

LIFE AFTER GRADUATION

OR

“Don’t Do As I Do, Do As I Say!”

OR

Some hard-earned advice for an academic postgraduate career

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- *Graduated too old.*
 - If you are over [insert age here] by the time you graduate (and have not made a mark otherwise before that), you will start looking like a has-been to the scientific community and the funding agencies.
 - Also many older graduates tend to get stuck to working on minor technical problems. This is OK for a person under 30, and a way to make your mark, but shows poor judgment in older researchers. (Which besides being personally pathetic leads to difficulties with funding agencies.)

SO YOU HAVE GRADUATED?

Congratulations! Having studied theoretical computer science, you have by now probably made at least one of the following mistakes:

- *Studied too little, and/or too limited kind of mathematics.*
 - In your future career, you will need all the mathematics you have learned, and especially the mathematics you *didn't* learn.
- *Graduated too young.*
 - After you graduate, you will need to start doing a lot of nonresearch “service” work, so you had better get your scientific act together before this. (This is not so bad as it used to be; the entry to the real world can now be postponed by doing a postdoc, and it is advisable to do so.)

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YES! I GOT MY PH.D. WHAT DO I DO NOW?

Briefly: Get Out of There!

- *Physically:* Go somewhere else to do a postdoc. You are by now too stuck in the ways of your old department, with too many professional and personal commitments and a limited world-view. It is very educational to see that things can be run in a completely different way from what you have been accustomed to. This also helps you to start thinking independently about what *you* want, as opposed to what is expected of you.
- *Scientifically:* Move away from your Ph.D. topic, or at least look seriously into something quite different on the side. You need

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HELP! NOBODY IS TELLING ME WHAT TO WORK ON ANYMORE!

to become independent in your choice and evaluation of research topics, and not get stuck in a once-given area.

- *Advice 1: Travel.* Go somewhere else to do a postdoc. Go to conferences. Talk to people. You will quickly get a feeling for what the interesting research directions are.
- *Advice 2: Think Big.* A Ph.D. topic is supposed to be something that you can safely complete in 3–4 years. A career of 30+ years is different. Most people seem to adjust their research areas in ~10 year intervals, so you will probably work on maybe 3 areas in your career. Plan with that perspective.

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HELP! MY ADVISOR DOESN'T WANT TO FUND ME ANYMORE!

He/she is not supposed to. By now (or after your postdoc year) you should start writing your own grant proposals. Advice on that:

- *Think Big.* Although you shouldn't actually propose solving the Problem of the Universe in your 3-year grant period, you should have that as a backdrop to your specific research issues.
- *Evolve.* Within the research area of P. of the U., develop new & novel approaches, not the same thing you have done before, no matter how successfully.

graduate students, who at least initially rather *detract* than add to your own research contribution.

One thing to note about funding after the Ph.D./postdoc stage is that you usually cannot get money for yourself, but only for your

SO HOW DO I BECOME A PROFESSOR?

Answer: In Due Time.

- Advantages: Secure monthly salary, some amount of influence on your environment.
- Disadvantages: A Professorship is Not a Research Job! No! If you thought so, think again. There's a lot of service work, teaching, writing proposals & generally worrying about *other people's* problems.
- Conclusion: Do not rush to the first job that comes your way.
- On the other hand, not *ever* applying to professorships eventually starts to look like evading responsibility.

RESOURCES

Books on Academic Life

P. J. Feibelman, *A Ph.D. is Not Enough: A Guide to Survival in Science*. Addison-Wesley 1993.

J. E. Littlewood, B. Bollobás (Ed.), *Littlewood's Miscellany*. Cambridge Univ. Press 1986.

P. B. Medawar, *Advice to a Young Scientist*. Harper & Row 1981.

Miscellaneous WWW Resources

<http://www2.phds.org/>: PhDs.org: Science, Math, and Engineering Career Resources

http://www.rmartin.com/SRC_FAQ.html: Sci.research.c
FAQ