

Pros and Cons of Pursuing a Ph.D

Most young people considering doing a Ph.D are not fully aware of what that decision entails, and most people starting a Ph.D program should not have made that choice (~80% in my opinion). I will work hard to discourage you from doing a Ph.D (with me or anyone else) if I believe that is not the right decision for you. However, there are also clearly a number of advantages to getting a Ph.D. Here is a list of the pros and cons, cons first, since they are usually more ignored. The same reasoning applies, to a lesser extent, to getting an MSc.

Why you should not get a PhD

- 1) **A very poor labor market for people with Ph.Ds in most fields.** It used to be the case that one went directly from a Ph.D to a position as Assistant Professor, and this can still happen in some disciplines. But as more Ph.Ds were trained than the labor market could support, and as a need for highly skilled research labor increased, these Ph.Ds started doing post-docs before being hired as faculty. 1-year post-docs became 3-year post-docs; for a recent position in the department where I did my Ph.D, I heard that 5-7 years of post-doc experience was needed even for a CV to get a serious review. Such things are common particularly in biology and health sciences, and reflect the fact that we train too many Ph.Ds for what the market can support. This is unfortunate because, after years of living on a very low Ph.D stipend, most Ph.Ds can look forward to (or dread) several more years with salaries substantially lower than what they deserve based on qualifications, with little guarantee of an eventual stable position.
- 2) **Pressure for profs to train Ph.Ds.** When I apply for grants, my ability to succeed depends in large measure on my CV, and one thing my colleagues generally want to see is that I am training lots of Ph.Ds. This creates perverse incentives for professors to take on, train, and let pass mediocre or moderately qualified candidates, despite the fact that the candidates' job prospects at the end of the process are very poor. This is a major reason why there are too many Ph.Ds on the labor market.
- 3) **Pressure for universities to recruit students.** University budgets are often based on head-counts of students (particularly public universities) or tuition (particularly private universities), and this creates an incentive for universities to encourage too many people to start and complete Ph.Ds.
- 4) **Grade inflation.** Both of the above factors contribute to grade inflation, which at the Ph.D level means handing out degrees to students that never would have made the cut 20 years ago. While I certainly know many brilliant young people finishing Ph.Ds, I also know a fair number of people whose talents lie elsewhere, and essentially have no business getting a Ph.D.
- 5) **Young people are naïve.** I was too. When I started my Ph.D, I wasn't thinking about labor markets or job prospects. I was just thinking that I was bright and curious and research seemed to be what I wanted to do with my life. Yet I came within a hair's breadth of having to abandon my research career, and I have seen many bright scientists forced out for lack of job opportunities. Although I am lucky enough to have a relatively stable position, I am not sure my decision to pursue a Ph.D was wise. Do you really want to take 4-6 years of your life, get a Ph.D, and then find you have very little use for the skills you learned?
- 6) **Poor alternative prospects to starting a Ph.D.** One of the worst reasons to start a Ph.D is because you have not found another job and the job market seems hard for you right now. Far

too many people are making this calculation, and this means that when you finish you will face even harder competition. Also, it means that you are not starting for the right reasons.

- 7) **Politics and careerism.** As larger and larger swaths of the population get higher degrees (more than a 40% increase in the US in just the last 10 years), academia is no longer run exclusively by a small intellectual elite. While there are certainly benefits to this democratization of higher education, it also means that research and higher education increasingly operate as a cold system with performance metrics, etc. Given the highly competitive nature of the job, this means that many who succeed at these careers do so by knowing how to play the system to advance their careers rather than by having great ideas. Your grant applications will likely be reviewed by people with little expertise in your field and relatively rigid ideas about what “success” looks like. This means that many of the most brilliant researchers do not succeed at research careers because they are less good at the political aspects than others.
- 8) **High-stress careers.** Tenure-track faculty positions are not the only job possibility with a Ph.D, but they are the primary one I can speak to. Most people pursue this career because they are curious about their research field and want to make a difference. The unfortunate reality is that a difference is very hard to make these days (there are a lot of bright folks out there, and most of the low-hanging research fruits were long ago plucked), but that a career trying to do so is much more stressful than it used to be. In many positions, particularly at medical schools (“soft-money” positions) your salary depends directly on getting research grants. This means that if you fail to get major grants – even for a few years – you may be out of a job. There are also substantial obligations for teaching and administration, with the final result being that you try to scrape by with enough time to write sellable grants for research projects that you may or may not love but which have a chance of passing. The research world and the research system are quite broken, at least in North America. If you pursue a Ph.D hoping to get a tenure-track post, you should know that you are signing up to be part of this broken system that may well disappoint you.
- 9) **Degrees are (generally) financed with public money.** If you complete a Ph.D financed by a public organization such as the university, my research grants, or a CIHR or FRQS fellowship, I feel you have an obligation to use that degree for the betterment of society. It is a shame that we use so much public money to finance higher education for students who will have to change careers because there are not enough jobs waiting for them.
- 10) **Don’t do it for the prestige!** A small subset of people pursuing a Ph.D do it because they like the ring of “Ph.D” after their name. If that is you, this is a clear indication that you should not do a Ph.D. The value of the degree is going down anyway. There are better ways to get prestige in the world.

Why you should get a Ph.D

- 1) **You will learn a ton.** If you do a good job in your studies, you will learn much that goes beyond your specific thesis project and field of expertise. (See “Research skills to acquire with an advanced degree.”) Many of these skills are useful largely in an academic context, but many also go beyond that, including critical thinking, independence, and time management. Overall, a Ph.D is a relatively inefficient way to acquire these skills if you do not plan on pursuing an academic

career. For that reason, I do not like how the current system churns out so many Ph.Ds for industry and other jobs: there are more efficient ways to get people the skills they need for those jobs, ideally without taking taxpayer money and without a low quality of life for students for many years. But that is the current system.

- 2) **Some jobs will require it.** For better or worse, many jobs that should not require Ph.Ds now do. If you know you want one of those jobs, you'd better pursue a Ph.D. As indicated above, to me, Ph.Ds should only be required if you plan to be conducting independent research.
- 3) **If you absolutely can't imagine doing anything else with your life, AND you have everything you need to succeed.** Some people are just built to pursue intellectual pursuits, and would be ill-suited to other jobs. If this is you, prepare to be disappointed. But maybe you should continue your studies anyway, since your other options aren't great and you may well regret not having tried.