

D3 PhD Days

How to fail your PhD in 7 Easy Steps

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(not from D3)



Disclaimer!

- Aim
 - Prompt **discussion**
 - Encourage your own **reflexion**
- No claim to **absolute truth**
 - Interested in your views



Small Exercise

Post-it

- If you are a PhD student write an **D**
- If you are/have been a PhD supervisor write an **S**

- **One key thing to do** to maximize a PhD's success
- **One key thing to avoid** to maximize a PhD's success

Always expect to be told what to do

1

- PhD = learning by doing
 - Similarity with apprenticeship / **initiation**
- A PhD \neq school, or "normal" work
 - No detailed roadmap
 - Strong personal **ownership**
- Intrinsic **paradox** of supervision
 - Supervisor's help essential
 - But end goal = scientific **autonomy**



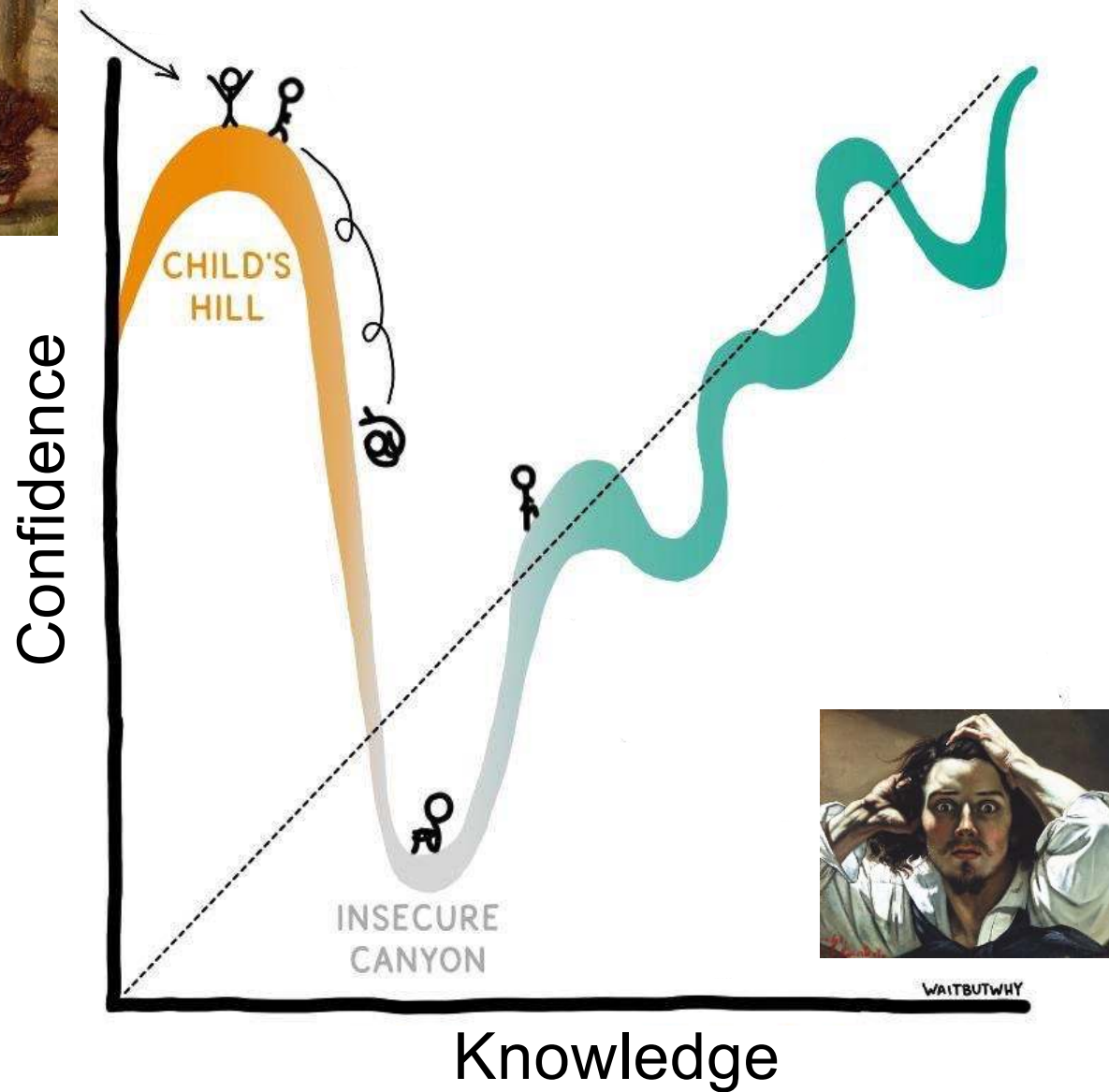
Only expect successes

2

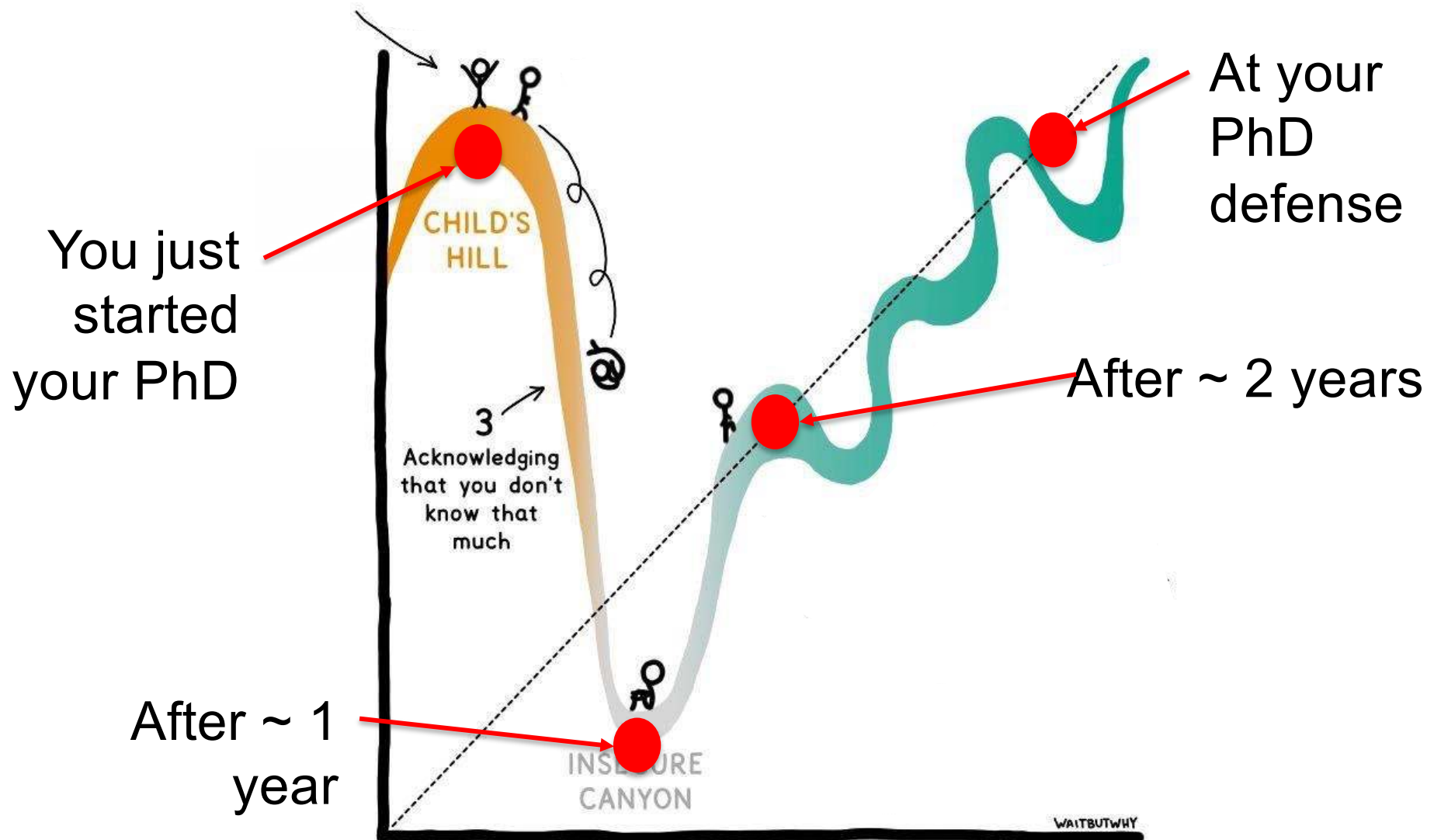
- Failing is part of the job
 - No **risk**, no unknown → no research
- Often hard to learn as
 - good undergrad ≠ good PhD
 - Role of **external validation**
- Research is **competitive** and global
 - **Luck** often involved in successes
- Do not get discouraged
 - **Perserverance** is key



The Dunning-Kruger effect



The Dunning-Kruger effect (for PhD)



Avoid / ignore feedback and criticism

- Feedback = essential to **progress**
 - Offer ability to grow / improve
- Science at heart a **collective** activity
 - Each **community** = own expectations
 - Early criticism = ↗ success
 - Supervisors, CSI, reviews, confs
- Ways to better process criticisms
 - Not about you but **your work**
 - **Context**-dependent
 - A means to improve, not final



Don't be curious

- Science = **dialogue** thru time/space
 - Reading (many) papers
- Robust approach to **bibliography**
 - Reading in selective depth
 - Incremental approach
 - Efficient note taking system
- More broadly
 - **Socializing** at conferences
 - Role of **science in society**
(societal impact, ethics)



Leave no written traces

- **Written** word essential to science
 - Books, papers, labbooks
- Taking **notes** from day one
 - Keep track of your journey
 - Nurture your creativity / inspiration
 - Basis for write-up
- Lifelong **skill**
 - Presenting complex ideas **clearly**

5



Do not build trust with your adviser(s)

- PhD – Supervisor relationship
 - **Human**, hence imperfect
 - **Interpersonal**: different styles
 - Evolves over **time**
- What your supervisor is **not**
 - Your **nanny** / personal **secretary**
 - In charge of your PhD's success
- Key aspect: **respect**
 - Goes both ways
 - Understand your advisor's **constraints**



No work-life balance

- A PhD can be **intense**
 - long-run is key
 - Clear PhD / life **boundaries**
 - Hobbies, recreation
- Emotional and physical **health**
 - Sleep, nutrition, exercises
- Discuss your problems
 - Personal **support network**
 - Your supervisor
 - Other contact persons (PhD **mediator**, Doct. School, ...)



3 Extra Rules

■ Procrastinate

- 3 years = long but also (very) short
- Regular work routine = great help to most people

■ Do not interact with others

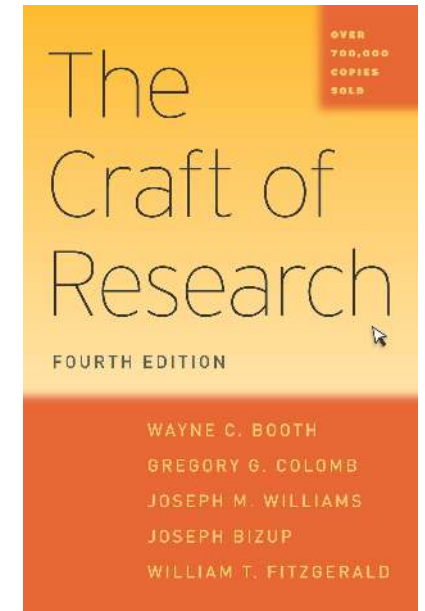
- Science is a social activity
- Chain of knowledge

■ Do not think beyond your PhD

- Academic career? Industry? Freelance? Start-up?
- Postdoc? In France? Abroad?
- Talk! (Supervisors, older PhDs, young doctors, mentor)

To Look Further

- The Craft of Research
- Charte du doctorat du Collège Doctoral de Bretagne
 - <https://ed-mathstic.doctorat-bretagne.fr/fr/documents-de-reference>
- Recommandation du comité d'éthique du CNRS (COMETS) en matière de déontologie de la recherche et de la formation doctorale
 - Same link
- Most pictures from <https://classicprogrammerpaintings.com/>



7 Golden Rules (to Fail)

1. Always expect to be told what to do
2. Only expect successes
3. Avoid / ignore feedback and criticism
4. Don't be curious
5. Leave no written traces
6. Do not build trust with your adviser(s)
7. Have no work-life balance