

Reasons to get or not get a Ph.D.

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A Ph.D. certifies you as someone who has successfully produced scientific or technological research, as judged by your thesis committee. Scientific research can help to expand human knowledge. Technological research can help to expand human capability.

There are some ancillary benefits of getting a Ph.D.

1. You will get smarter. Scientific research encourages lifelong study. In most fields, the frontier is constantly moving. Acquiring new skills is necessary to stay productive.
2. You will learn to communicate better. Science is fundamentally collaborative. Our work only matters if we enable others to understand it.
3. Scientific research often provides autonomy. You may be able to do what you wish, how you wish, when you wish, dressed as you wish. You may be able to indulge obsessions and perfectionism.
4. You will become more disciplined. The freedom to set your own goals, deliverables and deadlines requires you to regulate your own behavior.
5. Academic affiliations and degrees may convey prestige or social capital.
6. Scientific incentives typically encourage personal integrity.
7. You may get to work with interesting, wonderful and creative people.

Getting a Ph.D. is neither necessary nor sufficient for any of those possible benefits.

There are also some potential drawbacks of getting a Ph.D.

1. It can be hard. The easy research is already done, or it's not worth doing. Understanding the literature can take years. Contributing takes longer.
2. It's slow. Completing a Ph.D. normally takes 4-7 years. In my personal experience, based on a sample of about 25 published papers in 15 years, writing a working paper takes 1-5 years, with a median of about 2-2.5 years. Publishing a working paper takes an additional 1-10 years, with a median of an additional 2-2.5 years. The research process typically reveals obstacles you did not expect at the outset.

3. It's uncertain. You might spend 250 hours working on an experiment that fails to yield conclusive data. Or, you might spend a year working on a project, then learn that another researcher has already completed a similar project. Yet outcomes depend more on results than effort, intentions or attitudes.
4. It's expensive. Your graduate stipend will likely pay you the lowest salary of your career. You will forego significant earnings and savings during graduate school. Your lifetime earnings will likely be permanently reduced. The Ph.D. may not be enough to secure an academic position. Academic positions often pay less than jobs in industry.
5. You do not know your aptitude for scientific research at the outset. Conducting original research bears little resemblance to studying; skills in one domain often do not transfer to the other. Conducting research is more akin to entrepreneurship than studying, in that research requires self-reliance, creativity and risk-taking.
6. It can be lonely. Much of the work is done in isolation. Your partner, friends or family might not understand or care about what you work on. Most people think professors are teachers and that "research" means accessing existing information.
7. In some fields and subfields, the research evaluation process may be status-driven, biased, overly political or unfair. I believe that most peer review processes are productive, but it may be reasonable to describe some as toxic. It can be difficult to know what you are getting into at the outset.

There are many reasons to get a Ph.D. There are many reasons to not get a Ph.D. Some of the downsides can be partially mitigated at the outset, but that requires time, effort and self-knowledge. Ultimately it is a question of personal values, fit and opportunity cost.

Based on personal observations, I believe that nearly all Ph.D.s I have met are smart; but increasing general intelligence does not correlate strongly with increasing success. I think the character traits that best predict academic success are internal motivation, creativity, an optimal degree of stubbornness (not too much, not too little) and resilience.

There are some failsafes available. Most Ph.D. programs offer a terminal masters degree to students who decide to leave mid-stream or who do not reach candidacy. Many private companies now hire Ph.D.s to fill research-related roles. In some fields, a Ph.D. combined with relevant research experience may qualify you to work in other sectors like government, nonprofit, or consulting. But let's be clear, these paths should be backups for most doctoral students. You will likely go farther, faster, with a relevant masters and 3 years of work experience than with a Ph.D. and no experience.

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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. Mingyu Joo, Robbie Sanders and Linli Xu provided helpful comments. Please send comments, questions or suggestions for improvement to kennethcwilbur@gmail.com.

A follow-up essay is available at [Choosing a field, subfield and Ph.D. program](#). <https://PhDproject.org> offers others' views on some of the same topics.