

From Researcher to Mentor and Back

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My Life as Mentor Part I

While a researcher at Bell Labs, AT&T Labs

- Strong, motivated summer interns
- 1 project = 9 months specification + 3 months execution
- 1 internship = 1 paper

Grad students are great !

My Life as Mentor Part II

What I discovered after becoming a professor

- Students are *very busy* during the other 9 months !
 - Take courses, TA, lack background, change areas, many other problems...

What am I doing here ?

Things that Go Wrong in Mentoring

- Students are too busy to do research
 - Courses, TA, other interests, friends/family
- You can be faster without the students
 - There's too much they don't know
- Your students start having some really good ideas
 - You weren't expecting that, were you ?
 - But: their first ideas are poorly articulated, unpolished, "I could do that much better"...
- Your students need to become independent
 - Worse: they don't know that and you have to tell them

Things that Go Right in Mentoring

- When students are busy, that's good
 - They bring intellectual and cultural diversity to the conversation
- When students learn from you, that's good
 - And that's fun: that's why you are becoming a mentor after all
- When students have their own ideas, that's good
 - Their ideas really impact your research program
- When students become independent, that's *very* good

The Four Types of Mentors

- The Famous Scientist
 - “I don’t talk to kiddies; let’s meet after your second SIGMOD paper”
 - What works: swim or drown policy strengthens the spirit
- The CEO
 - Layer of seniority: junior students → senior students → postdocs → you
 - What works: emphasizes delegation which is a key to success
- The Accountant
 - Make students write daily briefings, weekly progress updates, monthly technical reports; repeat the same with meetings
 - What works: students know exactly where they are in their research (often: not too far)
- The Mommy/Daddy
 - You listen, you teach, you scold, you weep together when the SIGMOD paper gets rejected
 - What works: this is the mother of all mentoring...

How to Measure Your Success

You are successful when you become a good researcher *because* of your students

- Progression of student involvement:
 - You do the research, student does legwork
 - You and student split the research
 - Student does the research, you “advise”
 - Student writes a single authored paper (where does this leave you ?)
- In all these models *both of you win*

Researcher → Mentor → Researcher

One sunny day, a rabbit came out of her hole in the ground to enjoy the fine weather. The day was so nice that she became careless and a fox snuck up behind her and caught her.

"I am going to eat you for lunch!" said the fox. "Wait!" replied the rabbit, "You should at least wait a few days."

"Oh yeah? Why should I wait?"

"Well, I am just finishing my dissertation on 'The Superiority of Rabbits over Foxes and Wolves.'"

"Are you crazy? I should eat you right now! Everyone knows that a fox will always win over a rabbit."

"Not according to my research. If you like, you can come into my hole and read it for yourself. If you are not convinced, you can go ahead and eat me for lunch."

"You really are crazy!" said the fox, but since the fox was curious and had nothing to lose, it went into the hole with the rabbit. The fox never came out.

A few days later, the rabbit was again taking a break from writing when a wolf came out of the bushes and was ready to set upon her.

"Wait!" yelled the rabbit, "You can't eat me right now."

"And why might that be, my furry appetizer?" said the wolf.

"I am almost finished with my dissertation on 'The Superiority of Rabbits over Foxes and Wolves.'"

The wolf laughed so hard he almost let go of the rabbit. "Maybe I shouldn't eat you--you really are sick in the head! You might have something contagious."

"Come and read it for yourself, you can eat me afterwards if you disagree with my conclusions."

So the wolf went down into the rabbit's hole...and never came out.

The rabbit finished her dissertation and was out celebrating in the local lettuce patch.

Another rabbit came along and asked, "What's up? You seem very happy."

"Yup, I just finished my dissertation."

"Congratulations! What's it about?"

"The Superiority of Rabbits over Foxes and Wolves."

"No way! That can't be right."

"Oh, but it is. Come and read it for yourself."

So the two rabbits went down into the rabbit hole. As they entered, the friend saw the typical graduate abode. A computer with the controversial work was in one corner surrounded by discarded papers. And on one side of the room there was a pile of fox bones, while on the other side there was a pile of wolf bones. And in the center, there was a large, well-fed lion.

The moral of the story:

The title of your dissertation doesn't matter. The subject doesn't matter. The research doesn't matter. All that matters is who your advisor is.

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The subject doesn't matter.
The research doesn't matter.
All that matters is who your advisor is.

You are the Lion !