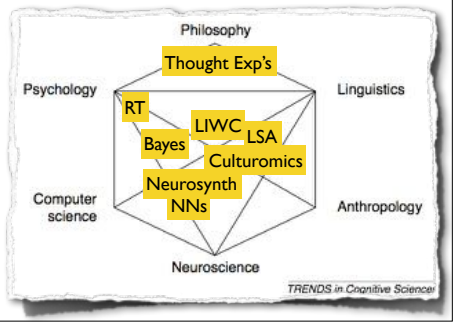
Career Issues

COGS 105, Week 12 Part 1: Academia

This Week

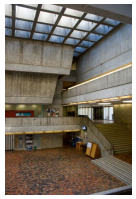
- Final paper / grades / extra credit
- What to do?
- Applied issues… careers!



"Meta-Methods"

- Let's engage in "meta-cognition," and think about where we'd like to go, and therefore what tools we might want to clip to our belt when we enter the real world…

Academia **Industry**



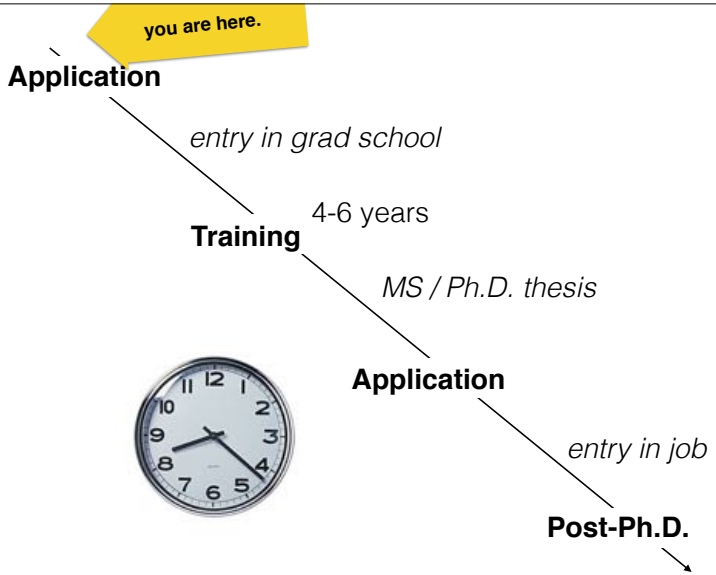
Academia

Three Ways to View This

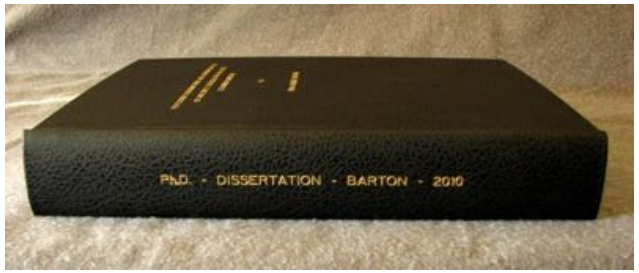
- "I don't know what's next. What's this?"
- "I have no inclination towards a graduate degree… but this is an interesting cultural study…"
- "I'm intrigued by graduate school, and the academic route, tell me about it, as a cognitive scientist."

Imagine… visualize…

- You've had some taste of hands-on activities… you like working on a project, finding things out, working with data, communicating those data …
- **Imagine seeking out a career path that lets you do that during most of your week.**



Ph.D.



The Academic Route

- After the Ph.D.?
  - **Researcher / Scientist** (exclusively on research)
  - **Lecturer** (focus on teaching, at any university)
  - **Professor** at a liberal arts college (focus on teaching, some research)
  - **Professor** at a research-intensive university (focus on research and teaching)
  - "Reinventing the Ph.D." (discussed here)

The Tenure Track

- If you get hired by an institution, the "tenure track" is a period of time during which you are evaluated (often: 6 years).
  - The tenure track is often likened to a grueling and confusing obstacle course, filled with very challenging long-term projects and diverse tasks.
- If you are evaluated positively, you "earn tenure," which, by some accounts, is a "permanent job."

You

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practicals

pessimism

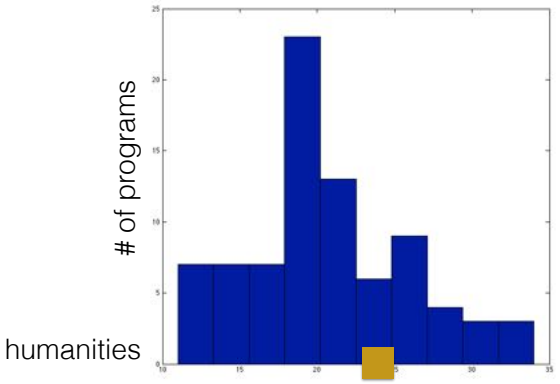
What Do I Need?

- Suppose you would like to enter a Ph.D. program.
- What's are some questions or concerns you may have?
  - GRE?
  - Research experience?
  - Grades?
  - Location?
  - Cost?

First important observation: Many, if not most, Ph.D. programs include a stipend and waiver of tuition

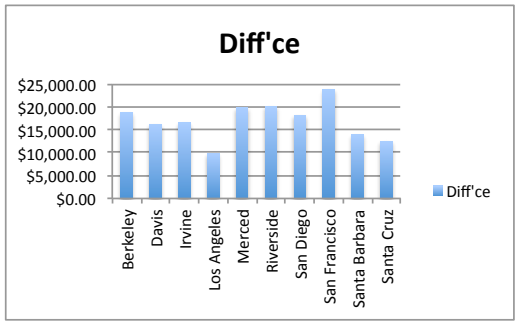
stipend: a yearly salary you receive from the program you join (e.g., research TA'ing)

Grad Stipend Distribution



GradPay

Grad Stipends in the UC



Prevalence of summer support in offers (2010)	
Berkeley	43.00%
Davis	32.00%
Irvine	36.00%
Los Angeles	33.00%
Merced	73.00%
Riverside	49.00%
San Diego	22.00%
San Francisco	52.00%
Santa Barbara	25.00%
Santa Cruz	21.00%

A willingness to be far away for a long time.

Getting In?

- **Recommendation letters** from faculty (occasionally, but rarely, from grads).
- Research **fit**.
  - Do your research interests fit with the program and (in particular) the person you'd like to work with.
- Research **experience**.
  - Undergraduate research presentation, projects in Research Week, presentations or work in a lab, etc.?
- Enough **GRE and grade quality** to indicate you can sustain a set of basic academic functions.
  - Some programs regard these as having a bit more "slack" — for example, the majority of faculty would go with strong research interest and experience than GRE/grades, if forced to choose.

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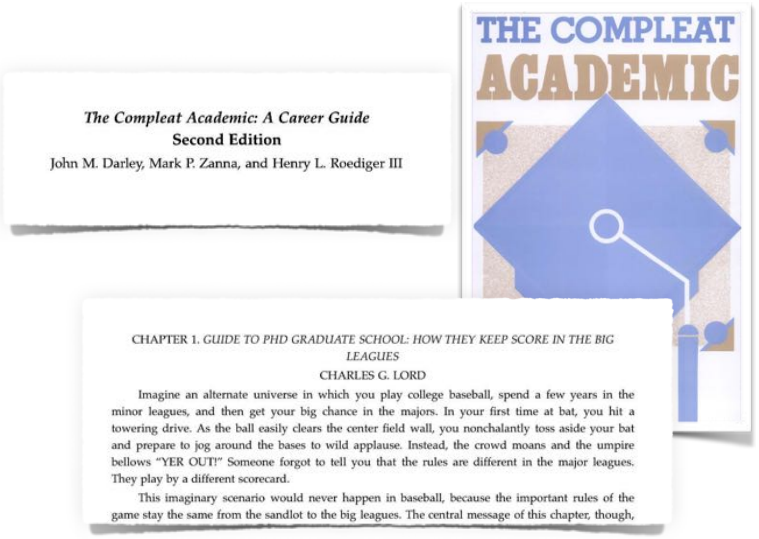

Graduate School

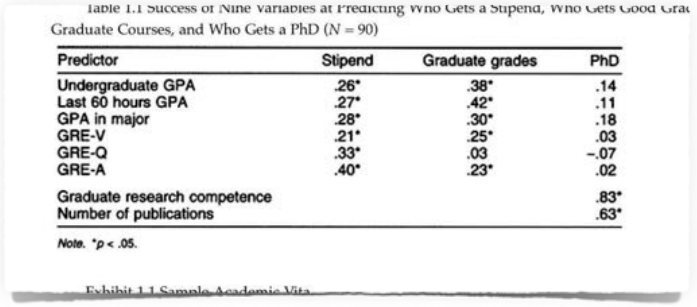

Table 1.1 Success of Nine Variables at Predicting Who Gets a Stipend, Who Gets Good Grades in Graduate Courses, and Who Gets a PhD ($N = 90$)

Predictor	Stipend	Graduate grades	PhD
Undergraduate GPA	.26*	.38*	.14
Last 60 hours GPA	.27*	.42*	.11
GPA in major	.28*	.30*	.18
GRE-V	.21*	.25*	.03
GRE-Q	.33*	.03	−.07
GRE-A	.40*	.23*	.02
Graduate research competence			.83*
Number of publications			.63*

Note. *$p < .05$.

Exhibit 1.1 Sample Academic Vita

classes: training, broadening, recommendation letters

Graduate School

position in their department: on their academic vita.

KEEPING SCORE: YOU *ARE* YOUR VITA

Since I have been in my department, we have hired more than half the current faculty. I have been intensely involved in all of these searches, both during the time I was department chair and later. Would it surprise you to know that I have *never* seen the graduate transcript of any of my colleagues? We do not request a transcript of graduate grades because my colleagues and I would regard that information as useless. We are trying to hire the best scholars, not people who got the best grades

The ir

No matter what anyone tells you, no matter the academic position you seek, to be competitive you need to place lines on your academic vita under "Publications." I've participated in many academic job searches. Busy faculty members are typically confronted with several boxes bulging with applicants' folders. In each folder they find the applicant's cover letter, lengthy letters of recommendation, reprints of published work, various other materials the applicant thought would help his or her cause, and an academic vita. Most committee members head straight for the vita. They often turn immediately to the "Publications" section. At this point, many of them do not know (or care) about your name, your gender, or any of the other background information usually included on the front page. They want to see what you have contributed to the published literature in your discipline.

Be warned. Do not attempt to fool faculty committees by including in the "Publications" section articles that are only under review, abstracts of conference publications, your unpublished master's

Importance of Research Productivity

attend
conferences
publish
in journals

Passions

- Success in the Ph.D. correlates with research passion.
- Do you have burning questions you want to ask?
  - Well, (i) find a program that has faculty who do that work, (ii) get into that program (see earlier), and (iii) develop projects with your advisor [**let run for 4 to 6 years**].

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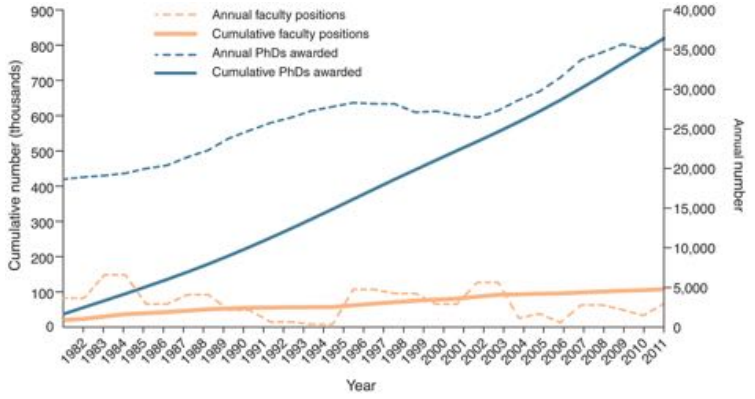
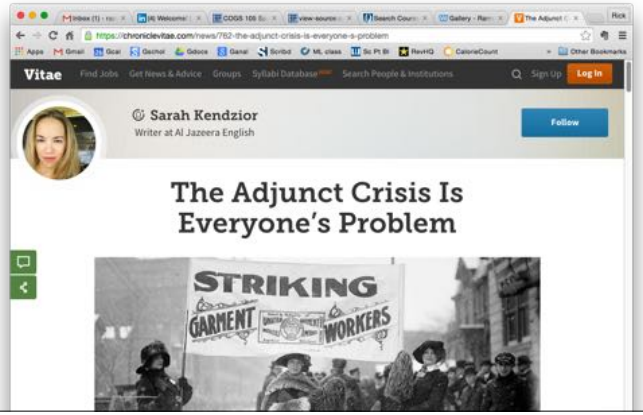
The Market



http://www.nature.com/nbt/journal/v31/n10/fig_tab/nbt.2706_F1.html

The "Adjunct Crisis"



RETHINKING PHDS

Fix it, overhaul it or skip it completely — institutions and individuals are taking innovative approaches to postgraduate science training.

BY ALISON MCCOOK

ing up the hallowed foundations of academia. They range from throwing scientists deep into independent study, to going interdisciplinary, to forgoing the PhD altogether.

1 JUMP IN AT THE DEEP END

For Michael Lenardo, a molecular immunologist at the US National Institutes of Health (NIH) in Bethesda, Maryland, the thought process went like this: When too many scientists are looking for too few academic positions, PhD programmes need to admit the students most likely to succeed, and provide them with all the skills they'll need. And neither the United States nor the United Kingdom seemed to be getting the mix exactly right.

In the United Kingdom, PhD students are given independence early, and degrees rarely last more than 4 years. But not all institutions require that students publish a first-author paper, which Lenardo sees as a drawback. US science degrees often do require first-author papers, but have ballooned to more than 7 years in duration.

In 2001, Lenardo created a new degree programme, called the NIH Oxford-Cambridge Scholars Program, that would combine the best elements of each system for a cadre of truly elite students. It admits just 12 of the 250–300 applicants per year. Independence is stressed — students devise and write their own project plan, begin their thesis work immediately, and skip the uniform coursework — but they must meet requirements such as authoring papers.

http://www.nature.com/news/2011/110420/pdf/472280a.pdf

Rethinking the Ph.D.

Linked in optional materials

Another Way to View It

Ph.D.

"I want
to be a professor."

"I want
to be a teacher."

"I want
to be a researcher."

"I want intense
project-based
technical training."

"I want an amazing
5-year experience
that opens
up lots of doors."

Next Time

- Industry! Data science and other avenues.
  - Some notes on professional programs (MS).