

# **Naturally Obsessed: the making of a Scientist**

## **NOTES FROM PAST DISCUSSIONS**

**State University of New York/Stony Brook**

**Date: Feb. 4, 2009**

**Program: jointly sponsored by Center for Inclusive Education and Graduate School Organization. Program notes and guide prepared by the filmmakers and the graduate student discussion leader, Matthew Engle. The discussion was assisted by Richard Rifkind and Dean Lawrence Martin.**

**Attendees: Graduate students, about 50%; undergraduates, 20%; faculty, 15%; administrators and staff, 5%; high school students and other visitors, 10%**

### **How the film portrays science**

"It's the first film that actually puts the camera on the 'research battlefield.' It corrects the fantasy about science; it's like a war news reel. Yes, it's the real world, these people are doing it."

"I liked that it shows the highs and the lows, and the powerful emotion when everything works."

"The film shows that the three different students each made a different career choice, that there are other opportunities outside of academia, although when you're in grad school, success is correlated with staying in academia."

"You see the difference between merely mastering technique and to think creatively about the big picture."

"It raises the issue of the pressure to do applied research rather than to be free to ask fundamental questions. I wonder if politicians aren't putting too much emphasis on quick practical results."

"It was very encouraging to see the strength of the mentorship in the film -- that's really important to the student. It emphasized the intensity of human relationships in the laboratory."

"The critical thinking and problem solving skills are valuable for more than just science itself."

"As a high school student, the fact that science is hard makes you want to work for the challenge. It's illustrated Rob's dropping out twice."

### **Issues in science education**

"Naturally Obsessed opens our eyes to the fact that Ph.D students do not live in a vacuum. The lives of these twenty and thirty somethings are arguably more complicated than those of their non-academic counterparts. It is this truth, brought to light by Naturally Obsessed, that opens the door for dialogue on how universities can best support Ph.D candidates on the research track."

"On a comparative basis, Americans seem to undervalue science education: Sweden produces 10 scientists for every lawyer, while in the U.S. there are 10 lawyers for every scientist."

"The dropout and retention rate of women is a problem" ... "if you're going to stay in science, you better have a partner who is truly a partner."

"It would be useful to show the film to friends and family, who don't understand what you're going through as a graduate student."

"We have a responsibility to communicate with society. Being about to talk about these things helps to put graduate school years in a broader perspective."

"American students don't seem to want to commit to science in sufficient numbers; it's a matter of values and application to hard work. More than 50% of entering graduate students are now international students, while fifteen or so years ago, they were mostly Americans. Foreign

graduates are finding good opportunities in China, India, and elsewhere.. The U.S. ranks 19th out of 22 advanced nations in the production of science and math PhDs."

## **Public policy recommendations**

"There needs to be more money for basic research. It's too hard and it takes too long to get started as an independent scientist."

"Better support is needed for science and math teachers. It's in the high school years that young people are being turned off to science and math."

## **Contributed later by Beverly Campbell, Dept of Pharmacology:**

### **FIVE THINGS ABOUT SCIENCE RESEARCH FOR PRESIDENT OBAMA AND POLITICIANS**

1. Show us the Money! Research needs money for equipment, supplies & personnel.
2. Skills learned as a Ph.D. candidate are important for many areas outside of the scientific research.
3. Support for programs that bring science, real science, to public schools and that retain students K-12 in science.
4. We need people that can do real science down the road.
5. Individual funding (public and private) of a graduate student (rather than PI-driven research interests). Make it easier for institutions to get money from organizations (for example, American Heart Association) to fund research through graduate students and/or postdocs without outrageous overhead (currently 55% OMB).