

You do what now?



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Post hoc vs Post-Doc

The Post hoc Fallacy

To incorrectly assume "A" is the cause of "B" just because "A" preceded "B".

e.g. "All Professors have Ph.D.'s, therefore getting a Ph.D. means you'll get a Professor job (right?)"



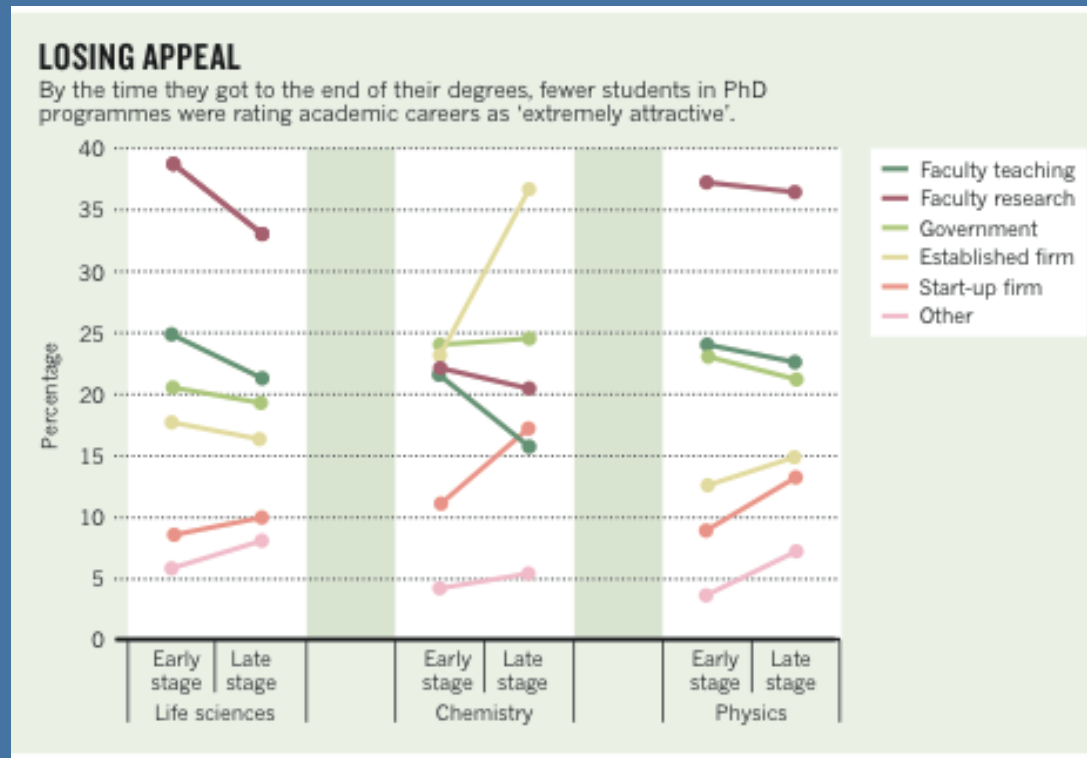
The Post-Doc Fallacy

To incorrectly assume you'll have a job just because you have a Ph.D.

*e.g.
"Now what??"*

What do you want to do?

- A Ph.D. is a scholar-in-training, but not a job guarantee



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 - Private industry or non-profit research, consulting, communication, outreach, grant management, weather modeling/forecasting

Where do our graduates go?

- Academia – 1/3
 - Research intensive meteorology programs
 - Teaching intensive meteorology and related disciplines
- Research positions – 1/3
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- Operational meteorology – 1/6
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Where do our graduates go?

- Academia – 1/3 (shrinking, esp. on tenure track)
 - Research intensive meteorology programs
 - Teaching intensive meteorology and related disciplines
- Research positions – 1/3 (steady, shift to soft money)
 - Academic (soft-money)
 - Government (civil service or soft-money or both!)
- Operational meteorology – 1/6 (growth in private)
 - Government (NOAA)
 - Private sector
- “Alt-Ac” – 1/6 (growing)
 - Private industry or non-profit research, consulting, communication, outreach, grant management, climate impacts modeling

- But the vast majority all Ph.D. graduates first go on to do a post-doc!



What is a post-doc?

- A postdoctoral research associate is a temporary full-time research position at an academic or research organization
 - Usually 100% research (sometimes with mentoring or teaching responsibilities)
 - Funded by grants or fellowships
 - Direct supervision by a mentor
 - Typical length is 1-2 years
 - There are generally more positions than qualified applicants in most sub-fields

And what do you do there?

- Gain independence in research and lab management skills
- Chance to publish your dissertation
- Learn new techniques or explore new directions of existing research
- Have more say in direction of project
- Teach or supervise students
- Find a permanent position!

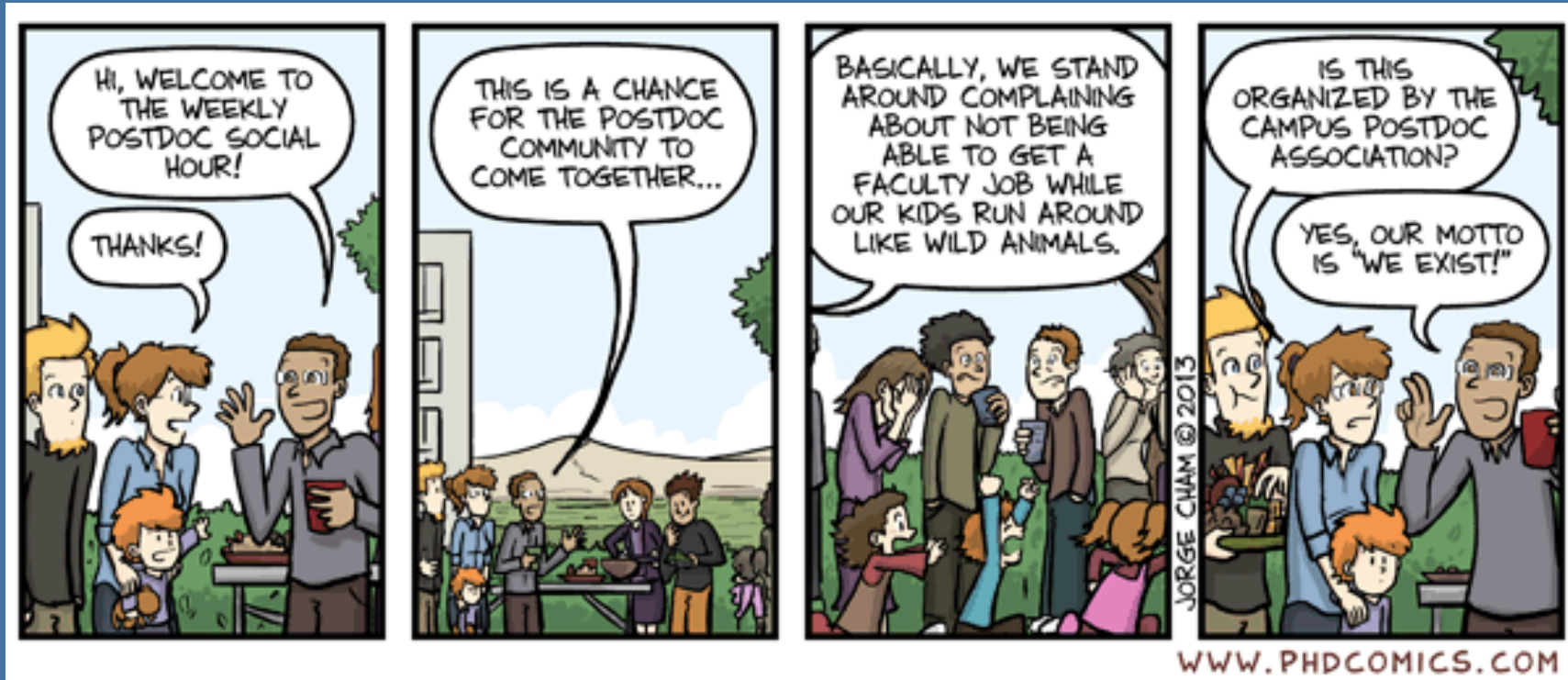
Guidelines

- From Bourne and Friedberg, PLoS Computational Biology, 2006
- 1. Select a position that excites you
- 2. Select a laboratory that suits your work and lifestyle
- 3. Select a laboratory and a project that develops new skills
- 4. Have a backup plan

Guidelines

- 5. Choose a project with tangible outcomes that match your career goals
- 6. Negotiate first authorship before you start
- 7. Time in a postdoc fellowship should be finite
- 8. Evaluate a growth plan
- 9. Strive to get your own money
- 10. Learn to recognize opportunities

Community matters!



How to find one?

- Start applying ~6 months before defense
- Put together a CV and research statement
- Avoid “cold-emailing” – ask your advisor for contacts
- Network at conferences!
- Looks at job lists at major atmospheric science programs and research centers (e.g., NCAR, CIMSS)
- Apply for fellowships
- Subscribe to listservs:
 - es_jobs_net
http://mailman.acd.ucar.edu/mailman/listinfo/es_jobs_net
 - Met-jobs <http://www.lists.rdg.ac.uk/mailman/listinfo/met-jobs>

Fellowships – what's out there?

- NSF AGS post-doc program
 - http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=12779
- NOAA Climate & Global Change
 - <http://www.vsp.ucar.edu/cgc/>
- NCAR/UCAR Advanced Study Program
 - <http://www.asp.ucar.edu/>
- USGS Mendenhall
 - <http://geology.usgs.gov/postdoc/>
- DOE ORISE
 - <http://see.ornl.gov/AcademicStatus.aspx?type=PostDoc>
- National Academies
 - <http://sites.nationalacademies.org/pga/rap/>
- NASA Post-doc Program
 - <http://nasa.ornl.gov/postdoc/>
- DOE Labs (LLNL: <https://postdocs.llnl.gov/>)

Fellowships – what's out there?

- University fellowships:
 - Harvard Environmental Fellows:
<http://environment.harvard.edu/grants/fellows>
 - Princeton AOS/NOAA GFDL post-doc program:
http://www.princeton.edu/aos/postdoc_program/
- International:
 - NSF IFRP
http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5179
 - NERC
<http://www.nerc.ac.uk/funding/available/fellowships/index.asp?cookieConsent=A>
 - Fulbright fellowships, Marie Curie fellows, etc...

What do post-docs pay?

- Low-end: <\$40K/yr
- Mid-range: \$42-52K
- Fellowships: \$50-60K
- High end: >\$75K
- Be sure to account for cost of living!
- Part-time positions are possible, but most are full-time 12-month
- Salaries go up with years and with experience
- Taxes on post-doc salary vary with job classification

What else to consider in negotiation?

- Health/dental/vision/retirement benefits
- Vacation/sick/parental leave
- Moving expenses
- PI status for grant submission
- Conference travel and research supplies
- Office space
- Supervision responsibilities
- Flex time to work on publishing dissertation
- Expectations for publication, authorship, intellectual property

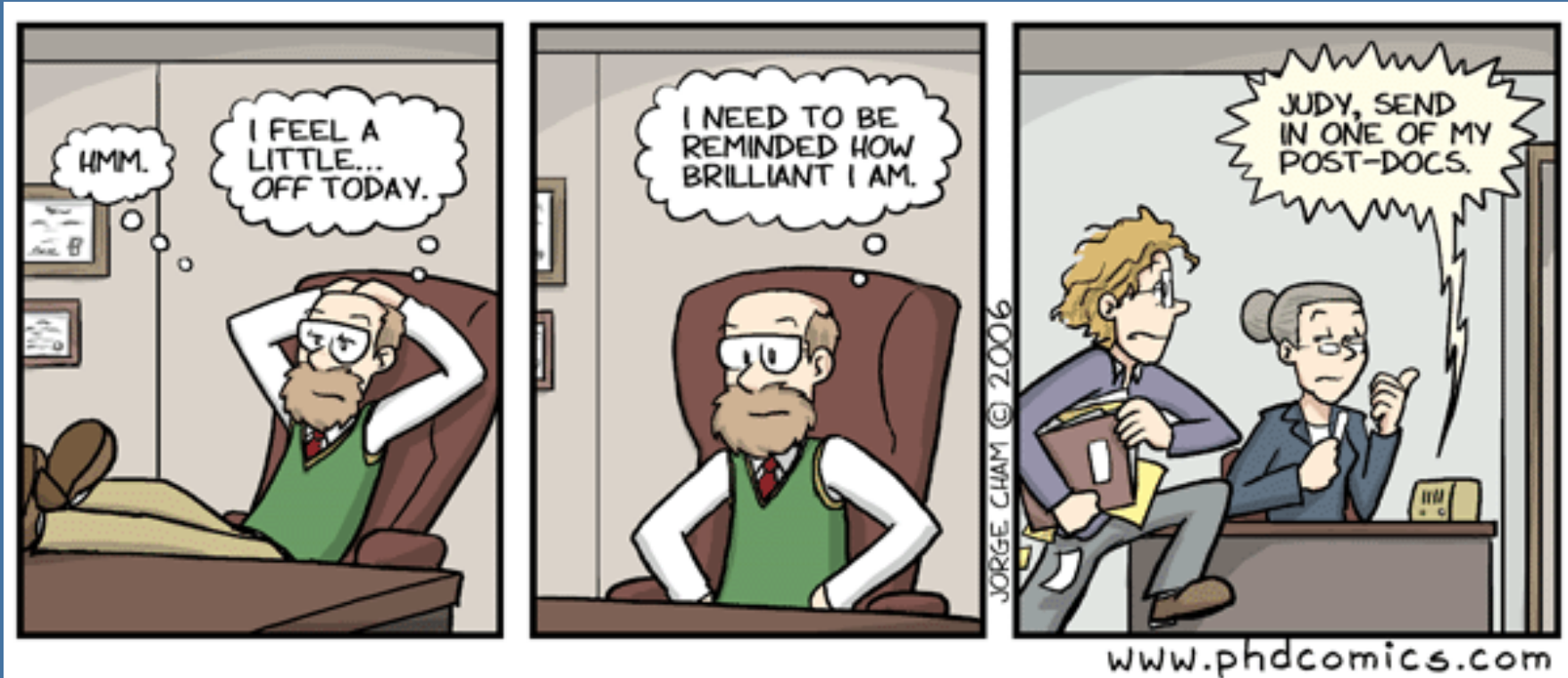
Things to avoid doing

- More than several post-docs in a row
- Staying on as a post-doc in one position for more than 3-4 years without promotion to a research position
- (maybe) doing a longer than 6 month post-doc with your current PhD advisor
- Asserting an extreme level of independence
- Not exerting any independence
- Not publishing/presenting your dissertation
- Not having a contract or research plan in writing
- Leaving a position without “cleaning up” – documenting and providing data, having a publication plan, keeping your mentors notified of job offers and interviews
- Not consulting your peers, family, partners, advisor before accepting a position, a move, or a salary

Is there a reason to not do a post-doc?

- You have a permanent position!
 - Consider a post-doc deferral, esp. for tenure-track positions
- You are sure you do not want a research focused career
 - Teaching post-docs do exist!
- You need time off and can afford to do so
 - Long gaps will be questioned by employers

Thanks!



Thanks again to Jorge Cham!

More:

National Post-doc Association: <http://www.nationalpostdoc.org/>