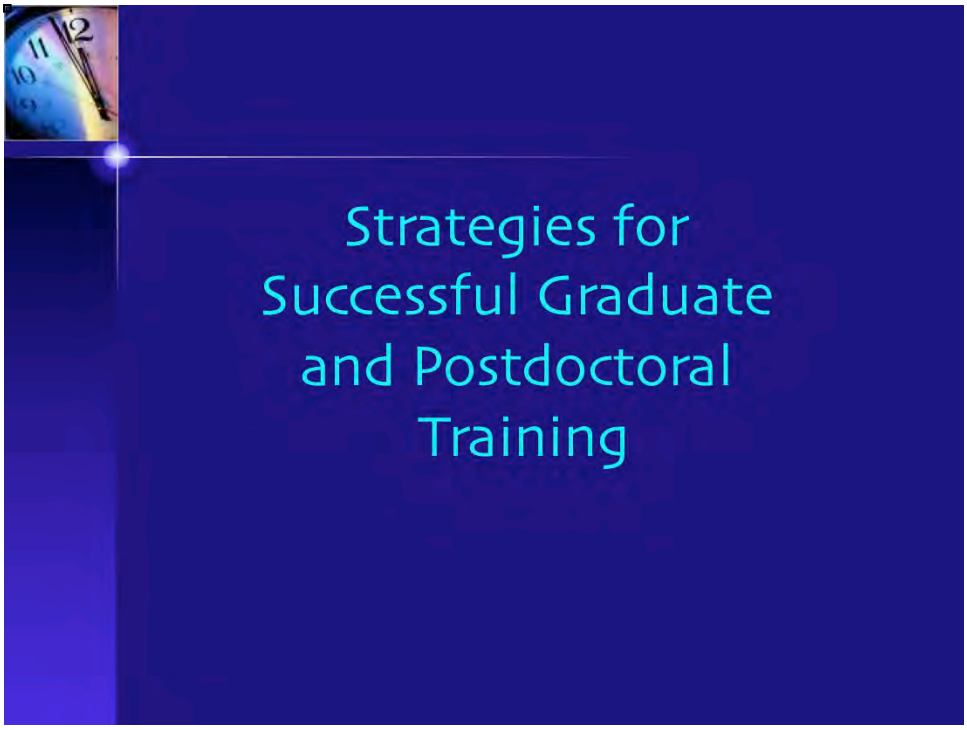

Sandra Schmid
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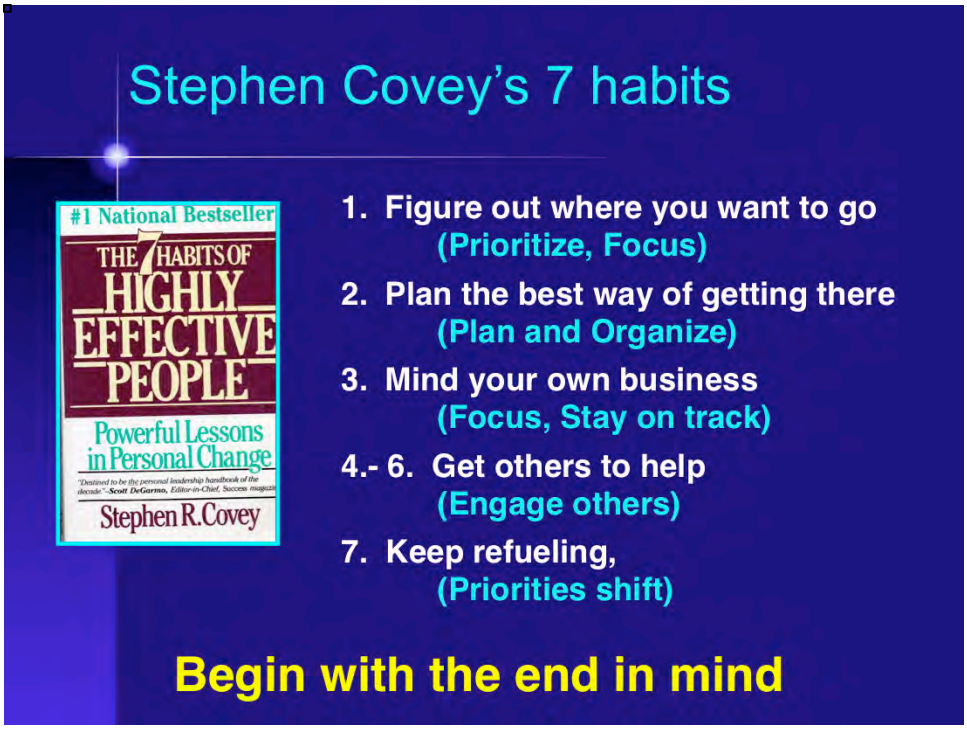
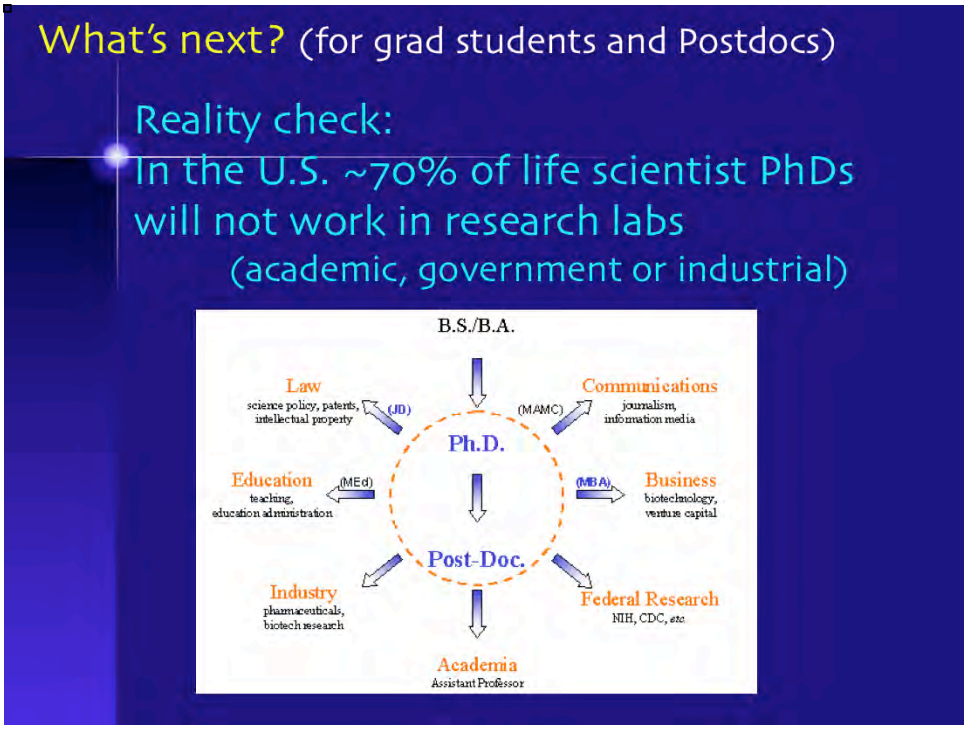


A great book, which I highly recommend. These are the crib notes.



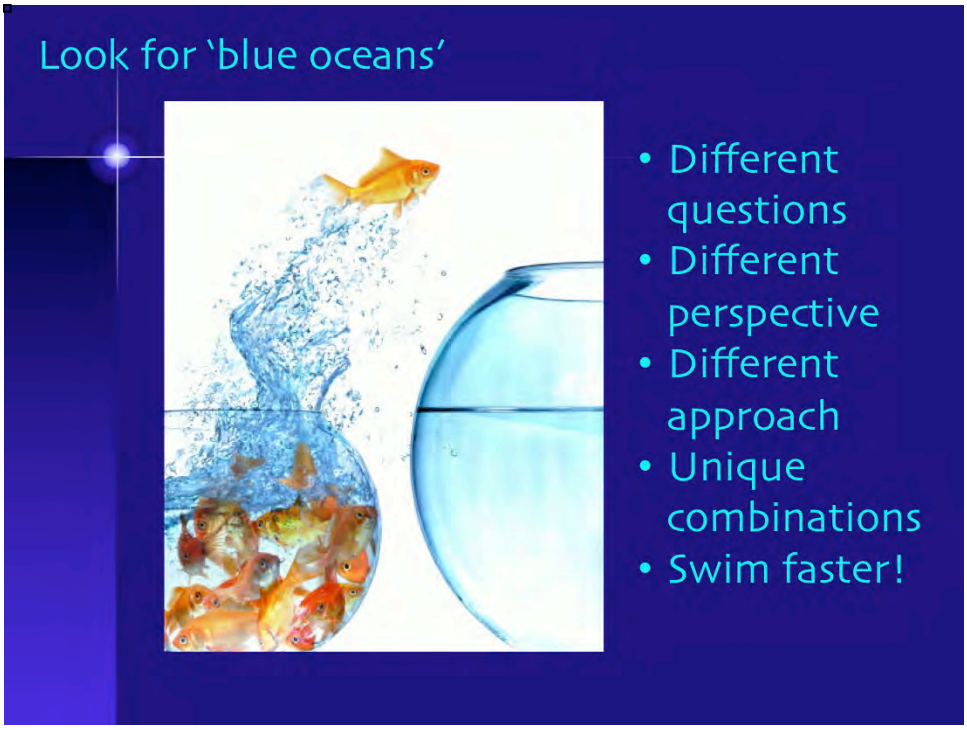
With regard to keeping the end in mind. Many of you will not be working in research labs. Think about customizing your training and expectations to fit your specific career objectives. I think about how much better off we would be with more PhD politicians (like Angela Merkel), more PhD CEOs (think Goldman Sachs/Enron) more PhD industrialists (think BP Oil), ,journalists, etc., etc. Smarter decisions would be made.

The skills you acquire as a PhD are transferable and will ensure your success in any profession (I you want it and are willing to work for it).

- This slides speaks to defining your customizing your training. You need to have this discussion with your advisors.


It begins with self-assessment
Job Search
Focused Plan
Exploration
Self-Assessment

Self-assessment: What do you love doing, what are you UNIQUELY good at, what can you make a living doing. For picking science projects you also want to think about your competition and take advantage of the unique environment provided by your lab/department/institute.



"Red oceans" refer to crowded, competitive shark-infested waters. Try to identify blue ocean projects, career paths.

Peter Drucker's Sources of Innovation

Businesses	Academic labs
1) Unexpected Occurrences	Apparently unrelated observations and/or findings that are peripheral to the experimental goals.
2) Incongruities	Unexpected experimental findings in the context of the hypothesis being tested.
3) Process Needs	Improvements to current methodologies and new technologies needed.
4a) Industry Changes	New knowledge, contributed by other labs.
4b) Market Changes	New funding opportunities or shifts in funding priorities by NIH or private funding sources.
Demographic Changes	Not applicable?
5) Changes in Perception	Seeing things from a different angle
6) New Knowledge	Unexpected Discoveries/"Eureka" moments (often from trial & error or serendipity).

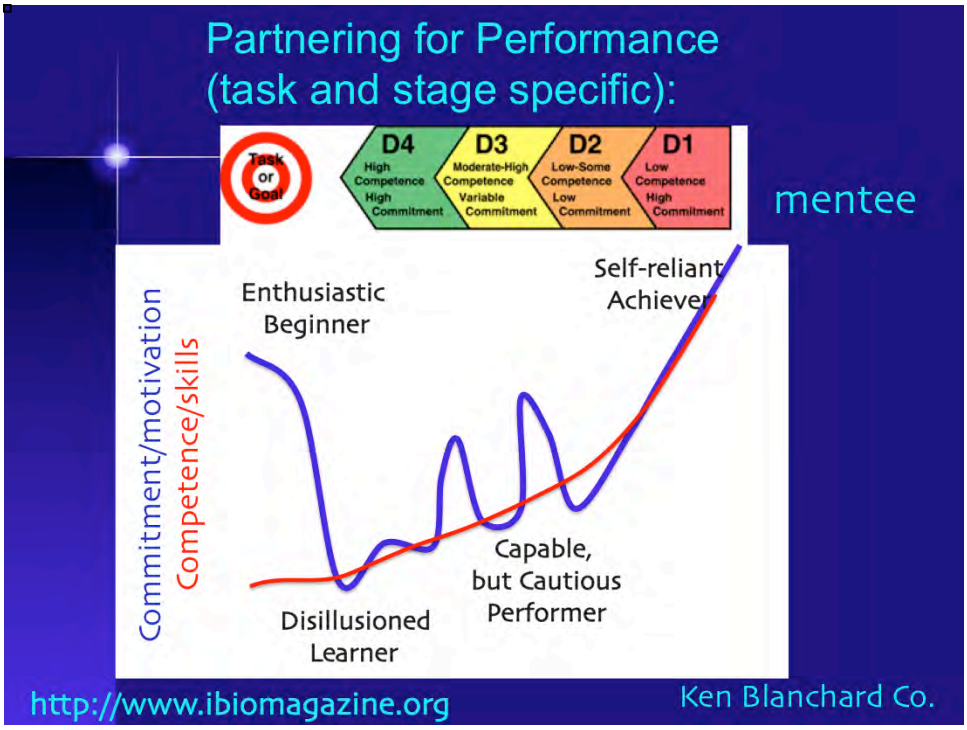
Harvard Business Review

Businesses think about innovation as without it they will not be profitable. Science should also think about where innovation comes from and how we can create environments that foster it.

Tools for creative thinking

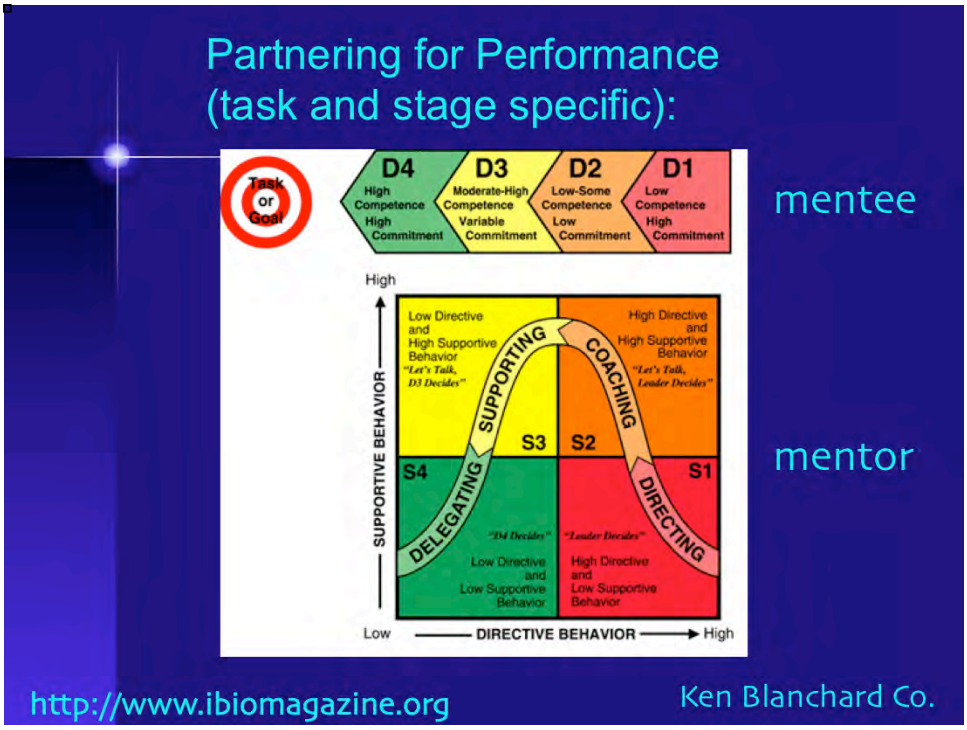
Your postdoctoral training is probably the most critical point in your career. During it you should decide your career track

- Don't forget the mentorship you can get by talking to more senior graduate students, postdocs, new assistant professors. Learn from their mistakes (you bet they made them).



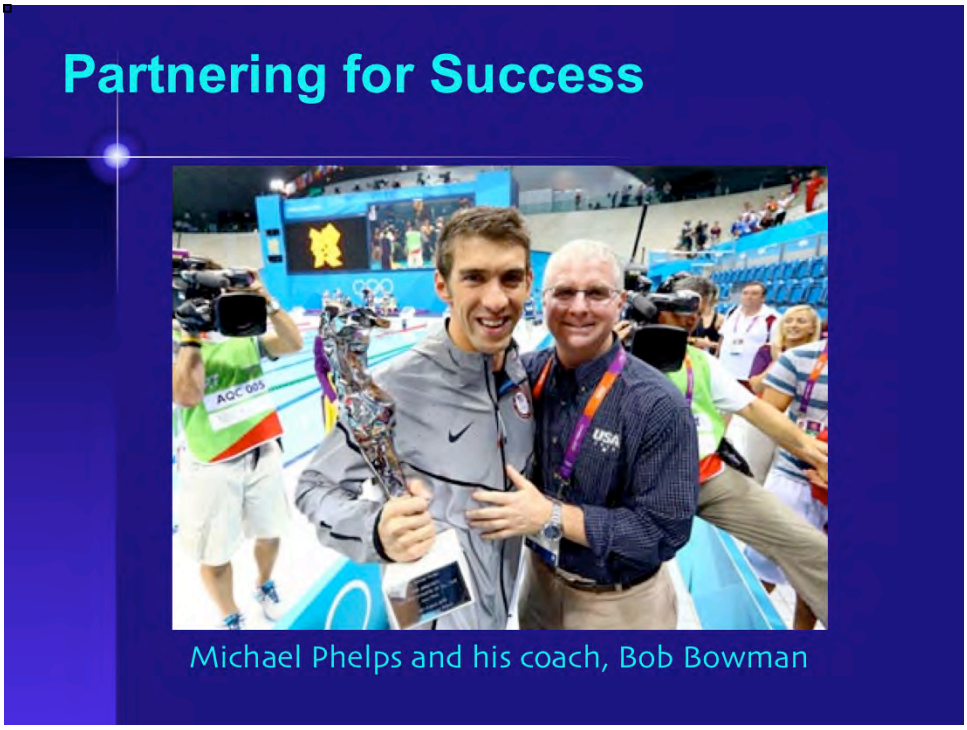
For each new task, you will pass through these 4 stages of development. This is true for each new task

Starting a new project, writing a paper, starting a new lab. We are all beginners over and over again.



Need to use different leadership/mentorship styles for different development levels. More or less directive. More or less supportive. (These are high and low, not 'all' or 'none'

Find more details on iBiomagazine.



Everybody needs a coach to push them to greater heights.

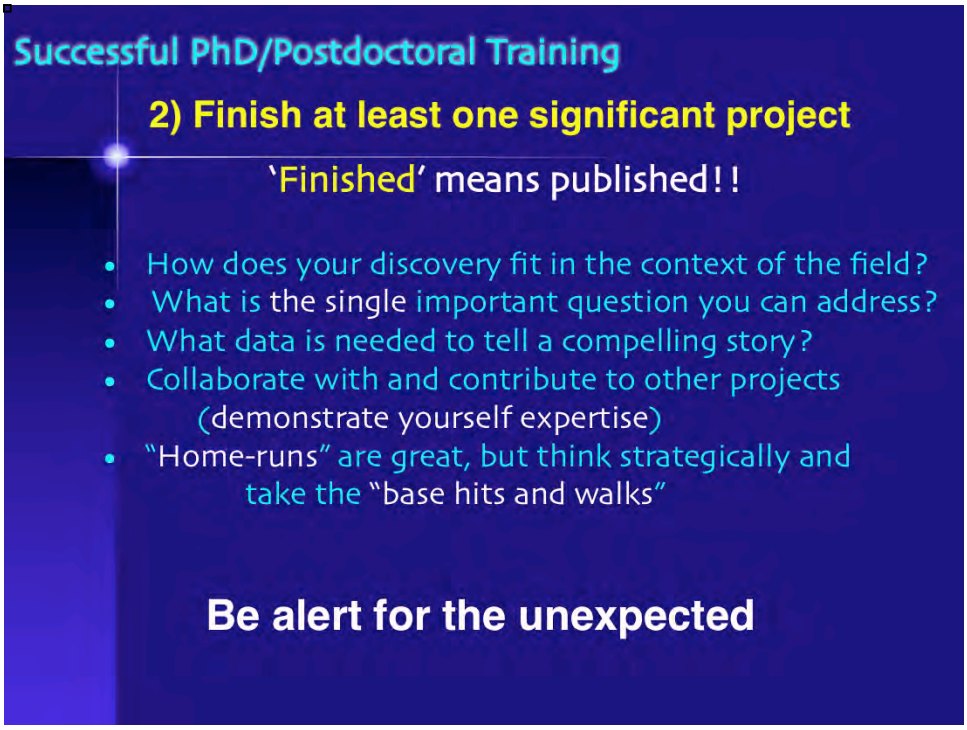
Writing a fellowship early on in your project helps your mentor to be more directive.

Successful PhD/Postdoctoral Training

2) Finish at least one significant project

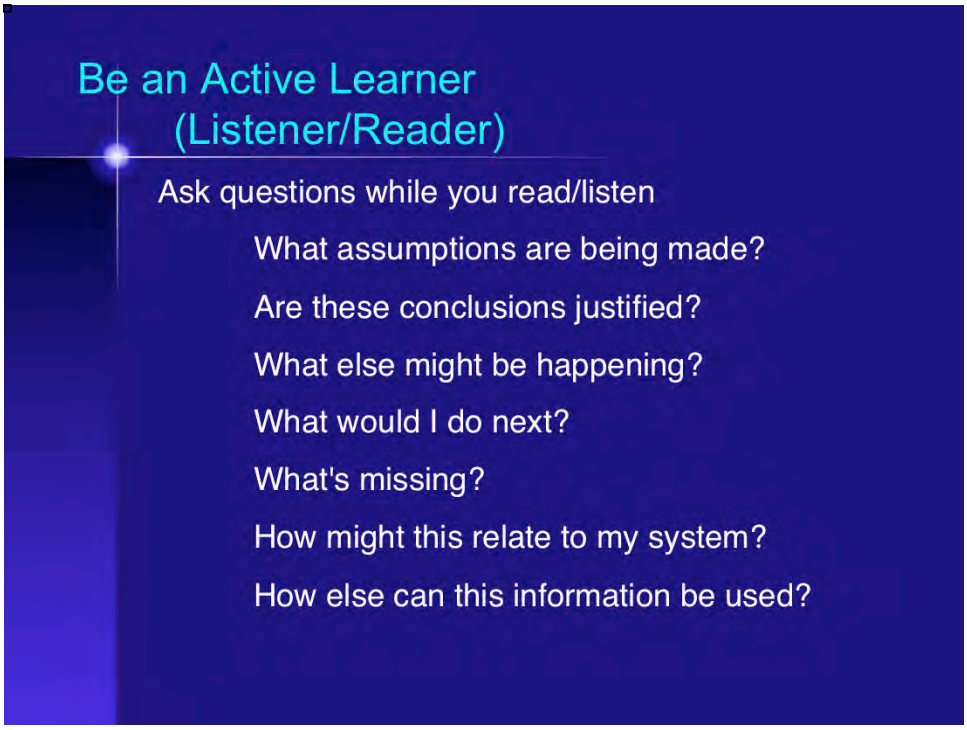
'Finished' means published!!

"Surely you were aware when you accepted the position, Professor, that it was publish or perish."



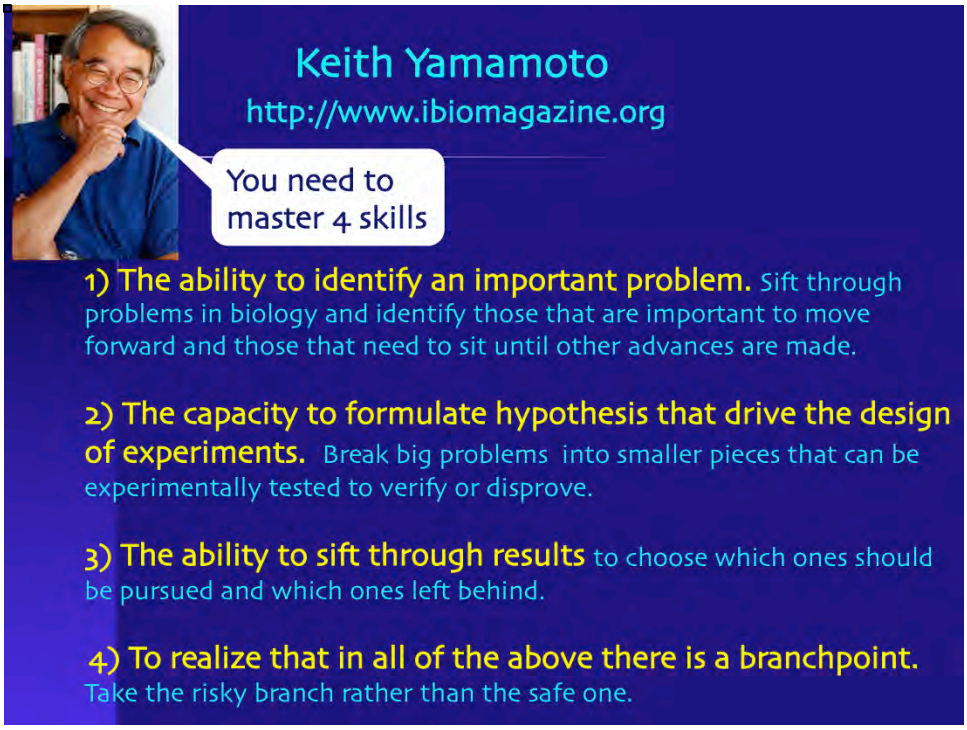
If you string together a series of 'base hits' your overall scoring will be higher. Don't be forced to put whole papers into the supplemental materials of a since Science paper.

You can't establish your identity unless you talk to other people. This is also where good ideas come from (cross-fertilization, or the 'adjacent possible')

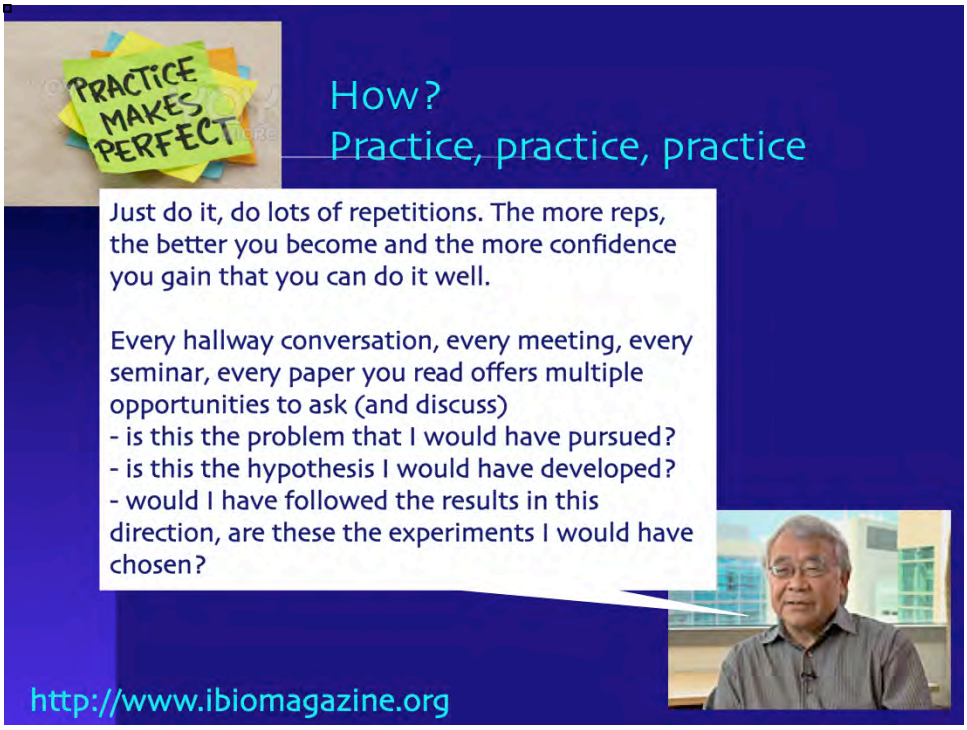


Do this with every paper you read, every seminar you attend, every group meeting and WIP.

Get practice. Write up your experiments as if they were descriptions of a result for a paper. Have your advisor (or peer mentor) read them



Check out iBioMagazine for this terrific talk.

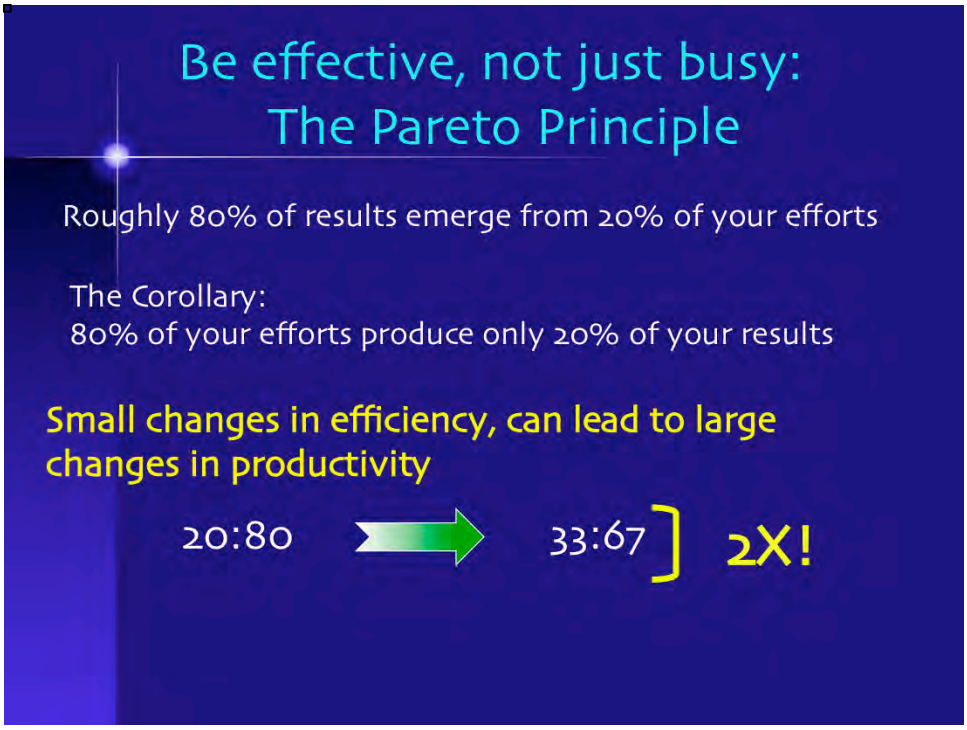

PRACTICE MAKES PERFECT
How?
Practice, practice, practice
Just do it, do lots of repetitions. The more reps, the better you become and the more confidence you gain that you can do it well.
Every hallway conversation, every meeting, every seminar, every paper you read offers multiple opportunities to ask (and discuss)
- is this the problem that I would have pursued?
- is this the hypothesis I would have developed?
- would I have followed the results in this direction, are these the experiments I would have chosen?
http://www.ibiomagazine.org

Success in anything requires hard work. Think Thomas Edison "2% inspiration, 98% perspiration".

Time Management

How to avoid being overwhelmed by your workload


Time Management
Don't confuse busy-ness with effectiveness
Productivity α time • efficiency
How can you increase efficiency?



Plan ahead. Talk to your advisor. Make sure you're doing the right experiment in the right way, as best you can predict.

If It Doesn't Work the First Time

1) Try it again

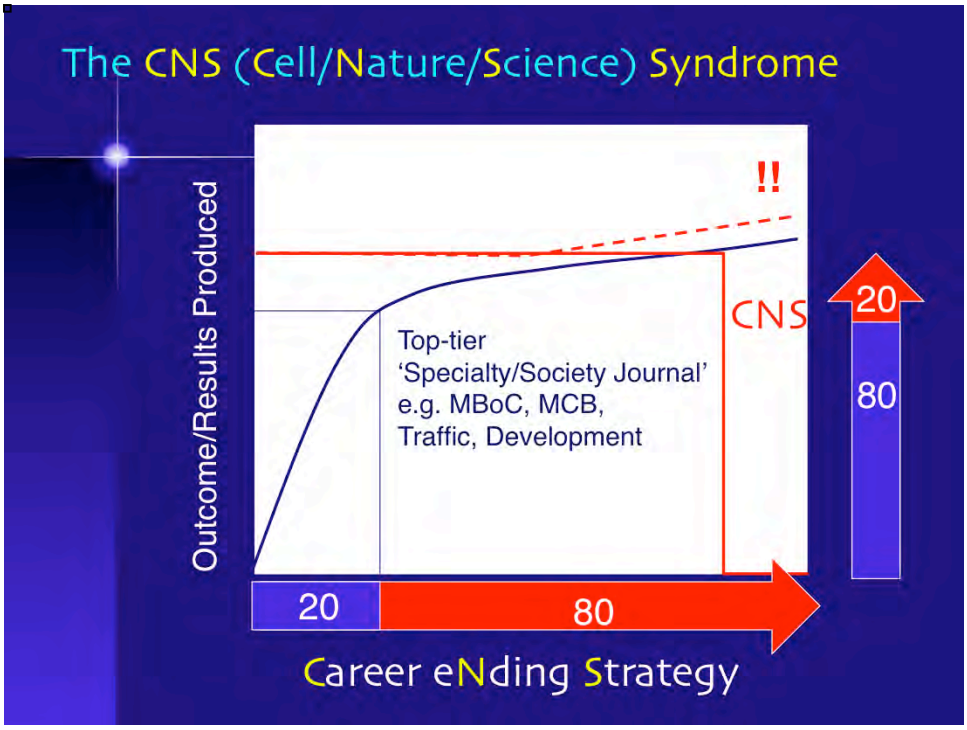
   You might have made a mistake

2) Do something different

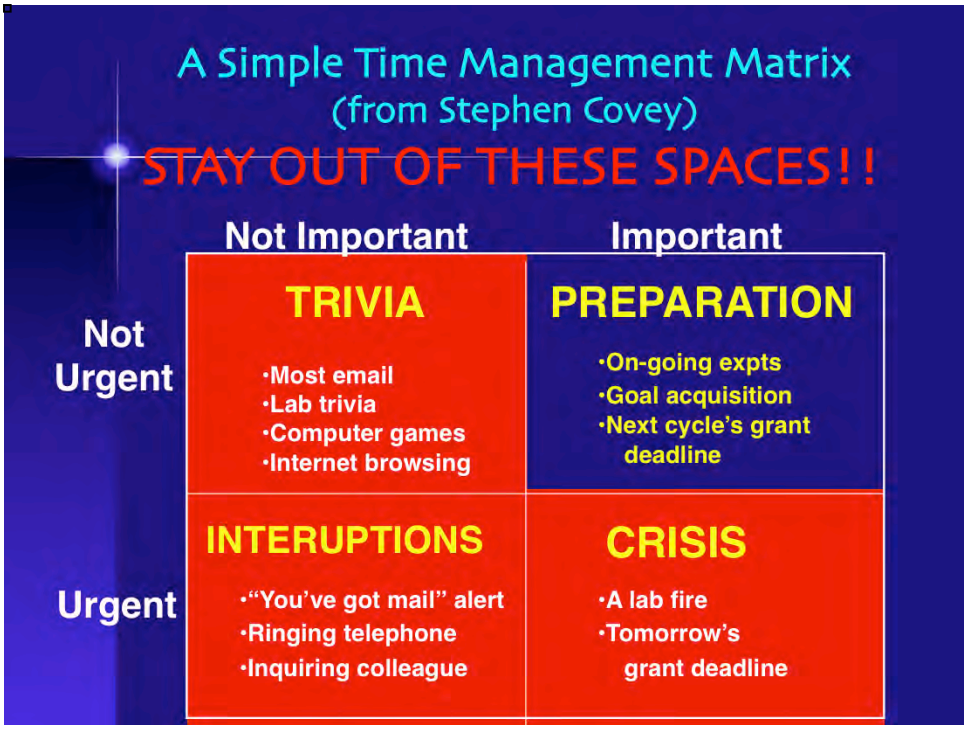
   What changes might make a difference?

3) Ask for help!

   Don't waste time/seek advice/another set of eyes



In most–not all–cases the extra year you spend getting your paper into Cell is wasting your time. You are doing experiments that you know the outcome of (trivial controls, incremental extensions) just to satisfy anonymous reviewers and inexperienced editors. You could be making the next discovery. Also it is demotivating.



Think about what distracts you and how many unimportant things you spend your time on. YOU define what's important and work on it before it's urgent.

Balance:

Not every day
Maybe not every week
It's an overall sense

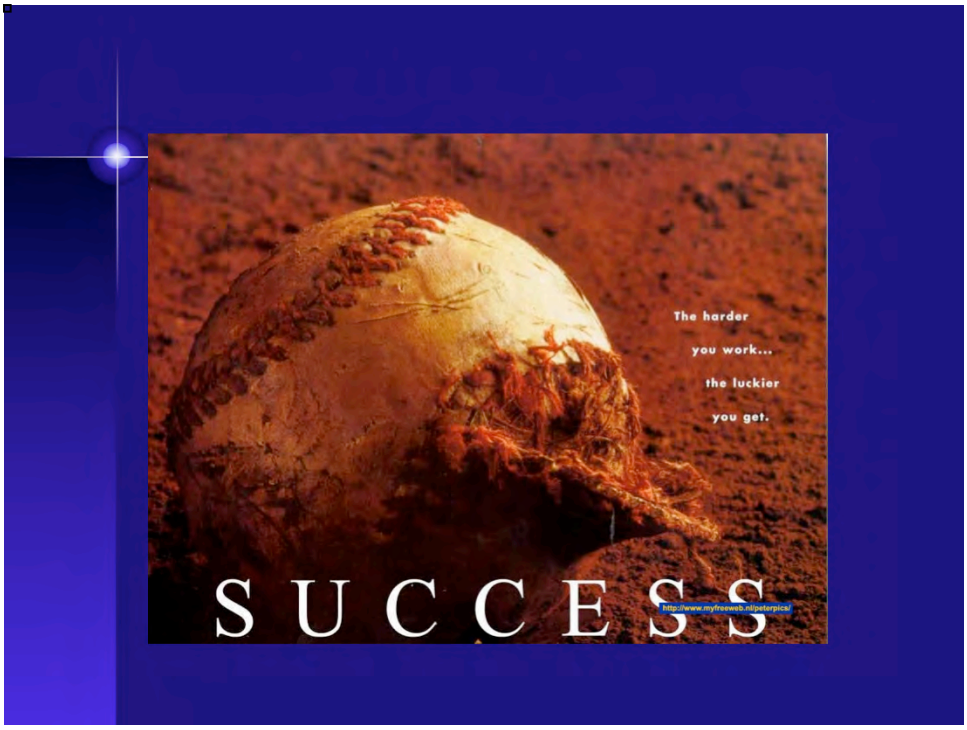
"A balanced life"

Shifting priorities
Engaging Partners
Long-term Planning

One Size Does Not Fit All

Determine YOUR objectives
Acquire the skills YOU need
Seek the help YOU need
when YOU need it
Define YOUR success

Do what you are UNIQUELY qualified to do.



The harder you work, the luckier you get!!!