

Post-Docs Post-NIH Doubling



NATIONAL POSTDOCTORAL ASSOCIATION
providing a national voice and seeking positive change for postdocs



Richard B. Freeman, Harvard and NBER
Great Conference, Oct 1, 2008

Sources of Data on Post-docs

NSF administrative data from universities

NSF SED and DRF

Science Survey

Sigma Xi → National Postdoc Association

Other administrative records

NIH, NSF, DOD, DOE rules governing stipends

Behavior of Post-Docs

Findings

1. Despite concerted efforts, PD economic position remains precarious → new institutional framework; NIH did not deliver on promised stipends
2. Institutional change → from chaotic to organized market
3. The doubling increased numbers of foreign-born but not of US-born – so more money for science is not enough
4. International students (/post-docs?) are important source of highly educated immigrants to US.

Lessons: Incentives ... incentives ... incentives ... “You get who and what you pay for”. Fight ... fight ... fight ...
“You (may) get what you fight for”

The Revolt of the Peons (person held in compulsory servitude to a master for the working out of an indebtedness)

- **Alternative forms:**
 - Grad student unions (26 with 16 drives); Grad students now more unionized than typical US worker –20%
 - post doc associations (50 form national association)
 - Information: postdocs job web site. Geoff Davis' PhDs.org
- **Grad Student Union Organizing in Private Sector brought to a halt by Bush NLRB**
- **Universities establish PD offices**
- **Post-Doc Associations form NPA in 2003**

What are Effects of PD Association and Offices?

- **Little evidence of wage effects**, but improved benefits
 - health care and pension coverage sizable increase (NSF) , reductions in inequality within some institutions;
- Evidence of formalization/grievance systems etc;
reduction of power imbalance
- Potential large spillovers – Cornell graduate students benefited from NYU
- Radical hope: change the “logic of university labor market”
 - New career pattern teach/research as grad & post doc paid normal wage → leave for non-university job
 - Old career pattern grad student to faculty teach/research

1. Failure to improve economic position

- **2006 NSF data shows that 49% of science PhDs become post-docs; 76% of those in biological sciences**
- **PD/PI ratio trends up**
- **University % of hires who are PDs (other non-tenure) remains high**
- **Chances for young researchers deteriorated as NIH doubling was undone. Widely publicized. Zerhouni and many others**
 - **ARISE report by AAAS – some issues with medical school data, with huge increase in age**
 - **Freeman & Van Reenen NBER study, NAS**

NRSA Salary comparisons over time

	Starting	3 years	25+ male	Bachelors's
2002	\$31092	\$40692	45598	64345
2003	\$34200	\$42648	46129	64270
2004	\$35568	\$43428	47444	65489
2005	\$35568	\$43428	49640	69452
2006	\$36996	\$43428	51615	70355
2007	\$36996	\$43428	52113	73182
2008	\$36996	\$43428	53989?	75817?
% Δ,2003-08	8.2	1.8	17.0	18.0

How the Post-Docs at California saw a remedy:

The contract negotiated by the nation's first postdoc union, University Health Professionals, a local of the American Federation of Teachers, with the University of Connecticut Health Center in Farmington, significantly bettered UCHC postdocs' income, benefits, and workplace rights. Whether PRO/UAW can deliver improvements at UC, where postdocs already have benefits and work rights that rank among the nation's best, will be the acid test for the unionization effort.

2. University of California Postdoc Union Wins Official Recognition August 29, 2008 By Beryl Lief Benderly PRO/UAW, the union that tried and failed in 2006 to organize the postdocs on the 10 University of California (UC) campuses, has received official notification that it succeeded on its second try. On 19 August, the California Public Employment Relations Board (PERB) faxed a letter to the organizers stating that the union, known formally as Postdoctoral Researchers Organize/International Union, United Automobile, Aerospace and Agricultural Implement Workers of America, had submitted valid signatures from a majority of the approximately 5000 UC postdocs eligible to petition for union representation. Under state law, unionization is therefore automatic. The move brings an estimated 10% of U.S. postdocs into UAW, an AFL-CIO-affiliated national union that represents more than a million other members, including UC academic employees, such as graders, teaching assistants, and lecturers.

Why students/apprentices/PD grad workers organize?

Basic Economics: elongated training period; increased use as teachers; non-independent researchers; NOT APPRENTICESHIP BUT WORK

Universities become best place to do commercial research because elsewhere cannot get highly educated scientists to work 50-60 hours a week @35k;

Wide variation/inequality in situation of Post-docs – more so than grad students

Failure of universities/NIH/others to react except under pressure and of the political weakness of the science community. Failure of top down efforts to remedy situation much if at all.

3. Doubling NIH did not attract US-born

	1985	1998	2003	2005
All PDs	22387	40086	46613	48653
US citizens/pr	13258	19710	19645	21678
Bio-med all PDs	14583	27971	31682	33072
US citizens/pr	9737	14428	13882	14904
Bio Grad students	46,000	57,000	65,000	70,000
US citizens/pr	33,000	36,000	41,000	43,000

4: Percentage of Foreign-Born S&E workers whose highest degree was from US, 2003

PhD	64%
Master's	69%
Bachelor's	54%
Total	60%

Source: NSF, 2008. Table 3-8

About 1/2 of foreign-born post-docs are US graduates

NSF data on intention to stay in US and
Mike Finn longitudinal study shows
continued high proportions of US-trained
foreign-born S&E PhDs, many of whom
will be PDS, likely to stay for long
periods

Structure of PD market

Many foreign-trained find jobs through formal channels. Formal channels produce less job satisfaction and greater turnover.

Geoff Davis has shown that better structured programs → higher satisfaction and higher productivity

What next ...

Can post-doc association + union deliver more?

Will increased global competition ... EU to China lead to US loss of international students/PDs or return to home

Collective bargaining will set standard in public sector

Union to begin preparations for negotiating its first contract with the university. ... elect their negotiating team, with everyone eligible for union membership entitled to run and vote ... choose" issues for negotiation ... The organizing team will develop a more detailed survey, then submit the priorities it produces to a vote. Negotiation experts from the national union will assist the team. One area could be a UC postdoc pay scale that starts below the National Institutes of Health's recommended minimum and offers no cost-of-living adjustment to postdocs living in expensive metropolitan areas. Another could be establishing independent arbitration of disputes.

• Once the union and the university have come to terms, the postdocs will vote on whether to ratify the contract. Only after ratification will the union begin collecting dues of 1.15% of income from postdocs who choose to join the union and a fee of about 0.9% from members of the bargaining unit who choose not to join, (from Benderly article)

The Broader Context

Will financial melt-down of greedy capitalist model change US student choices?

Will national economic failures – country going wrong way – and giant humanity problems – global warming, energy, threat of pandemic, natural resource shortages -- lead to longer-term thinking and decision-making ?

Or will we cut budgets for R&D as we struggle in major recession? The amounts of money are “trivial” compared to ... Iraq War, Bank Bailout, Tax cuts for wealthy.

Important to Get Science PD Market Right for Economic Growth, National Security, Saving Humanity

“Post-docs as the canary in the mine”