How Universities Work, or: What I Wish I'd Known Freshman Year

A Guide to American University Life for the Uninitiated

By Jake Seliger

Introduction

Fellow graduate students sometimes express shock at how little many undergraduates know about the structure and purpose of universities. It's not astonishing to me: I didn't understand the basic facts of academic life or the hierarchies and incentives universities present to faculty and students when I walked into Clark University at age 18. I learned most of what's expressed here through osmosis, implication, inference, discussion with professors, and random reading over seven years. Although most of it seems obvious now, as a freshman I was like a medieval peasant who conceived of the earth as the center of the universe; Copernicus' heliocentric[1] revolution hadn't reached me, and the much more accurate view of the universe discovered by later thinkers wasn't even a glimmer to me. Consequently, I'm writing this document to explain, as clearly and concisely as I can, how universities work and how you, a freshman or sophomore, can thrive in them.

The biggest difference between a university and a high school is that universities are designed to create new knowledge, while high schools are designed to disseminate existing knowledge. That means universities give you far greater autonomy and in turn expect far more from you in terms of intellectual curiosity, personal interest, and maturity.

Degrees

This section might make your eyes glaze over, but it's important for understanding how universities work. If you're a freshman in college, you've probably just received your high school diploma. Congratulations: you're now probably working toward your **B.A.** (bachelor of arts) or **B.S.** (bachelor of science), which will probably take four years. If you earn that, you'll have received your **undergraduate** degree.

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[1] One useful study tip: if you read or hear a word you don't know, look it up. You'll expand your vocabulary and, concomitantly, the range of your thinking.

From your B.A./B.S., if you wish to, you'll be able to go on to professional degrees like law (J.D.), medicine (M.D.), or business (M.B.A.), or to further academic degrees, which usually come in the form of an **M.A.**, or Master's Degree. An M.A. usually takes one to two years after a B.A. After or concurrently with an M.A., one can pursue a **Ph.D.**, or Doctor of Philosophy degree, which usually takes four to ten years after a B.A.

The M.A. and Ph.D. are known as research degrees, meaning that they are conferred for performing original research on a specific topic (remember: universities exist to create new knowledge). Professional degrees are designed to give their holder the knowledge necessary to be a professional: a lawyer, a doctor, or a business administrator.

Many if not most people who earn Ph.D.s ultimately hope to become a professor, as described in the next section. The goal of someone earning a Ph.D. is essentially to become the foremost expert in a particular and narrow subject.

Professors, Adjuncts, and Graduate Students

There are two to three main groups—one could even call them species—you'll interact with in a university: professors, adjunct professors, and graduate students.

Professors almost always have a Ph.D. Many will have written important books and articles in their field of expertise. They can be divided into two important classes: those with **tenure**—a word you'll increasingly hear as you move through the university system—and those without. "Tenure," as defined by the New Oxford American Dictionary that comes with Mac OS X 10.6, is "guaranteed permanent employment, esp. as a teacher or professor, after a probationary period." It means that the university can't fire the professor, who in turn has proven him or herself through the publication of those aforementioned books and papers along with a commitment to teaching. This professor will probably spend her career at the university she's presently at.

Those without tenure but hoping to achieve it are on the "tenure track," which means that, sometime between three and six years after they're hired, a committee composed of their peers in the department will, along with university administrators and others, decide whether to offer tenure. Many professors on the tenure track are working

feverishly on books and articles meant for publication. Without those publications, they will be denied tenure and fired from their position.

Adjuncts, sometimes called adjunct professors, usually have at least an M.A. and often have a Ph.D. They do not have tenure and are not on the "tenure track" that could lead to tenure. They usually teach more classes than tenured or tenure-track professors, and they also have less job security. Usually, but not always, adjuncts teach lower-level classes. They are not expected to do research as a condition of staying at the university.

Graduate Students (like me, as of this writing) have earned a B.A. or equivalent and are working towards either an M.A. or a Ph.D. From the time they begin, most graduate students will spend another two to eight years in school. They take a set number of small, advanced classes followed by tests and/or the writing of a dissertation, which is an article- or book-length project designed to show mastery in their field.

Many—also like me—teach or help teach classes as part of their contract with the university. In my case, I teach two classes most semesters, usually consisting of English 101, 102, or 109 for the University of Arizona. As such, I take *and* teach classes. In return, the university doesn't charge me tuition and pays me a small stipend. Most graduate students who teach you ultimately want to become professors. To get a job as a professor, they need to show excellence in research—usually by writing articles and/or books—as well as in teaching.

For all three groups, much of their professional lives revolve around tenure, which brings additional job security, income, and prestige.

Two Masters

Most graduate students and non-tenured professors serve two masters: teaching and research. As an undergraduate, you primarily see their teaching side, and your instructors might seem like another version of high school teachers. For some instructors, however, teaching is not their primary duty and interest; rather, they primarily want to conduct original research, which usually takes the form of writing

articles (also sometimes called "papers") and books. The papers you are assigned for many classes in part help you prepare for more advanced writing and research.

Graduate students and professors feel constant tension between their teaching and their research / writing responsibilities. Good ones try to balance the two. For most graduate students and professors, however, published research leads to career advancement, better jobs, and, ultimately, tenure. Many of your instructors will have stronger incentives to work on research than teaching. This doesn't mean they will shirk teaching, and most teach creatively and diligently, as they should. But it's nonetheless wise to understand the two masters most of your instructors face.

Interacting with Professors, Adjuncts, and Graduate Students

To earn tenure (or work towards earning tenure), many professors and grad students spend long periods of time intensely studying a subject, most often through reading. They expect you to read the assigned material and have some background in reading more generally; if you don't, expect a difficult time in universities.

Professors and your other instructors have devoted or are devoting much of their lives to their subjects. As you might imagine, having someone say that they find a subject boring, worthless, or irrelevant often irritates professors, adjuncts, and graduate students, since if those people found their subject boring, worthless, or irrelevant, they wouldn't have spent or be planning to spend their lives studying it. Most make their subject their lives and vice-versa. They could earn more money in other professions but choose not to pursue those professions, but they are often excited by knowledge itself and want to find others who share that excitement. If you say or imply their classes are worthless, you've said or implied that their entire lives are worthless. Most people do not like to think that their lives are worthless.

Professors can sometimes seem aloof or demanding. This is partially due to the demands placed on them (see "Two Masters," above). Being aloof or demanding doesn't mean a professor doesn't like you. Most professors are interested in their students to the extent that students are interested in the subject being taught. In this

sense, professors often try to stir students' interest in a subject, but actively hostile/ uninterested students will often find their instructors uninterested in them. Motivated and interested students often inspire the same in their professors.[2]

To be sure, there are exceptions: some professors will be hostile or uninterested regardless of how much effort a student shows, and some will be martyrs who try to reach even the most distant, disgruntled student. But most professors are in the middle, looking for students who are engaged and focusing on those students.

Nearly all your instructors have passed through the trials and tests they're giving you: if they hadn't done so, and excelled, they wouldn't be teaching you. Thus, few are impressed when you allocate time poorly, try to cram before tests, appear hungover in class, and show up late to or miss class repeatedly. On the other hand, many will cut slack for diligent students who show promise.

One reason professors don't think much of student excuses is because many students have different priorities than professors. As undergraduates, most professors were part of the "academic culture" on campus, to use Murray Sperber's term (5); in contrast, many undergraduates are part of the collegiate (interested in the Greek system, parties, and football games) or vocational (interested in job training) cultures. The academic culture, according to Sperber, "[has a] minimal understanding of, and sympathy for, the majority of their undergraduate students" (7) at big public schools. I think he's too harsh, but the principle is accurate: if you aren't in school to learn and develop your intellect—and most students in most schools aren't, as Sperber shows—you probably won't understand your professors and their motivations. But they will understand yours. Academics are a disproportionately small percentage of the student population at most schools but an extraordinary large proportion of grad students and professors.

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[2] In the hard sciences, for example, it's often wise to ask professors if you can join their research labs, where you'll gain valuable experience and make important connections. But most undergraduates don't seem to realize that the first thing they have to do is ask. The second thing they need to do is show their professors that they won't be a waste of time.

Requirements for Undergraduates

You can only graduate from a university if you pick a major and fulfill its requirements. Clark called its undergraduate requirements "Perspectives," while the University of Arizona calls them "Gen Eds" or "General Education Requirements." There is no way to avoid filling requirements, and most requirements demand that you spend a certain amount of time with your rear end in a seat at a certain number of classes. Fulfill as many requirements as possible as soon as you realize those requirements exist, assuming you want to graduate on time.

You'll often be assigned an "academic advisor," whose job it is to help keep you on track to graduate and to help you pick courses. Don't be afraid of this person: he or she will often help you or point you to people who can help you. At bigger schools, your advisor will often seem harried or uninterested, but even if that person is, you should remember that he or she is still a valuable resource. And if you can't get help from your counselor, find the requirements of potential majors or all majors and work toward checking them off, because you won't be able to get out of them.

I tried and found that there is virtually no negotiating with requirements, even if some are or seem silly. For example, Clark required that students take "science perspective." In studying my schedule and options, I figured that astronomy was the easiest way out. Considering how useless astronomy looked, I decided to petition the Dean of Students to be excused from it so I could take better classes, arguing that I'd taken real science classes in high school and that I could be more productively engaged elsewhere. The answer came quickly: "no."

Astronomy consisted of tasks like memorizing the lengths of planets from the sun, what the Kuiper Belt is[3], and the like. Tests asked things like the size of each planet—in other words, to regurgitate facts that one can find in two seconds on Google, which is how I found out what the Kuiper Belt is again. The professor teaching it no longer

[3] A bunch of rocks near Neptune's orbit, for those of you wondering.

appeared to have a firm grasp of his mental faculties. At least it was relatively easy: the only worse thing would've been having to take, say, chemistry, or a real science class.

That astronomy class was probably the most useless I took, and Clark's tuition at that time was something like $22,000. I received a scholarship toward tuition, room, and board, so my tuition was probably closer to $16,000, or $8,000 per semester. Undergrads took four classes, so the useless astronomy class cost around $2,000. Would I have rather taken another English class, or Computer Science, or a myriad of other subjects? You bet. But I couldn't, and if I didn't take some kind of science class, I wouldn't have been able to graduate, no matter the uselessness of the class.

What should I major in?

I have a theory that virtually everything you learn in universities and in life is the substance or application of two (or three, depending on how you wish to count) abilities: math and reading/writing. Regardless of what you major in, work on building those two skills.

In the liberal arts, that most often means philosophy, English, and history; other majors vary by university, but those requiring a lot of reading and writing are almost always better than those that don't. In the hard sciences and economics you'll be left to develop your reading and writing skills on your own. And this does apply to you, whether you realize it or not. As software company founder and rich guy Joel Spolsky wrote:

> Even on the small scale, when you look at any programming organization, the programmers with the most power and influence are the ones who can write and speak in English clearly, convincingly, and comfortably. Also it helps to be tall, but you can't do anything about that.
>
> The difference between a tolerable programmer and a great programmer is not how many programming languages they know, and it's not whether they prefer Python or Java. It's whether they can communicate their ideas. By persuading other people, they get leverage.

So if you want leverage, learn how to write. And if liberal arts majors don't want to be bamboozled by statistics, they better learn some math.

In short, I have no idea what you should major in. But you probably shouldn't major in business, communication, sociology, or criminal justice, all of which are worthy subjects that, for most undergraduates, are sufficiently watered down that you're unlikely to challenge yourself much. Odds are that you'll even make more money as a philosophy major than a business management major ("Salary Increase by Major").

Paul Graham wrote:

> Thomas Huxley said "Try to learn something about everything and everything about something." Most universities aim at this ideal.
>
> But what's everything? To me it means, all that people learn in the course of working honestly on hard problems. All such work tends to be related, in that ideas and techniques from one field can often be transplanted successfully to others. Even others that seem quite distant. For example, I write essays the same way I write software: I sit down and blow out a lame version 1 as fast as I can type, then spend several weeks rewriting it.

The reality is that your specific major probably doesn't matter nearly as much as your tenacity, ability to learn, and the consistent application of that ability to learn to specific problems. One way people—friends, employers, graduate schools, colleagues, etc.—measure this is by measuring the way you speak and write, which together are a proxy for how much and how deeply you've read.

A great deal of college is about teaching you *how* to learn, and reading is probably the fastest way to learn. Once you've mastered the art of reading, you'll be set for life, provided you keep exercising the skills you develop at a university. Keep that in mind as you search for majors: those that assign more reading, more writing, and more math are probably more worthwhile than those that don't.

Many people have many opinions about what you should major in, and most of them are probably wrong. This one included. As I said previously, it probably doesn't matter in the long run, so don't worry much about what to major in—worry about finding something you're passionate about and something you love. In *Prelude to Mathematics*, W.W. Sawyer wrote: "An activity engaged in purely for its consequences, without any pleasure for the activity itself, is likely to be poorly executed" (16 – 17). If possible, find something to major in which you enjoy for itself, or which you can learn to enjoy for itself.

How do I get an A?

One thing you *shouldn't* do is say that all you want to do is get an A: as stated above, most professors are completely and utterly invested in their subject. When you ask how you get an "A," they're likely to be annoyed because you're indicating you *don't* care about learning, which is the best way to earn an A. Instead, you care about the badge. It's like asking how you become poet laureate, as Ebenezer Cooke does in *The Sot-Weed Factor*: the question itself is wrong, because the right question is how you become a poet, and the laureateship will follow (Barth 73). If you ask professor how to get an A, they'll also tell you what you already know: work hard at the class, show up, read the book(s) and related materials, form study groups, and the like.

Another grad student in English said that she's almost relieved when students say they just want to get an A, because it means she doesn't have to worry about them or their grade. Paradoxically, when you say that you just want an A/B/C, you lower the probability that you'll actually get it.

To get that A/B/C, demonstrate that you're interested in the material, do all the reading, and show up to class every day. Go to the professor's office hours to ask intelligent questions—like whether you're on the right track regarding a paper—or what you could've done better on a quiz. By doing so, you're *showing* that you're interested in doing better, rather than *saying* you are. Novelists have a saying: "show, don't tell," which means that you should show what a character is thinking and why they are acting in a certain way rather than telling the reader. Readers are smart and

will figure it out for themselves. Your professors will be able to figure out in a million ways whether you're interested in a subject, and when you ask how you get an A, they'll know you aren't.

Oh, and don't fear the library—it's the big place with the books. If you conduct research with books, your professors will be impressed. And learn to use the online journals. If you don't know what this means, ask a librarian, who will assist you. They very seldom bite and are there to help, and most schools also conduct library help sessions at the beginning of each year. Indeed, almost everyone at a university is there to help you learn; you just need to a) want to learn and b) ask. Many students never get to point a, and of those who do, more should get to point b.

Reflection

I wrote this now because I'm old enough to, I think, have some perspective on universities while still being young enough to remember the shock and bewilderment of the first semester of my freshmen year. This document reflects my academic training and preoccupation: it contains allusions and references to other work and is structured in such a way that you can skip easily from section to section. As a trade-off for its detail, however, weaker or uninterested students might lose interest in it before they come to the end, which is unfortunate because it describes the world they will largely be inhabiting for somewhere between one week and six if not more years.

Anecdotes from my own academic experience are included because discovering facts about the incentives in university life didn't occur all at once for me. No one gave me a document like this: I was expected to either already know or understand most of what you just read, and as a result, I spent years drawing a mental map of universities. The professors and graduate students had spent long enough in the university atmosphere that they knew how universities were structured with the thoroughness you know your native language. I've written this in the hope that it will better explain to you (in the plural sense) what I've explained to many individuals.

My natural impetus is to remember when I have to repeat the same things over and over again, consider how I might convey all the things I've said to a large number of people, and then write those things down so that they might be read, which is a vastly more efficient information transfer mechanism than speech. Nonetheless, I realize that this document and my explanations are probably not perfect, so if you've read this to the best of your ability and still have questions, don't be afraid to ask them. One thing universities should inculcate is inquisitiveness, and I hope I do so as a teacher and as a person.

Notice that this document has a version number in the upper-right corner: as time goes on and I receive questions or comments, I'll probably change this document to reflect new concerns. When you ask questions, you're not only helping yourself discover something: you're helping the person you're asking better understand the subject at hand and the nature of what they're trying to say. By asking me questions about this document, you might help me ultimately improve it, and ultimately help those who read it in the future. If there is one cultural advantage universities should impart more than any other, it is the ability to ask questions about even the most fundamental things; confusion and uncertainty are often the sources of new knowledge.

As Paul Krugman, who won the 2008 Nobel Prize for Economics, said of his own research (which led him to the prize):

> The models I wrote down that winter and spring were incomplete, if one demanded of them that they specify exactly who produced what. And yet they told meaningful stories. It took me a long time to express clearly what I was doing, but eventually I realized that one way to deal with a difficult problem is to change the question -- in particular by shifting levels.

He also has a section called "question the question," in which he recursively asks himself whether the question he has asked is the right one. For him, as for many people, questions are at the center of the learning universe, and if you learn to ask them promiscuously and then seek the answers, whether from me, your other

professors, or from books, you'll be better equipped to find the answers, do well in college, and do well in life. One challenge is often learning enough to be able to formulate the right questions, and with this in mind, I hope you know how to ask important questions about the institution you're attending.

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[4] Writers include works cited pages so others can draw on the sources used to construct an argument. Contrary to popular belief among freshmen, they're not just pointless hoops teachers set up, and they become progressively more important as you matriculate.