

Good light in Broom- My perspective on the PhD journey

Acram Taji



Cable Beach- Broom

Where on earth is Broom?

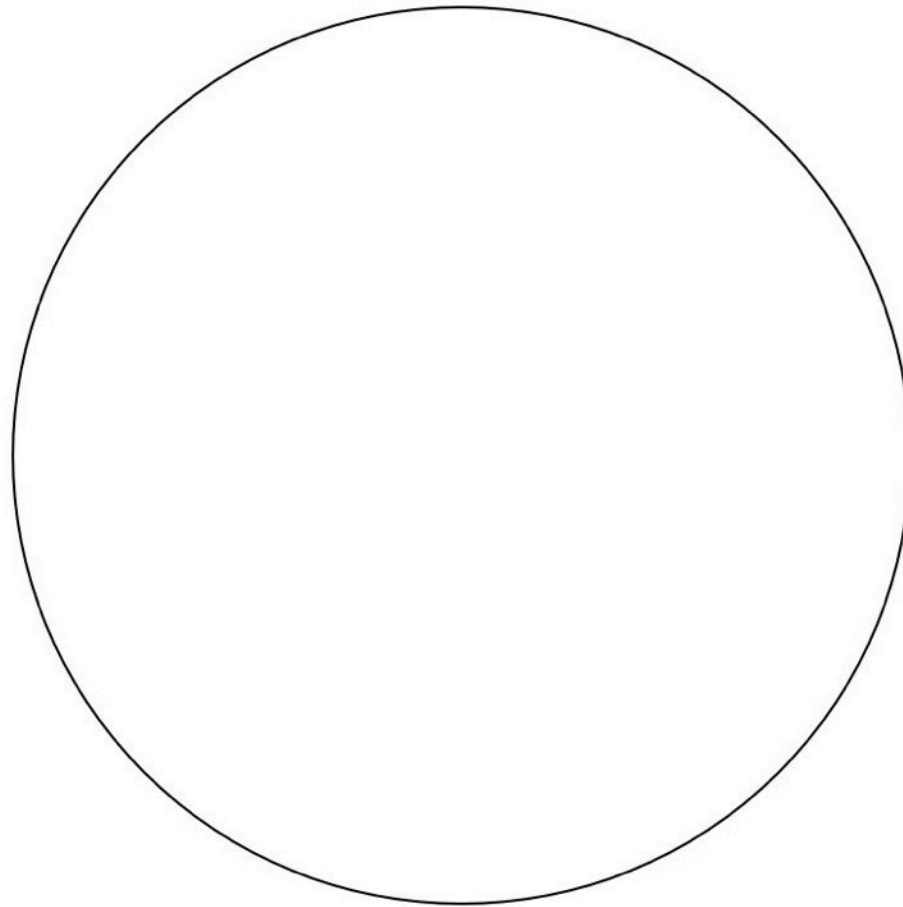


What will I cover?

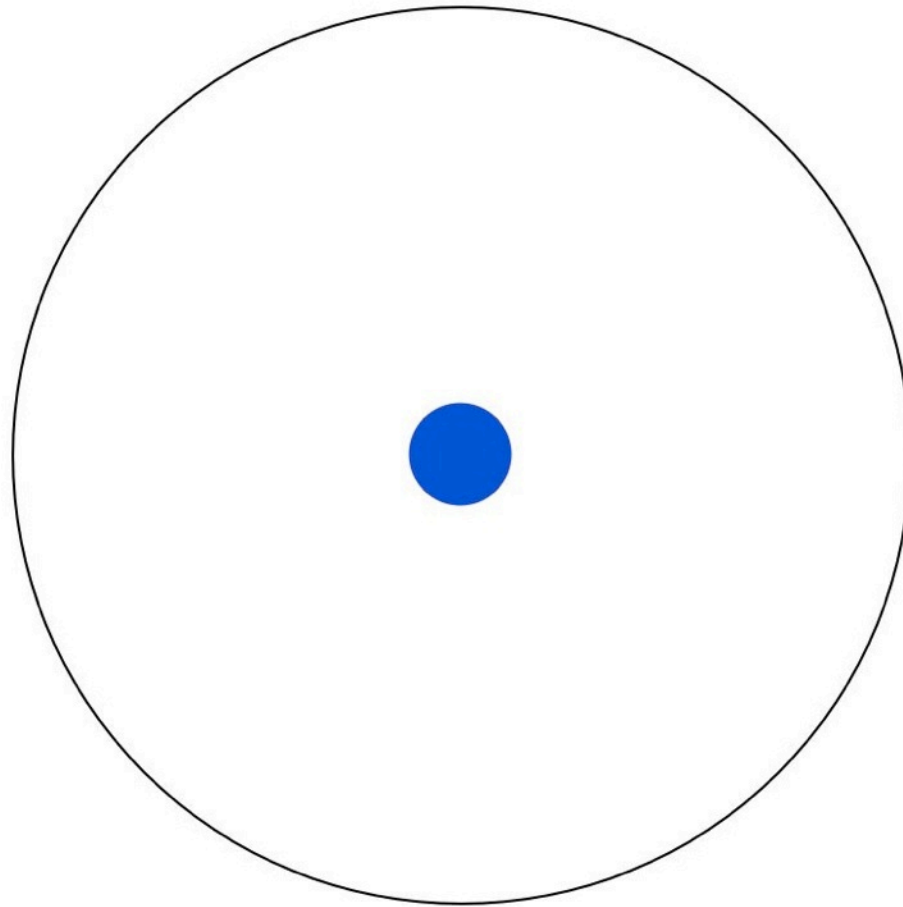
- What is a PhD?
- Why do we do PhD?
- Do I have the right skills to undertake a PhD?
- What are the keys to success?
- What are the pitfalls?
- Attributes of a global workforce
- When it is all said and done.....
- Some singing THEN
- **Workshop questions**

So what is a PhD?

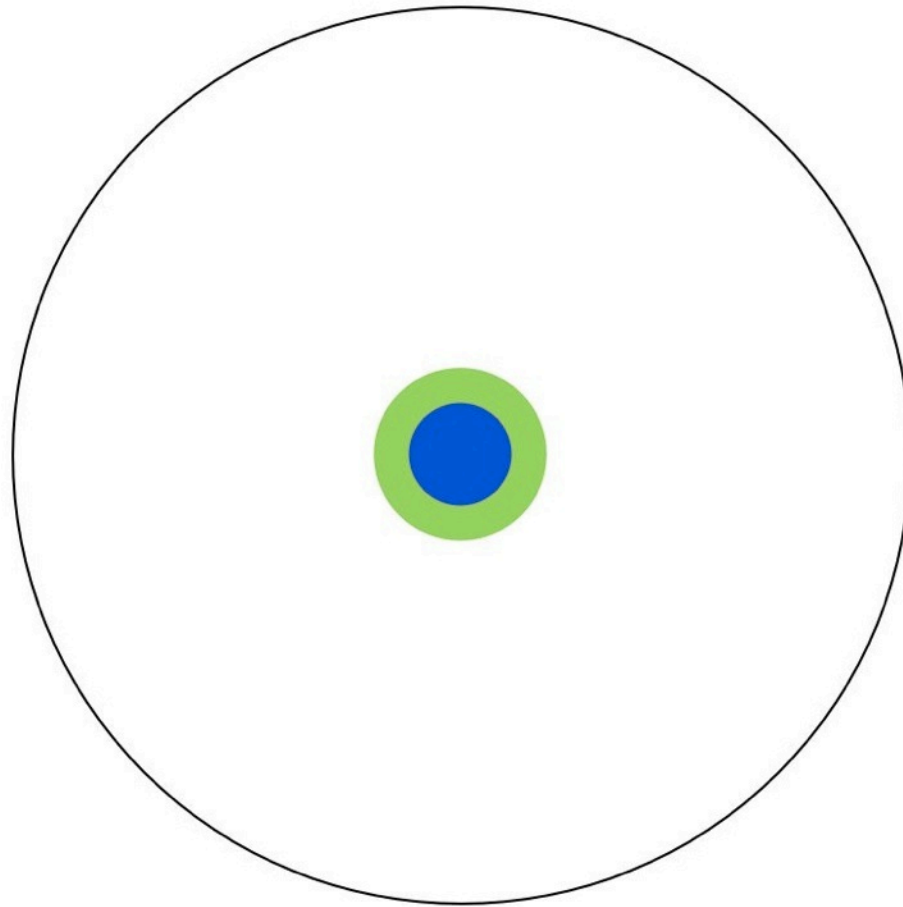
Imagine a circle that contains all human knowledge



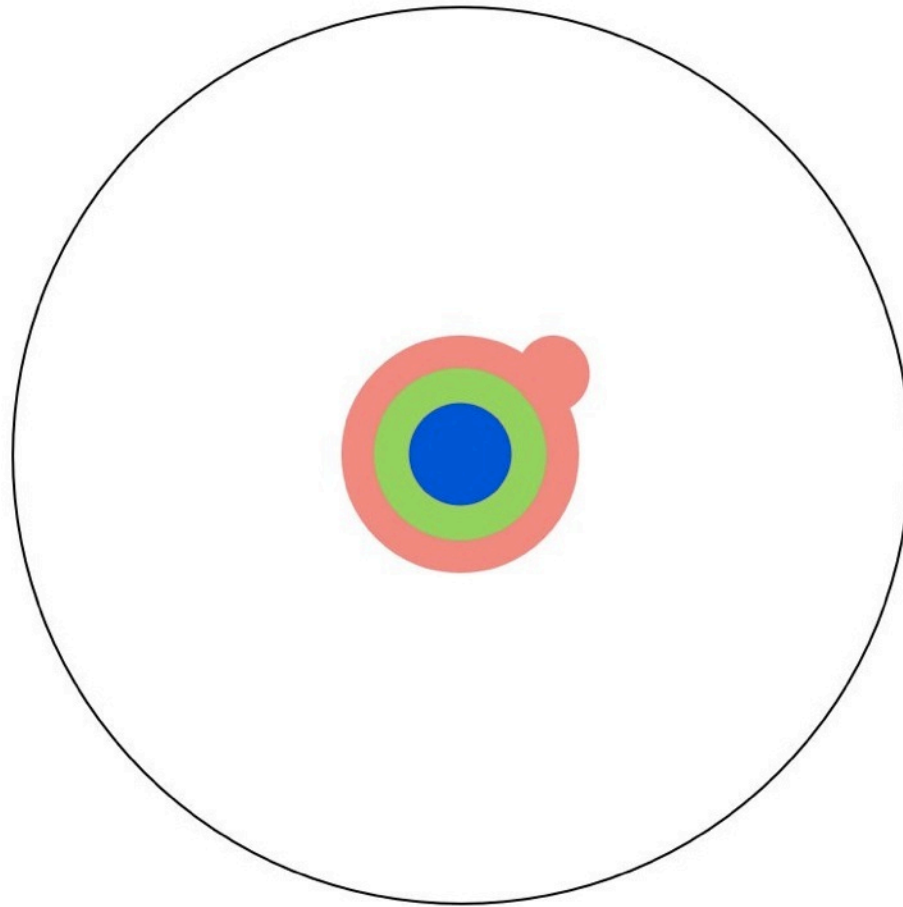
By the time we finish primary school, we know a little bit



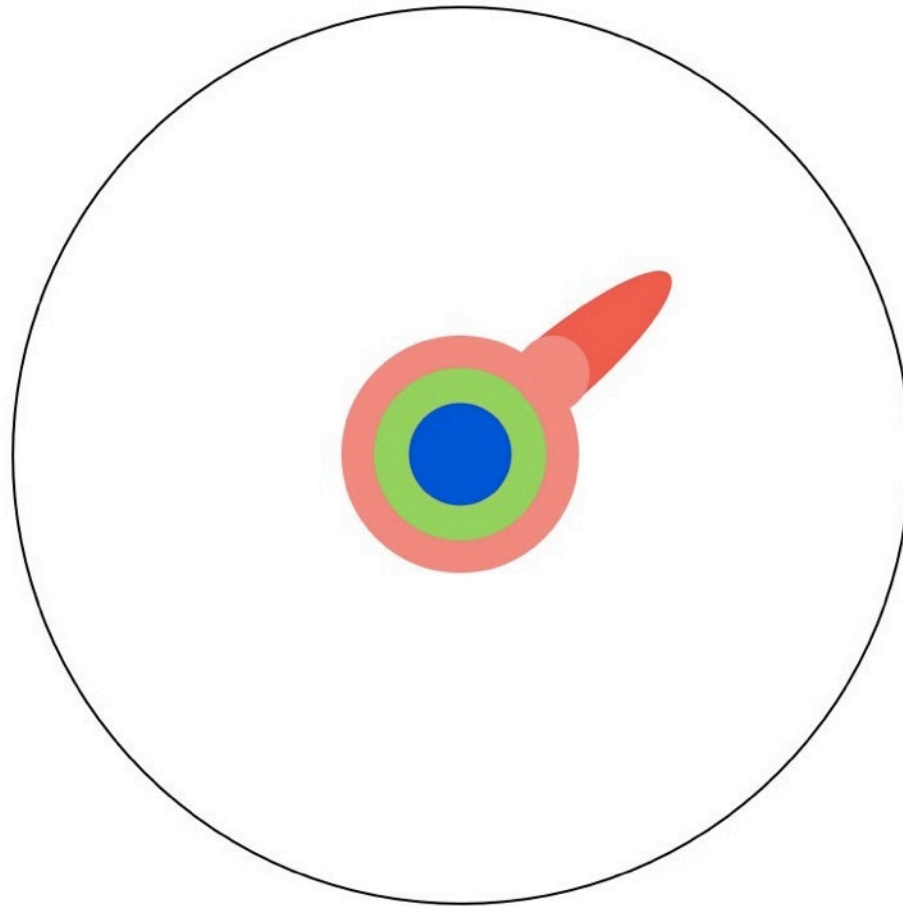
By the time we finish high school, we know a little bit more



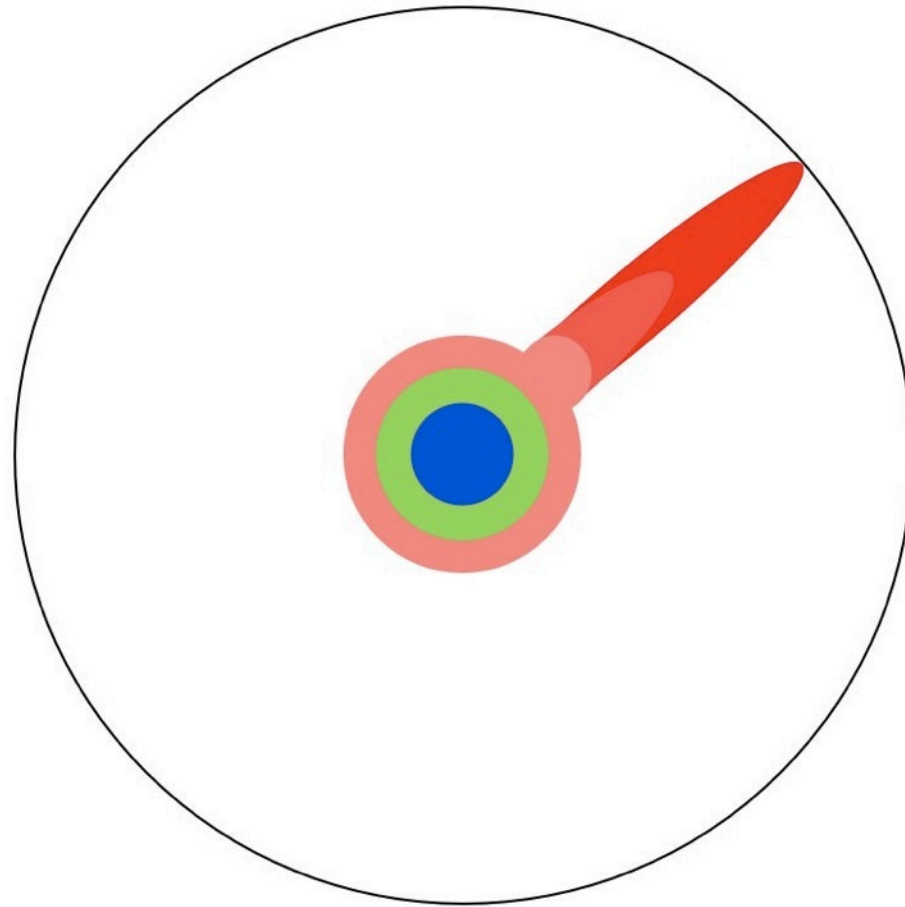
With a Bachelor degree, we gain a specialty



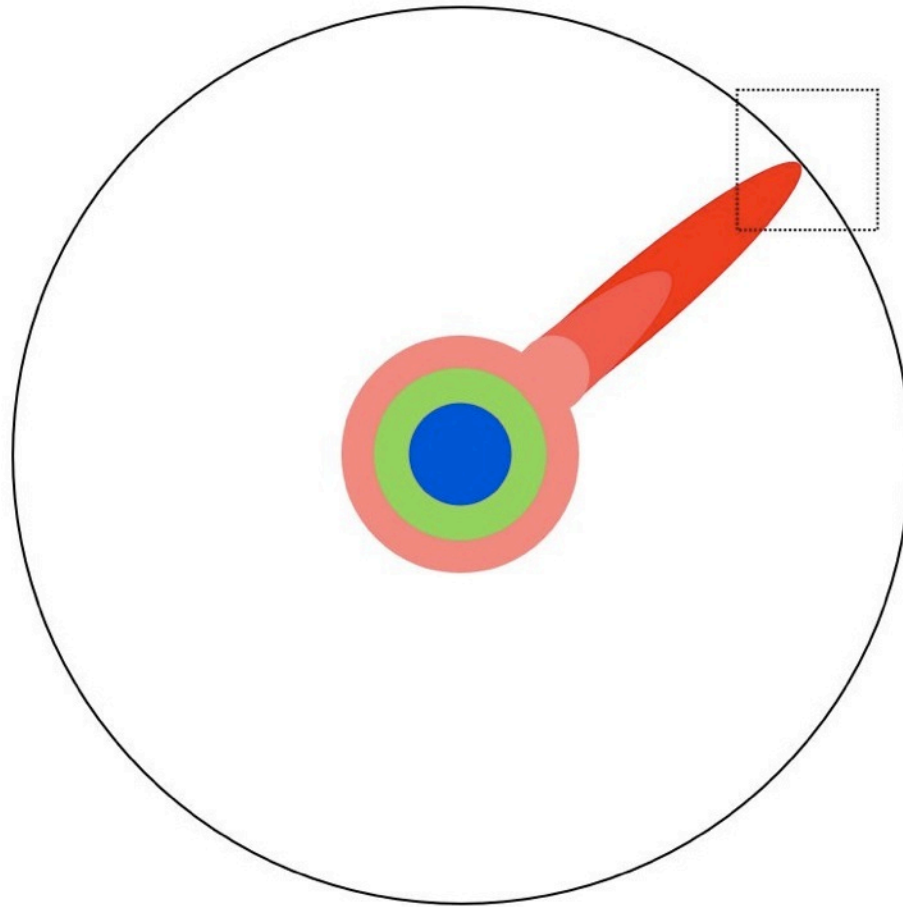
A Master or an Honours degree, deepens our specialty



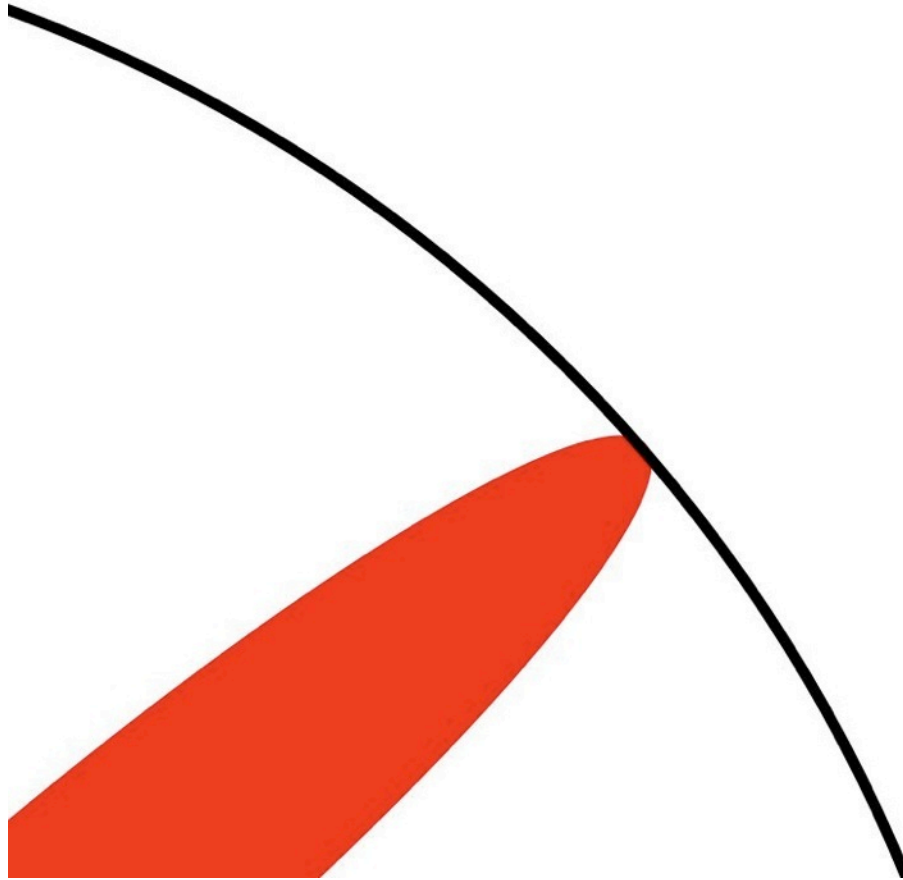
We start our PhD by reading research papers, which takes us to the edge of human knowledge



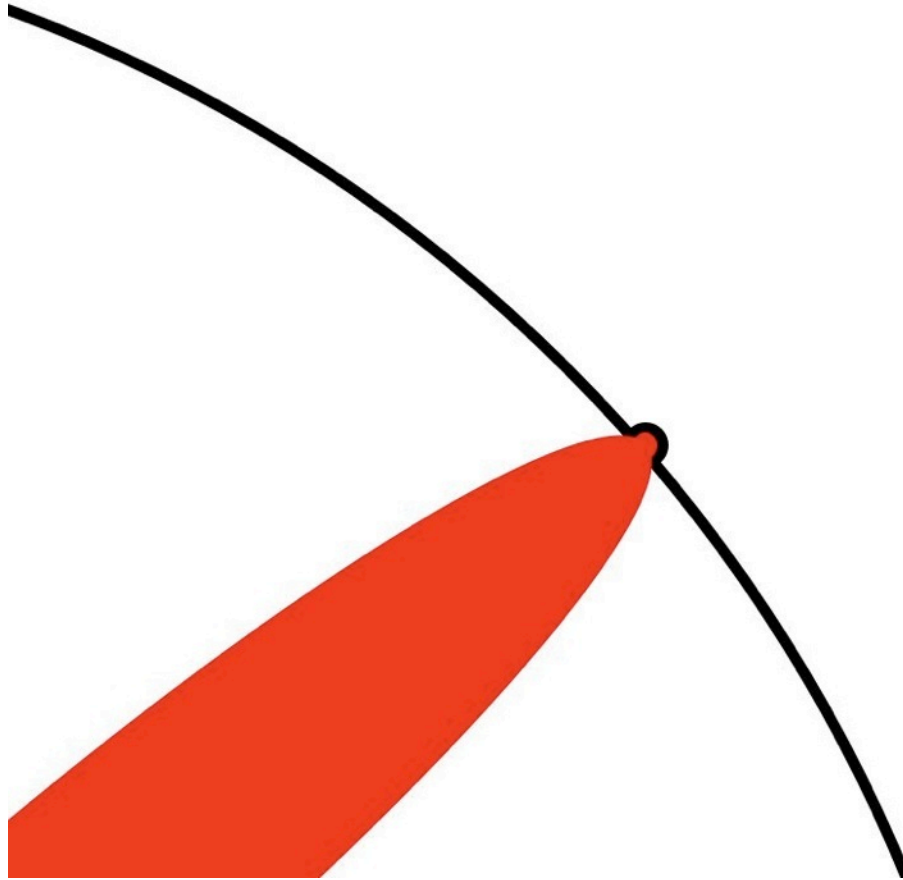
Once we are at the boundary, we focus



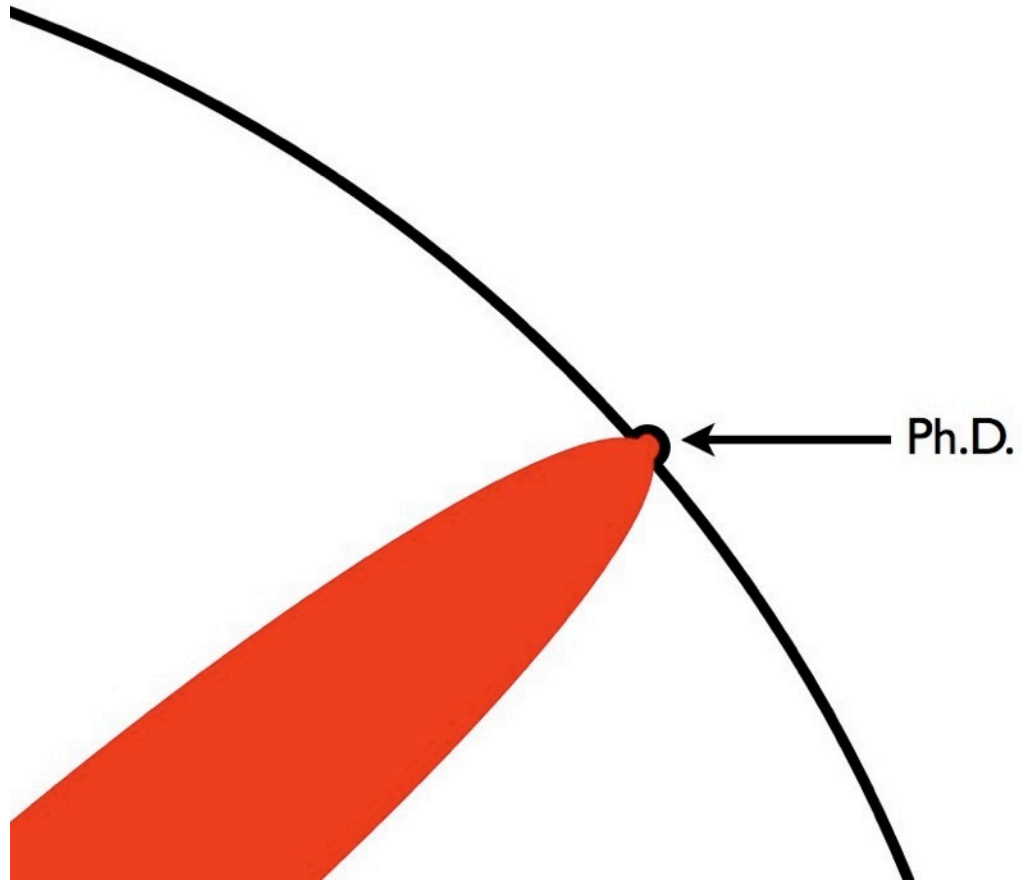
We push at the boundary for a few years



Until one day, the boundary gives in



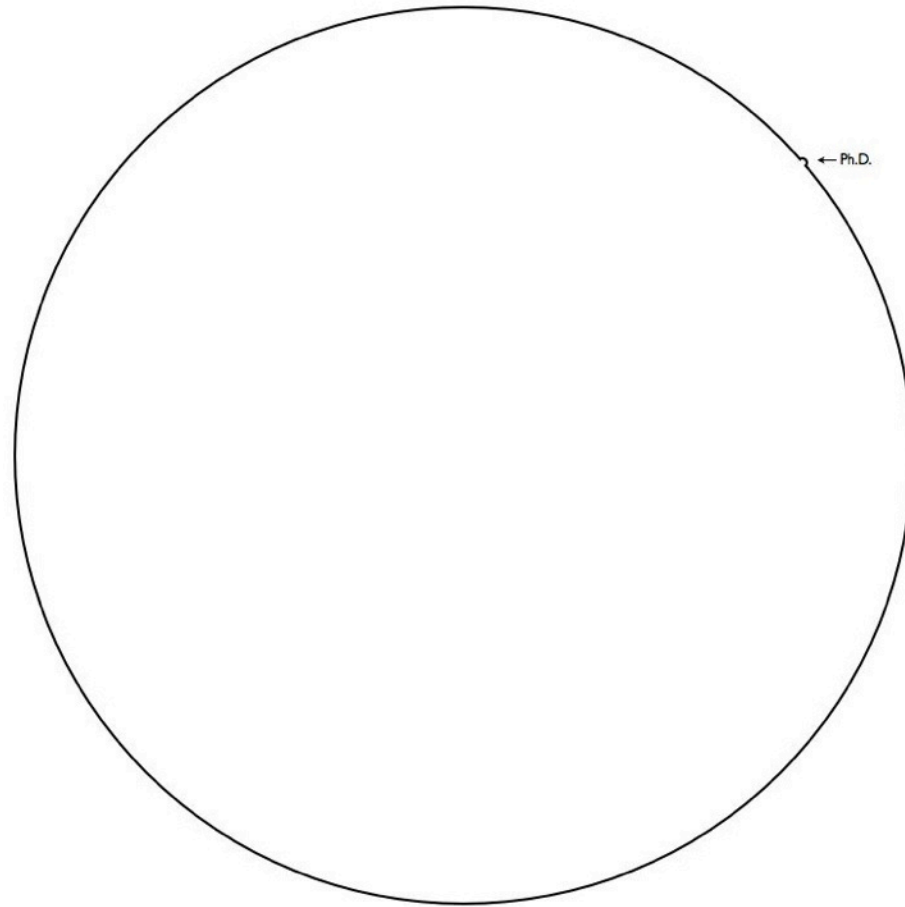
And, that dent we have made is called a PhD



The world now looks different to us



But we must not forget the bigger picture



So why do we do a PhD?

Why do we do a PhD?

Some of the reasons are:

- We want to learn a lot about a given topic and become a scholar
- We are passionate about inquiry and intellectual discovery
- We have an interest in actively shaping knowledge and a fascination in new leading edge knowledge that unites teaching with research
- We want to become analytical and strategic thinkers
- To help us with credibility in our work environment
- We like the title of Doctor...

Learn a lot and become a scholar

- Focussed learning- culminating in a thesis
- Don't waste time on non-required classes outside your field- it is great to be enlightened but...
- Don't focus on getting 7 for AIRS unit
- Typically we need to have read 120 to 150 key papers to defend our thesis- so be selective- no need to read everything under the sun

A bit of history

- First PhD in Australia - Melbourne University in 1952
- 1970s Australia had 11 universities and ~500 PhD students
- Today >25000 PhD students in Australian universities
- Last year >7500 PhD graduates from Australian universities



Skill audit- How can I assess my skills?

- Undertake a SWOT analysis- strength/ weakness/ opportunities / threats
- Check the following website- Key skills for PhDs:
 - <http://www.portlandpress.com/pp/books/online/fyos/083/0105/0830105.pdf>



What makes a PhD student successful?

- Perseverance- PhD is full of:
 - Uncertainty
 - Rejection
 - Frustration
- Tenacity- thick skin
- Cogency
 - Ability to clearly and forcefully articulate your ideas- PhD is about the science of discovery and the art of persuasion
 - Balance between clarity and precision
- Understanding one's supervisor
 - Their goals
 - Their skills
 - Their likes and dislikes
 - Their inadequacies

Top 6 key skills for successfully completing a PhD

- Intellectual curiosity
- The ability to work independently AND as member of a team
- Organisation
- Communication
- Academic skills
 - IT skills
 - Numeracy skills
 - Statistical abilities
 - E-literacy skills
- Belief in yourself
 - Tenacity
 - Persistence

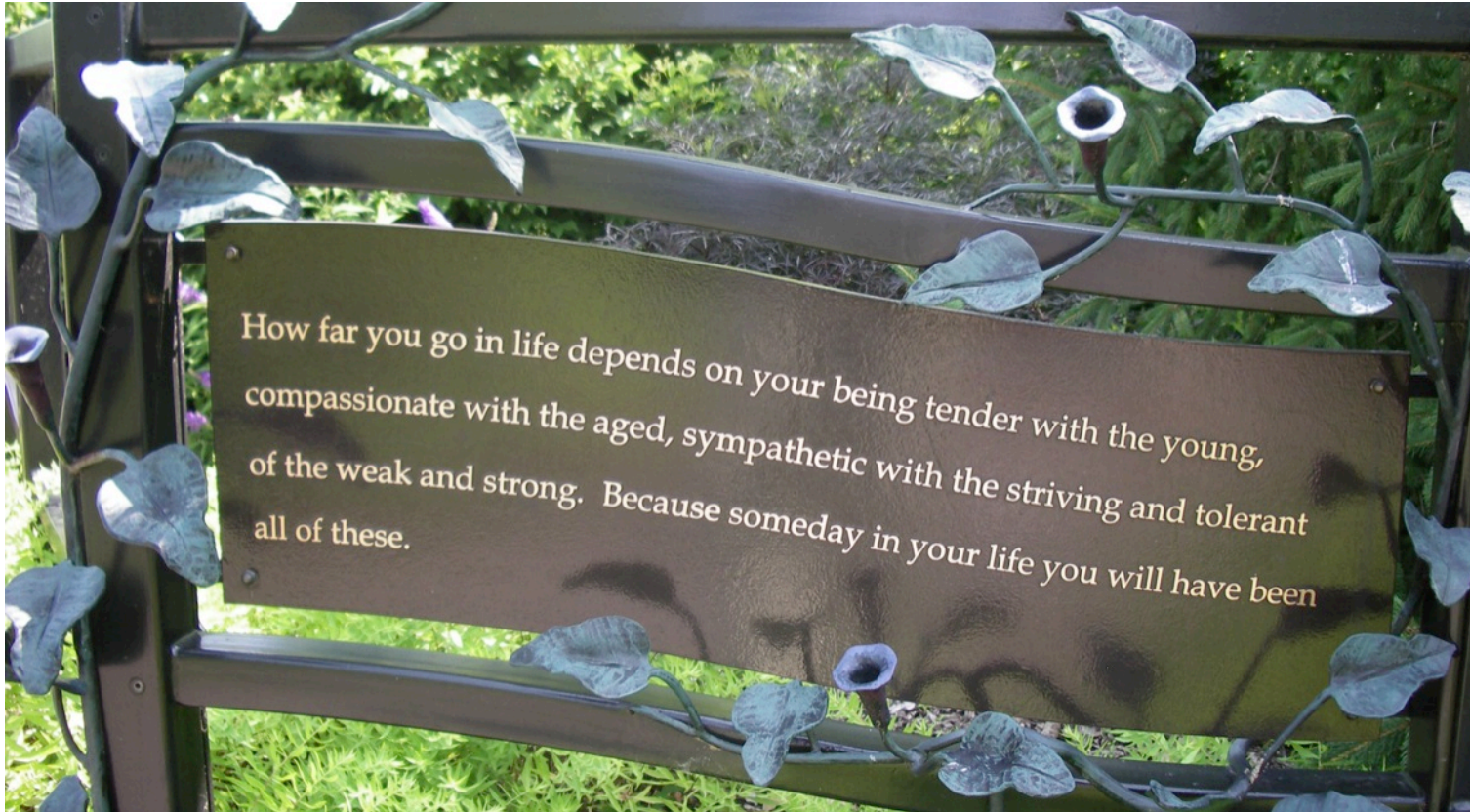


My grandfather's four 'I's of Success

- Imagination
- Innovation
- Improvisation
- Imitation



Words of wisdom



Pitfalls

- Attaining perfection
 - Perfectionism is a slow death- *Hugh Prather*
 - Stop polishing papers past the point of diminishing returns
 - Good enough is FAR BETTER than perfect which we may never reach
- Procrastination
 - Chronic perfectionists are procrastinators
 - Plan to boost productivity
- Seeing “the light” too soon/too late
 - The changing relationship between supervisors and student
 - Trick is getting the timing right
- Aiming right
 - Aiming low leaves no room for uncertainty- research is always uncertain
 - PhD is the start of a scientific career- PhD thesis does not need to come up with a cure for cancer or enable cold fusion

Pitfalls....

- Quality and attentiveness of academic supervisors
 - Good supervisors
 - Absent supervisors
 - Poor supervisors
 - Team supervision in “words” not in “action”
- Meetings
 - What should be the frequency of meetings?
 - Have an agenda
 - Keep record of the discussion
 - Email it back to supervisors
- Miscommunication due to cultural differences
 - Not rude if you say *“sorry I don’t understand”*
 - Clarify meaning- *“ e.g. What is Critical?”*
 - Conflict *versus* misunderstanding
- Realising that PhD takes longer than 3 years
- Who to talk to if you run into problems with your supervisor
 - Nepotism- Your HDR Director is your Head of School’s husband?!!!- conflict of interest exist. Learn to live with it
 - Read the university rules about the duties of supervisors

More pitfalls

- Being over-ambitious
- Not having clearly defined objectives
- Inadequate planning and timetabling of work
- Failing to keep adequately detailed research records- Lab Log Book
- Not being aware of relevant literature- confusing **anecdote** with **facts**
- Not enough contact with supervisors- fatal independence
- Not seeking advice beyond the primary supervisors
- Working too much in isolation
- Not attending relevant conferences
- Trying to publish too quickly
- Inadequate or inappropriate analyses of data- confusing statistics with rigour
- Inadequate training in methodologies relevant to research
- Trying to do too many things simultaneously
- Not having a **Plan B** if anything goes wrong
- Respect for failure- Einstein got it wrong but still got his PhD- JNR
- Leaving all the writing to the last minute
- Not working intensely enough
- Lack of detail in planning write-up
- Lack of care in editing and presentation

Dealing with conflict

- Conflict is common
 - Caused by breakdown in communication
- Supervision is like marriage
 - There are two of you in this marriage
 - Divorce can happen
- Talk to an independent umpire
 - Another academic colleague
 - DIGR
 - HDR Director in your Discipline/ School/ Faculty
- If all else fails change supervisor
 - Formally or informally
 - Funding may be an issue

MARRIAGE vs. The Ph.D.



Marriage



Ph.D.

Typical Length:	7.5 years	7 years
Begins with:	A proposal	A thesis proposal
Culminates in a ceremony where you walk down an aisle dressed in a gown:	✓	✓
Usually entered into by:	Foolish young people in love	Foolish young people without a job
50% end in:	Bitter divorce	Bitter remorse
Involves exchange of:	Vows	Know-how
Until death do you part?	If you're lucky	If you're lazy

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Jorge Cham- PhD in Mechanical Engineering from Stanford has published widely in the area of robotics

Attributes of a global workforce

In addition to **knowledge of the field** and **speaking other languages**

- Communication skills
- Global perspective
- Information literacy- learn how to learn
- Life-long learning
- Problem solving
- Social responsibility
- Team work



Group of our Bhutanese students doing their PhD at QUT to become part of the global workforce.

Skills to be developed during your PhD

- Research skills and techniques
- Research management and leadership
- Personal effectiveness
- The ability to communicate with public- art of explaining our complex work to a friend
- Networking and team working nationally and internationally
- Negotiation
- Career management
- Cultural understanding
- Dealing with and understanding political circumstances
- Writing grant application

By the time we finish our PhD we do age



Questions, comments or criticisms?

Good light in broom

Neil Murray

<http://www.youtube.com/watch?v=Tk4cLYS9BdM&feature=related>

I was hangin' out in Sydney and I was goin' down
I'd done too many parties and my money was runnin' out
Then I met an old man, who lived all alone
He had two dogs for company, that's all he owned
He was savin' his pension for a one-way fare
Said when he had enough, he was getting' outta there
I said "Really, what are you gonna do?"
He smiled and said "There's good light in Broome"

I went out to western Queensland, working in the sheds
Met a girl in Quilpie and we got wed
Moved up to the Gulf, had our first born
We were livin' in a caravan, I was workin' on the prawns
I came home from a stormy sea
She'd up and gone and left a note for me
On it she wrote, "I'm sick of you"
That's when I felt- there's good light in Broome

Good light in Broome and I'll be there soon
I know exactly what I'm a gonna do
Sit on the beach, stare at the moon
Haven't you heard? there's good light in Broome

I headed down south, couldn't take the hint
Saw a lot of pubs, I had a lot to drink
I was runnin' pretty ragged, I didn't hardly eat
I was thinkin' about her and what she did to me
There was a road and a hairpin bend
Then I woke up in a hospital bed
"How do ya feel?" said a voice in the gloom
I gave the answer, "there's good light in Broome"

I went truckin' out of Melbourne, back and forth to Perth
Didn't take long and it seemed like a curse
My eyes were on the road, but my mind was somewhere else
When I pulled in to a Nullarbor roadhouse
The waitress came over and she's there lookin' at me
She asked me how I was, I said "Bit ordinary"
She said "I thought that might be your tune"
I said "Don't tell me, there's good light in Broome"

Good light in Broome, well I'll be there soon
I know exactly what I'm a gonna do
Sit on the beach, stare at the moon
Haven't you heard? there's good light in Broome

Well when I get to Cable Beach, I'll fall right out of the truck and into the sea
With my clothes still on, I'll plunge under the waves
And all the dirt will drain away
And just like Bunjil, I'll get two dogs
And every evenin' I'll walk them along
On the edge of the country, take in the view
Just like I heard, there's good light in Broome

Good light in Broome, well I'll be there soon
I know exactly what I'm a gonna do
Sit on the beach, stare at the moon
Didn't I tell ya? there's good light in Broome

Workshop questions

- So what is your interpretation of a PhD?
- Why do YOU want to do a PhD?
- What are the characteristics and skills you have right now that will help you succeed in your PhD?
- What characteristics and skills you would need to develop further along your PhD journey?

