

Applying Psychological Science: Science, Politics, and Money

By Eric Lang

My initial interest in applied psychological science is easy to pinpoint—it began in sub-Saharan Africa in 1989.

As background, I had recently graduated from the University of Michigan with a PhD in Social Psychology (1988) and accepted a position with the American Institutes for Research (AIR) working primarily on health and education research projects. In 1989 the Senior Scientist at AIR, who had outlined a method for assessing the potential of small communities to adopt new health care initiatives, asked me to join him on a trip to Botswana and Lesotho, and then to take over the project when he retired a few months later. Because the opportunity seemed like a paid research adventure with an expert mentor, it took some will power to pause for what I hoped would appear as a moment of mature consideration before I eagerly agreed.

I was fascinated with the Africa project because it required applying social science to an important human problem: developing science-based procedures to help government health officials allocate scarce resources to villages that would best utilize them.

What I came to realize was that the basic science I learned in graduate school was necessary but not sufficient for the Africa project to succeed. A science based approach to a real world problem requires dealing with an inextricable braid—science, politics and money. You can print important science-based recommendations on a shirt but, aside from a few people noticing, all you'll accomplish is warming your own heart. **To effectively influence change, science must be combined with expertise in securing resources, and negotiating the concerns of key stakeholders and institutions.**

My interests and applied science skills were nurtured further through work at Sociometrics Corporation (1991-2000) where, as a Principal Research Scientist, I won several National Institutes of Health grants to create research and teaching resources for use by universities, private sector scientists and government agencies. In essence,



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the work was an opportunity for me to better understand and meet the needs of social science consumers—from basic researchers and teachers, through program and policy developers. In addition, I developed a deeper appreciation for two things (1) that social scientists need tools designed by someone with equal expertise in basic and applied science, and (2) that creativity and problem solving are personally satisfying, whether they are employed to facilitate the work of scientists or to author science directly.

Currently, I am a Program Manager at the Defense Personnel Security Research Center (PERSEREC), where I have worked since 2000. PERSEREC conducts basic and applied studies to improve federal personnel security clearance systems. The applied work

focuses on assessments, pilot tests, and recommendations to make clearance policies and operations more effective, efficient and fair. Here are some examples of applied psychology issues that I and others at PERSEREC have helped to address:

- When do automated decision rules perform as well as human judgment for adjudicating the results of security clearance background investigations?
- What behavioral indicators are associated with significant risk for mishandling classified information, compromising security or committing espionage?
- How can face-to-face interviews and questionnaires be improved to facilitate honest, accurate and complete answers?
- What social and psychological factors influence reporting the suspicious activity of a coworker?

While the primary responsibility of PERSEREC is to address such questions using rigorous empirical methods and analysis, success requires sensitivity to all parts of the triumvirate—science, politics and money—from the initial problem definition through implementation. The basic frustration: key parts of federal clearance systems have entrenched problems, and innovation is often unnecessarily slow. Why I stick with it: the work is stimulating and I appreciate being part of a skilled team that helps to improve national security, save tens of millions of tax dollars and protect the rights of millions of individuals who go through the clearance process.

As for advice, here are four tips for students and young professionals

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interested in applied psychological science.

- Ensure scientific integrity. As an applied scientist, your first responsibility is to get the science right. To do this, develop expertise in a variety of social science procedures and statistical techniques, in addition to thorough knowledge in your applied domains of interest. Ask colleagues to review your ideas and writing. Strong skills in planning, methodology and analysis will be valuable and transferable throughout your career.
- Manage the temptation for armchair philosophy, which is common in applied work. If you are compelled to provide a personal opinion, be clear on the degree to which your speculation, proposal or advocacy reaches beyond the data.

- Help the decision maker. Applied science is often needed to make difficult decisions about which program to fund, which policy to change, which technique to use or, generally speaking, how to make the world a better place. Although research results often entail qualifications and limitations, empathize with the research sponsor or potential implementer's need to take action and manage risk. If the goal is a decision in light of uncertainties, be prepared to engage in practical and responsible consultation to achieve the goal.
- Document thoroughly but communicate succinctly. Regardless of whether your work requires you to produce detailed research reports you should, for each effort (1) maintain documentation as might be needed to describe and defend your research to a scientific board of inquiry, and (2) include an executive summary of one to two pages suitable for an

informed lay reader. Many decision makers will read only the executive summary, although they may give the full report to a staff member to assess. Clarity and brevity are highly valued. For example, a Senator may need a multiyear research effort summarized in a few text bullets or a three minute presentation. The ability to clearly and concisely articulate the applied problem or opportunity, method and key findings, and critical decision considerations is invaluable.

As a final note, one may get the impression from the above descriptions that my career path has been coherent, perhaps even intentional. Personal life narratives often move in that direction. The truth is that my career has been shaped substantially by a series of serendipities and unexpected opportunities. The coherence throughout has been in the practice of social science and a passion for positive change. ■