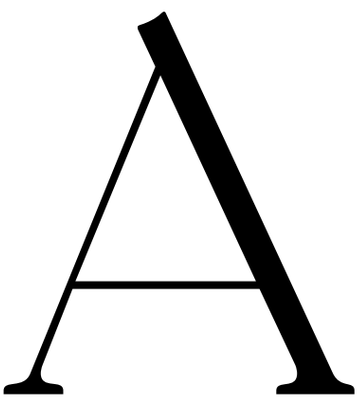
Was it just the fog of a late-40's brain, or was something more serious going on? The author embarks on a scientific journey in pursuit of her memory.

In Search of Lost Time

By Cathryn Jakobson Ramin



Photograph by Dan Forbes

A few months ago, as I trudged down the stairs of my office building, deep in my thoughts, I noticed a dark-haired woman waving to me from the window of her car. She looked vaguely familiar, but I couldn't place her. Like quite a few others, she had slipped out of my mental Rolodex. In my brain, the synaptic traces that connected us had frayed. Yet again, I had misplaced an entire human being.

"So wonderful to see you," she said, inquiring by name after every member of my family, including the two dogs. Apparently she was not a casual acquaintance. Fending off panic, I proceeded through a mental list: Work? School? Synagogue? I couldn't visualize her in these places. I was about to cut and run with a quick "nice to see you, too" when the rear window slid down, revealing a toothy grin.

"We've been to the orthodontist," she said. The minute I saw Sam's freckled face, the mystery was solved. Our sons were best pals in nursery school and kindergarten. I had sat in her kitchen, discussing birthday parties. I re-

membered her backyard dotted with Little Tikes plastic play furniture. I knew what she did for work, and the name of her Portuguese nanny.

"Lisa," I said, as if her identity had never eluded me, "it's terrific to see you."

Why, as I edge toward the end of my 40's, has so much of what I know become impossible to access on demand? Where are the thoughts that spring forth in the shower but evanesce before they can be recorded, the mental lists that shed items on the way to the supermarket? The names of books and movies, actors and authors, *le mot juste*, the memory of social plans agreed upon in some calendarless situation — what have become of these?

I take some comfort in the fact that I am not alone. In the space of one week, a psychologist remarked that she had turned over all social scheduling to her husband, at his insistence, because the couple had appeared at yet another dinner party on the wrong night. A woman who publishes a local magazine noted that she'd just come from the bank, where she'd spent 10 minutes searching through her purse, briefcase and pockets for a check that she'd never written. A freelance illustrator disclosed that he'd gone to work on Friday, completed a drawing for an editor and mailed it off, only to return on Monday to re-execute the identical assignment without any sense of déjà vu.

The feelings of embarrassment, frustration and anger that surround such middle-aged lapses serve to disguise a more primitive emotion. At the heart of it, there is fear — cold, implacable anxiety, emerging from the suspicion that this is just the beginning. Memory, the instrument we trusted to guide us, has instead betrayed us, making us deeply uncertain about our cognitive futures. We worry about decades of dependence, of life with a diminished mind trapped in a still vigorous body.

To the person who has misplaced his keys three times in two days or just called a colleague by the wrong name, forgetfulness in middle age can feel like incipient Alzheimer's disease. But for most of us, the memory deficits we encounter in midlife reflect a common pattern of brain aging and are not thought to be predictive of the progressive degeneration that leads to dementia. Neuropsychological tests can help tease out the difference between normal aging and pathology. Individuals, even in the early stages of Alzheimer's, show a marked inability to remember a list of several words after a 20-minute delay. When they are reminded that, for instance, one of the words is a type of fruit, they still lack the "aha!" experience that allows the average person to say, "Oh, yes, it was an orange."

"We are hyper-alert about Alzheimer's disease," said Dr. Oliver Sacks, the author and neurologist, when I asked him why we find cognitive lapses so worrisome. "Even momentary forgetting, quite benign, can be unduly upsetting, because there is general alarm around us. But that is only one part of it: For people who have always been very competent, forgetting brings a disturbing sense of the loss of control and mastery."

So much that is fundamental is bound up in the ease and accuracy of recollection. Foremost, there is trust: On the afternoon when you forget that it is your turn to carpool and leave three kids and a disgruntled coach standing on a soccer field in the teeming rain, your belief (and theirs) that you are a reliable person is severely tested. There is self-knowledge: at the holiday table, when your brother recounts your role in setting the garage on fire some 30 years earlier and you can't recall the event, your historical perspective is altered forever. There is self-esteem: when you open your mouth to ask a question at a professional meeting, certain that you have the facts at your fingertips, but the words elude you, you feel witless and weak.

"In an information age," writes Charles Baxter in a collection of essays called "The Business of Memory," "forgetfulness is a sign of debility and incompetence. It is taken as weakness, an emblem of losing one's grip. For anyone who works with quantities of data, a single note of forgetfulness can sound like a death knell. To remember is to triumph over loss and death; to forget is to form a partnership with oblivion."

Nearly 15 years ago, when I was pregnant with my first son, I realized that something was happening to my mind. Beyond the typical things — forgetting names, directions to places I'd been before — I found it harder to comprehend or retain complex reading material. I could no longer make rapid connections between ideas, because I'd lost access to knowledge I'd already absorbed.

"How bothersome the loss is," Dr. Sacks said, "depends very much on personality. Someone who has prided herself on control, on having everything in order, may be much less tolerant than the easygoing person." As an indisputably Type A person, I was deeply perturbed.

Three years ago, a few days before I turned 45, I went to the movies with my husband. On the short drive home, I realized that I couldn't remember the title of the film, which I had liked very much, or the name of the actor who played the leading role. Was this just the result of growing older — the same middle-aged muddle my friends felt — or was it something of a different magnitude? The question, for me, had become urgent. I could give up, resigning myself to existence in a mental fog. Or I could subject my brain to the best analysis and treatment that science could offer.

I went first to see Dr. Gary Small, director of U.C.L.A.'s Center on Aging. He's the author of "The Memory Bible," as well as the recently published "The Memory Prescription." After meeting with him, I enrolled in a research study he was conducting; I'd adhere to a high-protein diet including fruits and vegetables with antioxidant properties, omega-3 fatty-acid supplements, daily multivitamins and capsules of vitamins E and C. The program also called for exercise, daily mental challenges and stress-release activities. Dr. Small was investigating whether following this regimen for two weeks would improve memory. In order to assess my base-line cognitive abilities, Dr. Small ordered two imaging studies — a PET scan and an M.R.I. of my brain — as well as a brief neuropsychological evaluation. The images were heartening — apparently, my brain was free of the signs of Alzheimer's disease or evidence of stroke or tumors. As for my neuropsych evaluation, Dr. Karen Miller, a neuropsychologist working on the research study, explained gently that although some of my scores were below those of my peers, when averaged, they were consistent with the impairment that one might expect at my age.

At first I didn't grasp the importance of what Dr. Miller had said. That five of my scores showed significant cognitive deficits was in fact the first concrete evidence that something was awry in my brain. I clung instead to the notion that what I was experiencing was "average."

And what precisely did it mean to have an average amount of memory impairment? Although we notice it first in middle age — sometimes as early as our mid-30's — memory starts to decline in our 20's. This has been demonstrated with mice, rats, primates and humans, all of whom begin to lose processing speed at about the same relative age. If you're a middle-aged rat, 15 months old, this means that it takes you longer to locate an underwater platform in a water maze. If you're a middle-aged human, it means that when you hear a list of words, you begin to lose some of your ability to "acquire" them (place them in short-term memory and parrot them back immediately), "store" them (move them — after 10 seconds — from short-term memory to long-term memory) and "retrieve" them (haul them out of long-term memory). These abilities don't change overnight, but by the time a person reaches her early 40's, there are statistically significant differences from the early-to-mid-20's peak.

One explanation for these changes is put forth by Dr. George Bartzokis, director of U.C.L.A.'s Memory Disorders and Alzheimer's Disease Clinic, who has studied the midlife breakdown of the myelin sheath, a sheet of lipid fat that wraps around the delicate branches of a neuron and is critical to

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Cathryn Jakobson Ramin is at work on a book about midlife memory for HarperCollins.

brain development. From infancy, cholesterol levels in the brain slowly increase in order to facilitate myelin growth. Bartzokis suggests that at some point after age 30, these cholesterol levels reach a point where they become high enough to promote the development of a toxic protein that begins to eat away at myelin and other membranes, disrupting the smooth flow of neuronal messages. (It is not clear whether reducing blood cholesterol has an effect on levels of brain cholesterol, but researchers suggest that cholesterol-lowering medications are among the preventative therapies worth investigating.)

"Our hypothesis is that the very process of myelination — which allows us to become wise human beings — sets up the degeneration," Dr. Bartzokis says. "How to prevent that degeneration is the focus of a great deal of research."

In some individuals, the escalation of toxic protein may begin earlier or progress more quickly than in others, possibly engendering the development of the plaques and tangles that are the hallmark of Alzheimer's disease.

Scientists believe that there is a relationship between this toxic protein production and the Apolipoprotein E gene. All of us carry two copies of this gene. Research confirms that individuals who carry the e-4 variant of the Apolipoprotein E gene (about 20 percent of the population) are vulnerable to developing Alzheimer's disease at an earlier age.

There is a blood test to determine whether a person carries this variant. Several scientists warned me, however, that the test could not predict whether or not a person would develop Alzheimer's and noted that it would be difficult to obtain without a diagnosis of unspecified dementia. My internist, accustomed at this point to my requests for odd laboratory tests, simply noted "memory impairment" in the appropriate form and faxed it to Athena Diagnostics in Massachusetts. If the test was positive, health-insurance providers would likely consider me a terrible risk. Still, I wanted to know. Several weeks and half a dozen phone calls later, I had my answer: I didn't carry the variant.

GENERALLY SPEAKING, middle-aged forgetting follows a familiar pattern. People's names often go first, because they are word symbols with no cues attached. Difficulties with word retrieval tend to follow. Instead of the phrase you want, you get what James Reason, a psychologist at the University of Manchester, in Britain, called "the ugly sisters" — similar-sounding but frustratingly incorrect combinations of syllables.

Recently acquired "how to" memory becomes challenging to consolidate. You think and think, but you just can't remember the steps required to back up the new hard drive, a skill you perfected yesterday. Prospective memory, that is, remembering to perform an action at some distance in the future — to fetch milk from the store on the way home, for instance — is vulnerable, particularly in the face of competing distractions. The cues that are supposed to remind you that you need milk — your husband's phone call a half-hour before, or the Post-it now deep in your handbag — fail to alert you, until you pull into your driveway. "As you age," said Dr. Daniel Schacter, a Harvard psychologist, "those retrieval cues have to be readily accessible, unambiguous and informative. The equivalent of a string around the finger isn't going to do it. You're going to be asking yourself what that string is for."

A decline in the availability of working memory, which allows us to manage several ideas or intentions at the same time, storing and retrieving them with the fluidity of a three-card monte player, is perhaps the most odious loss of all. Multitasking can be frustrating and often counterproductive. New research, from Dr. David E. Meyer, a psychologist at the University of Michigan, shows that for all but the most routine endeavors — and few cognitive efforts seem to require such minimal attention — it is more time-consuming and wearying for the brain to alternate among tasks than it would be if the same jobs were done one at a time.

Feelings of embarrassment and frustration that surround memory lapses disguise fear — cold, implacable anxiety emerging from the suspicion that this is just the beginning.

THERE ARE MANY potential catalysts for forgetfulness; in fact, the list is so long that it's a wonder we remember anything at all. Stress, anxiety and depression all inhibit memory. Hypothyroidism can affect memory and concentration. Type 2 diabetes and its precursor, insulin resistance, can also significantly reduce cognitive function. Even fish-eating can be a hazard. Exposure to neurotoxins, most commonly the methyl mercury that we consume when we eat large predatory ocean fish, like swordfish and tuna, can result in what Dr. Jane Hightower, a San Francisco internist who wrote the resolution on fish and methyl mercury toxicity that was adopted by the American Medical Association, calls "fish fog."

None of these factors seemed to account for my own cognitive troubles, however. I wasn't depressed. My mercury levels were a little high, but not high enough to cause fish fog. My thyroid was fine. I felt stressed, certainly, but for the most part because I was so worried about my memory. One catalyst, on the other hand, did seem plausible: lack of sleep. Like many people who had spoken to me about their memory deficits, I slept poorly — often I was up at 3 a.m., when, in the words of the poet Richard Lang, the bedroom turns into "a switching yard for the freight trains of anxiety." A modest but constant sleep shortage can undermine alertness, a University of Pennsylvania study notes. Those with "minor" sleep debts — say, sleeping just four to six hours a night — may display cognitive declines equal to people who have not slept for up to two full nights.

Good sleep, both REM and non-REM sleep, appears to be critical to the ability to absorb information. During non-REM sleep, which comprises about 80 percent of snooze time, simple spatial tasks and recollections of personal experiences may be consolidated, according to Dr. Michael Perlis, who directs the University of Rochester's Sleep and Neurophysiology Research Laboratory. Tasks involving visual skills, like facial recognition and memory of events with strong emotional impact, appear to be fortified during REM, as are memories of complex actions and procedures.

Dr. Jan Born, at the University of Lübeck, in Germany, recently demonstrated how our sleeping brains may continue to focus on problems that baffle us during waking hours. That's why, in addition to being well rested while you take in information, it may also be important to have a good night's sleep afterward, in order to successfully move that information into long-term memory.

Born's study suggests that creativity or problem-solving insight may often happen during that portion of non-REM sleep known as slow-wave sleep — the deepest type of sleep, usually occurring during the first third of the sleep cycle and usually devoid of dreams. But from age 40, said Dr. Robert Stickgold, a sleep researcher and assistant professor of psychiatry at Harvard Medical School, "slow-wave sleep virtually disappears, diminishing from about 20 percent of the night to near zero. Since slow-wave sleep helps us consolidate certain types of memories, this might explain a substantial component of our memory decline with age."

Several pharmaceutical companies, Dr. Michael Perlis said, are pursuing the development of new compounds that may reverse declines in slow-wave sleep. "This new class of drugs may or may not help people fall asleep as

quickly, or stay asleep as long, as traditional sleeping pills," he said. "But they have the potential to produce qualitatively better sleep."

AS A RESEARCH SUBJECT in Gary Small's study, I'd been following his recommended memory regimen. Along with the diet, I pursued the recommended exercise program, spending some time each day on an elliptical trainer. Studies indicate that as we age, our mental abilities are improved by regular aerobic and strength-training workouts, while nonaerobic exercise, like stretching and toning, are less beneficial. I felt more energetic, but frankly, I didn't feel much sharper.

Frustrated, I went to see Dr. Jonathan Canick, the director of the neuropsychological assessment service at California Pacific Medical Center in San Francisco. Canick is a pragmatic specialist, accustomed to evaluating patients with serious dementias, head injuries, brain tumors and strokes, as well as those with more subtle neurocognitive disorders. "When a patient ends up in my office," he said, "it's because the medical professionals are stumped."

Dr. Canick suggested that for most middle-aged people, the real issue was not so much declining memory or retention but rather the faltering ability to attend to and process the onslaught of colliding streams of information coming at us all day long. "It gets experienced as a memory issue," he said, "but in reality, it could be about attention, learning or retrieving information." We could blame evolution: our brains, designed to attend to novel stimuli like a tiny sound downstairs in the middle of the night, ignore that which seems old and familiar. A great deal of what we experience every day — some of it important, some not — simply fails to be encoded. As we age, our brains slip into "been there, done that" mode. "If it blows by you," he said, "and it doesn't register, you're never going to be able to retrieve it — because it doesn't exist."

Over the course of two days, Dr. Canick put me through an exhausting seven hours of neuropsychological tests. I knew I was struggling. To test facial recognition, I thumbed through a book of head shots. A minute later, presented with a book containing the same photos as well as a group of new ones, I was unable to say whom I had already seen. In another task, I was asked to connect the dots through an alternating and ascending lineup of numbers and letters. I lost the sequence and had to backtrack to rediscover it. Numbers, letters, words, figures — they were bewildering. "Keep going," Dr. Canick said. "Go to the end." He worked my brain like a trainer works an athlete, looking for weakness.

Halfway into the testing, he told me that there was no evidence of a dementing, neurodegenerative or progressive disorder. But the tests I flubbed nevertheless showed impairments that were disturbing and not considered "average" in midlife. He explained that there might be a reason for these deficits. People with mild traumatic brain injuries, he said, often demonstrate variable and reduced ability for attention, processing information, word-finding or multitasking. Typically, they interpret their experience of slowed processing and attention deficits as "memory" problems.

"For now, it's only a hypothesis," he said. "But your symptoms and your results show the distinct neurobehavorial fingerprint of brain damage, the kind that stems from a series of mild traumatic brain injuries."

"That's impossible," I said. "I've never even been knocked unconscious."

On the drug, I had complete focus while I was working. But off duty, I found that certain pleasures, like wandering around aimlessly in my own mind, were no longer available.

"And that," Dr. Canick said, "reflects a very common misperception." Concussions do not always result in a loss of consciousness, he explained; one can have a mild concussion, experienced as "seeing stars," and remain conscious. In fact, a person doesn't even have to experience direct impact to her head. Rapid acceleration or deceleration of the head, which is often accompanied by a rotation of the brain, can result in concussion. In some cases the brain bounces off the interior of the skull, causing dendrites and axons to be stretched and sheared, damaging the myelin sheath and disrupting communication in a way that could cause a person eventually to slow cognitively and physically. Mild traumatic brain injuries often are undiagnosed, Dr. Canick said. With successive concussions, the effect is more logarithmic than linear. Even if the first injury did little harm, the second can have exponential impact, as does every injury that follows.

A few weeks later, I broached the subject of brain injury with my brother Peter, expecting him to agree that Dr. Canick's hypothesis was ridiculous. He did not. "Don't you remember," Peter asked, "when we were children, and I hit you with. . . . " I never heard the end of the sentence. I hadn't given it a thought in 30 years, but in less than a second, I was 9 years old, back in the basement of our house in Scarsdale. My brother, a whirling towheaded kid drunk on centrifugal force, spun in circles, an old broomstick extended horizontally from his hands. I was in the wrong place. The impact knocked me flat. For the next three weeks, as my eye sockets and forehead turned every color in the rainbow, my fourth-grade teacher referred to me as Miss Technicolor.

There were other head injuries as well: horseback-riding wrack-ups and, because I am tall, forehead-smashing collisions with low-hanging doorways and tree branches. One by one, these recollections emerged. According to the National Center for Injury Prevention and Control, at least 1.1 million people each year sustain mild traumatic brain injuries that result in confusion, disorientation or impaired consciousness for fewer than 30 minutes. The number is probably underestimated, given that many people with mild injuries don't go to a doctor's office or an emergency room at all.

How could I know that Dr. Canick was right — that my mild traumatic head injuries could actually produce long-lasting neurocognitive deficits? I was reluctant to credit his diagnosis, suspecting that he might want to be the guy with the answer, whether or not that answer was correct. I understood the concept of logarithmic damage, but why had I failed to notice any impairment until I reached my mid-30's?

"You must take into account the concept of neuronal reserve," said Dr. Ronald Ruff, a clinical neuropsychologist in San Francisco, who concurred with Dr. Canick's findings. "By age 25, you have all the neurons you're going to get," he said. "For most of us, the fact that we experience continuous slow cell death over the years doesn't become evident until we reach our 80's. If, on the other hand, you've had concussions, or abused substances or alcohol, you'll have diminished your share of neurons, and the slope of decline will be sharper. In your 20's, this is usually no big deal, but by the time you reach your mid-30's or 40's, the net availability has declined so much that, when you're called to rise to the height of your capacity, you start to notice."

That made sense, I thought — but why, in my case, had the onset of cognitive problems occurred so swiftly? Hormonal changes during pregnancy can affect memory and cognition, Dr. Canick said. In addition, "you had an underlying vulnerability," he explained. "You toughed it out during your 20's, because you had the neuronal resources to do it. After the birth, you faced a new situation — you were compelled to divide your attention as you never had before, and you discovered the deficiency in your brain function."

Serious long-term effects of mild traumatic brain injury are often missed because the injured person returns rapidly to normal life, said Dr. Tracy

McIntosh, professor of neurosurgery at the University of Pennsylvania. "Several months down the road — about two months later in mice — you'll begin to see subtle cognitive changes," he said, because, perhaps, it takes that long for the injured neurons to die or the neural pathways to become dysfunctional. The vast majority of these injuries were thought to resolve completely within a few months or even weeks, but brain-injury specialists like Dr. McIntosh now question that assumption.

I returned to Dr. Canick to talk more about the results of my test and his theory about brain trauma. "Your results range from the 10th percentile to the 98th," he said. "You cannot rely upon your own abilities, because they are so variable." He said it was as if neurologically I were two different people. "You don't know which of the two people is going to be available for any task. And that is destabilizing, as well as a recipe for anxiety, confusion, angst and self-doubt."

Dr. Canick's descriptions felt achingly familiar, an explanation for a dichotomy I'd felt for years. As a psychologist, Dr. Canick could not prescribe drugs. But he told me that several of his brain-injured, attention-compromised patients had improved with the use of neurostimulants, either Ritalin or Adderall, the same drugs that are regularly administered to children with A.D.H.D. Although these drugs enabled people to focus better and make more effective use of their brains, he cautioned that they did not bestow abilities that weren't there in the first place.

I discovered that Adderall — an amphetamine and a controlled substance with a high potential for abuse and addiction — was rapidly developing a black-market status. Despite its side effects — dry mouth, insomnia, lack of appetite, headache and racing heartbeat — college students were using it to improve their focus on exams, some young professionals have been taking it to increase their productivity at work and increasingly, middle-aged people like myself were using it to restore their attention and concentration. If you were willing to visit a psychiatrist or a sympathetic general practitioner and answer a series of rather transparent questions that suggested that you were suffering from adult attention deficit disorder, it seemed that prescriptions were readily available.

Adderall and Ritalin appear to provide a boost in focus to virtually anyone who ingests them. Dr. Anthony Rostain, medical director the University of Pennsylvania's Adult A.D.H.D. Treatment and Research Program, suggested that he wouldn't be surprised if, in the future, hordes of middle-aged people popped pills for cognitive enhancement. In fact, he predicted that these stimulants would be available over the counter. "Given the performance orientation we have today," he said, "and the urgent need to improve productivity, it seems to me that people will use these drugs in the same way we now use socially sanctioned stimulants like caffeine." Other cognitively enhancing drugs, he noted, were on the way — the market for them was vast, and the pharmaceutical companies had taken notice.

I wish I could say that the Adderall didn't help. But after about a week, the gears meshed in my brain. Once again, I could move sentences around in a manuscript without finding myself holding a handful of orphaned words. I regained access to my vocabulary. My errands proceeded in an orderly fashion.

Dr. Canick asked me to return to his office. He wanted to test me again now that I was on the drug. On the test of facial recognition, my scores improved from well below average — in the 19th percentile — to the 93rd. On a test of mental arithmetic, my performance increased from the 50th percentile to the 91st for people my age. Verbal math problems, once unfathomable because I could not remember how many doughnuts Sally, Bill and Jane had each purchased, became quite easy. Other tests showed more modest improvements, but the trend was clear.

I didn't kid myself. Drugs aside, the mechanism was still broken. If Dr. Canick's diagnosis was correct, I was dealing with a problem that could be patched up but never fixed. New imaging technology will detect microscopic damage to axons and specific neural pathways, perhaps answering the question of whether indeed my brain had suffered an injury. While I knew that my expectations for myself were high, and that a pathology could be involved, I also saw that many people in midlife experienced the same sense of perpetual distraction and preoccupation. What had brought us to this point? I wondered. Were we trying too hard to live fast-paced, information-heavy lives, when our brains were naturally slowing down? Our fleeting attention, it seemed to me, might be a protective if ill-timed response — the brain's way of saying that it had simply had enough.

After a month of Adderall I could see that there were side effects I hadn't read about in the drug literature. I worked like a demon, but I found myself disconnected. At the computer I was entirely focused, but off duty, certain pleasures, like wandering around aimlessly in my own mind, were no longer available to me. I began to take mini-vacations from Adderall — a Sunday off, so that I could recline in a lounge chair and watch my kids perform cannonball dives. I suspected that I was gunning a middle-aged engine at speeds better suited to one with fewer miles on it, and that there would be consequences. Because I never experienced the feeling of euphoria that causes some people to desire ever-increasing doses of the drug, I didn't worry about addiction, but I was concerned about psychological dependency.

Sometimes I wondered whom I was trying to fool. Was this cognitive enhancement actually no more than vanity, as frivolous as a face lift, but more deceptive, because in the end, you duped only yourself? I could not imagine tossing the Adderall prescription and returning to the mental fog. Nevertheless I found myself wondering whether at some point in the future, such hard-edged, drug-induced accuracy might start to feel as unseemly to me as a thigh-high miniskirt, and I'd quit.

Not long ago, I spent some time with Dr. Thomas Crook III, a clinical psychologist who had devoted his long career — including 14 years at the National Institute of Mental Health, where he served six years as chief of the Geriatric Psychopharmacology Program — to helping to establish age-associated memory impairment as a clinical condition that warranted attention and treatment. Years ago, he noted the insensitivity implicit in telling older patients who complained about their memories that what they were experiencing was inconvenient but typical. If they went in complaining that they could no longer read, he wrote in 1993, "it would scarcely occur to the clinician to inform them that their problems are no worse than those of other persons of the same age and, therefore, that they do not merit treatment."

Something he mentioned gave me hope that I would not always feel so troubled by what had happened to my mind. Although for many, essential cognitive skills, like the ability to remember names or recognize faces, decline precipitously as the decades go by, people's self-reported impressions reflect a different understanding. "Asked how they would describe their memories," Dr. Crook said, "people who are in their 40's are the most critical. In their 50's, they feel a little bit better about their capacities, and by the time they reach their 60's, they're as satisfied as they were in their early 30's."

With Adderall, I had a Proustian taste of what I thought I'd left behind. I was glad to know that, at least while pharmaceutically enhanced, I still had the chops. Still, I often thought about what Dr. Crook had said. At what point might I stop dwelling on what had been lost, I wondered, and begin to relish what I had gained with age? Perspective and insight, fused with acceptance, formed the cornerstone of wisdom. The rest, presumably, I could get from Google. ■