Is Email Making Professors Stupid?

It used to simplify crucial tasks.
Now it's strangling
scholars' ability to think.

Illustration by Harry Campbell for The Chronicle

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By CAL NEWPORT
February 12, 2019

Donald Knuth is one of the world's most famous living computer scientists. He's known for his pioneering efforts to bring rigorous mathematical analysis to the design of computer algorithms. An emeritus professor at Stanford University, he's currently writing the fourth volume of his classic book series, *The Art of Computer Programming*, which he's been working on since the early 1960s.

Given Knuth's renown, many people seek him out. If you're one of those people, however, you'll end up disappointed. On arriving at Knuth's homemade Stanford homepage (https://www-cs-faculty.stanford.edu/~knuth/), you'll notice that no email address is provided. If you dig deeper, you'll eventually find a page named email.html (https://www-cs-faculty.stanford.edu/~knuth/email.html) which opens with the following statement:

"I have been a happy man ever since January 1, 1990, when I no longer had an email address. I'd used email since about 1975, and it seems to me that 15 years of email is plenty for one lifetime."

Knuth does provide his mailing address at Stanford, and he asks that people send an old-fashioned letter if they need to contact him. His administrative assistant gathers these letters and presents them to Knuth in batches, getting urgent correspondence to him quickly, and putting everything else into a "buffer" that he reviews, on average, "one day every three months."

Knuth's approach to email prioritizes the long-term value of uninterrupted concentration over the short-term convenience of accessibility. Objectively speaking, this tradeoff makes sense, but it's so foreign to most tenured and tenure-track professors that it can seem ludicrous — more parody than pragmatism. This is because in the modern academic environment professors act more like middle managers than monastics. A major factor driving this reality is the digital communication Knuth so carefully avoids. Faculty life now means contending with an unending stream of electronic missives, many of which come with an expectation of rapid reply.

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When email first spread to campuses in the late 1970s, it simplified crucial tasks like communicating with distant collaborators, but as its ubiquity grew, it became a public portal through which the world beyond close colleagues could make increasing demands on a professor's time and attention, making email into a kind of digital water torture for the scholar struggling to think without interruption.

Another factor driving the professoriate's drift into middle management is a significant increase in administrative demands. In part, this is due to the growth of university bureaucracy, which, once established, inevitably consumes the time and attention of its subjects to justify its existence.

A subtler factor arose as an unexpected side effect of the introduction of "productivity-enhancing" networked personal computers to professional life. As the economist Peter G. Sassone observed in the early 1990s, personal computers made administrative tasks *just easy enough* to eliminate the need for dedicated support staff — you could now type your own memos using a word processor or file expenses directly through an intranet portal. In the short term, these changes seemed to save money. But as Sassone documents, shifting administrative tasks to high-skilled employees led to a decrease in their productivity, which reduced revenue — creating losses that often surpassed the amount of money saved by cuts to support staff. He describes this effect as a diminishment of "intellectual specialization," and it's a dynamic that's not spared higher education, where professors spend an increasing amount of time dealing with the administrative substrate of their institutions through electronic interfaces.

We can actually quantify the background hum of busyness that Knuth so assiduously avoids. In 2014, the Boise State anthropologist John Ziker released the results of a [faculty time-use study](https://thebluereview.org/faculty-time-allocation/) (https://thebluereview.org/faculty-time-allocation/), which found that the average professor spent a little over 60 hours a week working, with 30 percent of that time dedicated to email and meetings. Anecdotal reports hint that this allocation has only gotten worse over the past five years. "The days of the ivory tower are a distant memory," concludes Ziker, and many burnt-out professors agree. Until recently, I would have as well.

Now I'm not so sure.

On his website, Knuth offers the following explanation for his refusal to use email: "Email is a wonderful thing for people whose role in life is to be on top of things. But not for me; my role is to be on the bottom of things." The idea that the life of a professor should be radically different than other professions, and that universities should take far-reaching steps to allow faculty members to be "on the bottom of things" is easy to dismiss as eccentric utopianism. But the time has come to take Knuth's vision seriously.

I n 2016 I published a book titled *Deep Work* (Grand Central). It argued that the knowledge economy is systematically undervaluing uninterrupted concentration and overvaluing the convenience and flexibility offered by new technologies. If you're Google, for example, and you invest an extraordinary amount of money to hire elite programmers but then bombard them with email and meeting invitations, their cognitive capacity will be significantly impeded — thereby diminishing both the quality and quantity of the code they produce. From a bottom-line perspective, a company like Google is better off creating a Knuth-style work environment in which high-performers work for long stretches free from distractions — *even if* doing so makes other internal activities less convenient.

Deep Work resonated because there's a growing sense that the way we work today — defined by hyperactive digital distraction and onerous administrative burdens — is both strangling productivity and making people miserable. However, the book has largely failed to spark major business overhauls, and for good reasons. In the business world, a big culture change is risky; if it doesn't work right away you could lose your competitive edge. It also requires upfront investment — you can't have Donald Knuth, for example, without paying for his assistant. To prove the long-term value of deep thinking in a distracted world, some industry needs to take the leap.
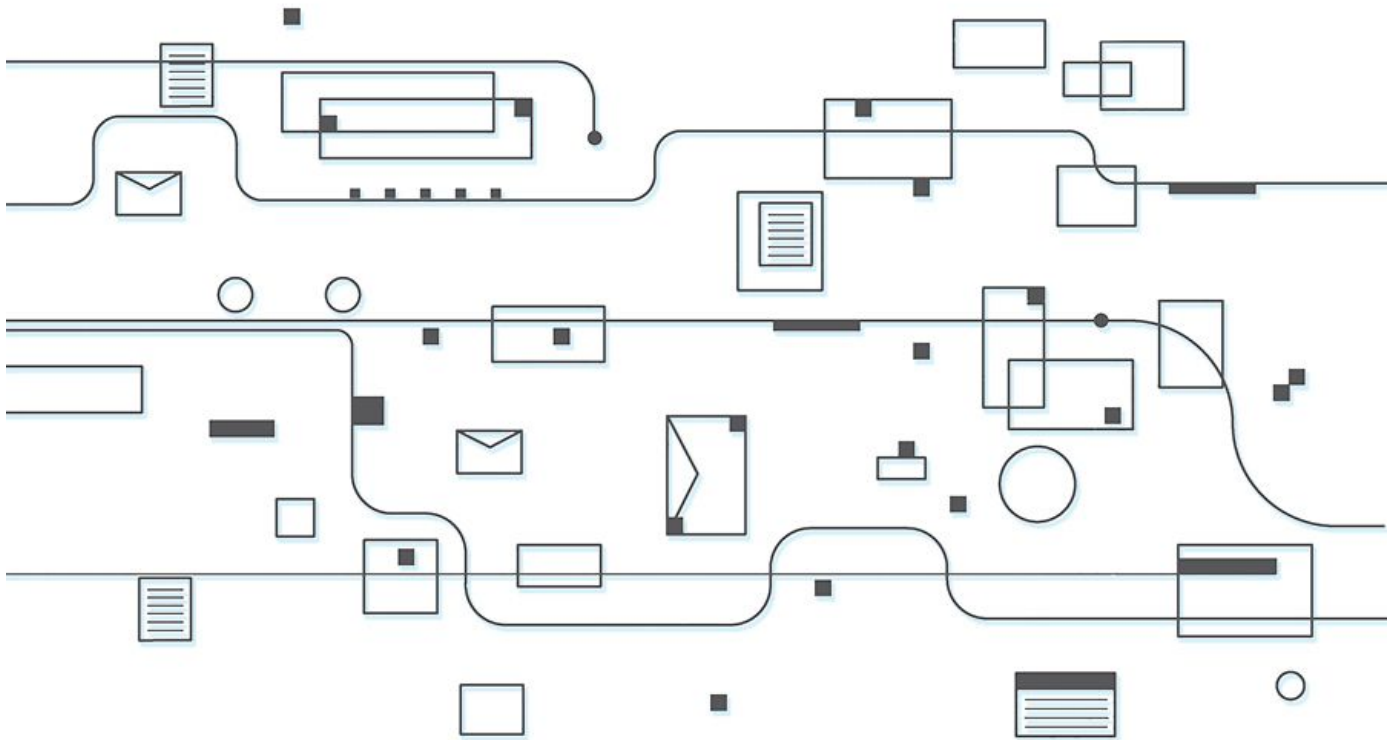
I can think of at least three strong arguments for why higher education should be that industry, significantly restructuring its work culture to provide professors more uninterrupted time for thinking and teaching, and require less time on email and administrative duties.

First, universities have more freedom to experiment than a business struggling in a competitive market. Georgetown University, where I work, has been around since the time of George Washington (you can still see the steps where this founding father once gave a speech on campus): It's unlikely that after two centuries our downfall will be experimenting with email norms. The academy should leverage this durability to take the lead in exploring how to preserve the value of focused thought in a society overwhelmed by distraction.

Second, by prioritizing deep work universities would get better at their primary tasks of research and pedagogy. Producing and organizing complex knowledge requires uninterrupted concentration — the more time you have to focus, the better the work you produce. Switching from Task A (say, preparing a course lecture) to Task B (say, responding to "urgent" emails) can significantly reduce your cognitive capacity — essentially making you artificially dumber. Professors are increasingly buffeted by a relentless tide of digital disruptions and onerous administrative demands. A classic sign of

bureaucratic malaise is when efforts to keep an organization running begin to crowd out the work that the organization was formed to support in the first place. Higher education has fallen into this trap.

Finally, a reorganization of academic life to support careful thought and sustained attention would produce benefits that extend well beyond the campus. It would allow higher education to proudly present itself as the last bastion of focus in a distracted world; a citadel of concentration defending the life of the mind against our culture's slide toward digital noise. Given the hundreds of thousands of students who pass through our institutions each year, an emphasis on deep work would gradually filter out into society, shaping the way future business leaders organize their companies and even how future parents raise their children.

The forces driving us to constantly look at screens are varied and strong. But there's nobility in pushing back. Amid a general crisis of attention, universities have not only the opportunity but an obligation to integrate the value of sustained concentration into their social mission.

What concrete changes are needed to create a Donald Knuth-style academic culture? I propose two starting points: a return to intellectual specialization, and an overhaul of the way we structure faculty service obligations.

By "intellectual specialization" I mean the high-value activities for which scholars were specially trained, specifically research and teaching, not administrative tasks mediated through a computer screen. Reprioritizing intellectual specialization would reverse the shift in academic life from the monastic to the managerial.

For a hint about how to achieve this goal, let's return to the example of Knuth. His deep work is enabled by his executive assistant, who intercepts all incoming communication, makes sense of it, brings to Knuth only what he needs to see, and does so only at ideal times for him to see it. His assistant also directly handles the administrative chores — things like scheduling meetings and filing expenses — that might otherwise add up to a major time sink for Knuth.

It's hard to overstate the benefits of this setup. Knuth is free to think hard about the most important and specialized aspects of his work, for hours at a time, disconnected from the background pull of inboxes and "pressing" tasks. If there's any professional context in

which this arrangement should become standard, it's the academy.

Imagine if when you first arrive on campus, instead of being shown how to configure your email inbox or access the university IT systems, you're introduced to the assistant who will handle most of that for you.

> *Email has become a kind of digital water torture for the scholar struggling to think without interruption.*

There are at least two major objections to my proposal. The first is the fear of inconvenience. If I can no longer expect you to see and reply to my email within 20 minutes, this might make my life harder and even cause the occasional bad thing to happen (think: missed deadline). This fear is largely overstated. Something I've observed in studying organizations that shift away from email is that their employees and clients quickly adapt — indeed, though people often think they want accessibility, what they really crave is predictability.

The more pressing objection, of course, is cost. Most departments provide some level of administrative support to professors, but to extend this to something like Knuth's dedicated-assistant model would be expensive. This shouldn't be a deal breaker. A one-to-one ratio of professors to assistants isn't necessary to reap most of the benefits of Knuth's arrangement. The same advances in technology that have led us to disastrously shift the burden of administrative work onto frontline employees has also greatly increased the efficiency with which support staff can operate — enabling a smaller pool of assistants to help many professors.

We must also acknowledge that the real costs of administrative work are currently hidden in ways that don't immediately show up on a university's balance sheet. Distracted and interrupted professors produce less research and spend less time innovating in the classroom. That reality doesn't directly impact revenue and is hard to measure as a concrete cost and therefore easy to ignore.
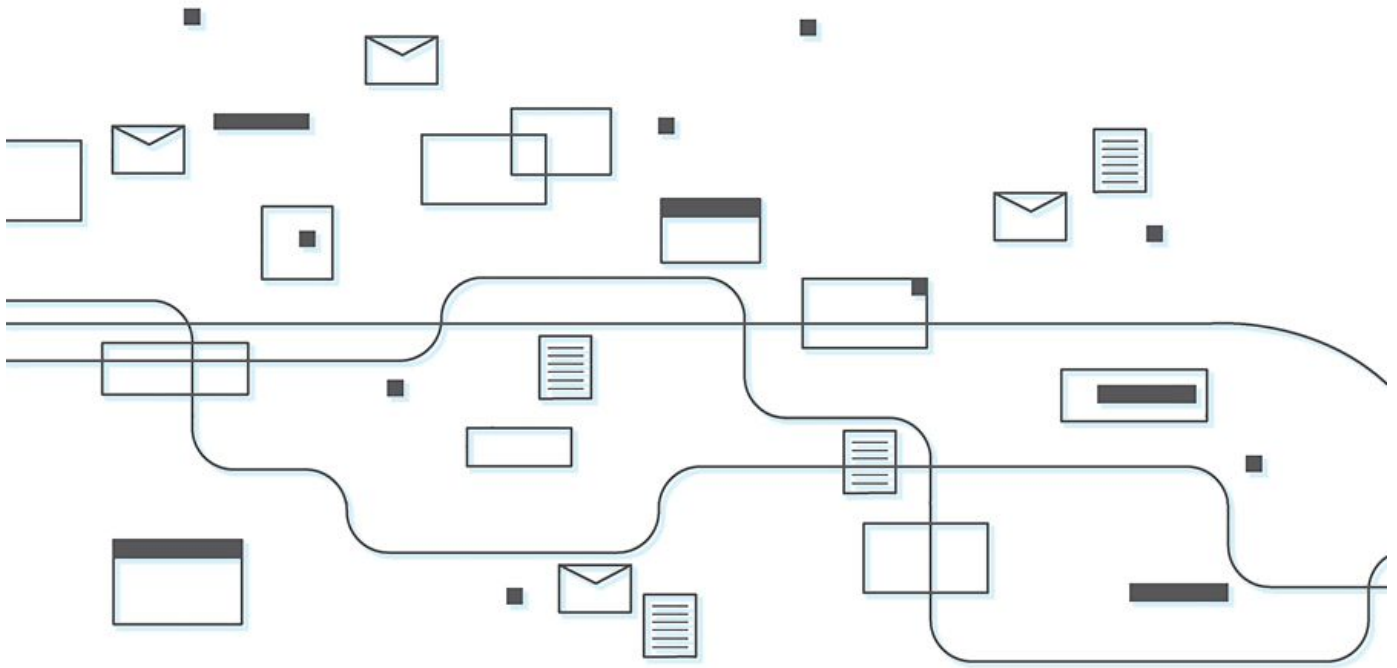
To keep up with this administrative overload, professors also often add a "second shift" to their schedule, returning to work at night, as well as on weekends and vacations, to catch up on the never-ending onslaught of demands on their time and attention. In the short term, this scheduling sleight of hand keeps departments functioning without requiring additional faculty or support staff but at the expense of long-term burnout and dissatisfaction.

In short, we're already paying a price for the proliferation of ceaseless communication and administrative busywork. The question is whether we're finally ready to admit it and have an honest discussion about whether it's worth it.

A second necessary change to academic culture is reforming the way faculty service is structured. These obligations are an essential part of supporting the university, which depends on faculty members to review applications and tenure cases, participate in self-governance, and take on departmental leadership roles. But for many professors, service has transformed from an important duty to a serious problem. This is due, in large part, to the haphazard manner in which the obligations tend to be distributed. A typical approach to service is to say "yes" to a fire hose of incoming requests until you become so overcommitted that you retreat in desperation to catch up.

Those whose personalities can tolerate it sometimes deploy a more extreme strategy in which they shirk these responsibilities, risking the disapproval of colleagues in exchange for peace and quiet. Perhaps the most famous description of this approach comes from the Nobel Prize-winning physicist Richard Feynman, who explained his method in a 1981 television interview:

"To do real good physics work, you do need absolute solid lengths of time … it needs a lot of concentration … if you have a job administrating anything, you don't have the time. So I have invented another myth for myself: that I'm irresponsible. I'm actively irresponsible. I tell everyone I don't do anything. If anyone asks me to be on a committee …'no' I tell them: I'm irresponsible."

Feynman's strategy is obviously unfair as it rewards those few individuals who happen to be born with an unusually low level of agreeableness — enforcing an implicit niceness tax on everyone else.

One solution is to directly confront the zero sum trade-off generated by service obligations. Professors have a fixed amount of time; the more that's dedicated to service, the less that can be dedicated to research and teaching. Instead of ignoring this reality, we should clearly articulate these trade-offs by specifying the exact amount of time a faculty member is expected to devote to service each year. That amount would be negotiated between a professor and a department chair, and the professors would be encouraged to enforce the limits of their service budgets.

These budgets would vary depending on the career phase and interests of individual professors. A faculty member actively engaged in research or creating new courses might be responsible for only a handful of service hours per week, while others would have more substantial obligations. Pre-tenure faculty members would presumably have smaller budgets than full professors who no longer need to consider promotion, and so on. The occasional major service commitment, like serving as department chair, would necessitate a large budget, but even in this case, making the trade-off clear is important. If the time required to be department chair is absurd, it's useful to quantify this absurdity as a stark case for additional administrative support, or to help calibrate the proper compensation in terms of course buyouts or leave.

The obvious drawback to a system of service budgets is that they would most likely reduce the overall number of hours faculty devote to service, leading to unfilled obligations. There are, however, a couple things to keep in mind about this concern. An increase in administrative support, as I've proposed, would significantly reduce the number of hours required to accomplish the same amount of service. When a dedicated support staff can handle the logistical aspects of most obligations, the total time burden on professors will be greatly diminished.

It's also well-known that working within a fixed time budget has a way of increasing efficiency. As Cyril Parkinson famously concluded in his mid-20th century study of the British Civil Service: "work expands so as to fill the time available for its completion."

Abstractly speaking, university service is crucial. In practice, however, some obligations are not crucial — initiatives that serve purposes more political than pragmatic, or projects that were once important but are now propelled mainly by legacy momentum. If there are fewer professorial service hours to go around, universities will be forced to carefully re-examine which activities are truly worthwhile, and which mainly serve to sustain bureaucratic self-regeneration. This type of administrative decluttering is long overdue in higher education.
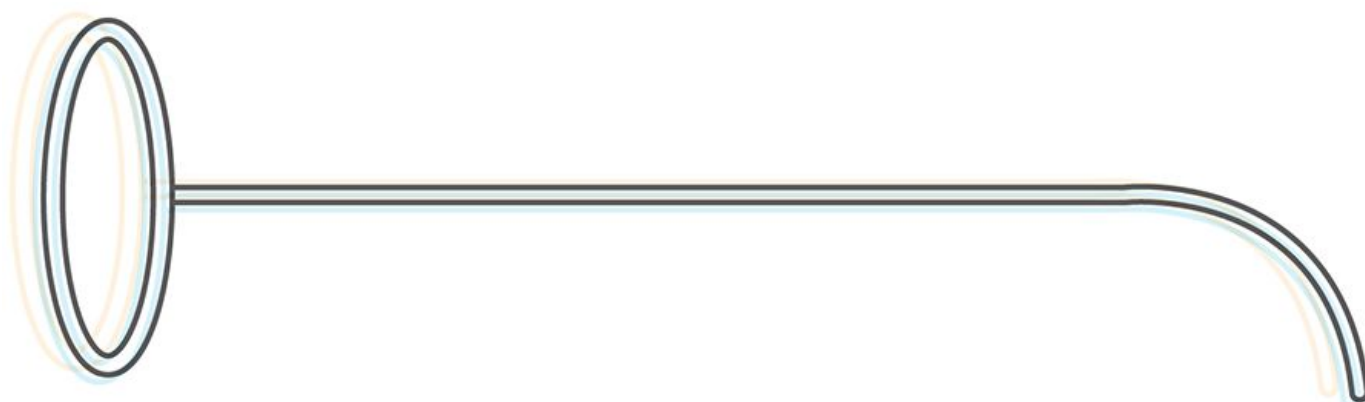
Society has been engulfed by a crisis of concentration that has hit higher education particularly hard. Our time and attention have gradually shifted from the specialized intellectual tasks that directly produce value to busywork, such as managing our inboxes and tackling nonessential administrative obligations.

Instead of giving in to this reality, we should reaffirm the importance of the life of the mind by reforming the academy as a beacon of concentration in an age of distraction. Higher education can lead the way in turning back the tide of electronic chatter that threatens to overwhelm us. Do we have the will to protect what's important against the pull of what's easy? Will we stand for the power of concentration over the shallowness of rapid communication? And if not us, then who?

Donald Knuth's commitment to being on the bottom of things might seem eccentric, but it also might be the thing that saves academic life.

Cal Newport is an associate professor of computer science at Georgetown University. He is the author of six books, including Deep Work: Rules for Focused Success in a Distracted World *(Grand Central, 2016), and* Digital Minimalism: Choosing a Focused Life in a Noisy World*, just out from Portfolio.*

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