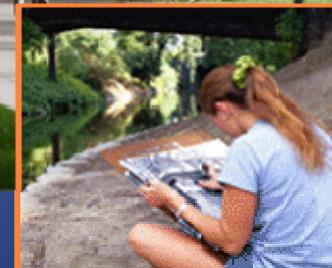
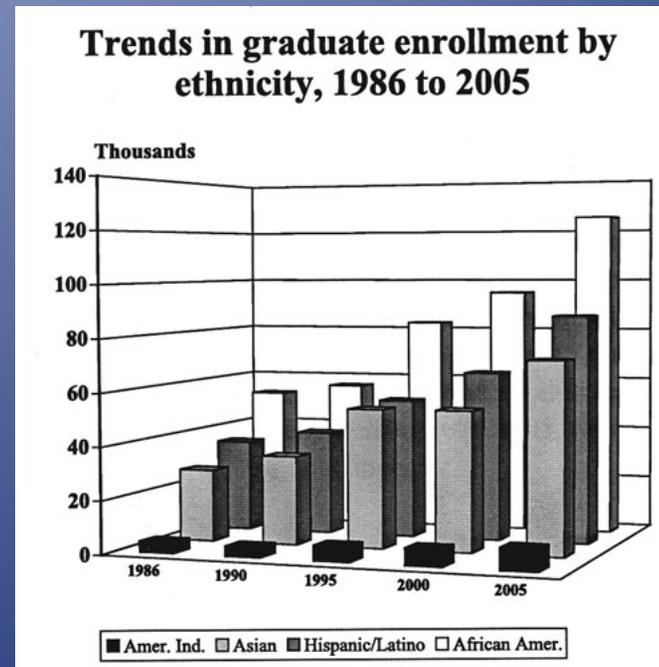
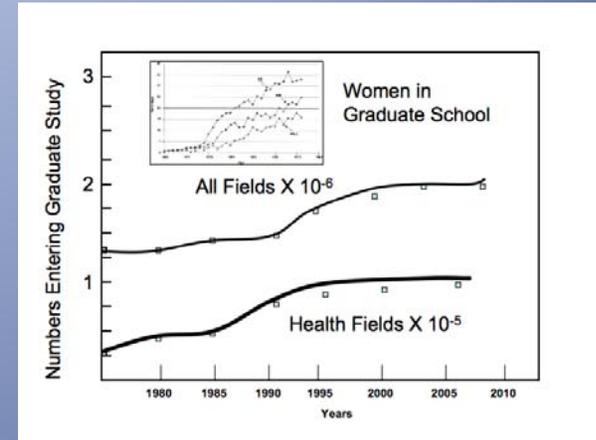
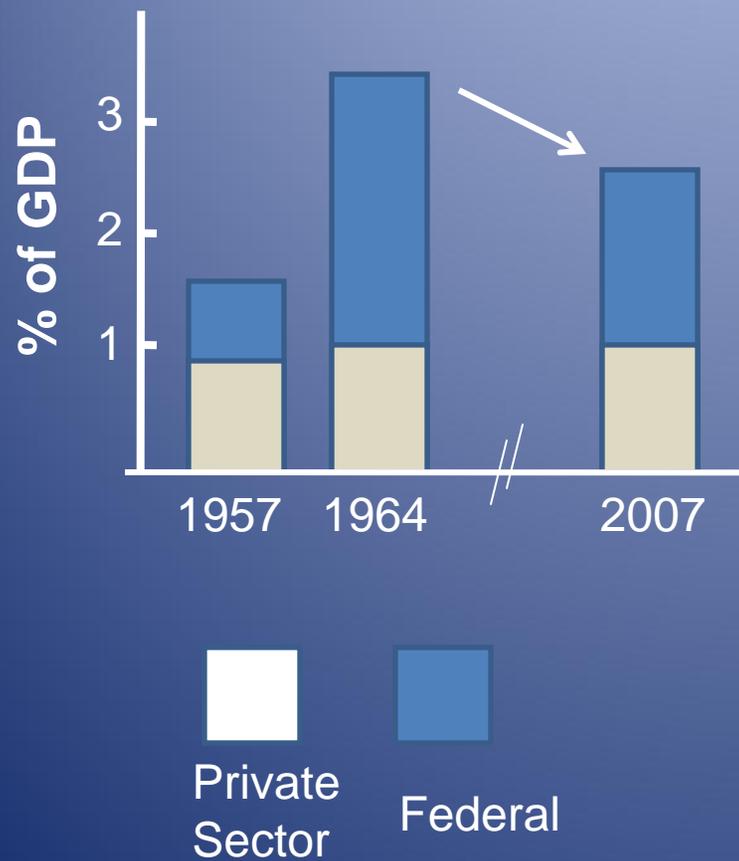


Graduate Education: Choices and Expectations

Robert Rucker
University of California



Graduate Training and Trends in Funding



International Students in British, French, German, and Finnish Institutions (UG, Grad, Professional Programs)

Relative Growth of Doctoral Programs US vs. Asia

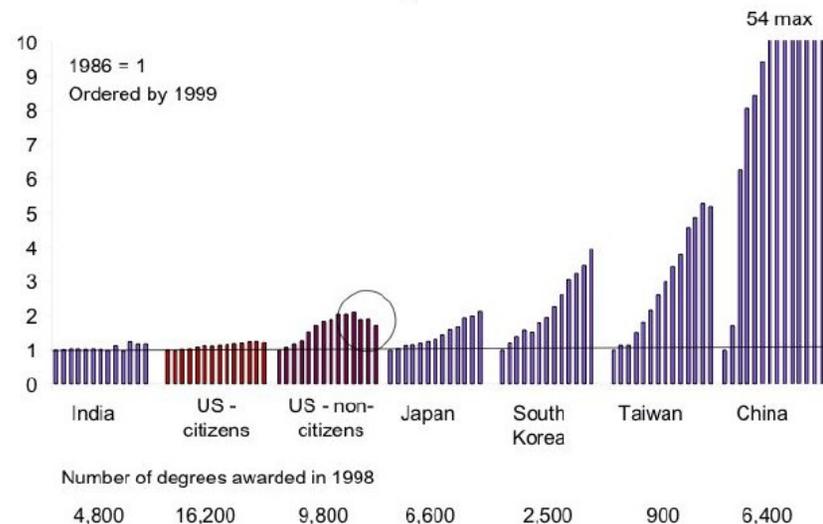
GROWING ENROLLMENTS OF INTERNATIONAL STUDENTS

Country	1999	2005
Britain	232,540	318,399
Germany	178,195	259,797
France	130,952	236,518
Finland	4,847	8,442

NOTE: Each country defines the term "international" differently, but all include students with citizenship from other countries.

SOURCE: Unesco Institute for Statistics

Growth in doctoral degrees awarded 1986-1999



Source: NSF Science & Engineering Indicators 2002 Appendix tables 2-29, 2-36

Message One – Think well beyond intuitional boundaries



- Education and research institutions must embed global competence skills
- The culture of U.S. educational institutions must change to one where meaningful international collaboration is the norm
- We need to renew our efforts to attract and retain domestic and foreign investment in high-tech industries and have a workforce that can work well within the U.S. and abroad
- The U.S. needs to further develop a dynamic, flexible infrastructure that integrates science, engineering and technology to readily work with researchers elsewhere in the world.
- We can not rest on our past accomplishments

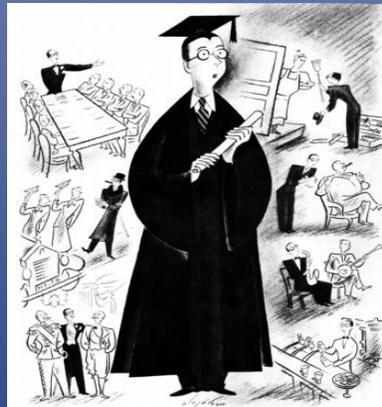
Message Two

It is in part about money



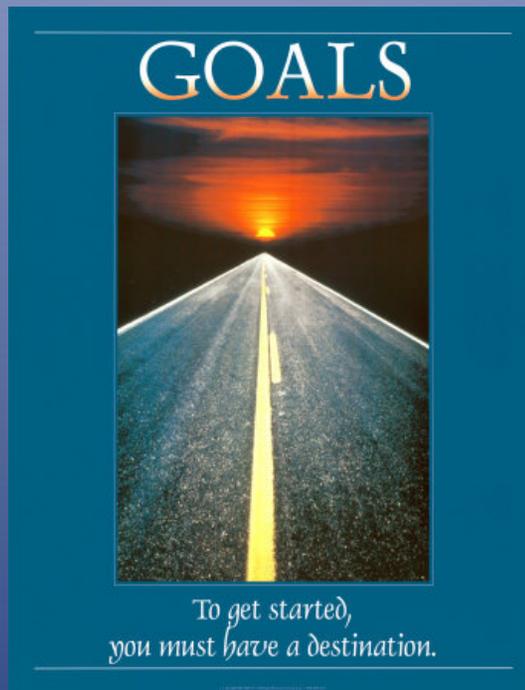
Message Three

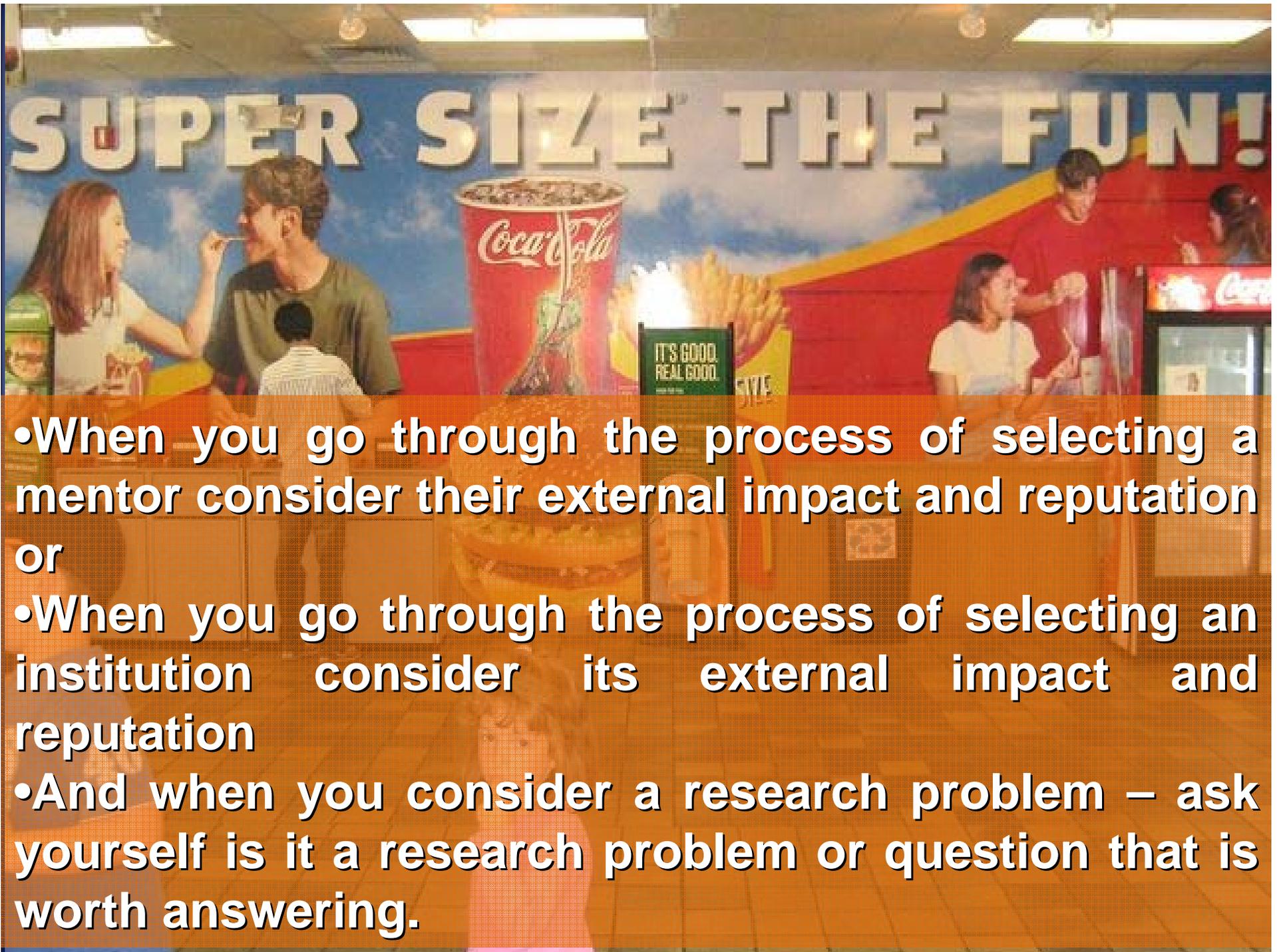
Much of it has to do with you



Message Four

Choose your mentor and research area or question with some ultimate short-term and long-term goals in mind





- When you go through the process of selecting a mentor consider their external impact and reputation or
- When you go through the process of selecting an institution consider its external impact and reputation
- And when you consider a research problem – ask yourself is it a research problem or question that is worth answering.

Message Five

Develop a set of strategies that go beyond merely learning

- You will be expected to develop a sense of urgency about your work
- You will be expected to articulate your findings
- You will be expected to get to the “cutting” edge of your field rapidly; means reading well beyond the classroom lectures and textbooks
- You will be expected to contemplate and anticipate where the research is going in your area, both your own and of you colleagues. A goal is to learn when an idea is feasible and when a research direction is important or of high impact

Message Six

Appreciate that some aspects of the process may be uncomfortable and challenge your independence

“If all else fails - Lower your standards” – Better stated always have an exit strategy or develop a lot of patience

SHOULD YOU GO TO GRAD SCHOOL?

A WEE TEST

- T F
- I AM A COMPULSIVE NEUROTIC.
 - I LIKE MY IMAGINATION CRUSHED INTO DUST.
 - I ENJOY BEING A PROFESSOR'S SLAVE.
 - MY IDEA OF A GOOD TIME IS USING JARGON AND CITING AUTHORITIES.
 - I FEEL A DEEP NEED TO CONTINUE THE PROCESS OF AVOIDING LIFE.

Individuals Benefit from Additional Education in a Knowledge-Based Economy



Source: Bureau of Labor Statistics