Anecdotes from the Postdoc Limbo

(And Some Unsolicited Advice)

~~Career~~ Not Unemployed Seminar

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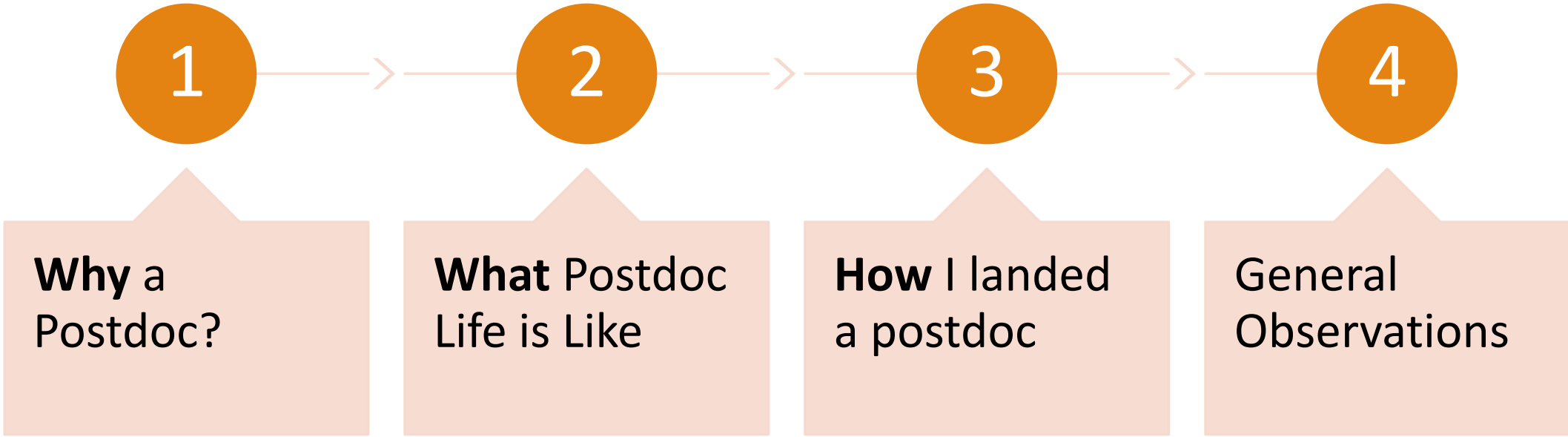
Themes and General Atmosphere

- Give you ***honest*** account
- My viewpoint is highly ***biased***
- Please ***interrupt*** / ask ***questions*** / colloquial
- Encourage you to attend other seminars / speak to other postdocs
- Speak to advisers (but be careful!)

Outline


1
2
3
4
Why a Postdoc?
What Postdoc Life is Like
How I landed a postdoc
General Observations

Brief Bio

- Graduated from UIUC in 2015 (Abbamonte Group)
- Transition year at Argonne/UIUC (X-ray/Neutron Group)
- Now at MIT (Gedik Group)

Quick Intro to Argonne

- Staff ~3500
- Budget ~ $760 million
- Area ~ 7 km^2
- Synchrotron Source for X-ray Experiments (APS)

Quick Intro to MIT

- Private institution
- Demographics
  - Undergrads: ~4500
  - Grad Students: ~ 6800
  - Academic Staff ~ 1200

Why a Postdoc?

- Continue doing basic science (curiosity)
  - Learn about a different branch of CMP
- Space to be creative
- Flexible schedule
- Leaves possibility of academic position open
  - Unconventional paths possible, but less likely

Things to Consider

- What do you want to achieve during a postdoc?
  - Do something completely new / switch fields?
  - Do something somewhat related?
- Group / Adviser
- Institution atmosphere
- Family / Geography
- Cost of Living
- **Your happiness and long-term contentment**

How is a Postdoc Different from Grad School?

- In many cases it isn’t
- More responsibility / freedom
- A little more money ($20k vs. ~$60k)
- Proposal writing
- Time: less of it to work on a long term project

Truth about Physics Postdocs

The stark truth is that in most cases a postdoc is ***not a ticket to a permanent academic job****. The Institute's poll found that although* ***three out of five physics postdocs wanted*** *a* ***permanent faculty*** *position, only* ***one in five had secured*** *such a post 5–10 years later. A* ***similar fraction*** *were still stuck in* ***postdoc positions****.*

- Institute of Physics

Myths about Postdocs

- Postdocs are the only way to continue doing research
- There aren't other interesting jobs out there
- Alternative options:
  - Teaching at a four-year college (increasingly require postdocs, but more important is a dedication to education)
  - Other countries have different systems
  - Lots of jobs in tech / finance that are interesting and important

Near-Graduation Uncertainty

- Job in Silicon Valley (Lam Research / Plasma Etching)
  - Cited Personal Reasons
- Position at Argonne / Transition year
  - Conflict with Adviser
- Geographic Location → Chicago
- Possibility of MIT postdoc after a year

Postdoc Life at Argonne: The Good

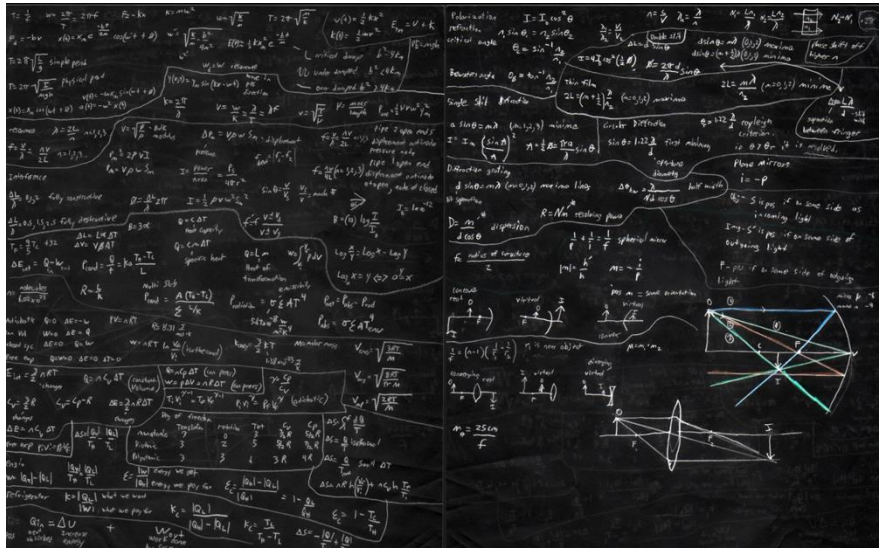
- Large scale problems are solvable
- Pace is a little slower
- Schedule is very flexible
- Scientists doing science / Diverse science
- Pay is typically higher than university
- Time for hobbies, activities outside of work
  - Speaker-building, Tennis, Blogging

Postdoc Life at Argonne: The Bad

- Bureaucracy / Red Tape
- Hierarchical Structure
- Few graduate students/postdocs
  - Not as vibrant as atmosphere at university
- Politics (?)

Postdoc Life at MIT: The Good

- Vibrant department
  - Lots of seminars, talks, young people
- Money for research
- Feels like you're doing cutting-edge science
- Growth → Smart people, up your game
- Location / Lots of companies, job opportunities



Postdoc Life at MIT: The Bad

- Hours are long – typically work 9am-7pm
  - No longer time for speaker-building, less time for blogging, etc.
- Cost of Living (1BR is typically $2000++)
- Pressure is more intense (for publications, etc.)

How I Went About Getting Postdoc

- Spoke to adviser
  - Told him about 2-body problem
- Suggested going to Argonne
  - Funding for one year
- Adviser asked who I'd like to work with
  - Gave him 3 names
  - He contacted one of them
  - I contacted 2 on my own

Email

Dear Peter,

I had asked Peter Abbamonte (my advisor) to introduce me to you earlier today, but unfortunately our schedules didn't seem to want to align, as I had a Skype call with Nuh while you were touring our lab. I have been following your work for some time now and also genuinely enjoyed your seminar today.

The reason I had asked to be introduced was because I am interested in the possibility of doing a postdoc in your lab if you have a position open. I would like to branch out into optics, as it provides a good complement to electron spectroscopy. Part of my interest, in fact, stems from your on-line lecture notes on optical properties of strongly correlated systems.

If you have an opening and are interested in discussing the possibility, I can send you a CV and any further information you would like.

Thanks for your time.

Best Regards,

Anshul

Email Response

Dear Anshul,

Thanks for your email. I am sorry we didn't get a chance to meet yesterday. It was a pretty busy day and I was running from meeting to meeting all day long. As it turns out, I am looking for a postdoc or two right now. Perhaps we can set up a Skype meeting later this next week?

Could you ask Peter to send me a letter of reference?

Regards,

-P

Skype Call / Interview

- Spoke a few times
  - Why I wanted to do optics
  - Suggested ideas for experiments
  - Seemed to share a mutual enthusiasm for certain topics
- This is also an opportunity for you to interview them!
  - Share similar approach to physics
  - Share similar ideas about work culture / creative space

Offers / Salary Negotiation

- 2/3 Offers Received
- Accepted Gedik Offer
  - Choice heavily based on two-body solution
  - Salary offered low compared to Argonne → $7.5k less
  - Asked for more → Gave extra $3k
  - Worth asking for relocation in hindsight

Reflections

- Argonne vs. MIT: Switching sub-disciplines
  - Conventional spectroscopy → Non-equilibrium physics
  - New perspective
  - Expected to learn much faster than grad school
- Most people come to grad school with broad interests
  - Don’t let that dissipate

General Observations about Academic Life: The Bad

- Constantly feels like fighting an uphill battle (apart from few exceptional cases)
- Narrowing of interests / External Constraints
- Don't forget to ask yourself:
  - "What would I research if I didn't have to publish papers?"
- Elitism
- Backing from adviser helps *a lot*

General Observations about Academic Life: The Good

- Flexibility in work hours, etc.
- Pursue you own interests (w/ limitations)
- Lifelong learning / Always something new
- Be your own boss (w/ limitations)
- Search for good questions!
- Teaching / Interaction with students

Thank you!

Questions or Comments?