

# Soooo... You're Thinking of a PhD

---

Notes From The Trenches

Jonathan Heathcote

# Who am I?

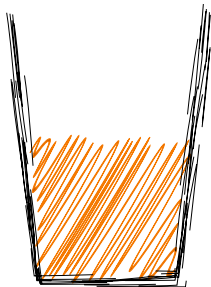
- First/Second Year PhD (CDT) Student
- Graduated last year (Manchester CS, BSc)
- Summer Placements
  - **Research** (University of Manchester)
  - **Hardware Design** (ARM)
  - **Hardware Tools Development** (University of Manchester)

# What is a PhD?

“Produce an **original** contribution to the state-of-the-art”

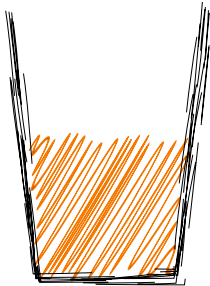
- **3-4 Years** (UK)
- Typically **Funded** (With Stipend  $\approx$  £13,700 Per Year)
- Each PhD is (completely) **different** to the next
- Requires **perseverance**
- Get out what you put in
- **Not just a 'better' BSc/MSc**

## Again: BSc vs. PhD

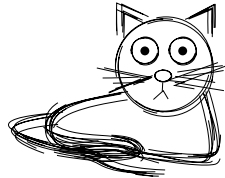


BSc

## Again: BSc vs. PhD

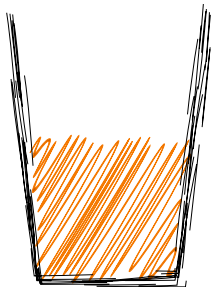


BSc



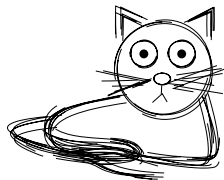
PhD

## Again: BSc vs. PhD



BSc

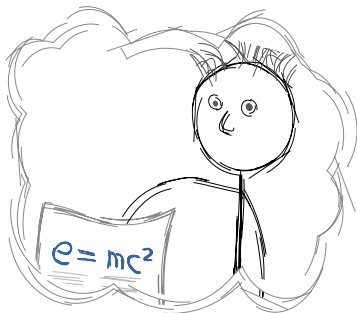
Totally  
Different.



PhD

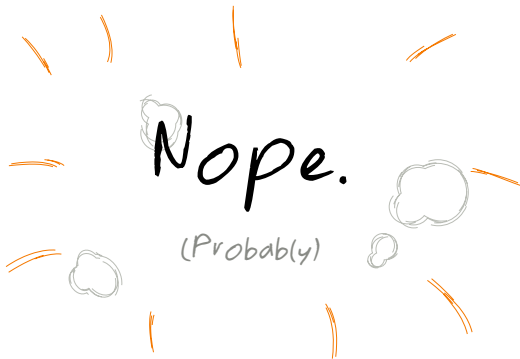
# So, what *is* a PhD?

# So, what *is* a PhD?

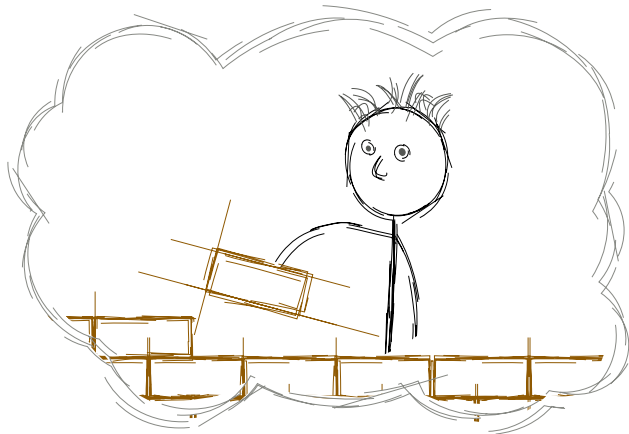




## So, what *is* a PhD?



## So, what *is* a PhD?



So, what *is* a PhD?



Nearly...

Needs Perspective...

## So, what *is* a PhD?



## When to do your PhD?

- After your undergraduate degree
  - 'Vanilla' PhD (3 Years)
  - CDT Programme (Manchester Only)
    - $\frac{1}{2}$  Year Masters Courses
    - $3\frac{1}{2}$  Years Normal PhD
- After a masters degree
  - Common but not always useful
- After a period in industry
  - Very hard to re-adjust

# What do I do all day?

- Read Papers
- Build stuff
- Meet with Supervisor
- Visit Conferences
- Read more papers
- Write papers
- Read papers
- Work with collaborators  
(national and international)
- Draw stick figures

Pro: Lots of choice!

Machine Learning

Graphics

Chip Design

Security

1337 HAX

Networks

Drawing Jokes  
of Sweets

Accessibility

Linguistics

SW Eng

Bio-Tech

Databases

Text Mining

SPINNAK

UI Design

Theory

Comp

Comput

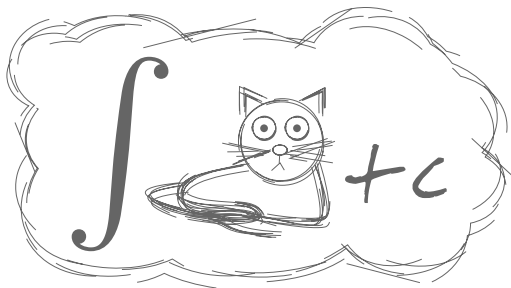
Quantum





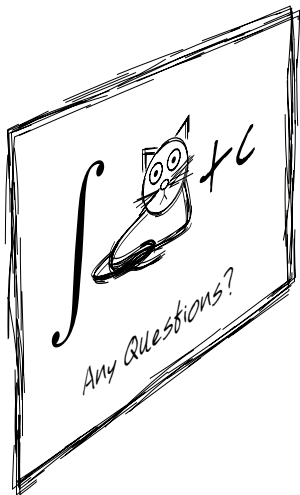


## Pro: Intellectual Freedom!

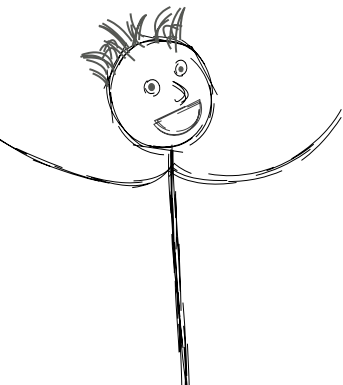


"I'm going to invent  
kitten Theory!"

## Con: Freedom to Fail



## Pro: Start of an Academic/Research Career



*\*Reality much cooler....* 8/10

**Con:** Not very financially rewarding.



## Pro: Conferences



## Con: Conferences are Hard Work

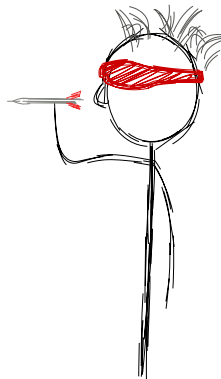
7:00AM  
is not a lie in



## Choosing a PhD



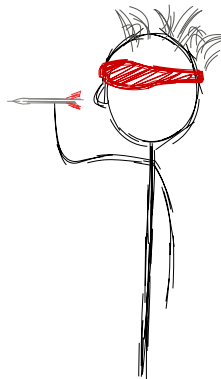
- Pick a **Topic & Supervisor**
- **CDT** Programme (Manchester)
- **EngD** (Work in a company and get a PhD)



## Choosing a PhD



- Pick a **Supervisor & Topic**
- **CDT** Programme (Manchester)
- **EngD** (Work in a company and get a PhD)





**Don't worry: I'll Shut Up Now.**  
Any Questions?