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# INFSCI 3005: Introduction to Doctoral Program

## Lecture 2: Planning your Doctoral Studies

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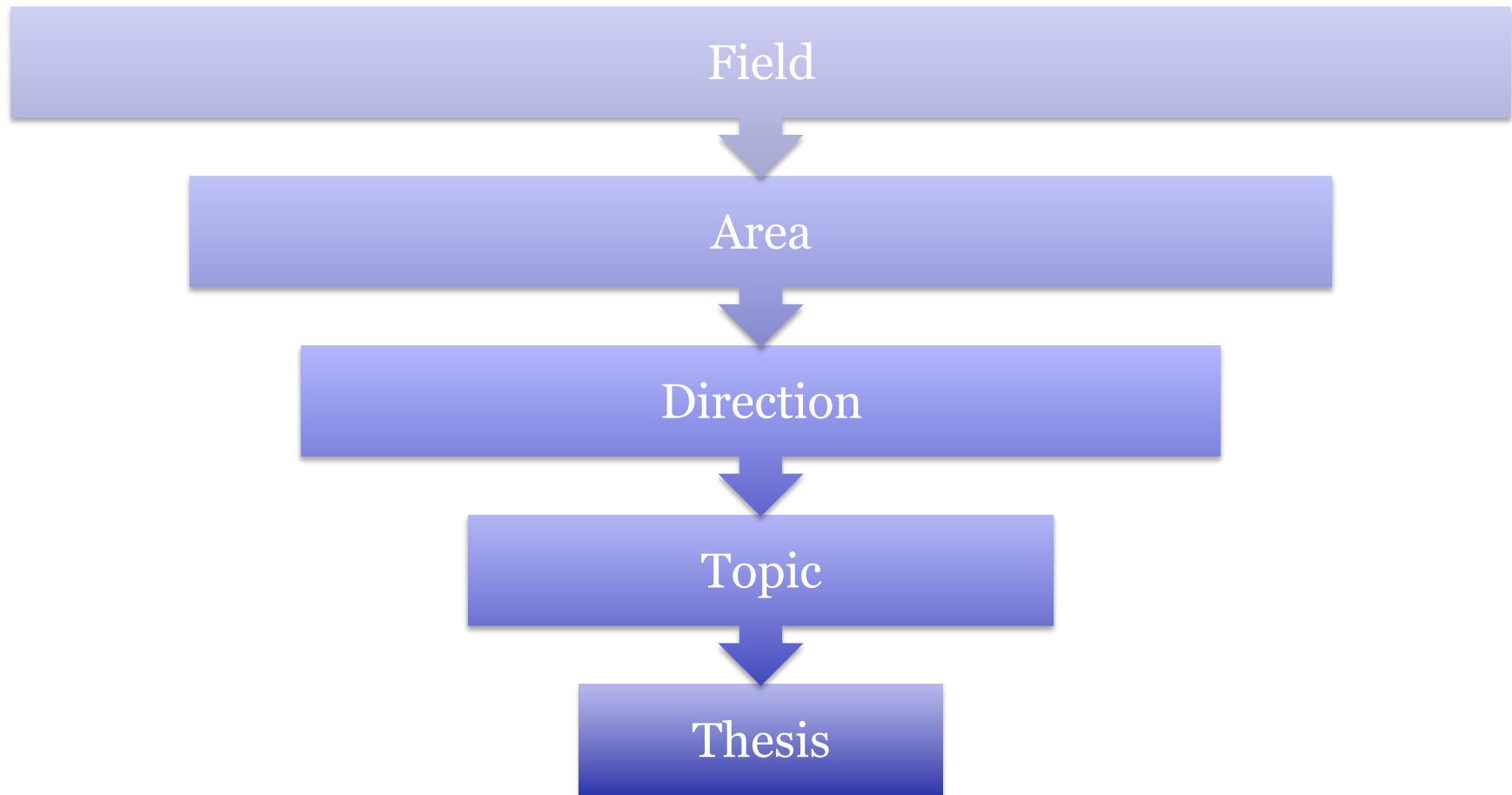


## Overview

- Stages of the Doctoral Study
- The Daily Grind
  - Reading
  - Listening
  - Doing
  - Journal
- Advisor
- Committee
- Expectations



# Stages of the Doctoral Study



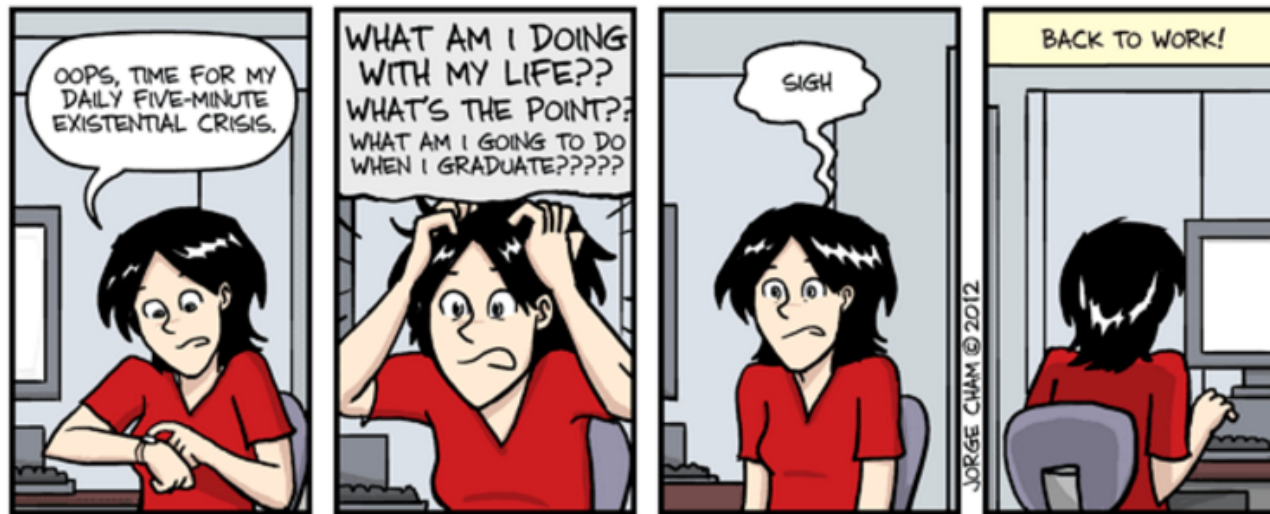


# The Daily Grind

Getting the ideas → Trying the ideas →  
Sharing the ideas → Documenting your work

Piled Higher and Deeper by Jorge Cham

[www.phdcomics.com](http://www.phdcomics.com)

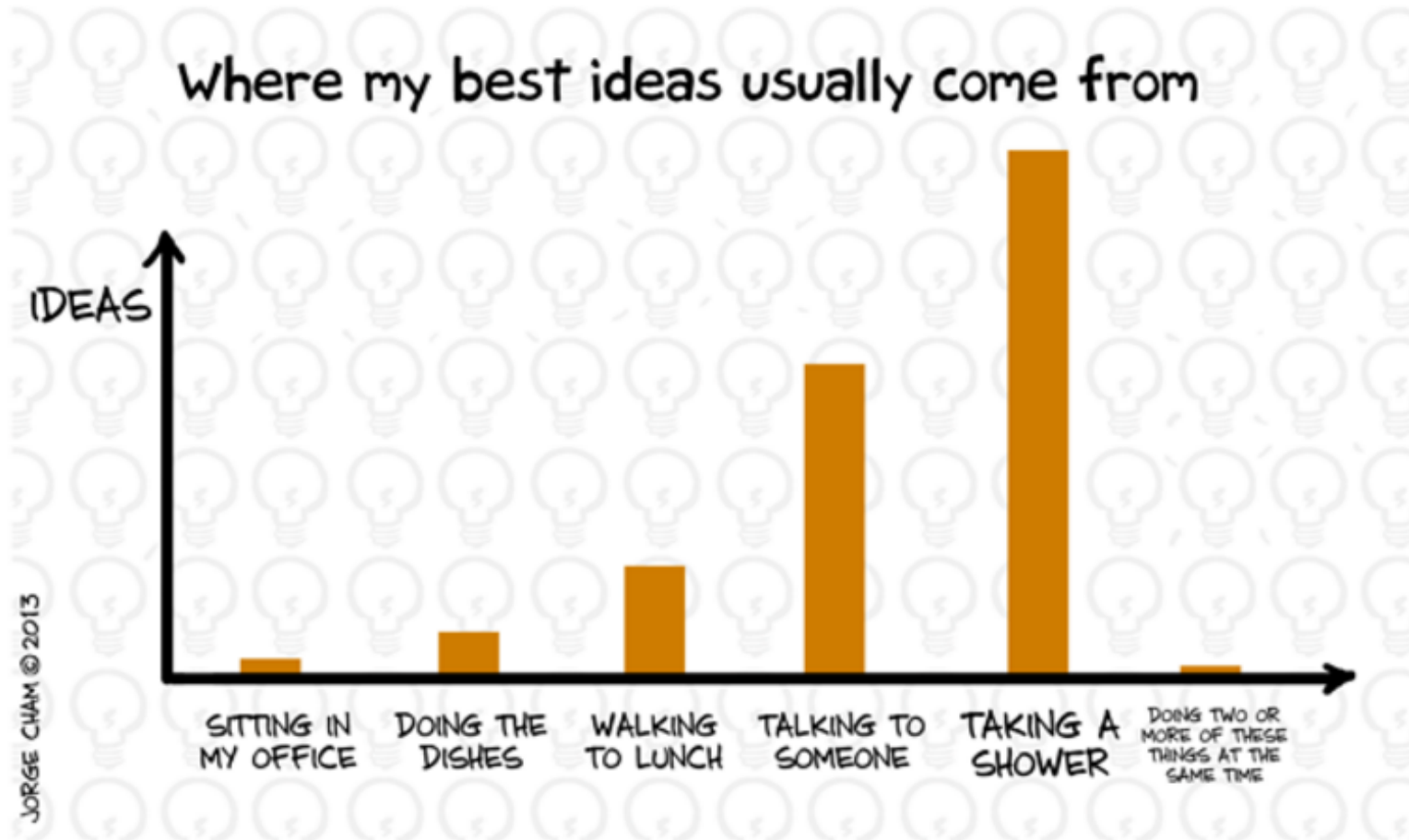


[WWW.PHDCOMICS.COM](http://WWW.PHDCOMICS.COM)

title: "The Daily Routine" - originally published 4/20/2012



# Getting the Ideas?





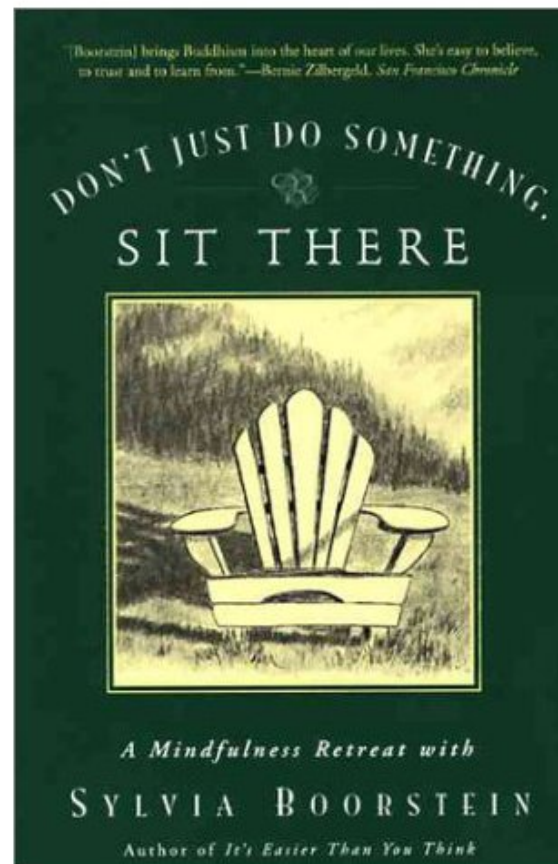
## Getting the ideas

- Reading, reading, reading...
  - How many papers per year?
  - Journal club
- Attending research seminars
- Attending conferences
- Talking
- Explore broadly! Most creative ideas appear on the crossroads
  - Old problem, new math
  - Problem from one field, approach from another



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# The Motto of an PhD Student?





## Trying the Ideas

- Don't just sit there, do something
  - You will not get real experience until you try to do something
- Try a small-scale project
  - IS students have a space for two with two mandated independent studies, but ISP students can take independent studies too!
- Start something new or add new component to an existing project
- The benefits of a large group





## Sharing the Ideas

- Sharing your ideas will bring you critical feedback
  - White paper, share with advisor and friends
  - Presentation at your group seminar
  - Doctoral Brown Bag
  - Doctoral Consortia at research conferences
- Start publishing early
  - Workshops, student posters (think core conferences!)
  - Your Prelim paper
- Share broadly
  - Sharing your ideas will make you “known”
  - It's easy to talk to / learn from others when you have something to say!
  - Start with your poster/paper when talking with others at conferences!



# Documenting Your Work

- Maintain a research journal!
- Central place to put in ideas, reflect on readings and seminars, plan the work and analyze results
- Paper days are gone, use an information system
  - Search, tagging, structuring
- Keeping a blog may combine the journaling and the sharing issues – you will be heard
  - Sometimes you do not want to ...





## Advisor

- Advisor is the most vital to your success
  - PhD study is an apprenticeship
- Academic advisor vs. research advisor
- Find your research advisor
  - See and talk to every candidate advisor
  - Go to Brown bag seminars, colloquia
  - Ask around (but use your common sense!)
- Follow your candidate advisor
  - Take his/her classes
  - Attend his/her research seminar
  - Read his/her thesis and papers





## The Advisor: Critical Issues

- Is his/her area of research something that I want to get into?
- Is he/she a good scientist?
- Does he/she have a good track record in terms of publications and funding?
- Has he/she been a good advisor for his/her students (ask around)? Have there ever been problems in his/her interactions with students?
- Is his/her research style fitting my expectations? Can he/she be my role model?
- Will he/she have enough time for me?
- Can I get along with him/her personally?
- Does he/she have (prospects for) money for me?



# Your Dissertation Committee

- The Committee is very important
  - Shaping your thesis from multiple prospects
  - The committee should be strong in the area of your proposed work and should be able to contribute something meaningful to your thesis (they are your secret weapons)
  - They will also learn the details of your work and cite/promote it
- Think about the committee early
  - Take classes with faculty who will likely to be on your committee
  - Ask research advise of prospective committee members when appropriate
  - Preferably involve the potential committee members in your Comprehensive Exam
  - Engage with prospective external committee members (classes, conferences, advise, internship, joint work)
- Discuss potential committee members and choose **THE** committee together with your advisor

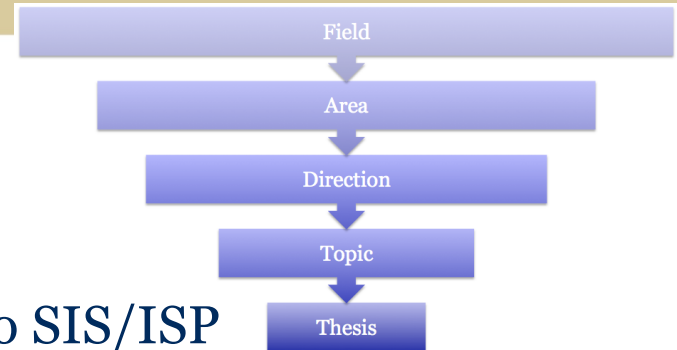


## The Committee: Critical Issues

- There should be no fundamental scientific disagreements between your advisor and the other committee members
- There should be no personal animosities between your advisor and the other committee members
- They should be reasonable (ask around!) Every committee member potentially pulls in his/her direction and can mean more trouble for you
- Try not to have more than minimal required number of people in your committee (4 for IS/ISP)



# Expectations



- You already selected your field by applying to SIS/ISP
- Choose your area and your advisor within the first 2 years
  - Preliminary Examination is a good trial of an area and an advisor, but it is not a contract
  - Your first projects is more for trying and area and learning how to do research
  - Until this is done, your reading should be broad, not narrow: read many overview papers
- Choose your specific direction of work within first 3-4 years
  - Once it is done, start extensive reading and exploration in this direction
  - The structure of Comprehensive Exam helps you to do it
  - Do research and start publishing your work in this direction early (the earlier, the better, you will not get a good job with a thesis alone!)
- Start working on your thesis before you hit 5<sup>th</sup> year in the program
  - Your thesis is the culmination, but not the whole content of your study
  - Still a lot of reading and a lot of work



## Wise Words from the Faculty

- Get involved in research as soon as possible, preferably during your first semester here
- Don't jump around in terms of research groups and advisors. Make a commitment and follow it up (unless it really does not work out)
- Stop working in the “course and exam” mode. Everybody knows that you are good at it
- Don't think that hanging around for five or six years will give you a degree
- A degree alone is not enough to get a good job!
  - Make sure you are visible, well-published, and competitive when you graduate





## More Wise Words from the Faculty

- Don't wait for your “lifetime” topic - this is an illusion
  - Newell's lecture "Desires and Diversions"
- Freedom of choice is also an illusion
- Make a commitment to your career, organize your life, make sacrifices (no TV, no newspapers, no newsgroups and web surfing)
- Part-time PhD? Consider quitting your job so that you can focus on your studies
- Have a role model, be careful whom you are following and who you are listening to. Avoid crowd mentality



## And Yet...Do not Burn Yourself Early

- PhD years are not only about study, it is possibly the best time in your life
- Combine work, study, with active life
  - Exercise
  - Social life
  - Cultural life
- Pittsburgh is a city of opportunities
  - Eventur: <http://eventur.sis.pitt.edu/>
  - Pitt Arts: <http://www.pittarts.pitt.edu/>