UNLIKELY WRITER

Atul Gawande, "slightly bewildered" surgeon and health-policy scholar—and a literary voice of medicine

by ELIZABETH GUDRAIS • photographs by FRED FIELD

ONE WEDNESDAY LAST APRIL, Atul Gawande was in his office at Brigham and Women's Hospital, trying to make some progress on a *New Yorker* article about disparities in healthcare spending. He kept getting paged when other physicians thought their patients might need surgery. By late afternoon, there had been a few false alarms: he visited patients and ruled against operating. Responding to a page about an elderly man who had had heart surgery the previous week and was now in severe abdominal pain, Gawande got on the phone with the surgical resident and pulled up an MRI on his computer screen. He navigated through digital slices of the patient's abdomen, squinting at the screen, then agreed to meet the resident at the patient's room. As he got up from his desk, his movements took on a sense of purpose. "I think this one's real," he said.

Gawande had seen that part of the man's colon was ischemic—dead and gangrenous—and had ceased to move waste out of the body. He wasn't sure about the cause, but suspected a blood clot. One thing was clear: without immediate surgery, the colon would rupture.

After examining the patient, Gawande conferred with the resident in the corridor outside the man's room. He went through a familiar and well-practiced set of actions that he seemed to do without thinking: slipping his ring finger into his mouth to moisten it, working his wedding band off, unbuckling his watchband, threading it through the ring, and refastening it, all the while carrying on a conversation about stopping the patient's anti-clotting medication and getting a vascular surgeon to assist.

One moment, this patient's children had thought he was on the mend from cardiac surgery. The next, they were having to process the fact that he faced near-certain death if he didn't undergo another procedure with its own dangers. Suddenly, a life was in Gawande's hands. The *New Yorker* would have to wait.

The medical writing for which Gawande is best known represents only a small fraction of his professional output. He is a surgeon, and a busy one at that, performing 250-plus operations a year. He is a professor at Harvard Medical School (HMS) and the Harvard School of Public Health (HSPH). He heads a World

Health Organization initiative on making surgery safer. And he is a husband and a father of three.

A few days after the emergency surgery on the man with the ischemic colon (who survived and recovered), Gawande was back in the OR, removing the enlarged and possibly cancerous thyroid lobe of a 42-year-old schoolteacher. This is the type of surgery he most commonly performs, cutting open patients' throats to remove thyroid and parathyroid growths. And after thousands of hours of practice, he works with an air of assurance.

Operating on the throat is not simple: it is densely packed with nerves, blood vessels, and a surprising amount of fat. It bears little resemblance to an anatomy chart, where body parts are neatly subdivided and set off from one another in contrasting colors. But Gawande knows what he is looking at when he peers into the patient's throat through the thick magnifying lenses of his OR glasses. He can gaze into a messy, bloody incision and see nebulous boundaries between various tissue types.

Huddled over the blue-draped schoolteacher, Gawande and a surgical resident performed a delicate dance, their movements synchronized. One snipped to remove suspicious tissue; the other, following just behind, sewed up. As they went, they cauterized small blood vessels and took care to avoid larger ones and the vocal-cord nerve.

With this patient, Gawande decided to transplant one parathyroid gland (essential for maintaining proper blood calcium levels) to ensure that it would have adequate blood supply after the woman recovered from the operation. He removed the amorphous parathyroid tissue himself and smeared it on a small plastic tray. Then he instructed the resident, for whom this innovative procedure was new, to gather up the parathyroid "like peanut butter" (indeed, it has a pastelike consistency and the surgical tool looks like a butter knife) and tuck it back into the patient's throat in a different spot.

Surgery demands decisiveness: waffling has no place in the operating room. Surgeons face judgment calls, large or small, every few seconds, and the pace does not allow for second opinions.

But Gawande, who is 43, says he is indecisive by nature—agonizing over the choice of a restaurant, for instance. As he remarked

Gawande in his various environments (clockwise from top): in his office at the Harvard School of Public Health; seeing patient Ericka Webb (right) at a post-surgical follow-up, with medical student Devon Quasha '02, J.D. '06; and in the operating room (Gawande's hands are at right).





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during a 2004 commencement speech at Yale, "I chose surgery because I thought that perhaps this would make me more like the kind of person I wanted to be."

He is far from the stereotype of the surgeon who thinks he is God, and this emerges in his writing. When he tackles thorny political issues, his arguments do not have polarizing overtones, and he does not use words to browbeat. When he takes a position, it often comes with an admission that the other side has merit.

There is nuance, and a good dose of neurotic self-doubt. In a chapter of his 2007 book Better: A Surgeon's Notes on Performance, he chronicles the soul-searching he went through in deciding what his policy would be about asking patients to undress (or not) and asking a female "chaperone" (a nurse or other health professional) to come into the room when he was examining female patients. He paints an endearingly awkward, fumbling picture of himself as a newly minted doctor, having decided to examine patients in their street clothes in most cases:

If a patient with gallstones wore a shirt she could untuck for the abdominal exam, this worked fine. But then I'd encounter a patient in tights and a dress, and the next thing I knew, I had her dress bunched up around her neck, her tights around her knees, and both of us wondering what the hell was going on.

In fact, it is his habit of acknowledging uncertainty that makes his writing so refreshing. "It's the kind of ambiguity that is uncomfortable, and that other writers want to zip out of the picture, that he gravitates toward," says his New Yorker editor, Henry Finder. Often this willingness to face the unknown leads to striking cultural insights. Toward that chapter's conclusion, Gawande says he suspects that having a female "chaperone" in the room

helps more than it hurts. But we don't know; the study has never been done. And that itself is evidence of how much we've underestimated the importance and difficulty of human interactions in medicine.

IF GAWANDE IS AN UNLIKELY SURGEON, envisioning a career in medicine, more generally, was easy. He grew up in Athens, Ohio, the son of a urologist father and a pediatrician mother, and he has often said that following them into the field seemed so inevitable that he tried every way he could think of to avoid it. Careers he considered along the way included philosophy and politics; they did not include writing.

His first published writing for a popular audience, in 1996, came at the invitation of Jacob Weisberg, a friend from Gawande's time at Oxford as a Rhodes scholar. Despite Gawande's lack of writing experience, Weisberg, who helped found the online magazine Slate and later edited it, had a hunch that his friend would be good at explaining medicine to a lay audience. Besides, he was encouraged

A CHECKLIST FOR LIFE

Atul Gawande's research centers around the idea he raised with the Brigham's chief of surgery back at his residency interview in 1995: envisioning surgery as a public-health issue, and improving its safety record. Viewing surgery as an exceptional experience is archaic, he is fond of saying, now that one person out of 25 undergoes a surgical procedure in a given year. In fact, there are more surgeries worldwide each year than births-yet surgery carries a risk of death 10 to 100 times higher than that of childbirth.

In the quest to make surgery safer in the developing world and everywhere, Gawande leads a research team of professors, graduate students, and postdoctoral fellows from Harvard Medical School (HMS), affiliated hospitals, and the Harvard School of Public Health (HSPH). Funding sources include the World Health Organization (WHO), for whom Gawande leads an initiative on surgical safety. Like Gawande himself, the research team has a full plate—the agenda for a recent weekly meeting, which runs three hours, listed 31 different projects—but a principal focus is the medical checklist.

It's a simple concept that had been used when taking vital signs and in nursing. Donald M. Berwick, a professor at HMS and HSPH who is also president and CEO of the Cambridge-based, nonprofit Institute for Healthcare Improvement, started promoting the checklist. Then Johns Hopkins Hospital critical-care specialist Peter Pronovost picked it up, developing a checklist

for preventing central-line infections. (Used to provide patients with intravenous nutrition or medication, and to monitor vital signs or draw blood, a central venous catheter is threaded into the vena cava, the main blood vessel to the heart. Such lines commonly become infected, and because their route into the bloodstream is so direct, an infection is life-threatening.)

Pronovost's results with the checklist were more than encouraging. After he implemented the checklist at his hospital in 2001, just two centralline infections occurred in the next 15 months. Judging from previous infection rates, the checklist prevented 43 infections and eight deaths. Two years later, the state of Michigan decided to try Pronovost's checklist in intensive-care units statewide. In the first 18 months, they saved an estimated 1.500 lives and \$175 million.

Gawande and colleagues decided to develop a similar checklist for surgery and to test it at eight hospitals worldwide-one each in the United States, Canada, New Zealand, England, the Philippines, India, Jordan, and Tanzania. Although the checklist includes mostly rudimentary tasks such as confirming a patient's identity, the procedure to be performed, and the site of the surgery (so as not to operate on the wrong knee or the wrong side of a patient's brain), none of the eight pilot hospitals was routinely performing every task on the list. One of the eight performed none of them at the pre-study evaluation. After a year using the checklist, the rate of complications from surgery at those hospitals had fallen by more than a third; surgicalsite infections by half; and deaths of surgical patients by nearly half.

Seven countries and more than two dozen U.S. states now require use of the surgical checklist. Hospitals may also opt in independently, and in all, roughly 600 in the United States and an equivalent number outside have registered with the WHO as users of the checklist. Gawande's team is also developing checklists for perinatal care, emergency care, trauma care, burn care, and for managing a particularly troublesome type of bacterial infection. Team members are developing materials to help other groups develop their own checklists (a "checklist handbook").

Far from boasting about these results when discussing the checklist, Gawande strikes a tone of frustration that nobody did this sooner. He wrote in the New Yorker:

These are...ridiculously primitive insights. Pronovost is routinely described by colleagues as "brilliant," "inspiring," "a genius." He has an M.D. and a Ph.D. in public health from Johns Hopkins, and is trained in emergency medicine, anesthesiology, and critical-care medicine. But, really, does it take all that to figure out what house movers, wedding planners, and tax accountants figured out ages ago?

by what he knew of Gawande's personal qualities: "Atul goes at everything in an incredibly focused, driven way. The odds of him not making something work are a lot lower than they would be with anybody else."

Those earliest pieces *did* take work. Gawande's wife, Kathleen Hobson, a former comparative literature major who has worked in book publishing and in magazines, gave the inaugural *Slate* column a first edit before submission. She says it demanded a "slash and burn" approach: "It was horrible." This is related in a tone of wry affection—and astonishment at his progress since then. His first *New Yorker* piece, in 1998, took *nine months* from submission to publication, and went through 22 rewrites; today, they typically take just a couple.

Despite two books, a decade on staff at the *New Yorker*, and a MacArthur Fellowship that recognized his writing, Gawande still does not consider himself much of a writer. But Finder says that even those early *Slate* pieces revealed "a mind that gravitates toward interesting conundrums."

Let it be testament enough that his writing attracted the attention of Malcolm Gladwell, who first suggested that Finder read Gawande. And Finder notes that *New Yorker* senior editor Hendrik Hertzberg '65, IOP '85, compared Gawande's style to that of Rachel Carson's *Silent Spring*. "He's just incredibly clear," Finder says. "The writing is never showy. It's not 'watch me write' ostentation. It's carefully carpentered, an almost surgical precision."

Phrased that way, Gawande's success as a writer makes perfect sense: he writes like a surgeon, including just the essential details, cutting away the fat to find what is relevant. There is one more similarity between medicine and journalism: they share a resemblance to detective work. An article begins with a question, as does a diagnosis. Through a strangely circuitous route, Gawande has arrived at a life in which diverse pursuits dovetail seamlessly.

Most people with professional interests as disparate as his—medicine, politics, philosophy—must choose one and relegate the others to hobbies or a Plan B. Gawande has managed to pull them together, but more through fumbling in the dark, he says, than by design.

After his 1987 graduation from Stanford with a degree in biology and political science, he went off to Oxford to study philosophy. "I hoped to become transformed, to become a thinker, perhaps a professor of philosophy," he told the Yale commencement audience.

But it took all my capacity just to answer the questions philosophers asked, let alone offer anything like original answers. I had no natural ability in this and, though I came back a bit better educated and better traveled, I was not fundamentally changed.

To hear him tell it, he gave up on philosophy. But its influence survives in his writing, both in whom he quotes (Montaigne, Descartes, Alasdair MacIntyre) and in how he frames issues.

His career incorporates even more directly the other path he considered, politics and policy. Gawande volunteered for the presidential campaigns of Gary Hart and Al Gore '69, LL.D. '94, in the 1980s. In the years after graduating, he was agnostic, back and forth between Boston and Washington, entering HMS but taking a leave of absence. He worked for U.S. Representative Jim Cooper, and later advised Bill Clinton's presidential campaign on health and social policy and, ultimately, worked on healthcare reform for

the Clinton administration. He says he chose politicians who "were smart and didn't sequester themselves in parts of the world where they were just in academia, where they weren't helping move the ball forward in practical ways."

He finally jumped into medicine with both feet in 1994, after the Clintons' attempt at healthcare reform foundered. (By this time, he was married to Hobson, whom he'd met in a Stanford dorm when she was a freshman and he was a sophomore.) Still, Gawande knew that his interest in policy would color his medical career, and said as much in his residency interviews. "I would explain how I thought surgery and public health and policy all went together," he recalls. "Half the money in hospitals goes to surgery, but we haven't thought about how to be wise about using those dollars, about the harm that can come from surgical care, and about the worldwide gaps that we have." The message didn't go over well in some places. "People would sort of nod their heads and say, yeah, yeah, whatever, and think I wasn't serious about being a surgeon."

With Michael Zinner, Moseley professor of surgery at HMS and the Brigham's chief of surgery then and now, it was different. "I walked in the door and he got it, and was immediately talking about, how do we do this? How do we put this together?"

Gawande was not the first HMS doctor to write for the New Yorker—Recanati professor of medicine Jerome Groopman, of Beth Israel Deaconess Medical Center, is also a staff writer there (see "The Examined Life," May-June 2000, page 58). But having a doctor writing for the New Yorker from inside hospital walls was new at the Brigham, and when Gawande began doing so he was still a resident. His tendency to turn a critical eye toward his own profession made some colleagues squirm, and it is easy to see why. In a 1997 Slate column on the topic of work hours for residents, he wrote, "I know I have seriously harmed patients because of fatigue." One of his early New Yorker articles chronicles an incident at the Brigham in which a patient nearly died in his care. The woman had been ejected from her car in a high-speed rollover accident, and surely no one outside the hospital would have asked questions had she died. But Gawande explains, in gripping detail, how his attempt to intubate the patient, to provide her with a clear airway, went awry. And he admits that it was a miracle this woman lived—not only because she survived the crash, but because her physician had neglected crucial steps in a basic medical maneuver for reasons he himself did not understand: "hubris, inattention, wishful thinking, hesitation, or the uncertainty of the moment."

In the early days, Zinner looked over Gawande's articles before they were submitted—and he approved things others would not have. "I had senior faculty flying into my office demanding to know how I could let this go on," he says. "I suggested they go back and read the article." Though Gawande sometimes starts off with a dramatic, even sensationalistic, story to grab readers' attention, "he always has a brilliant and insightful message in the conclusion."

When Gawande began writing for the *New Yorker*, the Brigham's public affairs department wanted to see each piece before it was submitted. "No way was the *New Yorker* going to allow that," he says. "Zinner stepped in and said, 'I'll take responsibility.' Then he said, 'You don't have to show it to me.'"

The two men share a fervent belief that pulling back the veil on medicine will do more good than harm, even if it means pushing transparency's limits right up to the edge of lawsuit territory. "What is the alternative to understanding the complexity of the world?" Gawande asks. "It's denying it. There's no way that's a successful strategy."

In 2003, after medical school, residency, internship, and a master's degree in health policy from HSPH—all told, 16 years after completing his undergraduate degree—Gawande officially began his career as a professional, as opposed to a student, surgeon. He wanted to be in a supportive environment for his "unusual mix" of surgery, public health, teaching, and writing. He had spent years calibrating this delicate balance at the Brigham, and he decided to stay.

THE SCHOOLTEACHER'S THYROIDECTOMY was the second of five operations for Gawande that day. The third was a 41-year-old woman with a parathyroid growth that was causing calcium to leach from her bones into her blood. Gawande would remove the growth, then send a blood sample to the lab to see if her parathyroid hormone levels had returned to normal. These near-instant results meant he could know if the surgery had succeeded before bringing the patient up from anesthesia.

During the 45-minute wait, he stepped out of the operating room, leaving the patient with the surgical resident, anesthesiologists, and nurses. From a tiny office just adjacent to the OR, he could still see in through a window. He scrolled through some emails on the computer, then picked up the phone and dialed. "Hi, it's Atul....Are you a basketball fan?" Headed to Palm Springs the following weekend for a medical conference, he was trying to give away tickets to an NBA playoff game in Boston. He was taking two of his children along and was excited about the trip, but "it's killing me" to miss the game, he admitted.

Gawande was on the phone with a journalist when the surgical nurse interrupted with the test results. Satisfied with the numbers she recited, he instructed her to give the surgical resident the OK to apply the final dressing to the patient's wound. Turning back to the phone, he dialed into the hospital's dictation system to give a report for the patient's medical record, talking so fast that the boundaries blurred between words. Then it was off to tell that patient's family how the procedure had gone, and then to the preoperative holding area to talk to his next patient.

This kind of effortless toggling between tasks helps explain how Gawande can keep so many balls in the air. Certain other habits also contribute. He arrives precisely on time—not late, but not early either. He leaves swiftly when meetings end, as others linger to chat. There is nary an idle moment in his day. He saves his writing for the hours between 7 and 11 a.m. and 4 and 7 p.m. to capitalize on the body's circadian rhythms. And it helps that he isn't bothered by a lack of downtime.

Gawande's no-nonsense focus can sometimes make him come off as brusque or formidable. Many nurses and doctors inject color into the OR by wearing headgear decorated with stripes, polka dots, or a sports-team logo; Gawande opts for standard-issue plain blue. He eschews comfort footwear, such as clogs or sneakers, in favor of flat-bottomed leather loafers. But he humanizes himself in other ways. OR teams that work with him are treated to a sound-track of alternative rock from his iPod (a recent playlist included Tom Petty, the Clash, Modest Mouse, Feist, Dido, and M.I.A.). With students and other mentees, he is supportive and patient. He has an easy smile, and he considers a genuine interest in others important, greeting people by name and recalling personal details,



regardless of their status in the hospital hierarchy.

He seems to guard his time so closely not for selfish reasons, but so that he can be generous with it when he wishes. During a meeting with his research team, a junior colleague was having trouble working out the design of a pilot project on reducing childbirth-related mortality. Gawande offered to make himself available to discuss the details: "late night, evenings,



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weekends, whatever we need to do." He does a surprising number of media interviews—several radio appearances after the March publication of his article on solitary confinement, and an entire hour on an NPR show after his article on disparities in U.S. health-care spending appeared in June. And he doesn't leave *every* room the moment his obligations end. After giving a talk to HMS students, he stuck around to answer questions for the long line of students who gathered, staying until the technical staff started packing up and turning out the lights.

One monday afternoon at 4 p.m., Gawande was finishing his ninth office visit of the day. Coming out of the exam room, he found a sandwich, potato chips, and bottled water waiting at the computer station where he would enter notes into the patient's medical record. This wasn't a mid-afternoon snack; his assistant had secured the provisions because meetings had taken up his whole morning and he'd skipped lunch. He took a few bites between bursts of typing, but then it was on to appointment number 10. By 5:30, when he saw his twelfth and final patient, the sandwich was still not fully eaten, and he had barely touched the water, or for that matter had anything to drink all afternoon.

This wasn't a particularly busy day; it was a typical Monday. Gawande does this day after day, week after week, and somehow he hasn't burned out. It is partly the legacy of residency, which teaches young doctors a catch-as-catch-can approach to sleep and food. But one also gets an impression of a man so engaged in, and stimulated by, his work that physical needs are an afterthought. He is in a constant state of flow.

Gawande is happiest, he says, when he has a lot going on. In 2001, when he was preparing his first book, *Complications: A Surgeon's Notes on an Imperfect Science*, for publication, he took two months off from other duties, but, he says, "I actually didn't get more done, and I started to go stir-crazy."

His week proceeds according to a carefully calibrated schedule.



Mondays are for pre-operative or post-operative consultations with patients. Tuesdays are for meetings, of his research team and otherwise (and frequently, speaking engagements). He spends Thursdays in the OR; Fridays he works on his writing. Wednesdays are for the overflow, and some writing time if he's lucky.

In spite of all he does, he leaves the hospital most nights around 7 P.M. At the end of a 12-hour day, he is home in Newton in time to eat dinner with Hobson (who is now a full-time mom) and their son Walker, 14, and daughters Hattie, 12, and Hunter, 10.

As one might guess from his writings, Gawande reads insatiably. "If he's not actively talking, he's reading," says Hobson. "He reads before he goes to bed. He reads right after dinner....It's like an addiction. His brain is voracious and always needs food."

Consequently, he is always ready with a killer quote from a source popular or obscure, from any walk of life: philosopher, politician, figure from literature or sports. (His 1997 Slate essay on his taste for niche medical journals as guilty pleasure is a deliciously funny read.)

Gawande grew up in a house with journals, not novels, lying around, and both he and Hobson say he was pretty much indifferent to literature until he began courting her. But once he decided to try writing, Hobson says he took a methodical approach: "He became a student of writing. How are they working this out? How is it progressing? ...He sees through to the bones, to the method."

Across his portfolio of pursuits, Gawande displays a willingness to be influenced by people he respects, and to recognize good ideas when he finds them. He says he would not have gotten a publichealth degree had Zinner not suggested it. The policy concept perhaps most closely associated with his name, the surgical checklist, was not his to start with, as he readily admits (see page 32).

Perhaps this is why he is reluctant to describe his own writing style, saying instead that he "steals" from such writers as Hemingway and Tolstoy. But there is what Finder calls a "Gawandean" style: "He understands how the small, colorful details can bring an argument to life. He's always very attendant to rhythms and sonorities." In a *New Yorker* article on aging, he wrote:

The hardest substance in the human body is the white enamel of the teeth. With age, it wears away nonetheless, allowing the softer, darker layers underneath to show through. Meanwhile, the blood supply to the pulp and the roots of the teeth atrophies, and the flow of saliva dimin-

ishes; the gums tend to become inflamed and pull away from the teeth, exposing the base, making them unstable and elongating their appearance...

At least as important is Gawande's knack for choosing exactly the right case to write about—a reflection of the exhaustive reporting that goes into each piece, and the number of cases he researches and rejects. For an article on itching, he found a woman who had experienced itching so intense that she scratched through her own skull. In one on blushing, he tells the story of a young woman who was on track to achieve her long-held dream of becoming a television news anchor, but found herself crippled by chronic blushing (and then flew to Sweden to have a controversial new procedure that disconnected the blushing reflex by severing some nerves).

The blushing article also demonstrates how Gawande refuses to stick to the confines of medical writing. He zooms out from an individual case to a view that spans all of human history:

What is this peculiar phenomenon called blushing? A skin reaction? An emotion? A kind of vascular expression? Scientists have never been sure how to describe it. The blush is at once physiology and psychology. On the one hand, blushing is involuntary, uncontrollable, and external, like a rash. On the other hand, it requires thought and feeling at the highest order of cerebral function. "Man is the only animal that blushes," Mark Twain wrote. "Or needs to."

As Finder puts it, Gawande's pieces "open up like an umbrella." Once a college sophomore with little interest in literature, Gawande now says he *thinks* in stories and feels a compulsion to write. In fact, he recommends that everyone do a bit of writing. "It makes no difference whether you write a paper for a medical journal, five paragraphs for a website, or a collection of poetry," he said during a 2005 HMS commencement speech:

...by putting your writing out to an audience, even a small one, you connect yourself to something larger than yourself....An audience is a community. The published word is a declaration of membership in that community, and also of concern to contribute something meaningful to it.

His writing serves to amplify the impact of his surgery and his policy work. After his January *New Yorker* article on learning from other countries' experiences in designing American healthcare reform, he was invited to testify before Congress. The *New York Times* reported that his June article on healthcare spending disparities had so intrigued President Obama that he discussed it with aides and cited it in a meeting with senators. And the checklist figured into the plot of a March episode of the popular television drama *ER*.

On the desk in his office at the Brigham is a framed copy of Sylvia Plath's poem "The Surgeon at 2 A.M." She describes a patient's innards as "tubers and fruits/Oozing their jammy substances." From the surgeon's perspective, she writes: "I worm and hack in a purple wilderness." Gawande notes that Plath, *not* a surgeon, nevertheless got things just right. "That," he says, "is the really amazing thing, and that's the difference between me and a real writer."

He likes the Plath poem because it casts the surgeon in an ambiguous light. "Most writing about people in medicine casts them as either heroes or villains," he says. "That poem captures the surgeon as a merely human, slightly bewildered, a little bit benighted person in a world that is ultimately beyond his control." ∇

Elizabeth Gudrais '01 is associate editor of this magazine.