

Consortium on Law and Values in Health, Environment & the Life Sciences

Student Proposal Cover Page

Applicant Information

Applicant Name: Zoe Nyssa Date: 02/16/08
Project Title: Studying Biodiversity, Saving Biodiversity: Investigating Expert Constructions of Public Understanding of Conservation Science
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How did you hear about this funding opportunity? Direct email: bounce-8793-1064888@ecommunication.umn.edu; on behalf of; Consortium on Law and Values [lawvalue@umn.edu]

Funding

Amount of funding requested: \$5953.73

Funding justification: [a clear statement of what you will use the funds for without going into budget details]

Funding will allow me to gather data (ethnographic observations, interviews, short answer surveys) for the proposed project (to investigate how conservation biologists themselves articulate the objectives and activities of their "ethical" science and how the public should be engaged in biodiversity conservation). The remaining funds will be used to provide a (partial) summer living stipend so that I may begin to compile, analyze and disseminate the collected data over the summer and fall.

Approvals

Check all appropriate approvals required for your proposal. Approvals must be obtained prior to receipt of funding. If you have applied for approval but have not yet received it, indicate that below.

IRB Date submitted: In process Number: _____
 IACUC Date submitted: _____ Number: _____
 Other Explain: _____

For Use by the Consortium Office

The proposal is 1000 words or less excluding budget, biographies, references and citations.
 The proposal includes a work plan with a specific timeline using months or quarters to identify work to be done and completion dates.
 The proposal includes a 1-2 paragraph biography of the applicant and all co-investigators.
 The budget form is complete including the funds sought for this project, other pending applications for this project, and the amount/source of matching or other funds.
 The applicant's faculty advisor is copied on the application email. Professional students w/o advisors check NA.
 All necessary approvals are pending or received.

**Studying Biodiversity, Saving Biodiversity:
Expert Practices and Public Engagements in Conservation Biology**

Applicant: Zoe Nyssa, Ph.D. Student
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(Word count: 996)

Overview

Science is often understood as having two goals: the investigation of natural phenomena “for its own sake” (“pure” science) or for its possible applications to human problems (“applied” science). Conservation biology is unusual in it has explicitly ethical objectives as well: global biodiversity is considered to be a “good” in its own right and the scientific study, and protection, of biodiversity itself a moral imperative (Soule 1985). This uneasy relation between scientific and ethical purposes was infamously identified by Daly (1999) as conservation biology’s “lurking inconsistency.” If biological evolution has no telos and even extinction of species is “natural,” why conserve? And given limited resources, incomplete data, and imperfect methods, conserve what and how? These scientific and normative tensions motivate my dissertation project, which asks:

1. How do conservation biologists understand how and why they “do” conservation biology?
2. How do conservation biologists attempt to engage the public¹ in conserving biodiversity?

My dissertation is a multimodal, interdisciplinary investigation of conservation biology as a discipline and epistemic culture (Knorr Cetina 1999). I trace conservationists’ negotiation of their scientific and ethical aims from the initial conceptualization of conservation projects to the dissemination of research findings to a variety of collaborators, stakeholders, and publics.

¹ “The public” here is understood as a category partially constructed, and appealed to, by scientists themselves (Gross 1994).

Research Plan

This project extends my master's research, in which I examined how zoos communicate their animal conservation activities to the public. For this project I conducted, transcribed and coded eighteen interviews with zoo professionals and conducted discourse analyses of popular and scientific zoo publications.

My dissertation will investigate conservation biology by triangulating four types of data, specifically how conservationists:

1. Instruct students in the aims and practices conservation. (The focus of my current ethnographic study, January 2007-June 2008, of the conservation biology graduate programs at the Universities of Minnesota and Chicago.)
2. Think about conservation and how to engage the public and various stakeholders in conservation. (As self-reported to me in a survey and interviews, Summer 2008.)
3. Practice conservation biology on a day-to-day basis. (As I observe these practices in two conservation projects, Winter 2008-Fall 2009, after taking my preliminary exams and defending my prospectus, Fall 2008.)
4. Attempt to engage the public and other stakeholders in conservation. (As communicated via press releases, meeting notes, websites, scientific articles and working papers, analysis conducted Fall 2009-Spring 2010.)

The professional activities of conservation biologists are not fixed: at zoos, for instance, it is not unusual for conservation biologists to curate exhibits, teach graduate seminars or supervise interns, consult for conservation organizations, participate in inter-institutional groups, collaborate on overseas projects, and sit on review boards. Scientists in this still-evolving field boast many affiliations and commitments that are still poorly understood. My aim over the summer is to investigate the typical educational and professional trajectories of working conservation biologists and to map out the networks of collaboration, funding and influence among conservation biologists. I plan to do this by focusing my research on the Society for Conservation Biology (SCB) Annual Meeting in Chattanooga, TN, July 13-18. The SCB is the primary professional organization for conservation professionals and annual meetings typically draw around 1400 conservation scientists, policymakers, managers, students, and non-government organizations around the world.

In addition to conducting ethnographic observations of SCB meetings and activities, I will conduct interviews and administer a survey of conference participants. The goal of the survey is to gather broad data on the demographics, educational histories, research interests, current and past professional affiliations of working conservation biologists and professionals in related fields. I anticipate administering several dozen surveys in person at the conference and soliciting for additional participants in an identical survey to be made available online (100-200 surveys total, consisting primarily of short answer questions.) To supplement the survey, I will also

solicit volunteers to be interviewed in greater detail about their professional histories, conservation objectives, and the role of the public and other stakeholders in conservation. While I anticipate conducting many of these interviews on-site, I will also use the conference to establish contacts with prospective interviewees to be interviewed later via phone or email. All interviews will be audio recorded and transcribed for later discourse analysis (Wood 2000). I anticipate conducting two to three dozen semi-structured interviews (Kvale 1996) in total. I am seeking funding to travel to the SCB meeting to gather data and a (partial) summer/fall stipend to conduct analysis of data from the pilot study and SCB meeting.

Significance and Interdisciplinary Contribution

Despite burgeoning interest in conservation, no study has been conducted on how contemporary conservation biologists themselves understand and practice their science. Indeed, researchers in many disciplines have examined almost every other aspect of conservation, including its history (Grove 1995), efficacy, economics and legality (Ghimire 1997) and relationship to indigenous conservation practices (Agrawal 1995). While offering important analyses, these studies have focused piecemeal on evaluating the outcomes of individual conservation initiatives, not the process of conservation science itself by the scientists who structure, prioritize, conduct, and teach conservation science and advocate for global biodiversity. Conservation biologists themselves articulate a need for such a study, that would provide “a broad and fully integrated account” of the science, philosophy, policy, and practice of conservation (Meine 2006).

Thus, in looking at expert practices and discourses in conservation, particularly how conservationists construct and appeal to the public, my research will contribute to conversations and inquiry in several fields: rhetoric and public understanding of science, science and technology studies, and conservation biology itself. My interdisciplinary graduate training and master’s and predissertation research experience allow me to employ multiple methods (qualitative, discourse analysis, survey) and multiple disciplinary perspectives (rhetoric, anthropology, history, and philosophy of science).

Timeline

Now-06/04	Observing and interviewing University of Chicago faculty and students, obtaining IRB approval for summer project.
05/09-07/11	Analyzing Chicago data, creating/testing survey and interview instruments
07/12-07/18	Conducting observations, interviews and surveys at SCB Annual Meeting
07/21-08/01	Transcribing interviews, compiling survey data
08/03-09/26	Coding/analyzing transcripts and surveys

Biography

My research deals broadly with the intersections of public and specialist understandings of science, an interest informed by my experiences as a first-generation college student. Scientists and non-scientists alike actively shape and make sense of the world around them in a variety of ways; my objective is to illuminate this variety and to investigate ways to improve how nonscientists engage with sciences and technologies, particularly how scientists and nonscientists collectively deliberate on science policy and science ethics. To this end, I have worked as a researcher, writer, and advocate for a variety of organizations. During my Honours B.Sc. at the University of Toronto, I was accepted into the Undergraduate Research Opportunities Program, in which I conducted scientific research and wrote for scholarly and popular science publications. For my work organizing a student environmental education group, I was awarded the Rotary Club Environmental Leaders award. Upon entering the Rhetoric and Scientific and Technical Communication Program at the University of Minnesota in 2004, I was awarded a one-year research fellowship with Lincoln Park Zoo, Chicago. Based on this fellowship research, my thesis demonstrated in part how current models of public understanding of science needed further refinement: science knowledge does not flow in only one direction from expert scientists to a lay public, and, in the case of conservation biology, the science itself is not communicated only in terms of facts but also in terms of norms and ethics. In addition to my research with the university graduate programs in conservation, last August I conducted a small pilot study of community-based conservation. Working as a participant observer and “ecovolunteer,” I developed popular conservation and science materials for Santa Lucia Cloudforest Reserve, Ecuador, one of South America’s flagship community-based conservation programs.

My coursework is especially strong in the intersections of communication, science and ethics, including seminars in discourse ethics, rhetoric of science, and environmental ethics and narratives. My methodological training has focused on qualitative and ethnographic research and discourse and rhetorical analysis. My minor in studies of science and technology has provided training in historiography and twentieth century philosophy of science. This year I was accepted into the Traveling Scholar Program and am currently taking doctoral classes in the Conceptual and Historical Studies of Science Program at the University of Chicago. In addition to classes on global ethnography, pragmatics, ethics, and the colonial history of conservation science, I am also continuing my study of conservation graduate programs (first at the University of Minnesota Conservation Biology Program in spring 2007, this year at the University of Chicago Committee on Evolutionary Biology) and conducting follow-up research at local zoos. As a graduate instructor and curriculum consultant at the University of Minnesota, I have had the opportunity to teach scientific and technical communication, communication ethics, and science studies to students in the Departments of Rhetoric, Civil Engineering and Microbiology. In these classes, my students and I explore the many ways of knowing and reasoning ethically about the individual and societal impacts of science and technology. I have been active in sharing my work, including publication and presentation in over a dozen scholarly publications and conferences.

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