How to write a PhD

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1 What you need for a PhD dissertation

A PhD dissertation should:

1. Have a claim
2. That claim is the right size
3. The claim is motivated
4. The claim is defended by a rigorous argument
5. Your contribution is distinguished from that of existing literature
6. What you say is expressed clearly

None of these properties alone would be sufficient for PhD. If your dissertation has all these properties, you should feel confident going into the viva.

How much material should be in a PhD? The guidelines say that there should be enough material to publish two journal articles on the basis of the work of your PhD dissertation. An easy way to show this is to publish two journal articles. In terms of brute word count, most PhD theses come in around 70,000 words.

Notice how many of the properties above apply to any good piece of writing, or indeed to a contribution of any other kind to a debate. The skills for writing a PhD dissertation are highly transferable.

2 What you do *not* need for a PhD dissertation

A PhD dissertation need not be:

1. A magnum opus
2. Include a description of every possible view in the field
3. Include every possible objection
4. Use technical language/formalisms/grammatical constructions
5. Answer all questions on your chosen topic
6. Solve a major philosophical problem (e.g., the mind-body problem, the problem of induction)
7. Produce a publication in a top-ranked journal (e.g., *Philosophical Review*, *Mind*)

Property (4) is a positive disadvantage. (2), (3), (5), and (6) are likely to be unachievable. (7) is nice but by no means necessary.

3 Your PhD topic

Finding a topic is the first step when writing a PhD dissertation. This will determine which literature you will read and who will be your interlocutors. Do not feel constrained to pick something that continues work you have already begun (for example, in your MSc dissertation). The relevant constraint is to pick an area in which you have a strong, lasting interest.

Do not pick your topic based on your perception of what is currently hot. These trends are fickle, often produce a backlash. Judging whether something that is hot now will still be hot in three or four years is crystal ball gazing.

Play to your strengths. Do you have skills or experience that would help you work on a specific topic? You might be unusually well placed to make a contribution on a certain topic. Consider too the expertise of your PhD supervisor. On which topics is she or he working, and on which topics has she or he recently published? How can you make make best use of your supervisor's expertise?

4 Your PhD claim

Every dissertation needs a claim. A claim should be expressible in a single declarative sentence that clearly states the principal contribution of your dissertation. Think of your claim as the take-home message of the dissertation: the most important information you wish a reader to receive. If you do not have a claim, you do not have a PhD. Examples of claims a PhD dissertation might make include:

- Concepts are mental files
- Consciousness is not a natural kind
- Every mental process is a physical process
- Computations are objective properties of physical systems
- Teleological functions cannot be naturalised
- Grounding is explanatory dependence

Your claim need not be comprehensible to everyone. But your claim should be comprehensible, and of interest to, a wide philosophical and/or scientific audience. The wider the audience, the better. This audience may not appreciate all the details involved in establishing your claim, but they should at least recognise your claim's importance and content.

As your career progresses, you will often be asked what you work on. You will be expected to explain this clearly and precisely in a few seconds. This for applying for jobs, funding applications, and general networking. Summarising what you do clearly is an important skill in academia.

A PhD claim should be the right size. Too small, and its defence is unlikely to fill a PhD. Too large, and you won't be able to defend your claim rigorously in a PhD dissertation. Of the two dangers, it is better to err on the side of having a small claim. A small claim will get you a PhD and it can be a building block for a larger future project. If you do not have a rigorous argument for your claim, you have nothing.

Students are often wedded to the idea that they should work on a grand scale. They resist any attempt to settle on a particular claim, preferring to make big moves in broad strokes. They might believe that is how real philosophy is done. This is a major error. A student who persists in this line wastes time and energy and may irrevocably damage their chances of writing a good PhD. The difficulty quickly becomes evident to anyone who has ever been down this path. In order

to defend a broad claim – so that it is not destroyed by obvious counterexamples – one needs extensive knowledge of the entire field. But this is precisely what a PhD candidate lacks. And it cannot be remedied during the PhD. The amount of literature you would need to read will be effectively infinite – the pace of production of new papers will exceed the pace at which you can read them.

Better to start small. How one does this is described in the next section.

5 How do you find a claim?

If you do not already have a claim, the following heuristic may help.

1. Pick your favourite philosophical position, *X*
2. Summarise *X* in your own words
3. Identify, in forensic detail, the assumptions required by *X* as well as each inference required to justify *X*
4. Attempt to defend *X* from significant objections

In the process of doing (1)–(4) you will (obviously) achieve a superlative understanding of X. But more importantly, you will discover shortcomings of X that would have not occurred to you before. This is an invitation to explore further. How might *X* be changed to address those shortcomings? Which specific assumptions or other resources are needed to address the shortcomings? What are the costs associated with those changes? Is the result a coherent package? Does it achieve the goals that originally motivated *X*? Is there an alternative to your successor to *X*? Is *X* a single position or does it mark out a family of different views? What does all this mean for views that depend on *X*?

By starting small, you can grow your thesis in this way in a careful, clear, motivated and rigorous manner, to speak to larger considerations and identify a claim. Some of your questions may spin off into future (e.g. post-doc) projects.

6 Motivating your claim

Probably the most common question to a speaker in philosophy colloquium is: 'You claim *X*, but what is the point of *X*?'. This may be pressed in more or less polite forms. The same consideration will be in the head of anyone who picks up your dissertation.

Take a great deal of care to explain and justify why we should care about your claim. One way to do this is to argue for significant pay-offs from your claim, or equivalently, significant costs of *not* asserting your claim. Connecting your claim to a pay-off/cost is a non-trivial operation; do this clearly, carefully, and rigorously. Readers (for some reason, I do not know why) tend to be particularly attuned to detecting BS at precisely this stage. Tread carefully. Put yourself in a sceptic's shoes; make an irresistible case why your claim is important.

Never motivate your claim with a biographical story. This will be of zero interest to, and it will likely frustrate, your readers. They want to know why *they* should be interested in your claim not why you are happen to be interested in it.

7 Relationship to the literature

To situate yourself with respect to the literature, find a philosophical interlocutor. Who do you want to criticise? With whose position do you wish to contrast your own?

The best interlocutor is the philosopher with the view closest to yours. This is for two reasons. First, if you pick a distant interlocutor (even a famous one), you will be likely be perceived as begging the question against them because you differ on so many assumptions. Second, if your view is close to that of another philosopher and you do not explicitly contrast the views, the reader will assume your view is the same as hers.

A 'she says, I say' narrative is an excellent way of introducing your original material. If you have a new theory, don't present it as appearing out of an intellectual vacuum. Introduce it as a (justified) modification of someone else's proposal.

Note that it is not sufficient for the relevant contrast between your view and that of an interlocutor be clear in your own mind. It is a strategic error to leave your reader to work out the contrast for themselves – they won't make the effort.

Once the contrast your closest interlocutor is clear, you can go after bigger and more distant game.

8 Writing a rigorous argument

It is helpful to proceed by dividing an argument up into steps. Each step should be clearly marked so that the reader can recognise it as such. Your steps should fit together to justify your conclusion. The justification of each step should be made clear to the reader. This justification should be sufficient: the reader should be unable to entertain doubt that each step is correct.

Pay careful attention to how the steps combine to support your conclusion. There are many ways in which steps of an argument may support a conclusion. Tell the reader the kind of inference you are drawing. Do your steps deductively entail your conclusion? Or do they merely lend it inductive support? If so, what kind of support? Which evidence would defeat your argument? Is it likely to arise? Does your argument depend on any empirical assumptions? What is is the support for them?

Be explicit about who your argument is meant to convince. Would your argument convince a sceptic about your conclusion? Or only someone who has roughly similar views to you? Precisely which assumptions are required in order for your argument to be plausible? Answering each of these questions in rigorous forensic detail will show your chops as a philosopher.

A good argument is a sequence of clear and compelling steps that would rationally compel a wide audience. Put yourself in the shoes of an unsympathetic reader to test whether you meet that standard.

Here are further tips.

- *Start by giving the reader a preview of your argument*. Before taking your first step, give an overview of the entire argument. The reader will follow you better if she knows where you are going.
- *Make your original contribution clear*. Ensure that the boundary between what you say and existing work is unmistakable ('She says this, I say that.').

- *Don't show off.* Avoid display of knowledge or technical machinery that does not advance your argument. Your argument should be as simple as it needs to be, but no simpler.

- *Avoid tangents*. There is a temptation to include anything interesting on your topic you can think of whether relevant to your claim or not. Tangential material weakens your thesis in at least two ways. First, at a purely syntactic level it will make your argument harder to see through a forest of surrounding material. Second, the tangential material will set the reader off on a wild goose chase: she will start to focus on how your tangents relate to your argument, rather than on what she should focus – your argument. A PhD thesis does not get better the more you put in. Cut everything that does not advance your argument and save it for another project.

- *Prefer a few strong arguments to lots of weak ones.* Don't bombard the reader with lots of half-baked arguments with the hope that one will stick. This won't work and it will devalue your intellectual currency.

- *Continually rehearse the argument story to yourself.* Keep telling the argument to yourself and keep trying it out on friends and colleagues. The argument will improve on each telling. Kinks will be smoothed out. It will become stronger, less vulnerable to objections, and more rigorous. Prepare versions of it of different lengths (45 minute, 15 minute, 3 minute, and 1 sentence). Presenting at conferences helps. If you do this, you will soon hit on the optimal way of arguing for your conclusion.

- *Give your key points starring role.* Identify the most crucial steps/claims in the argument and explicitly highlight them to give them most prominence. Naming your key steps/claims helps.

- *Anticipate a reader's reactions.* Be sensitive to your reader's likely worries, objections, or failures to understand ('You might think *X*, but I will show otherwise…').

- *Think about your audience.* Your audience is not your supervisor or examiner. Consider who will read the work that comes out of your PhD thesis. If you are to have a career in philosophy, your audience must be wider than your supervisor or examiner. You need to carve a niche for yourself. You should aim for as wide an audience as possible. (Think about who will be on future hiring committees and grant panels assessing your work – can they relate to your work?).

- *Use concrete examples to aid understanding.* Illustrate your abstract claims by giving simple worked examples. These examples will stick in the reader's mind and they will likely be what she remembers best from your work. When explaining something difficult, start by describing a specific and concrete case before moving on to the general and abstract.

- *Be charitable.* Always give the strongest, most charitable, reading of another author's work. Never indulge in *ad hominem* attack.

- *Be intellectually honest.* Doesn't attempt to hide shortcomings. What matters is not establishing the truth of some specific claim, but establishing a claim that is true. If you don't have the answer to a problem, you can flag it as a question for future work.

- *Be concise.* Nobody likes reading long papers. Your supervisor is paid to do this, but no one else is. Keep it short and sweet.

9 Expressing yourself clearly

A large part of the value of a PhD dissertation comes down to how well it is written. This is not simply a matter of polish. Good writing is good thinking. If you cannot express your claim and argument clearly on paper, then you do not have a claim or argument.

First, think carefully about structure. A dissertation is not a bag of words. It should be a structured piece of writing, with clearly definable parts, each with a clear semantic role. Signpost heavily to mark boundaries between the different parts. Signpost at the level of a paragraph, section, chapter and the dissertation as a whole. What is signposting? Before you do something, say what you will do and why you are doing it. Do what you promised in the order you said it. Once you have done it, summarise what you've done.

For chapters:

- Structure chapters into sections
- Avoid heavily nested structure (e.g. sub-sub-sections)
- Pick your section titles carefully – they should summarise the content
- Each chapter should have an Introduction and a Conclusion section
- A chapter should not be longer than 10,000 words

For sections:

- Structure sections into paragraphs
- Make one, and no more than one, point per paragraph
- A paragraph can be a single sentence
- Prefer short sentences
- Use lists and labelled claims to identify the key parts in your argument
- Use the opening sentence of each paragraph as your 'topic sentence': summarise what you will do in the paragraph
- Each paragraph should build, in a way that seems logical or inevitable to the reader, on the previous
- Each section should have opening and closing paragraphs that do the signposting for the entire section

Regarding the mechanics of writing, you should invest time learning how to use the English language effectively. This includes knowing the correct use of various punctuation marks and grammatical forms as well as the stylistic conventions that promote clarity. Try to keep a notebook of expressions and phrases that you admire.

There is no algorithm for good writing. Here are some rules of thumb:

- Revise heavily and often; put yourself in a reader's shoes and ask yourself:
  - Can I make this more simple?
  - Can I make this clearer?
  - Can I make my point in a more vivid, striking way?
  - What jars in my ear in the current draft?
- Look out for opportunities to remove words or rephrase for clarity
- Prefer anglosaxon ('show') to latinate ('demonstrate')

- Avoided heavily nested clauses (multiple nested 'that …', ', which …', etc. in a sentence)
- Avoid pronouns unless their referent is unmistakable ('the claim reduces to behaviourism or functionalism, and it …' – does 'it' refer to functionalism, behaviourism, their disjunction, or the original claim?)
- Use the active voice ('I will argue that …' not 'It will be argued that …')
- Avoid overuse of 'that'
- Avoid adverbs ('-ly' words)
- Avoid 'very', 'extremely', 'of course', 'clearly', 'the fact that', 'whilst', 'basically'
- Don't be afraid to use space in your thesis in order to express your ideas more clearly – save that further brilliant insight for the next paper/chapter.

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