

Choosing a field, subfield and Ph.D. program

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This essay is intended for a potential doctoral applicant: someone who thinks they might want to get a Ph.D., but has not yet finalized their choice of a field or subfield. It discusses some considerations that might influence those choices.

I write this advice from the perspective of 15 years in a subfield (quantitative marketing) in which doctoral admissions are relatively limited. I have been reading Ph.D. applications for 15 years at three universities (USC, Duke, UCSD). I examine about 50 applications in a typical year. About half of applicants have masters degrees and another ~10% have experience in doctoral programs in other fields. I recommend 1 or 2 applicants for admission in a median year. This essay is an attempt to help applicants improve decisionmaking and strengthen applications.

Choose an academic field and subfield.

The single most important decision you will make is what field and subfield to study. An informed decision will likely boost the chance of admission to a desired Ph.D. program and success conditional upon entering the program.

Fields and subfields vary greatly. Some of the major differences are:

- What are the major open questions in the field? What methods are most commonly employed? What criteria are used to evaluate a research contribution?
- Availability of doctoral student enrollment opportunities, fellowship funding, student:advisor ratios
- Availability of publication and grant funding opportunities
- Availability of academic positions for new graduates; general rate of growth or decline
- Typical career path, e.g. tenure expectations, postdocs, etc.
- Importance of status signals like university affiliation, advisor, network memberships, etc.
- Relative importance between theoretical and applied research
- Relative importance of various skills (eg., mathematical, creativity, intuition, writing, programming, etc.)
- Financial compensation and outside opportunities (e.g., popular books, media coverage, consulting opportunities, policy influence, etc.)
- General norms, for example, do scholars write in plain english or highly specialized language? How do people in the field treat each other?

The best way to inform your choices of field and subfield is to read the papers published in top outlets. Treat your initial interest as a hypothesis; test the hypothesis by reading papers.

If you are not sure what the top outlets are, look at the CVs of recently tenured professors and associate professors at highly-ranked universities in that field/subfield. The outlets where they publish their best work should be the field's top outlets. You should read those outlets.

You should read selectively. There are multiple ways to choose which papers you should read. Here is an approach you could take as a starting point:

1. Read all of the tables of contents of each of the top 2 or 3 outlets from the past 5-10 years. For each interesting paper title, read the abstract.
2. As you read abstracts, make a list of papers that you would gladly read.
3. Continue until your list contains 20-40 paper titles.
4. Read all of those papers.¹
5. Record your impressions of each paper after you read it. How does the paper claim to contribute to the field? Does it deliver on that claim? What were the paper's strengths and weaknesses? How could the author improve the paper? How could someone extend the paper?

The suggestions above require a substantial amount of effort. I have been reading papers for 20 years. When I began my career, it took me around 3-6 hours to read a typical paper carefully. These days I can read faster, but it still takes me around 2-5 hours to read a typical paper carefully. Reading 20-40 papers easily might require 10-20 full days of effort, depending on the subfield. Despite the cost, there are several reasons that you should consider this approach:

1. You should probably choose a field that (a) you enjoy and (b) you are good at. Failing either requirement is likely to reduce your motivation to work and, consequently, your likelihood of success. You can only discover your preferences and capabilities if you expose yourself to the material you will be trained to produce in that field's Ph.D. program.
2. You might learn that you don't like reading academic papers in your preferred field or subfield. If you ever have to learn such a lesson, the best possible time to learn it is before applying for a Ph.D. If you don't like reading these papers, then you should either (a) investigate other fields or subfields, or (b) do not apply for a Ph.D.
3. Reading research in top outlets will enable you to develop and credibly communicate your research interests. Most Ph.D. applications require a personal statement. That is your opportunity to explain your research interests. Essays that convey a credible, informed, mature understanding of the literature are more attractive to potential advisors, because they demonstrate diligence and affinity for the topic. It also enables you to demonstrate creativity by explaining how your ideas for new research might help to push the field forward.
4. Reading research in top outlets enables you to identify which individual scholars are doing research that interests you. Scientists' papers often differ enormously, even within

¹ If you don't have access to published works, you can often find papers on google scholar or authors' personal websites. Pre-publication versions are usually good substitutes when published versions are not available.

a single subfield. The set of people who write papers that you enjoy reading is likely to overlap with the set of people who could advise you well. You can target your personal statement to individual scholars, a powerful way to earn their attention and increase your chances of admission.

5. Reading papers credibly demonstrates your work ethic and degree of commitment, and consequently shows that your application is less risky than others.

I have argued for a comprehensive approach to informing your decision about field and subfield. In my experience of reading personal statements, I have found that the large majority of applicants either do not expend this level of effort, or they do not show that they expended this level of effort.

You may be tempted to procrastinate by postponing your reading until after you enter a Ph.D. program. This is likely to be a mistake. It may sometimes be possible to switch fields or subfields, but the longer you wait before you do so, the more costly it will be, and the less likely you will be to succeed. Although 10-20 days is a substantial cost to effectively inform your choice of field/subfield, the risk of not paying that cost might be dropping out or spending 4-6 years completing a degree that was not the right choice for you.

In the process of choosing a field and subfield, you should also talk to as many people as possible who might help to inform your choice. That might include your current or former professors. The people who can give the best advice will be tenured and tenure-track faculty at research universities. In the U.S., such people typically carry the title of Assistant Professor, Associate Professor, or Professor. These are the people who either are or were most active in research production in a field. If you don't have access to those people, try to find someone who holds a Ph.D. in the field or who previously served as full-time faculty in the field. Those folks are likely to inform you effectively, although in some cases their information might be out of date. Finally, you might also consider speaking with teaching-oriented faculty in the field who do not hold a Ph.D. Although they may be the most accessible, they may also be less qualified to give high-quality advice about scientific research. If anyone tells you something surprising or questionable, follow up by asking how they know it is true.

Academic researchers may welcome your inquiry and gladly spend time talking with you about their field and subfield, even if they are very busy, so long as you approach them politely and avoid misusing their time. There are a few things you should be aware of. First, most faculty may not reveal (or indeed, may not even realize) the downsides of their own field or subfield unless you ask them the right questions. Second, most faculty only understand their own fields and subfields; it is somewhat rare to encounter someone who is able to provide a nuanced view of other fields or subfields in which they have not worked. Take comparative statements with a grain of salt, or at least understand the basis for the comparison prior to accepting it. Members of one field often tell each other stories about other fields; those stories might be accurate, but they are often outdated, incomplete, incorrect or misleading. Third, your conversations are not an effective substitute for your own reading of the field's and subfield's papers. Ideally, you

would start reading papers first, and then consult experts afterwards in order to refine your understanding. You will get more out of conversations with scholars if you approach them after you have informed yourself. Finally, be careful in your initial communications with potential advisors. If you write to them before you have developed your views about the field, or before you can credibly communicate a mature understanding of the literature, you may harm the way they look at your application and potentially decrease your chances of admissions.

Talking to active researchers may lead to opportunities to work as a predoctoral research assistant. You should volunteer for such opportunities if you have time for them. If you actively contribute to ongoing research, you will build skills that will be useful later on. You may be able to confirm your decision about what field and subfield you want to contribute to. Successful research assistance typically leads to positive letters of recommendation; these tend to be the most influential signals in an application because they come from people who are well informed about your likelihood of success, and who have reputations to maintain. Recommendations that come from teaching faculty, employers or others are much less influential.

In choosing a field, it is reasonable to consider the distribution of post-Ph.D. employment outcomes and placement rates. Estimating your lifetime earnings profile is necessary to understand how much doctoral study will cost you. You may also want to estimate the chance of finding an academic job after completing a Ph.D. There are a few fields that graduate such large numbers of Ph.D.s that high-quality academic positions are only attainable for small ratios of star students.

There are a few ways to go about learning about post-graduate outcomes. One is to look at salary data for public university professors in your field and subfield. Several major public universities provide faculty salary data publicly (e.g., University of California, University of Michigan, etc.); you can easily search by faculty name. Private university salaries are often similar or slightly higher than salaries at comparable public universities. Another approach is to look at the field's labor market. Two examples include "Job Openings for Economists" in economics or marketingphdjobs.org. Such sites often include non-academic employers in addition to academic job listings. You may want to look at top universities' placement data, which often will be listed in close proximity to information about the Ph.D. program. Finally, you might be able to find surveys of labor market participants. For example, in marketing, the American Marketing Association's "Docsig" organization conducts an [annual survey](#) of graduating doctoral students.

A few doctoral applicants express a desire to unify disparate fields or subfields. That is a laudable goal. Regrettably, most academic career incentive structures inhibit multidisciplinary and interdisciplinary work. It is already very difficult to contribute to a single field; imagine trying to master two fields, at the same time, well enough to make contributions to both. The most successful applications tend to focus on one most-preferred area of study and why it is most preferred. If you are certain that you want to unify one field with another, consider choosing one

primary field to study first, and then at a more mature stage of your career when you have refined your priors, take the actions that will enable you to make contributions to a second field.

Choosing where to apply

If your choice of field and subfield are fully informed, the choice of where to apply is relatively easy:

1. Take a look at the people who wrote the papers you found interesting.
2. Apply to the schools that employ those scientists.
3. Use your personal statements to explain why you want to work with those scholars.

If you find numerous scholars you want to work with, the following factors might refine the set:

- What characterizes each person's research? Is there a singular methodological toolkit or topical focus? Are projects driven by identifiable values that you share?
- Tangible evidence of ongoing involvement in the research process: recent publications in top journals, active editorial positions, regular conference participation, university seminar presentations, etc. Some faculty burn out or move into administrative roles later in their careers. Administrative work is important and valuable, but it does not contribute directly to the research process, and may reduce the chance of successful mentorship.
- Track record of graduating and placing doctoral students.²
- Junior faculty might be the most active and doing the most cutting-edge work. Senior faculty might have the most experience, willingness, time and wisdom to share as mentors; but they may fall behind the cutting edge. The ideal school has a good mixture of junior and senior faculty.
- Employment history and career reviews. Previous moves might predict the likelihood of a future move. Or, an assistant professor might fail to pass an upcoming tenure review and be obligated to move afterward. Doctoral students typically do not move universities when their advisors move. It may be difficult to find a new advisor after you have advanced to candidacy.

When you identify a set of potential advisors, it may be advisable to email some of them to introduce yourself and ask whether they are accepting new students or research assistants. Well targeted emails, which clearly convey your preparations and potential fit and thus clearly distinguish themselves from spam, may receive an affirmative response.

You don't necessarily have to apply to a large number of Ph.D. programs, but you may wish to apply to a range of Ph.D. program rankings. The #3-ranked program in a field likely offers better training than the #30-ranked program. However, it will be far more difficult to get into, and the difference in prestige is unlikely to determine your career profile. For example, in many fields, the most successful graduate of the #30-ranked program will surpass the median graduate of

² As with many similar factors, keep in mind that you may only be able to learn about the successful graduates and placements.

the #3-ranked program. The quality of a candidate's research matters more for career outcomes than the Ph.D. program pedigree. The fit between advisor and doctoral student is difficult to quantify, but I believe it is the single best predictor of students' career success.

You should not feel obligated to personally target all of your applications to individual advisors. Targeting is a strong signal because it is costly, so it is best to reserve it only for those cases where you have a meaningful fit. Also, advisors will expect you to remain committed to your targeting arguments after enrollment, so be careful not to make any promises that would be difficult to keep.

Choosing where to enroll

If you are lucky enough to receive multiple offers of admission, congratulations! It is an honor that is difficult to achieve in many fields. Multiple accomplished scholars have identified you as someone who might have a promising future.

In deciding where to enroll, there are a number of questions you might seek answers to. Normally, the definitive source of such answers would be the doctoral program director or school administrator, who should provide written information about the program requirements.

- What are the major checkpoints prior to a successful defense? What proportion of enrolled students have passed each checkpoint in the past 5 years?
- What courses are required and what options does the student have?
- Number of graduates and complete list of student placements over the past 5 years (not just the highlights on the webpage)
- What is the attrition rate over the past 5 years? What proportion of departing students failed to pass major program requirements?

It is usually advisable to visit the programs you would most strongly consider. Speak with the current Ph.D. students about the program. Such conversations can reveal important unknowns (e.g., physical environment, department culture, personalities, etc.).

Before you finalize an enrollment decision, consider asking your letterwriters for their recommendation, and listen carefully to their rationale. You should not substitute their decisionmaking for your own, but such conversations may shed light on assumptions, unknowns or signals that you might have missed.

General advice

Be scrupulously honest in all dealings. Science rests on a foundation of mutual trust, and almost everyone you speak with will be far more experienced than you. If someone believes you might be shading the truth, that belief alone may cost you an enrollment offer. Many subfields are small, networks are tight, and academic memories are long. If you become successful, some people will remember their early interactions with you, even many years later.

Be discreet about negative information. For example, someone in one program might disparage another person or program. Such negative remarks may or may not be accurate. Regardless of accuracy, there is little incentive to convey such information to others. I knew one doctoral applicant whose gossip at the Ph.D. application stage foreclosed faculty interview opportunities 5 years later.

Ph.D. enrollment models may differ dramatically across fields, subfields and programs. As a prominent example, some economics departments enroll several multiples more doctoral students per year than the business school at the same university. They may believe competition helps to motivate student performance, they may be unmotivated to screen applicants effectively, or the department's funding model may rely on a large number of graduate students to supply undergraduate teaching. As an applicant, you have to be careful, because high student attrition and low investments in student outcomes often accompany high student enrollments.

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This essay is not intended to offer verifiable statements of fact. It is a subjective attempt to draw general recommendations from personal experiences and observations. The goal is to increase access to Ph.D. education among potential applicants with limited exposure to the topic. <https://PhDproject.org> offers further views on some of the same topics. Mingyu Joo, Robbie Sanders and Linli Xu provided helpful comments. Please send comments, questions or suggestions for improvement to kennethcwilbur@gmail.com.