

Is a Ph.D Still Useful to Society?



By Alex Berezow, PhD — January 18, 2018



Credit: Storyblocks [1]

One of my favorite [movie lines](#) [2] comes from *10 Things I Hate About You*. The father, Walter Stratford, is giving advice to his oldest daughter, Kat:

"You're 18, you don't know what you want. And you won't know what you want 'til you're 45, and even if you get it, you'll be too old to use it."

There is much wisdom in these words.

We ask students -- kids, really -- to make gigantic, life-altering decisions at the age of 18. Deciding which college to attend is important enough, but an even bigger decision is picking which field to major in. Kids who follow their head and major in business, engineering, or science are, more often than not, putting themselves on a track to success; kids who follow their heart and major in art history or music may be putting themselves on a track to pouring lattes at Starbucks for the next 10 years.

The reality is that we are asking young people to make decisions that will forever alter their life trajectories at an age that, as Walter Stratford would say, they don't really know what they want. Moreover, college students don't fully appreciate the consequences of their decisions¹.

Something similar faces college graduates who are contemplating graduate school. At the tender age of 22 (or thereabouts), many smart students who don't feel quite ready to enter the workforce feel the pressure to do more -- get a master's degree or PhD. Many, like me, decide to go all in and spend the next six years (give or take a couple years) earning a doctorate.

Much of the time, that decision was based on very bad advice.

Should I Go to Graduate School?

Early in my undergraduate career, I decided that I was going to go to graduate school. Amazingly, I never put much thought into it. At 22, I didn't feel like I wanted to start a proper job. And many of my professors -- who were earnestly trying to offer me good advice -- told me I should go to grad school. Besides, I was told, not just by professors but by almost everybody, that once I got a PhD, I could do pretty much whatever I wanted to do. So I went.

Grad school was stressful but fine for the first three or four years. But, then things started to unravel. At the age of 26, I got married. My wife had a real job, and I wanted one, too. However, I was facing two more years of school. I could have dropped out and received a master's degree, but that felt like a terrible waste. So, I stuck it out for two more years and graduated with a PhD in 2010.

Just prior to graduation, reality hit me. I realized that I loved science, but that I didn't want to work in a laboratory. Unfortunately, I just spent the last six years preparing for a career in the laboratory. The advice that I could "do whatever I want with a PhD" was completely false. There just aren't many jobs for people with science PhDs who don't want to do research.

Oops.

I started applying for jobs -- pretty much any job that interested me -- and my career path then took a very unconventional turn: I became a science writer. I really enjoyed writing, and I ended up being hired by RealClearPolitics to become the founding editor of RealClearScience. It was a good job, but not one that required a PhD. It was then that I started wondering if I had wasted six years of my life earning a degree that I didn't really need.

A PhD Doesn't Prepare You for the Workforce

About five years into my six-year PhD training, I learned that I didn't want to do research. But graduate school doesn't prepare students for a world outside academia. All of the training is geared toward turning students into little clones of their professors.

The trouble with this is that there aren't enough jobs in academia. So even if I had wanted to stay in academia, my job prospects would have been terrible. One analysis in [The Atlantic](#) [3] showed that only 19% of PhD's land an academic job upon graduation. Of those who do stay in academia, horror stories abound of an endless succession of "[post-docs](#) [4]." Essentially, PhD's become trapped in non-tenure track positions with low pay and little hope for becoming, as my mentor jokingly referred to himself, a "big-time professor at a major university."

Schools are well aware of this problem, but they are doing almost nothing to fix it. We're still admitting and graduating way too many PhD's. We keep luring students with the false hope that a PhD is a ticket to anywhere. And once they arrive, there is little if any training aimed at preparing students for a career outside academia.

Is a PhD Still Useful to Society?

Even after saying all that, I still believe that PhD's are useful to society. But there is a gigantic

caveat: A PhD is only useful to a person who is 100% certain that a life at the research bench is what they want to do. If you aren't 100% certain that's what you want, then a PhD is probably not for you.

To me, it seems that the most important skill or character trait that a person can possess today is flexibility. Robots are taking over people's jobs. One day, robots might even take over my job as a science writer. (Yes, AI already can write very basic articles, like brief reports on the stock market.) Thus, being flexible -- i.e., being able to learn new skills in order to adapt to a rapidly changing workforce -- may be the most important characteristic a person can have.

A PhD, however, does not teach flexibility. In fact, it encourages the exact opposite. Earning a PhD requires a student to learn more and more about less and less. (That might seem paradoxical to those of you without PhD's, but every PhD will understand that perfectly.) For most people, this is not the sort of training that will lend itself to success in the 21st Century.

Notes

(1) It is for these reasons that I personally encourage high school graduates to take a year off before going to college. Get a job and think about what you want to do. *Then* go to college.

(2) As it turns out, I landed here at ACSH, where a PhD or MD *is* required. However, ACSH is the exception to the rule. Most science writers don't have PhD's, and most news outlets do not require science writers to have any scientific training at all. (It's not a coincidence, therefore, that most science journalism sucks.)

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[3] <https://www.theatlantic.com/business/archive/2013/02/how-many-phds-actually-get-to-become-college-professors/273434/>

[4] <https://www.nature.com/news/the-future-of-the-postdoc-1.17253>