

students ask these questions, but these are the wrong questions for someone embarking on a research career. I tell students that they should be asking themselves more personal questions. What would they like to learn about? What do they observe in the world and find puzzling? What topics get them excited?

Doing research is not like digging a ditch. A person can dig a perfectly fine ditch without enjoying his job for a minute. By contrast, research requires a certain passion about the topic being studied. Passion goes hand in hand with creativity. No one can manufacture this passion for strategic reasons of career advancement.

Most people who pursue an academic career do so because they are fascinated by their subject. It is for this reason that professors report among the highest rates of job satisfaction of all professions. Professors have found what they like to do, and they have found someone to pay them to do it.

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Duty and Creativity in Economic Scholarship

How do I work? Messily, cleaning up in dull moments. And I imitate my betters. And I cherish my little flame.

Academic life, like any other, has a full in-box. A professor can stay busy answering his or her mail. Professors, after all, are employed by bureaucracies, and it is the way of bureaucracies to generate tasks to fill the time allotted. The committees of a modern college or university grow yearly. They are too many and too large by a factor of about three, but you can make a career on them, attending to what appears to be your duty. And they are socially pleasant. Serving on a committee is a chance to get to know your colleagues, a chance strangely rare in academic life.

The requests that come from outside by mail or phone or e-mail grow steadily. Some grow because colleges are part of the 20 percent or so of national income in the course of being absorbed by the federal government without actually becoming government offices, above the 40 percent now supplying alleged goods and services as some level of government. Will the professor kindly fill out this report of how he or she spent his or her time, suitably jiggered to keep the feds happy? Some grow because the time of professors at *other* universities is a common pool, which academic institutions have become careless in exploiting. Will he or she kindly act as referee for a paper generated by fear of tenure review? Will he or she kindly be one of a dozen or so people solicited to write meaningless letters of

recommendation, interpretable only by the people in the identical field who know that Ken Arrow always exaggerates or that Stan Engerman always understates, but read by committees of people in other fields who know nothing of this?

I am not recommending irresponsibility. Some refereeing needs to be done, and who better to do it than you or me? Some committees need to meet, even though the VP will then do what she already planned to do. Most first-class mail, and even some third-class, warrants a reply, if only a scribbled note on the bottom. Books should be reviewed. The students must be graded. I seldom miss a class, even for really important matters like shopping the post-Christmas sales.

Many bureaucratic jobs really do need to be done, and it is shameful not to do them when asked, if you can. Everyone with gifts that way should be chair of the department for a while, poor though the job is (it is like being a foreman in a factory—neither labor nor management, chewed up by both). The work has to be done. The journals do have to be edited (though the task would be lighter if we did not need ten pieces for tenure). I still growl at a friend who twice turned down the editorship of the *Journal of Economic History* for what seem selfish reasons. He was willing to take honors from the profession but not to do the dirty work. Finally I shamed him into doing it.

And yet. Harry Johnson and Robert Mundell are paired in my mind, both at Chicago in the early 1970s. Both were Canadians, both heavy drinkers, both world famous in trade theory. Harry was the most responsible academic I have known, the very soul of professional care. His capacity for routine work was amazing. I came into the department once on a Saturday morning to find him with a pile of fifty Ph.D. core examinations on one side of the desk and a full bottle of scotch on the other. When I left a few hours later the pile and the scotch, both finished, had traded positions. Johnson inspired hundreds of other economists, traveling incessantly to universities off the main track, commenting on everyone's work, synthesizing, editing, teaching (his classes were models of preparation and clarity), attending committees (while opening his mail, all of which he answered promptly), running the invisible college. Bob Mundell, on the other hand, is among the least responsible academics I have known (the competition is stiff). His office at Chicago looked like the result of a terrorist bombing. He never prepared classes. He was editor of the *JPE* for a while, but was so negligent that Harry had to take over and straighten things up. And yet. Who remembers Harry?

And who can forget Bob's contribution to international monetary theory, in a brief flurry of creativity from 1965 to 1970?

If you are going to do creative work, you have to cherish the flame. You have to protect it from the puffing of bureaucracy. The examples from art are impressive, the most extreme case being Gauguin, who one day (it is said: the true story must be more complicated) left his bureaucracy and his family for a life of painting in Tahiti. That is a terrible thing to do, morally indefensible, and as a woman I am truly appalled. And yet.

The literary critic Edmund Wilson had late in life a postcard printed up, which he would use to reply to requests not relevant to his current projects. It said, "Edmund Wilson regrets that he does not (1.) Write testimonials for books (2.) Attend conferences (3.) Comment on unsolicited manuscripts" and so on through the dozen ways of snuffing the flame. He would check off the relevant item and drop it in the mail to the person soliciting him. The technique is harsh, but you see the point.

I learned how to cherish my flame from experts. My mother's passions for painting, singing (she started a promising career in opera), Greek, poetry, and remodeling the house have been a model of how to work for me. In 1995 I attended a conference at Temple University on writing, and some woman gave a paper called "Writing on the Bias" ("on the bias" is a term in sewing, guys). She said she learned to write by watching her mother make beautiful clothing. The inspiration to work is the same, whatever the medium. It fits me. My mother's way of tearing down a wall and rebuilding it is a way of doing science.

My father was a professor, too (as is my kid sister, a psychologist; professing is the family business). He was well known in political science in the 1950s and 1960s, a fine scholar. I watched him goof off a lot between deadlines. He would read two mystery novels a night, for example, and read many other books not on his professional list (his profession was the American Supreme Court). I say "goofing off," but that's not right, because he showed me that wide reading makes a flexible scholar. From him I learned to make time for reading outside British iron and steel 1870–1914, my dissertation subject, or British economic history, my specialty. The result was for example that in early middle life I had a way of learning something about the humanities, in order to see the "rhetoric" of economics; and in late middle life I could see the relevance to economics of ethical reflection.

My mentor early in graduate school was John Meyer, whose graduate course in transportation economics I had taken as a senior in college. He supported me for a couple of summers, and in part during the year, in exchange for incompetent assistance on the economics of slavery and the Colombian Transport Project. I saw him as an academic entrepreneur, more businesslike than my father. But "businesslike" does not mean "methodical, orderly, time-keeping." The word is "businesslike," not "bureaucracy-like." It is what foreign academics can learn from American academics, using the best values of a commercial civilization for the study of economics or Greek.

Meyer's force and business reminded me of my mother, or her father, an electrical contractor in Michigan. I noticed in particular that Meyer was ruthless about his research time, as an electrical contractor had better be ruthless about his wiring time. One day for example I was standing in Meyer's office waiting to be told what to do (research assistants are like that, unfortunately) when his secretary brought in a new book from the mail. Meyer tore open the package, turned at once to the index, scanned the pages he had looked up, and tossed the book aside, probably forever. In retrospect it's possible he was looking up (1) his own name and (2) sex. But at the time it struck me as an emblem of how a businesslike scholar works. Get right to the point. Dig out what you need. Don't read books; use them. From Meyer I learned to use the books relevant to a particular project.

Read for pleasure, use for work. Since then I've rarely read a nonfiction book cover to cover, though I've used thousands of books. As it was put by Francis Bacon: "Some books are to be tasted, others to be swallowed, and some few [very few, and mainly if written by your scientific opponents] to be chewed and digested." Good advice (though, it should be noted, from a scoundrel: Bacon was for instance the last man to use torture in England for official purposes).

But in my father's way the "pleasure" reading kept becoming work reading. I would read about astronomy for pleasure, but then find ten years later that I was using what I had absorbed about the scholarly attitude of astrophysicists to compare with economics and its math-department values. I would read about linguistics for pleasure—if I had it to do over again, I think I would become a linguist, although probably unhappily, linguistics in my day being one of the most violently contentious fields around. But then ten years

later I found that the linguistics illuminated how an economy operates. In the early 1980s I read Thomas Mann's first big novel, *Buddenbrooks*, because I was ashamed I had not read it. I found it enthralling and recognized that it was one of the few sympathetic portraits of a businessman in modern literature (another is David Lodge's recent *Nice Work*). It started me thinking, at Arjo Klammer's urging, about the role of persuasion in the economy, and then of ethics and our times.

My Ph.D. dissertation at Harvard was supervised, if that is quite the word, by Alexander Gerschenkron, the economic historian. One learned about cherishing one's creative flame in many ways from Gerschenkron. For one thing, he did not believe in spending a lot of time leading advanced graduate students through their work step-by-step. His neglect appears to have arisen from conviction, not sloth, since he would spend many hours talking to each first-year student in his large required course in economic history about their term papers. But from him no one got advice on how to write a thesis. Stop whining. Go read and write. In this I contrast Gerschenkron with the labor economist the late H. Gregg Lewis, long a colleague at Chicago, whom I watched extract the best from students by working with them closely, sometimes daily. By contrast, Gerschenkron got the best out of us by not working with us at all. You just wanted to do it right. Both models produced a lot of good scholarship.

I recall only one conversation with Gerschenkron about the thesis. Mostly we talked about baseball or literature. A *doktorbruder* of mine, Knick Harley, had exactly two conversations about his thesis, one of which consisted of Gerschenkron saying of Knick's long work on British shipbuilding, "It doesn't have an argument, does it?" Knick went back and worked for another year, giving it an argument.

Gerschenkron made his first impression on many people through his office, another lesson in cherishing the flame. It was an appalling mess, books and papers piled high, a long tunnel of stacked tomes to the desk itself, bottles of brandy littered within reach (he had a heart condition). Gerschenkron claimed that he knew where everything was because once a year he spent a day going through the stacks. It was one of the great messes of academic life. The prize in this regard goes in fact to Leo Goodman, the sociologist and statistician at Chicago, whose office had when I saw it a ton of unopened mail covering the entire floor, tilting up to the walls at the angle of repose of mail. Al Harberger's office at Chicago, despite the work of a super secretary,

Elyce Monroe, was only an order of magnitude or two below Goodman's entropy scale. Gerschenkron's lay somewhere between Harberger's and Goodman's.

The messy academic offices make the point. These were brilliantly creative people, masters in their field and beyond. The moral is given by the joke: "If a messy desk is a sign of a messy mind, what's an empty desk a sign of?" I recently saw at the University of Virginia the office of Ralph Cohen, a great student of literature, and it reminded me so strongly of Gerschenkron's that I told him so. Cohen, Gerschenkron, and the rest did not waste time being neat about inessentials. They were neat when it mattered, for this footnote or that equation—and then fanatically neat, willing to go to absurd lengths of precision—but not as a rule in matters far from the creative flame. Being neat about inessentials is like attending all committees and answering all mail or, in the modern mode, reading the manual from start to finish before starting up the computer. In the way of John Meyer or my father, Gerschenkron was businesslike and neat when it mattered, for compiling a table on Russian agriculture in the late nineteenth century or for writing English better than most native English speakers. But for the rest, well: clean up in a dull moment.

In the way of my father, too, who was a friend of his for this reason, Gerschenkron read widely, showing that the creative flame burns best in the open air. He wrote papers on the theory of index numbers, but also on the translations of Shakespeare. It was said implausibly but not impossibly that when the great critic Roman Jakobson retired from his chair in Slavic Literature at Harvard that Gerschenkron from Economics was on the short list to fill it. Waiting in Gerschenkron's chaotic office for a chat about baseball one day I received from the nearest of numerous stacks of books and magazines a lesson in the scholarly life, the sort of lesson that professors forget they give. The stack contained a book of plays in Latin, a book on non-Euclidean geometry, a book of chess problems, numerous statistical tomes, journals of literature and science, several historical works in various languages, and, at the bottom of it all, two feet deep, a well-worn copy of *Mad* magazine. Here was a scholar.

Above all I learned how to cherish the flame from Robert Fogel, who hired me at Chicago and was my colleague there for seven or eight years before he decamped for a stint at Harvard. One learned

from Fogel, as I had learned in a smaller way from my mother, my father, from Meyer, and from Gerschenkron, the nitty-gritty of cherishing the flame.

The nitty-gritty does not mean isolating oneself from the scholarly conversation. For example, Fogel sends draft papers out for comment on a massive scale. His students have adopted the practice. Invite criticism and take advantage of it. Mail is cheap. "I'd rather be criticized in private by a friend," says Fogel, "than be savaged in public by an enemy," and unlike most of us he actually believes it. (He also believes he has more friends than he in fact does, but that is another matter.) He believes deeply in the conversation of scholarship, often starting a new project by writing long, sweetly reasonable letters to other scholars, whether or not he has been introduced. I have since learned how unusual is Fogel's attitude toward criticism. A few years ago, for example, I sent fifty pages of confidential comments to a historical demographer, reckoned a friend, who did not thank me but instead got angry. She treated me with hostility even when I was being harassed by my sister about my gender change, and all the other women academics at the Social Science History Association supported me warmly (they threw a party for me with balloons reading "It's a girl!"). A couple of years ago I replied at length to a request by a well-known experimental economist to criticize a draft, ending by telling him he needed to read more. He got angry, too, like a bush leaguer. Fogel is a major leaguer.

Fogel does not spurn the nitty-gritty of administration, either, so long as it too feeds the scholarly flame. He has assembled research teams, larger and larger and larger with each successive project (each project, admittedly, less interesting than the last: he seems to be a lone scholar who wants nonetheless to run research teams). He has repeatedly created new institutions and taught his students the desirability of doing the same. His workshop in economic history was one of many in the Chicago Department of Economics—the institution of workshops is Chicago's main contribution to the culture of the field—but his was suffused with warmth as well as rigor. Some of the other workshops at Chicago seemed to spring more from the dark side of the Force. Chicago had a stream of foreign visitors coming to study with Fogel, because Fogel does not view demographers and historians as engaged in some other enterprise that we economists can safely ignore. Like most economists he believes in intellectual

specialization. But unlike most economists he is consistent in his economics: after the specialization he also believes in trade, rather than piling up exports unsold in the backyard.

Fogel embraced with enthusiasm the nitty-gritty task of financing his little flame of scholarship. He taught us that a scholarly life was worth paying for. He got fellowships for his visitors, he argued for appointments, and he paid for much of the resulting intellectual activity out of his own pocket. He spent what seemed like enormous sums on cameras and tape recorders and other equipment, using them to record first drafts of papers in seminars and to photograph participants quarreling with each other at conferences. A tape of the last seminar ran as background music for the famous annual Indoor Picnic at Bob and Enid's.

All these unifications of Fogel's life with his work were corollaries of The Great Nitty-Gritty, which I learned from my parents and Meyer and Gerschenkron, too: *put scholarship first*. Always, always scholarship came first. Moses Abramovitz, a student of Simon Kuznets as Fogel was, tells how terrifying it was to encounter Kuznets, because the older scholar would invariably ask, as though to a graduate student who was not making very good progress on his dissertation, "Well, Moses, what are you working on?" Fogel acted always as though Kuznets was going to show up in a few minutes and pop the overwhelming question, "Well, Robert, what are you working on?" He worked, and works, incessantly, to a plan that Kuznets would recognize as the most serious of scholarly work. When the Nobel committee called Fogel to announce his Nobel Prize, in the wee hours Chicago time, Fogel was awake and working, working, working.

So I try to work like these people, watching them cherishing the flame. Flame-cherishers are rare, so you have to pay attention when you run into one. I watch how the best people work and then try to imitate them. That's how you learn a sport and that's how you learn scholarship. Watch how the tennis player lines up her backhand. Watch how Bob Solow brings a personal tone into his scholarly writing. Keep your eyes open for hot tips.

For example, from the world historian at Chicago, William McNeill, whose office was across the hall from mine, I learned that you should never complain about teaching. He combined his teaching with his research, as we all should—anyone who can't learn a lot about economics from teaching Economics 1 is intellectually dead. McNeill said it this way:

A university promotes scholarship less through the leisure it confers upon faculty and students than through the routines of classroom performance that require student and teacher to have something to say at a fixed point in time, ready or not. By compelling initial formulations of a given subject matter in this way, ideas are literally forced into existence, to wither or to flourish under subsequent examination as the case may be. (McNeill 1980, vii)

Or as another example, from Milton Friedman I learned how to keep theory connected with fact, by asking myself Milton's most terrifying seminar question, "How do you know?" Milton is always ready to listen to some fool's answer. At the first cocktail party I attended at Chicago as an assistant professor in 1968 I was holding forth to a group including Milton on the monopoly of professional sports, the existence of which I had learned from reading Milton's writings. He asked mildly, "How do you know? How do you know that professional sports is a monopoly?" Gak. Jessum. I dunno. Milton told me so.

Now the problem is that it is hard to arrange to be around world-class scholars every day, right? After all, most of us are not at MIT, and even those who are there don't chat daily with Paul Samuelson or Peter Temin or Franklin Fisher, right?

No, wrong. You can learn from writings, without a presence, whether you are in Cambridge, Massachusetts, or at the North Pole, if you give it a serious try. This entails, though, reading, which most economists do not do enough of. Books, especially. I am often depressed by how few books economists have in their houses. An economist who thinks that economics, "like physics" (as they'll always say, without knowing physics), requires one merely to read the latest articles is not going to be much of an economist. (It should be noted that most fields in physics are not "like physics" in this sense, and that anyway physicists have famously wide interests. The definition of a string quartet at the Institute for Advanced Study at Princeton is three physicists and a mathematician.)

I learned most about The Great Nitty-Gritty, more even than from Fogel or Gerschenkron or Meyer or my parents, by reading books. I learned to pay attention to Bill McNeill by being a colleague, true, but I learned the idea about teaching from one of his books. Milton (Friedman, and the poet John) has taught me more in print than in person.

There's an enormous literature on How to Cherish Your Flame, in as much detail and specificity as you could want. You've just got to

read beyond the *Journal of Economic Theory*. If you're going to be anything but a routine scholar, you need to learn that people outside of economics are not all misled dolts. You can learn from them, if you'll just start buying and reading their books. Listen up.

An important example for me was the essay by the American sociologist C. Wright Mills (I do not recommend his views on economics), "On Intellectual Craftsmanship." It is an appendix to a collection of his essays called *The Sociological Imagination* and tells in detail how one fine scholar went about his work. Books on writing are good places to learn about flame cherishing. After all, a scholar is a writer. I read style books the way other people read econometrics books. Writing paragraphs well is just as important as inverting matrixes well. The *Paris Review* interviews of creative writers are the very type of flame-cherishing literature. They've been published now in successive collections, a half-dozen or so. Jay Woodruff has edited an amazing book of five interviews with the likes of Joyce Carol Oates and Robert Coles on how successive drafts change: *A Piece of Work: Five Writers Discuss Their Revisions* (1993).

Another good source of flame-cherishing advice is the academic biography. I read them compulsively. You need to know how other brain-workers have lived their lives. The *Autobiography of Edward Gibbon* (1796) tells how to write *The Decline and Fall of the Roman Empire*. The *Education of Henry Adams* (1907) tells how to continue to educate oneself into old age. I especially like mathematical biography, such as S. M. Ulam, *Adventures of a Mathematician* (1976), Paul Halmos, *I Want to Be a Mathematician: An Automathography* (1985), or Constance Reid's books *Hilbert* and *Courant*, though you have to watch out for a worshipful attitude toward math. For economics read James Buchanan's autobiography, *Better Than Plowing* (1992). The two volumes edited by J. A. Kaegel, *Recollections of Eminent Economists*, collected from pieces in the *Banca Nazionale del Lavoro Review*, should be perused by everyone interested in economics, though they show that not all economists are gifted in telling what happened to them beyond their résumé.

The wider point is that the key to scholarly creativity is to combine your life and your work. That's how to cherish the flame: make the passions of your life a part of your work, and your work a passion of your life. My best articles and books have come out of passions in my life—to mention a couple of recent examples, irritation with the

stockbroking industry after it had enticed my mother to lose two small fortunes (*If You're So Smart*); or concern about lofty sneering at the midwestern bourgeoisie ("Bourgeois Virtue"); or the experience of gender change (*The Vices of Economists*). The autobiography by the psychologist Jerome Bruner, *In Search of Mind*, contrasts two models of intellectual life: "Alfred Kroeber [the anthropologist] once told me that the difference between him and Clyde Kluckhohn [another anthropologist] is that Clyde wanted to weave everything he knew into one tapestry—anthropology, psychoanalysis, classics. He, Kroeber, was quite content to let them live on their own" (Bruner 1983, 77). I favor the Kluckhohn model (although Kroeber was hardly a barbarian). We should bring everything we know into our economics and our lives.

So read widely, for pleasure, and keep trying to reintegrate what you know with what you do. "To burn always with this hard, gemlike flame, to maintain this ecstasy, is success in life," said the English critic Walter Pater over a century ago. Heady stuff, but also soberly correct. Routine science is satisfactory and pays the bills. Yet we should each of us cherish our hard, gemlike flame, success in the scientific life, however small. Neglect the committee that is not accomplishing anything; avoid the student who is merely buttering you up; do not respond to the *n*th request for a recommendation of a colleague you don't know or care about. Or, to be exact and economic, watch out for the opportunity cost in cherished flame forgone.

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RACHEL McCULLOCH



Assembling the Puzzle Pieces

I find inspiration for my work in the here-and-now of economic life, especially those parts involving international transactions. My goal is always to im-

pose order and logic on the world I see, or at least on a little corner of it. As a young economist I used theoretical models for this purpose. Now (with luck I'm around the midpoint of my research career) my approach is harder to describe simply. My current efforts are usually directed toward integration and interpretation of theory and evidence. In essence, I try to fit together the pieces of an economic puzzle. The process often draws me into the history of ideas. I am particularly intrigued by ideas that become influential for a time yet are fundamentally flawed—ideas so out of sync with the "real world" that even economic theorists are bound eventually to take notice.

Although some of my papers draw heavily on contributions of other economists, they aren't proper surveys. A good survey seeks to impose order on a body of literature. My focus is not a body of literature but a particular phenomenon. Thus, I typically end up citing material from a variety of economics subfields ranging from labor to finance, and perhaps also political science or sociology. I draw on other work mainly when it helps to provide a coherent story, but occasionally also to explain why it doesn't help.

One editor who solicited a proposal from me subsequently

I am indebted to my Chicago classmate Robert Pollard for many comments and suggestions. In a marginal note to my section on the stimulus of deadlines, Bob wondered whether I was just saying that I am not very good at time management. But a second note a little farther down on the page acknowledged that he, with no external deadline, has been working on the same book for fifteen years.