PhD Students: Writing an NSF application

9 SEP 2012

Judging from the average application I have seen (and their ugly cousin: the PhD application letter), more students could benefit from advice. I have six key pieces, primarily for students applying for the Graduate Research Fellowship.

This is the one where you have to be a US resident or citizen, and applying or just admitted to a PhD program. Not American? As it happens, I followed the same principles writing my application years ago to the Canadian equivalent, and I think the advice applies. Already at the dissertation stage? I'll point out where the advice applies to dissertation improvement grants and even the big faculty grants too.

1. The most important thing is to show that you can ask and answer a clear research question. It means actually stating a clear question, showing how it fits into the literature and field, describing a coherent methodology, and hypothesizing results. This sounds obvious, but is still rare. Remember: the “S” in NSF stands for science. If needed, go back to your grade 9 description of the scientific method. It is a timeless guide.

2. The next most important thing: your research question should be compelling. By compelling I mean that someone in another area of your discipline can (a) understand it, and (b) find it interesting and important. Link it to big questions in the discipline, and to the public
interest as well. Avoid esoteric topics, or at least describe them in a way your classmates in other fields can understand. This goes especially for basic and theoretical research, where the link is seldom obvious to non-specialists.

Note that neither #1 nor #2 were “Write what you think you will work on”. Chances are you don’t actually know what you want to work on yet. It will probably change five times between now and your dissertation. Writing something clear and compelling is more important. Therefore:

3. Write about the question and study where you can outline the clearest, most complete research program, one that will be the most compelling to a non-specialist.

This would never apply to a faculty research grant or a dissertation improvement grant, when sticking to your proposal is essential. For doctoral fellowships, the proposal is no more binding than a PhD application letter (which we all know bears little relationship with reality). We assume you don’t know what you want to work on. At most you will stick with your sub-field. As in a PhD application letter, I think the NSF is interested in whether you are capable describe a coherent, interesting and ambitious research project. So do so.

4. Discuss your proposal with advisors (note the plural), several weeks or months in advance. Try to get at least one to read a draft and your revision. You should do the same with fellow students.

5. Revise, revise, revise. Drafts need to marinate in their mediocrity for a week before their flaws become apparent to you. Explaining your proposal out loud helps the process. This is a general principle that applies to all writing.

6. Please, do not describe a transformational personal experience. To be shunned at all costs: revelations in poor countries; childhood dreams; inspirational words from elderly people; books that changed your life. Even if true, it is tired and corny. Think of a personal statement as a CV in prose, one that links your experience to your ability to execute the project. Not a History channel biography.

Added or dissenting advice from other faculty and graduate students welcome.
24 Replies

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Last reply was September 9, 2012

@cblatts An NSFW application, shurely?
2.  @smsaideman (http://twitter.com/smsaideman)  
good advice for heaps of folks, not just NSF apps RT @cblatts: PhD Students: Writing an NSF application http://t.co/ehngRT55 (http://t.co/ehngRT55)  

3.  @hilango (http://twitter.com/hilango)  
@cblatts Some good advice, though I have heard contradicting advice for PhD app on “personal” part, esp creating narrative of your career.

4.  Dan  
This seems like good, first-order advice. I’m an econ phd student; I’ve applied twice for NSF GRFP, once successfully. One thing I might add is that the NSF seems to care a lot about the “broader impact” of your proposal. I don’t totally understand what that means, but I interpret it as “what’s the social value of your project?” meaning why would non-economists care. It seems to me that the application should also make clear the answer to that question. I don’t know that this is the most important part of the application, and I’m curious if the instructions to reviewers mention it?

5.  Chris Blattman (http://chrisblattman.com/)  
Yes, I think this is primary. I meant to emphasize this in point #2, but perhaps it did not come out enough. Public interest and social is essential to broader impact, which is essential to distinguish your application.

6. @sharanjit (http://twitter.com/sharanjit)
   MT @cblatts “Drafts need to marinate in their mediocrity for a week before their flaws begin to smell.” http://t.co/T4BJ5VcQ (http://t.co/T4BJ5VcQ)

7. @gruenatodes (http://twitter.com/gruenatodes)
   @cblatts Have well-defined&important question. Well-defined is well-defined. Important is not so well-defined but still important (D.Corbae)

8. @REDDheadings (http://twitter.com/REDDheadings)
   On application writing: ‘Please, do not describe a transformational personal experience’ http://t.co/N00cUYN1 (http://t.co/N00cUYN1) (cc @anucrawfordphd)

9. @franciscome (http://twitter.com/franciscome)
Must read RT @cblatts PhD Students: Writing an NSF application http://t.co/yfzKFloP

10. @foodresilience (http://twitter.com/foodresilience)
Timely, as my first deadline approaches all too fast http://t.co/5avWlxPJ
(http://t.co/5avWlxPJ)

11. Sabrina Karim (http://userwww.service.emory.edu/~skarim4/)
I would add- to make sure that proposal follows the criteria for which the NSF states the proposals will be evaluated and to propose something feasible.

12. @JessicaLLucas (http://twitter.com/JessicalLucas)
great advice from @cblatts PhD Students: Writing an NSF application http://t.co/TmSMBX9S (http://t.co/TmSMBX9S)

13. @firoozye (http://twitter.com/firoozye)
PhD Students: Writing an NSF application Chris Blattman http://t.co/ed9uS1RJ
(http://t.co/ed9uS1RJ)
14. @ekonoom


Writing advice: “Drafts need to marinate in their mediocrity for a week before they flaws begin to smell”. http://t.co/04Adlg6w (http://t.co/04Adlg6w)
I'm an Assistant Professor of Political Science & International and Public Affairs at Columbia University. I use field work and statistics to study poverty, political participation, the causes and consequences of violence, and policy in developing countries. [Read more](/about/)
1332253705502/Evidence2Policy-Uganda.pdf

- 2013: The effect of cash grants on poor women (http://chrisblattman.com/2013/05/02/invest-in-women/)
- All (http://chrisblattman.com/policy/)

**Advice: Development**

- Books development workers and academics should read (http://chrisblattman.com/2011/06/21/books-development-economists-and-aid-workers-seldom-read-but-should/)
- Getting a job in development (http://chrisblattman.com/tag/development-jobs/)
- How to take advantage of an MA program (http://chrisblattman.com/2011/12/06/the-problem-with-graduate-degrees-in-international-affairs-and-development/)
- Research in war zones I (http://chrisblattman.com/2008/03/10/so-you-want-to-go-to-a-post-war-zone/)
- Research in war zones II (http://chrisblattman.com/2011/03/23/should-student-researchers-go-to-conflict-zones/)
- Should you become a field RA on an RCT? (http://chrisblattman.com/2011/07/14/aspiring-phd-students-should-you-become-a-field-research-assistant-for-an-rct/)
- So you want to be an impact evaluator? (http://chrisblattman.com/2009/01/07/so-you-want-to-be-an-impact-evaluator-a-cautionary-tale/)
- What to bring for field work I (http://chrisblattman.com/2009/04/21/field-work-in-the-tropics/)
- What to bring for field work II (http://chrisblattman.com/2010/07/24/what-to-bring-to-the-field/)
- What to bring to the sky (http://chrisblattman.com/2013/05/31/what-to-bring-to-the-sky/)
- Why you should work in aid (http://chrisblattman.com/2010/08/06/is-aid-depressing/)
- Working in a developing country (http://chrisblattman.com/2008/06/02/advice-for-working-in-a-developing-country/)

**Advice: Academic**

- Applying to PhDs (http://chrisblattman.com/about/contact/gradschool/)
- Courses: 10 things I tell undergrads (http://chrisblattman.com/advising/undergraduate-general/)
- Courses: How much economics should you study? (http://chrisblattman.com/2012/01/11/how-much-economics-should-you-study-in-college-or-why-economics-is-like-a-martial-art/)
- How to ask for a recommendation letter (http://chrisblattman.com/advising/letters/)
- How to discuss a paper (http://chrisblattman.com/2010/02/22/the-discussants-art/)
- How to email your professors and employers (http://chrisblattman.com/2010/11/08/students-how-to-email-to-your-professor-employer-and-professional-peers/)
- How to get a PhD and save the world (http://chrisblattman.com/2007/12/12/how-to-get-a-phd-and-save-the-world/)
- MA or PhD? (http://chrisblattman.com/2008/03/01/which-is-for-you-mpa-mpaid-or-phd/)
- Moving from RA to co-author (http://chrisblattman.com/2008/07/01/ra-versus-co-author/)
- On quantitative field research (http://chrisblattman.com/2009/10/16/after-the-surge/)
- PhD students: Choosing a topic (http://chrisblattman.com/2011/10/14/how-to-pick-a-research-project/)
- PhD students: Don’t lose hope (http://chrisblattman.com/2010/01/05/dont-lose-hope/)
- PhD students: Econ PhDs & the politics market (http://chrisblattman.com/2011/08/12/economics-phds-and-the-political-...
PhD students: Job market advice (http://chrisblattman.com/2008/11/09/academic-job-market-advice/)

PhD students: Job market advice II (http://chrisblattman.com/2012/10/15/phd-students-advice-for-the-academic-job-market/)

PhDs: Picking a dissertation (and why it should not be a field experiment) (http://chrisblattman.com/2013/02/12/how-to-pick-a-dissertation-project-and-why-it-should-not-be-a-field-experiment/)

Writing PhD grant applications (http://chrisblattman.com/2012/09/09/phd-students-writing-an-nsf-application/)

Writing: How to write an essay (http://chrisblattman.com/2010/02/17/how-to-write-an-essay/)

Writing: How to write like a Mad Man (http://chrisblattman.com/2012/02/12/write-like-a-mad-man/)

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