, I was exposed to the CSU climate-change network. This exposure led to further opportunities, including working on a large-scale assessment of farmers and ranchers in the Great Plains of the United States and serving on the steering committee *(outreach)* for the Great Plains Climate Change Assessment, sponsored by the White House Office of Technology. This opportunity came as the result of an increasing interest in the human dimensions of climate change and the recognition that human activities are a driving force in global warming (Ojima et al. 2002).

I have given an example of how a generalist in the field of environmental anthropology, through *networking*, can find many varied *opportunities*. I have only mentioned a small sample of those I have been able to take advantage of through networking. In today's world of shifting circumstances, the role networking plays in leading to potential opportunities cannot be overstated. These opportunities can lead to *outreach* activities that can have a worthwhile impact on society and on the environment; they are essential to the understanding of the adaptation of a complex culture to a changing environment. A good place to start networking is in professional societies such as High Plains Society for Applied Anthropology. This award is indeed an honor for a generalist like me. ○

Notes

1. At Estes Park, Colorado, in the 26th year of the High Plains Society for Applied Anthropology, Edward C. Knop and Peter W. Van Arsdale presented the 14th Omer C. Stewart Memorial Award to Lenora Bohren of Colorado State University during the annual meeting April 28–30, 2006. This written version reflects her acceptance remarks. Previous winners of the Omer C. Stewart Memorial Award of the High Plains Society for Applied Anthropology are as follows: (1) Muriel K. Crespi, National Park Service, for 1993; (2) Robert A. Hackenberg, University of Colorado at Boulder, for 1994; (3) Deward E. Walker, Jr., University of Colorado at Boulder, for 1995; (4) Darwin D. Solomon, United Nations Food and Agricultural Organization, for 1996; (5) Donald D. Stull, University of Kansas, for 1997; (6) Gottfried O. Lang, Emeritus at the University of Colorado at Boulder, for 1998; (7) Howard F. Stein, University of Oklahoma, for 1999; (8) Carla N. Littlefield, Littlefield Associates of Denver, Colorado, for 2000; (9) Kenneth M. Keller, Metropolitan State College of Denver, for 2001; (10) Peter W. Van Arsdale, Colorado

Mental Health Institute and the University of Denver, for 2002; (11) John van Willigen, University of Kentucky, for 2003; (12) Edward C. Knop, Colorado State University, for 2004; and (13) Pamela J. Puntenney, Environmental and Health Systems Management of Michigan, for 2005.

2. Lenora Bohren's Ph.D.is from Colorado State University in natural resource administration. She directs the Clean Air Center/National Center for Vehicle Emissions Control and Safety at Colorado State University, Fort Collins, Colorado (CO) USA 80523-1584. Her telephone number is 970-491-1805, and **Lenora.Bohren@Colostate.edu** is an e-mail address for her.

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