

A Survey of Mistakes (Mostly Mine :)

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I have made almost all the mistakes
there is to be made



By Frits Ahlefeldt

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But there's one thing I did very well:

I myself caught many of my own mistakes

Today's talk:

- sharing these mistakes with you
- and my take-away lessons from them

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Bigger picture first ... and then the nuts and bolts



1



Scared

Insecure

Don't belong here

Oh, no ...

Started networking, collaborating, traveling, talking ...



No need to network now ...

- *Lock yourself and immerse for first N years**
- *Don't dilute by running around*
- *Focus, brainstorm, establish your identity*
- *No point being visible by being around*
- *Lot of time left in later life to collaborate ...*

** This does not mean don't talk to people ... don't talk to them for the sake of social networking ... remain technical, serious, focussed*

2



**Easy to
become
a manager**

...

A man in a dark suit, white shirt, and dark tie is walking through a city street. He is multitasking: holding a black pen in his right hand, talking on a mobile phone held to his left ear, holding a tablet computer in his left hand, and holding a laptop in his right hand. The background shows tall buildings and a traffic light.

Started managing too many things ...
funding, recruit, committees, teaching, space, purchase, ...

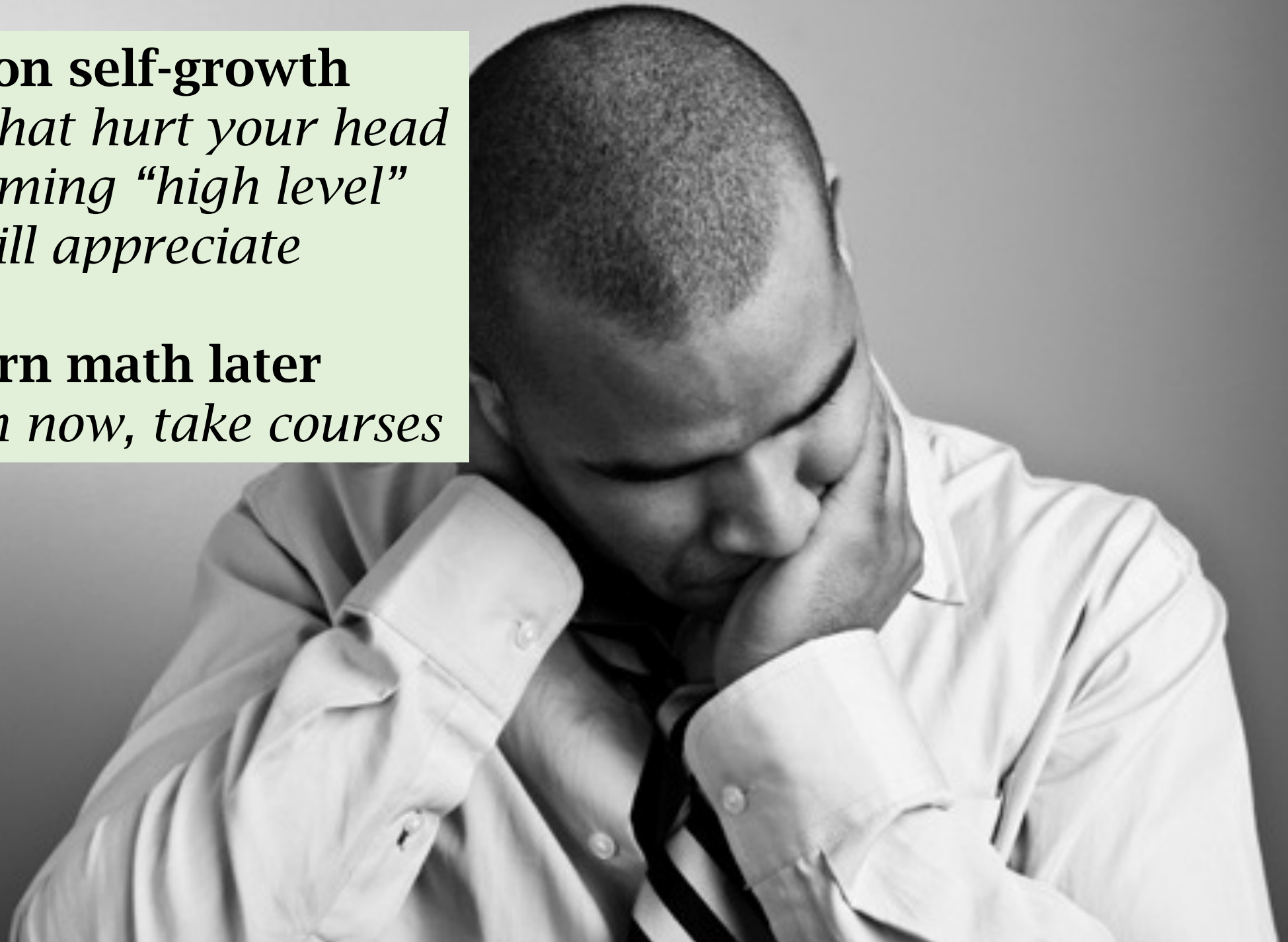
I was learning, maturing at tremendous pace ... but I didn't have time to get deep ... started delegating ... and it did not hurt productivity

Keep an eye on self-growth

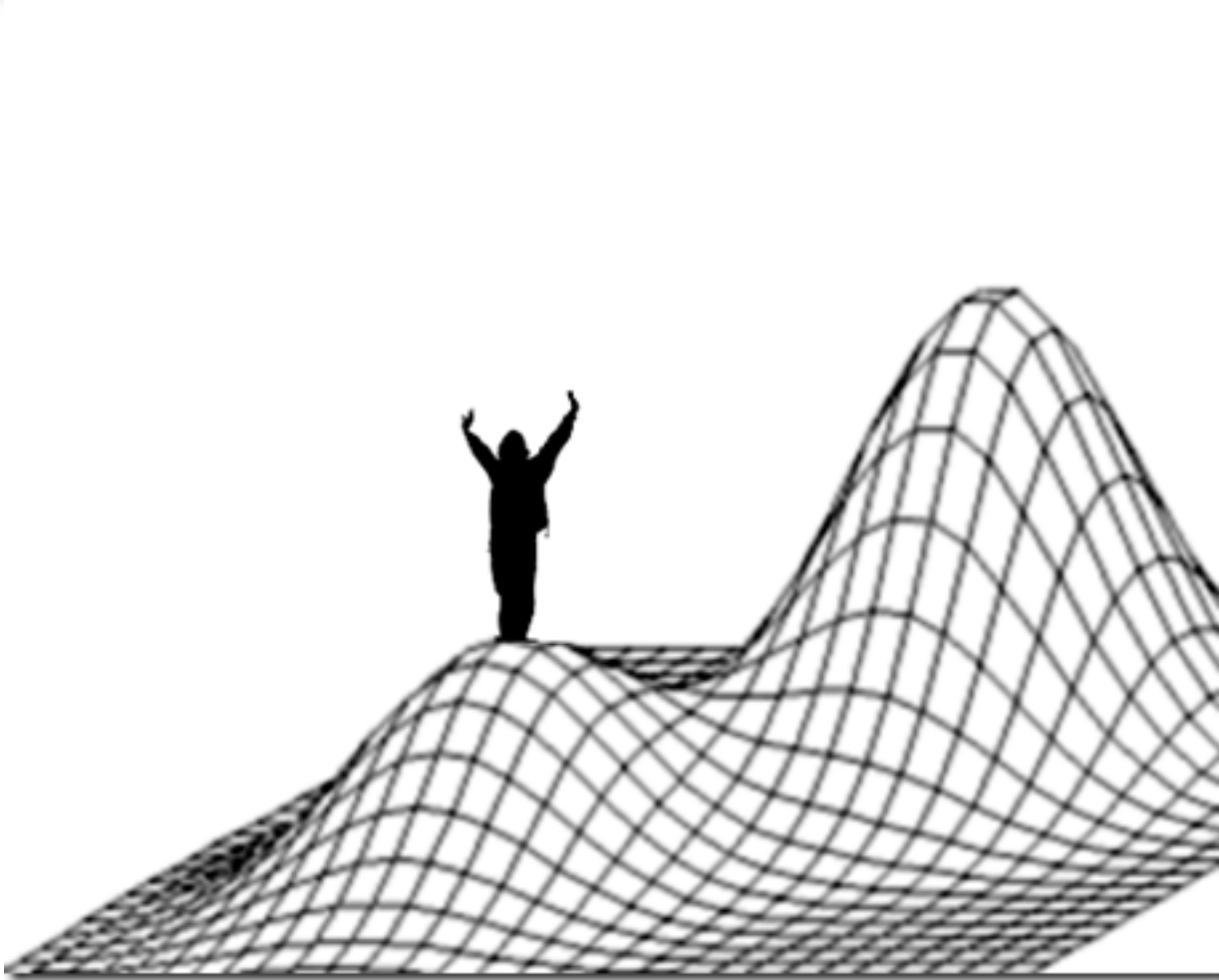
- *Do things that hurt your head*
- *Avoid becoming “high level”*
- *Students will appreciate*

Harder to learn math later

- *Learn them now, take courses*



3



**Success starts
coming in ...**

**Easy to converge
to a local maxima**

**Success will come ... and many bells and whistles
(papers, funding, PC invites, talks, industry summits, prizes, etc.)**



Important to be brutal to yourself

- *Is my research really strong?*
- *Or are there other reasons I am making the cut?*
- *Strong research correlates with acceptance rates but ...*

*It's OK if its not strong ...
It's **not OK** to not know that.*



Get Out of Echo Chambers

- *Hangout with people from other areas (theory)*
- *With people who challenge you more*




4



**Do I want
to run
the
Rat Race**

Publishing may feel like a “game” or “rat race” or “treadmill” ...

- Run the race for a few years ... and then you can choose to get out.
- Don't criticise without running the race.
- There is much to be learnt ...

A man in a white shirt is shown in profile, looking down at a document he is holding. The scene is dimly lit, with a stack of papers and a computer monitor visible in the background. The overall mood is one of focused work.

**Tenure will
bring the best
out of you ...**

5



Easy to burn out.

Celebrate,

travel,

decompress

Family/kids will reduce bandwidth

- *Make full use of your time and freedom ...*
- *You will have less control on life later*



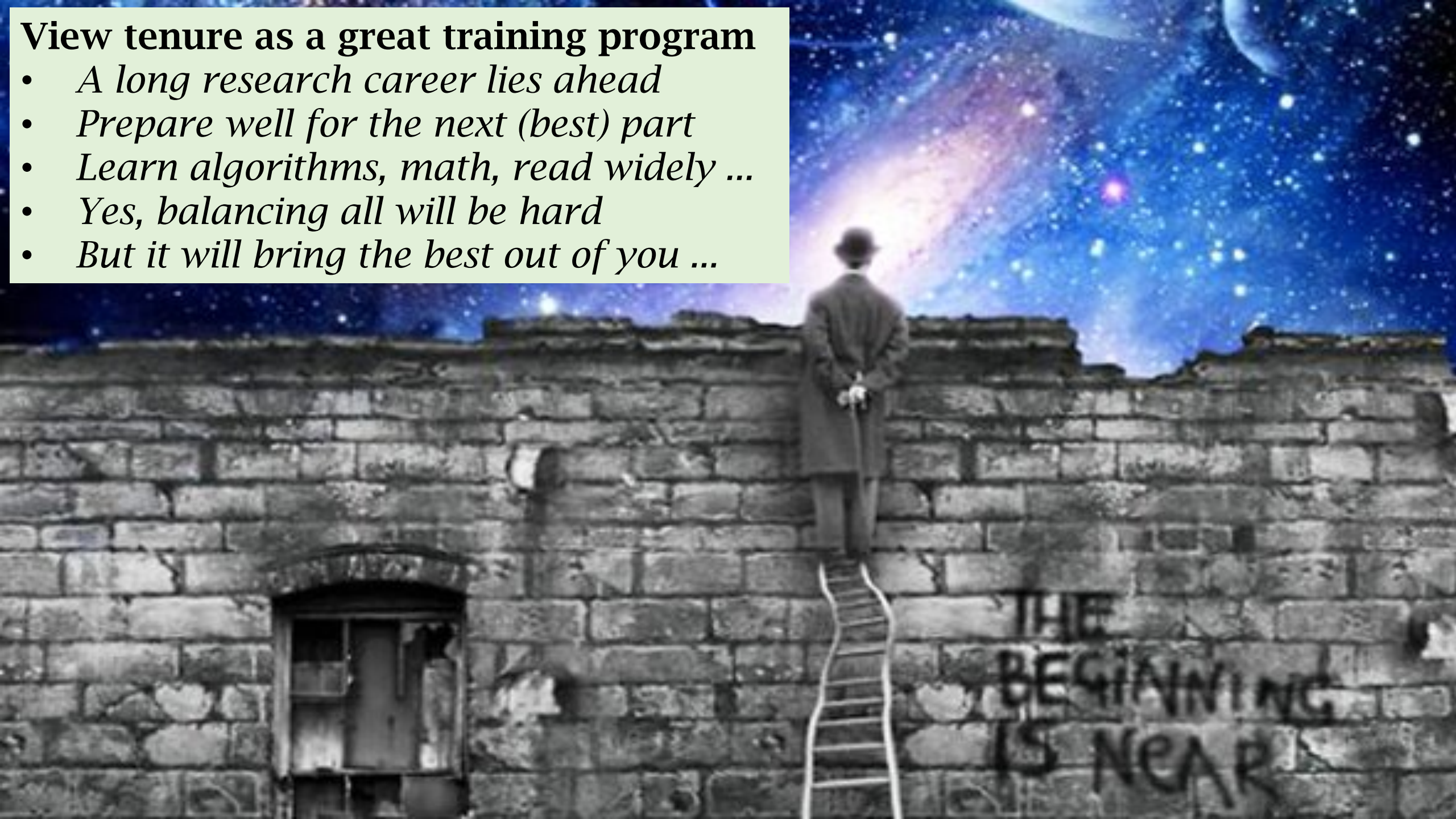
To summarize this high
level part ...

Don't treat tenure as the end of the tunnel ...



View tenure as a great training program

- *A long research career lies ahead*
- *Prepare well for the next (best) part*
- *Learn algorithms, math, read widely ...*
- *Yes, balancing all will be hard*
- *But it will bring the best out of you ...*



Some Nuts and Bolts



Research Taste

- ❑ You don't have to be a great painter ...
 - but you should be able to tell a Picasso when you see one.
 - Not sure how to develop taste ...
 - I guess one way is to constantly contrast the best papers with the bad ones ...
 - Train your brain with many data points from both classes ...
I think you will develop the classifier.
- ❑ Then, keep generating ideas and feed to your classifier
 - Stop when you really like it
 - Start working ...



Properties of a Good (Systems) Idea

- ❑ Can be stated cleanly ... crisply
- ❑ Can be abstracted into a (more general) puzzle
- ❑ The result applicable to various other contexts (beyond this paper)
- ❑ The pain point (or opportunity) is clear ...
- ❑ Don't need to see results to understand why it will work
- ❑ Authors not afraid to tell you what they are working on ...

Paper sized Ideas

- ❑ Difficult to get thesis-sized ideas ...
 - Unless you are opening a new sub-area
- ❑ Its OK ... work on exciting ideas, even if scattered
 - You can dedicate your life to one cause later in the career
 - This is also easier to publish ... good for tenure



Writing Well is Crucial

- ❑ Attended a semester long writing course as faculty
 - One of the best decisions
- ❑ Look up YouTube videos from Prof. Gopen (Duke University)
 - Specifically, “Writing from the reader’s perspective”

Funding

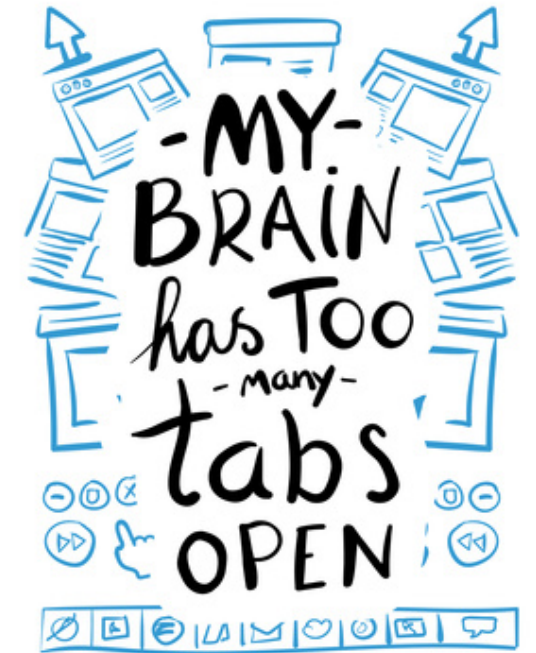
- ❑ Get the research right ... the funding will come
 - Don't get this wrong (i.e., get the funding to start the research)

- ❑ Someone told me “leave no stone un-turned”
 - Bad advice in my opinion
 - Write few proposals ... and write them with passion

- ❑ Join teams with care
 - Many teams forming ... Many people need “few pages of text” for proposal
 - Not hard to join co-PI teams
 - Resist temptation ... join if you are really excited about the vision / team.
 - Form deep collaborations once you form them

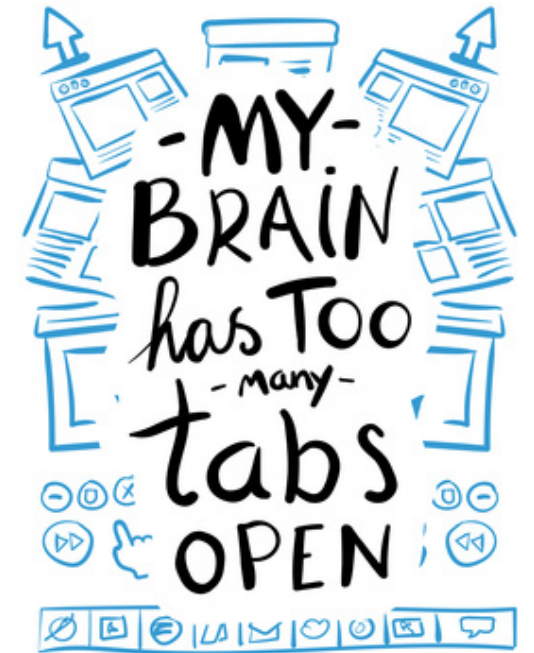


Time Management



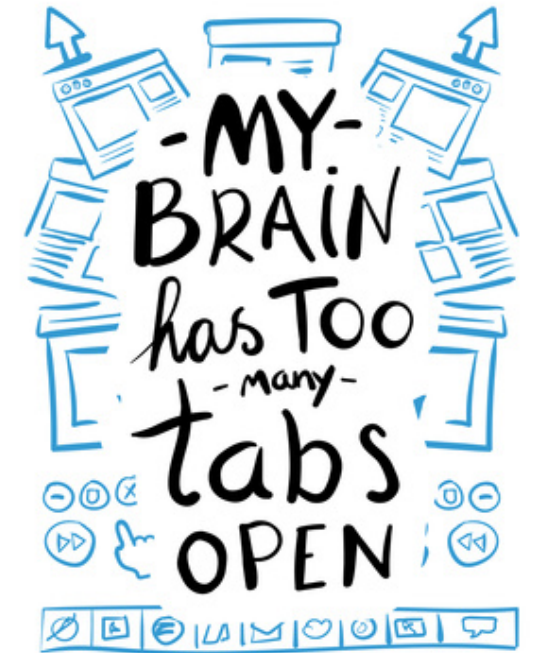
Time Management

- ❑ Write not-to-do lists
 - Remind yourself of 80-20 rule ...



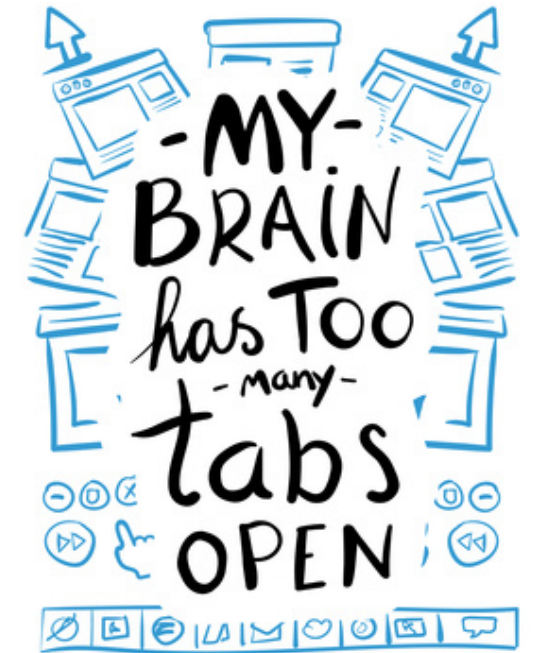
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- ❑ Reduce context switch
 - I have benefitted from keeping meetings between 2-5pm
 - I try to pick my class time as 11-12:15 or 3-4:30pm.
 - Check emails less often ... No one will give you the Turing Award for responding fast



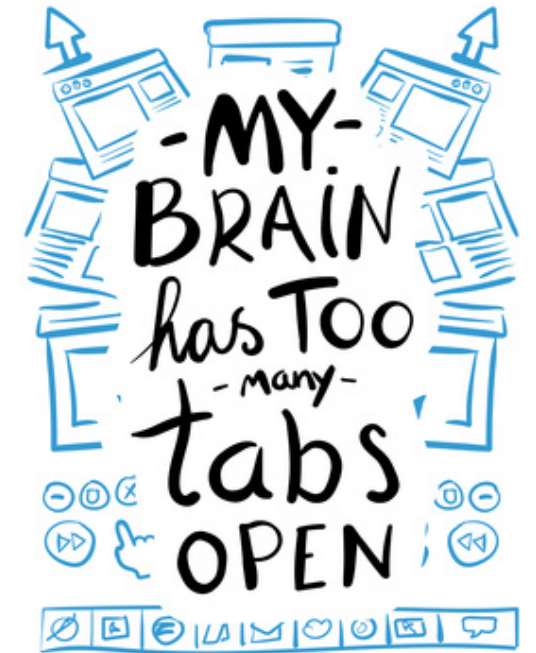
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 - Project reports, recommendation letters, slides ...



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 - Project reports, recommendation letters, slides ...
- ❑ Travel sucks up a lot of time
 - Pick your travels with care



Recruiting Students

- ❑ Don't have anything unconventional to say ...
 - Very hard ... Time consuming
 - But don't look only at students in your area ...
 - There's much to learn from students



Assorted

- ❑ Skepticism is useful
 - Am I doing really great research?
 - Strong research is correlated to acceptance ... but not causal

- ❑ Give love and kindness to students ... empathize ... have E.Q.
 - They will give you back much more

- ❑ Have a lot of fun ... enjoy what you are doing
 - If you have to force yourself to enjoy, you are in the wrong place





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- ❑ Actually, its not that hard ... if you don't think about the **outcome**, and just **enjoy the process**
- ❑ I can say with zero hesitation that **tenure were the best years** of my life ... and becoming a faculty, the **best decision** I have made ...

Questions