DAVID SKOLE PRESENTATION

April 4, 2011

Notes by (and inaccuracies due to) Maya Fischhoff

Skole offered general research –related "words of experience" aimed at graduate students and young faculty.

- **"Don't follow the funding density gradient."** Meaning, don't go where the grants are – build your own research program first. Figure out your core idea and set of questions, and then figure out how to resource it. It's better to nurture an idea than to throw off a bunch of scattered ideas.
- **"Do what's best for your career, rather than what the University says it wants**." Ultimately, such an approach will be a win-win for you and the University, Skole says. This is partly because high-level administration may be out of touch with the funding arena.
- **"Get your tips from other colleagues who are in the trenches**.**"** Again, your peers – faculty, department heads – may be more in touch with current trends than upper administration.
- **"Big plays really only work in soccer**." While universities increasingly push faculty to pursue large grants, small and steady grant funding can be a better goal. "You can win a basketball game in free throws, one point at a time; the same is true in research," Skole said. "Continuity in grants is more important than an occasional big play."
- **"You'll miss more often that you hit."** Failure should not be a deterrent! "You're going to miss big, so don't be afraid to fail," Skole said. He noted that the NSF success rate for some programs is 5%.
- **"Big interdisciplinary teams are overrated."** While there is a role for them, they are not valuable in every situation, he said.
- **"Ignore internal money; it's like crack."** Internal university money only provides small amounts from time to time, Skole said.
- **"Find a mentor and a team."**
- **"Create a mixed portfolio,"** e.g. in terms of grants from different agencies.
- **"Serve the community."** Participate in National Research Council and agency panels: "be engaged with the process of creating the science agenda in this country." In such involvement, you can help an entire research stream develop, rather than just advocating for your own individual research. "A rising tide lifts all boats," said Skole. When an entire research community argues that a certain kind of research is important, funding agency program officers listen.

Skole also offered tips on climate funding specifically.

- **Mission and non-mission agencies need to be approached differently.** Mission agencies like NASA lay out a strategic plan for their climate change research (e.g., NASA's Roadmap). Proposals need to fall within those distinct guidelines. Non-mission agencies like NIH and NSF are open to a broader range of ideas.

- **The US Global Change Research Program (USGCRP) provides a government-wide orientation to climate change funding.** The USGCRP is currently working on its third strategic plan, which will lay out an agenda for agencies to follow. Skole recommends cross-referencing this with strategic plans of specific agencies.
- **Some agencies are more focused on climate than others.** Skole recommends looking at DOE, NIH, USAID, NASA, and NSF. USAID has big funding for teams implementing change on the ground; usually not much research is involved. For NASA, ROSES is the key solicitation; it comes out annually with dates for all upcoming programs. NSF has the new sustainability-focused SEES program, looking at climate change, renewable energy, and sustainability; the first solicitation is focused on bioenergy.
- **The federal government hasn't resolved its budget.** There's currently a Continuing Resolution (CR). This allows existing programs to move ahead (e.g., NASA) but at their existing funding levels. Under the CR, no new programs can start.
- **Funding exists for basic science and applied research.** NSF and DOE provide research for basic science, but foundations and international organizations are providing "a tremendous amount of money for solution or problem-oriented science."