Some Lessons I Have Learned

... or ...

“That's Life”

Daniel Berleant, June 20, 2011, University of Central Arkansas
A Few Words About My Research

- Wouldn't it be cool to make machines think?! 
  - So, I pursued AI for my dissertation


The Excitement of AI

- My AI work was in “Qualitative Physics”
  - It was interesting, it got me a Ph.D., but...
    - I learned little about how machines could think!

Image: http://www.practicalphysics.org/go/Experiment_214.html
My Advisor Wrote this Book
Lesson #1: Share Authorship With Your Students

- When possible I put my students' names *first*
- Does this make my cv look worse?

- How about now?
  - Publications and other products (‘*’ indicates student author)
- In fact it makes my cv look *better!*
As a New Assistant Professor, AI was Hard to Work On

- Luckily, I branched out
  - Text mining got my first research grant
    - ...and colleagues that I still communicate with
  - Interval-valued probability
    - ...this tied into a very welcoming community
    - Life is a lot more fun when people are encouraging you!
Lesson #2: Sniff Out the Opportunities

- Text mining:
  - Important in the early '90s
    - ...but a lot of people didn't realize it
  - Mid '90s – the Web was invented
    - ...suddenly, text mining heaven!
  - Late '90s – mining biomedical texts ramps up
    - ...an opportunity to join the bioinformatics field

Lesson #3: Find Applications (even though it's not easy)

- Interval-valued probability:
  - Develop the theory
  - Find an application
  - Application demands new theory
  - Repeat!
Text Mining and Probability Intervals...isn't that too much?

- You can't do everything
- In most cases, focusing on one field yields the most progress and career success
- But it's risky!
  - You “put all your eggs in one basket”
- 1 ½ fields can be better in some cases
- But trying to do 2+ is probably a bit too much
- And now I am trying to do technology foresight...
  - Why ??!
Lesson #4: Know Your Drummer

• Some people “follow the beat of a different drummer”
• If 2+ fields is too much...why do it?
Lesson #5: The Grass is Always Greener on the Other Side of the Fence

- “If only I had done *that* instead of *this*, life would have been so much better” *sob*
  - Well, maybe…but maybe not! (what was that movie?)

http://blog.sagar.org/archives/2008_05_01_ukdiveboy_archive.html
Lesson #6: If You Don't ____,
then You Won't ____

- If you don't work on important problems, you won't get important results
- If you don't write grant applications, you won't get any funds
- If you don't ask, you won't get, etc.
Lesson #7: There is Good Luck, and Bad Luck...You'll Get Both

- I have a one-off paper in a 3rd-rate conference that is well-cited
  - Someone referenced it in a wikipedia article
- My “best” papers have sometimes been cited few or no times
  - Aaaargh!!
- I have an IEEE Computer Society “Top Ten” paper that has been cited only once
  - What does that mean??!
Have a Great Day!
For another time: collaboration; Milankovitch approach to choosing the right question