Fantastic Theses and How to Design Them

It can be much easier to identify an exciting problem than it is to shape an interesting thesis topic. …

Title: "Thesis topic – Epiphany" – originally published 10/9/1998
Piled Higher and Deeper by Jorge Cham (www.phdcomics.com)

"It's Not My Area of Expertise"
- What is your strength? (Which strong expertise can you contribute?)
- And what is the strength of your group? (Where can you profit from fellow PhD students, or where can your work contribute to their project?)
- Where's the part of the work that nobody else can do?
- What's the part where you contribute to research in your group?

"It'll Never Get Funded"
- To what extent does your topic need to match future/existing funding?
- How can you match the requirements of funding (a research project?) with the requirements of your PhD project (a research project!)
- Can you make the "funded part" a section (or sequence of sections) in your PhD thesis? (As a use case, corollary, excursus, outlook, or maybe just as a counter-example??)
- Or: can you expand the "funded part" to make it a PhD topic? (add theory, e.g.)

"It's a Boring Topic"
- Says who? (And who might actually be interested?)
- Really? (Is there really not a single interesting bit in it? How could you extend this?)
- How can you make the topic interesting to your own community – related communities – other communities?
- Examine your intended topic for its novel contributions, whether it's original, etc.
- However: if everyone is bored when you explain (see over) your topic, then it might indeed be a boring topic …

"Go Think Some More"
- See over …

"I Have a Thesis Topic"

So what's the content actually?

- What should be "in" under all circumstances, and why? What is "nice to have"?
- What is "out of scope"? Where do you connect to other work?
- Identify priorities and dependencies of topics, and turn this into a roadmap …

Can you explain your topic?

- To your fellow PhD student? To your parents? To your thesis advisor? To a friend/colleague you meet in an elevator/at a party/…?
- Within 30 seconds? Within 5 minutes? Within half an hour?
- On a piece of paper? On a poster? In a slide show?

Not all of this seems to be relevant, but explaining to different audiences and in different formats will pinpoint different aspects, such as broader impact of the topic, the most important goals or even the main "line" of argument.

Will you be able to finish your work?

- In the given timeframe? How reliable is your respective prediction?
- Are there crucial components, on which major parts of the thesis depend? What happens, if you cannot implement these components in time? (i.e., do you have a Plan B?)
- How much risk are you willing to take? What's the path with the lowest expected risk?
- Are you excited enough about the topic to spend several years on it? (and make it through difficult periods?)
- If you cannot finish the work in the given time: would there be an interesting subset that you can finish? Are there components you could skip?

How about actually writing the thesis?

- Are there formal requirements?
  (e.g., dissertation consisting of published articles, vs. monograph?)
- Oh, you mean the writing, itself -> stay tuned for the sequel:

Fantastic Theses and How to Write Them