

Unveiling the Ivory Tower: The academic's art of work

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Doctors cure sick people, writers write, actors act, carpenters fix our leaking windows and thus help us cope with the Icelandic weather, fishermen catch the fish we eat, and bank managers put their customers' savings in peril with dubious investments. Everybody knows this, but what do faculty members who work at Reykjavik University, or for what matters at any other university in the world, do?

I suspect that the first answer to the question above that comes to most people's mind is a simple and resounding: "Nothing!" Some intellectually oriented and opinionated people might add: "Academics reside in the proverbial ivory tower, engage in relaxing activities such as staring at a blank piece of paper or at spots on a wall, and even get paid for doing so! They should get a *real* job!"

One might hope to get a more informed answer from people who are either employed by a university in a non-academic position or who study there. However, the result of an admittedly tiny poll that I conducted indicates that the answer will become at best: "Faculty members teach courses that students take and, sometimes, examine students." So here is our first, and surely least surprising, finding:

Faculty members employed by universities teach!

I like to think that our students at Reykjavik University can testify that this is correct. Indeed, in varying degrees, teaching occupies a good amount of an academic's time on university premises, and only a very small amount of that time is actually spent teaching. During that time, the academic is on stage and, to quote the late mathematician Gian-Carlo Rota, "belongs in a class with P.R. men, with entertainers, with propagandists, with preachers, with magicians, with gurus." What is invisible to the students taking our courses is that the teaching they

receive is just the tip of an iceberg. Below water level lies the time spent preparing for the delivery of lectures, planning what should be taught in a course and how, deciding what exercises the students will benefit the most from solving and when, reading and assimilating new material, keeping abreast of new developments, honing one's pedagogical skills and much more. Thus, that form of acting that we call teaching is the visible product of a substantially larger effort, just like the acting for which we admire actors is the product of many hours of preparatory work.

So academics do teach. However, elementary and high school teachers teach too, as do people offering vocational courses amongst others. What is the difference, if any, between those teachers and academic staff members working in a university? If faculty members at Reykjavik University, say, only taught courses, wouldn't the university be just an advanced high school of sorts? The answer to this question lies in the very definition of what a university is: "A university is an institution of higher education and research which grants academic degrees in a variety of subjects." The core mission of a university is not only to disseminate knowledge via teaching, but also *to create new knowledge through research*. And guess who carries out the research that aims at pushing the frontier of knowledge in the focus areas chosen by the university?

Faculty members employed by universities do research!

By carrying out research in their specific fields, academics search for new knowledge and solve existing or new problems. Research is therefore a creative act and, like all creative acts, requires a lot of work. We all tend to think of the major advances in knowledge being effortlessly made by geniuses who have one eureka moment after the other while floating in their bathtubs, being hit by falling apples while dozing off under an apple tree or while walking their dogs. However, reality is more prosaic; Newton wrote that "If others would think as hard as I did, then they would get similar results", and Edison famously added that "Genius is 99% perspiration and 1% inspiration." Adding even a small brick to the body of human knowledge is satisfying, but also agonizing work. Academics are forever wondering whether they still have what it takes to have the spark of inspiration that is needed to solve a new problem, the stamina that is necessary to work out all the details on which the correctness of one's ideas rests and the hard skin that is needed to accept the many failed attempts, the need to rework everything and to rewrite one's research papers based on the comments of one's peers. Indeed, to quote John E. Littlewood, "The life of a researcher is mostly spent in frustration, punctuated with rare inspirations."

In light of what I just wrote, it should be of no surprise to you that, to paraphrase Paul Halmos, I love to do research, I want to do research, but I hate to sit down and begin to do research. I always try to put it off as long as I can. Isn't there something I must do first? And, indeed, there is always something else that seems more pressing than the struggle of research. Teaching is one of those tasks that, unlike research, cannot be put off, but it is not the only one.

Faculty members employed by universities have service duties!

In order to function properly, to grow and to prosper, any university needs to be governed, it needs a set of working rules and regulations, which are revised as they become outdated, and it needs strategy and vision. The participation of the academics plays a fundamental role in the administration of any university and in decision making. This takes time and effort, which cannot be used for research and teaching.

In addition, each academic plays a service role in her/his research community. Have you ever asked yourself what makes science "reliable knowledge"? The research work carried out by any of us is subject to the scrutiny of our fellow scientists according to the time honoured principle of peer review. Our work is examined by our fellow academics, whose job is to assess its correctness, novelty, level of scholarship and other quality criteria. This process is called "refereeing" and is carried out by anonymous colleagues who freely lend some of their time to this painstaking work. This is "community-service" work for which none of us receives any direct benefit, but that is of fundamental importance for the fabric of science.

Some academics play leading roles in their research communities: they steer professional societies, advice research centres and other universities, sit on the editorial board of journals, serve on the program committees for conferences and workshops, evaluate doctoral dissertations, and lobby for funding from the government, amongst other things.

Didn't I just mention funding? Universities need money to support research and teaching efforts, and to offer their academic staff and students the best possible working environment. Some of the funding that we have at our disposal comes from the government. Some other comes from those of you who decide to study at our university. However, none of this funding can be used to support research activities on specific research topics, hire graduate students or postdoctoral researchers, and finance travel to conferences or to other institutions for working with our colleagues. In order to support their research and teaching agendas,

Faculty members employed by universities write grant proposals!

This is yet another thing that I personally would postpone forever, if only I could. Applying for funding is a time sink and, once one has received a negative answer from the funding body one targeted, feels like a wasted effort akin to fighting against the windmills of La Mancha. However, it is a necessary evil.

Is this all? I wish it were. Academics are expected to disseminate their work by writing accounts of their research that are accessible to the general public, to deliver specialized seminars describing their work to their peers, to attract students to the university, to transfer knowledge to industry and to play a critical role in our society. There is much more to the academic's art of work than meets the eye!

Summing up, academics act like actors while teaching, they write like writers to disseminate their work, they fish like fishermen for new ideas and they build theories and tools like carpenters while carrying out their research, they cure themselves and their students from the blues and the bruises of learning, and, unlike bankers, are held accountable for the validity of their work.

If you have read this far, I hope that you now have a better understanding of what my colleagues and I do while we are at the university and, in fact, anywhere else. Writing this piece has also been part of my work as an academic and, as a compulsive writer, I enjoyed doing so. However, the other aspects of my profession that I neglected while composing the lines you are reading are frowning at me from my list of things to do. Some of them have been there for a long time, and their deadlines are approaching fast or have long passed, alas. I hope that you will excuse me if I retreat to my ivory tower, take out my sword and continue my hopeless fight against the Hydra of Lerna that is the academic's job.