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In future dean’s letters, I hope to explore the evolving landscape of higher education and some of its emerging challenges and opportunities, and to present some of the most distinctive, and exciting, aspects of Emory College. But for now, in my first such letter, I wish to express my sincere joy and enthusiasm for this opportunity to join Emory as dean of Emory College of Arts & Sciences. I’m truly a freshman here: I joined the Emory community just last summer, along with the Class of 2014.

But I hope to be staying a good bit longer than the class I entered with. Because as I’ve been discovering since I first set foot here, Emory is an extraordinary place. And one of the most gratifying things about my first year has been the absolutely marvelous welcome my family and I have received. Many universities describe themselves as a community, but I have never been on a campus that takes that notion so seriously as Emory. From my very first phone call and visit, the entire College—faculty, students, administrators, trustees—has welcomed me, my wife Ann and our son Saul with incredible warmth. Even before our arrival on the campus, we had all developed a great affection for the institution and began having trouble imagining ourselves anywhere else. (So you can imagine how thrilled I was when I was eventually offered the job!)

I’m very excited to be here, and I want to take this chance, first, to thank all of you for the things you’ve done (and are doing, and will do) for Emory. The College is an amazing work in progress, and everyone who’s passed through the buildings and grounds here has helped shape it. Marshall Duke—a senior, if I’m a freshman—has some great thoughts on that topic in this issue, on the portability of Emory as a place and idea.

I could easily tell from afar that Emory is a fantastic university, which led to my interest in joining this community, but I had no idea how many pleasant surprises it would offer up close. The terrific faculty and students, the pathbreaking research and truly creative teaching, all the opportunities for learning and service outside the classroom—there’s spectacular work going on in every part of campus. And we have tremendous strengths across the liberal arts: the social and physical sciences, the humanities and fine arts, and in many interdisciplinary areas that span such divides. Everywhere I look I see vibrant intellectual and artistic energy, a passionate commitment to scholarship and education, as well as a continual drive to do even more, even better. Along these lines it’s very telling that the same U.S. News ranking that once again this year placed Emory in the Top 20 national universities also included us among the nation’s Top 20 “up and coming” schools. I think this captures something true, important and quite wonderful about us. It says that after all we’ve accomplished together, we have not lost that crucial sense of discovery and possibility, ambition and innovation, the impulse to change things for the better.

Another surprise from my freshman year: I’ve realized how relatively little-known Emory is for a top-ranked school, one that’s recognized internationally among its peers. Emory is without question one of the world’s great research universities, with some phenomenal and quite distinctive strengths, and we need to do a little better at getting the word out. So I see it as one of my jobs to be an Emory advocate and cheerleader. Some have told me that we have been hindered in this regard by a sense of “southern modesty.” I have spent the last twenty-five years living in the South, but I still think it’s OK to feel a little pride about what we have built here, and to let it show, to let others share in our excitement.

I hope this will be the first in a very long line of these semiannual Quadrangle letters. And as I get to know this remarkable place even better, I hope you’ll write with comments, suggestions, support, or just to say hello. I look forward to hearing from all corners of the Emory College world. I’m excited to have this chance to be part of that world, and to devote myself to making it a more rewarding place for everyone, in any way I can, from my own corner.

Robin Forman
Dean of the College of Arts & Sciences

Providing a stimulating education that values core liberal arts with exposure to a range of intensively focused professional streams, Emory College is a Community for Learning.
Laying Down the Law

Professor Evans-Grubbs comes to Emory from Washington University, and before that from Sweet Briar College in Virginia, but she trails a long history with the College. She got her undergraduate degree here in 1979 before studying for a year in Athens (the one with the Parthenon, not the bulldog) and earning a PhD in classics from Stanford. “My sisters and I all came here,” she says. Her mother was a Georgia State University history professor, and her father, Trevor Evans, taught in the Emory math department for forty years, from 1951 until his death in 1991. Two awards are named in his honor, one recognizing Emory’s top math & computer science major, the other given by the Mathematical Association of America for exceptional scholarly articles.

“I was a strange major,” Evans-Grubbs recalls. “I doubted in English and Greek, and I took courses in American Studies, linguistics . . . . I really only got interested in Roman history my senior year, sitting in on a history colloquium with Tom Burns.” In graduate school Roman law took hold of her, including the Justinian Code, an extensive project undertaken by Justinian—the first Christian and last Latin-speaking emperor—to collect, record and simplify Roman law. Completed in 534, the code forms the basis of most modern European (though not British) law, which offers another illustration of the considerable light generated in those reputedly dark days.

The author of two books and dozens of articles and essays on law, women and the family in antiquity, Evans-Grubbs is now working on a book about children without fathers under Roman law. “I’m looking at the attitude toward children who had no legal father and who therefore were often in a marginalized, precarious position,” she explains. “Sometimes the fathers were dead, or else alive but not recognized by law—like slaves—or the children had been abandoned, or sold or pledged for debts, even by their own parents.

A lot of people were caught in a bind. The line between slavery and freedom in Roman society was often blurred, and you could get trapped between the abstract law and the real world, with its real people.”

One way to escape this dangerous borderland, to “prove that you were who you were, and owned what you owned,” was to petition the emperor for a legal ruling. This might seem an unlikely and even a risky move if you weren’t among the Roman elite (why alert an emperor that you’re unhappy unless you want centurions at the door?) but in fact “most petitioners were provincials,” Evans-Grubbs says. “We don’t have those original petitions, but the responses, or rescripts, show that about twenty percent were addressed to women. Even slaves sent petitions and received answers.”

Like her father, who received the Emory Williams Distinguished Teaching Award in 1972, Evans-Grubbs is a decorated teacher, twice the recipient of a National Endowment for the Humanities teaching fellowship. She gets plenty of opportunity here at Emory, as a faculty member not only in history but in Ancient Mediterranean Studies and the Center for the Study of Law and Religion. And she’s involved in a new interdisciplinary doctoral program in ancient history that pulls together classics, art history, philosophy, and religion among other fields.

“Here’s the thing of the things that impressed me. I’ve been at other schools with a lot of resources, but Emory has really pulled them together to build up the liberal arts, the humanities.”

Which suits her fine. “I always wanted to be a teacher,” she says happily. “I’m focused on undergraduate teaching. Always have been.”
“My father always told me that you should burn with passion and love for the rest of the world. You should take what you learn outside of yourself and apply it,” says Shivani Jain. The Emory senior is taking that advice to heart, planting seeds of change from Atlanta to Africa as she blazes through a degree in sociology. Jain recently received a Marshall Scholarship for advanced studies in Britain. She plans to study global health and economic development at University College London, health policy at Cambridge University, and infectious disease control at the London School of Hygiene and Tropical Medicine. “I still can’t believe I got it,” Jain says of the highly competitive, all-inclusive scholarship. “It’s starting to sink in.” Jain grew up in greater New Orleans. Her father came from Punjab, India, and her mother is from Calcutta. She was a junior at an all-girl’s Catholic high school when Hurricane Katrina hit, sending her off to boarding school in northern Louisiana. “It didn’t make sense for me to be at home anymore,” Jain says. “My school was closed and the city was like a war zone.” Being uprooted and sent to the Louisiana School for Math, Science and the Arts “turned out to be a blessing in disguise,” says Jain. “I was exposed to much more diversity, in terms of the students’ varied religious and ethnic backgrounds.” Jain began her Emory career at Oxford College, and thought she would major in political science until she enrolled in a class on globalization and the developing world taught by sociologist Michael McQuaide. The course included a trip to a remote village in Ecuador. “It changed my world view,” Jain says. “The people there are much more connected to their natural environment.” Her love of cooking led Jain to help organize the Emory Culinary Club, which feeds the homeless and assists organic farmers. Her interest in women’s issues and theater inspired her to direct, produce and act in The Vagina Monologues, aimed at preventing sexual violence. And her involvement with the Barkley Forum debate team moved her to teach debating skills to teens in inner-city Atlanta. “I like to use what I’m learning in the classroom,” Jain says. Under the guidance of Emory sociologist Tracy Scott, Jain interned at hospital wards in greater London and did comparative studies of health systems in the U.S. and U.K. “A lot of people in the media compare the two systems, but it’s not so simple when you learn more about them,” Jain says. Even within the London-area hospitals, she found a wide range of perspectives, both among health care providers and their patients. Last year she traveled to Ghana, to assist in a study of water sanitation policies in the capital of Accra. She interviewed people who lived in slums, without latrines or running water. “Many people didn’t see a problem with their children wading in the gutter water, even though they knew it was dirty,” Jain says. Staggering deficits in education, infrastructure and policies may seem hopeless to some, but to Jain they signal a call to action. “Research alone isn’t going to change people’s lives,” she says. “It’s not enough to just gather facts and give them to government officials. I want to actually try to implement change.” So Jain and her friend Neema Iyer, a graduate student in the Rollins School of Public Health, founded a nongovernmental organization, RISE Glocal, in fall 2009. It uses creative arts to bypass cultural and language barriers and connect people to health and environmental education through their own music, poetry and drama. The two women leveraged contacts they already had in Jordan and Mexico to begin RISE Glocal programs in those countries, then expanded to Sierra Leone and Ghana. RISE Glocal recently received a small grant from the Emory Center for Creativity & Arts, which will be used to sponsor an art contest for students involved in RISE Glocal programs, and to publish a magazine of the winning works of art. “The idea is to add an element of fun and an incentive for learning,” Jain says. “And we want to provide an open forum for children to communicate their ideas.” They presented the magazine, and the concept of RISE Glocal, at the annual state conference of the National Art Educators Association, held at Sea Island in April. As an undergraduate, Jain has explored a range of opportunities available at Emory. “I’m pretty busy,” she concedes. “In general, my thoughts are racing. Sometimes being so involved means you sacrifice other things, but I enjoy what I do and wouldn’t have it any other way. “In graduate school, I’m going to continue working with RISE Glocal, but I’ll have to get more focused,” she says. “It’s wonderful to be finishing up at Emory, but also bittersweet to leave behind friends and professors I’ve gotten to know so well. I’ve made a lot of lifelong friends.”
“Emory are here!” It was with this quaint (to our ear) British grammar, which sees group nouns as plurals rather than singulars, that our presence was made known in Canterbury.
Kevin Karnes, chair of the department of music, is well aware that many Emory students choose to double-major in music and, well, just about everything else. Students in the department are encouraged to explore another discipline, and the music program was crafted to provide a conservatory-level education within the framework of a broad liberal arts setting.

But even he was surprised when he glanced at the program of a recent Emory University Symphony Orchestra performance. Reading down the list of the first violin section, he came across 16 double majors out of a total of 18 undergraduates, starting with concert master Rachel Lin, a joint major in psychology and linguistics with a second major in music. He counted a whopping 57 double majors out of a total of 79 students who declared one of their majors to be music.

"I knew we had a lot of double majors," said Karnes, "but I had no idea it was this many."

The numbers are rising throughout departments in the College—a double major is now the first choice of about 30 percent of students. In fact, so many students are double-majoring in the arts and another discipline (about 200) that Emory’s Center for Creativity & Arts is helping develop a workshop to support them. A YouTube video ("Why Double Major") from a 2009 roundtable with students has received more than 2,000 views—and one comment from an obviously relieved parent: "Put me at peace with my daughter’s decisions in the future."

Emory isn’t the only college seeing more double major action. Researchers are investigating the pros, cons and implications of the phenomenon across the U.S. Emory, for instance, is one of seven colleges included in a Vanderbilt study that’s looking at why students choose to double major and whether it makes them think differently (results are due in 2011).

A 2010 staff report by the Federal Reserve Bank of New York, no doubt sniffing a trend relevant to human resources departments, was entitled “Double Majors: One for Me, One for the Parents?” Despite the provocative title, the
researcher debunks the notion that students choose one major for themselves and another to keep their parents happy. Instead, students in the study reported enjoying the coursework and gaining parental approval in both majors.

So why the move to double up?

Students and faculty cite a number of reasons for the shift, as well as some personal and professional benefits and some potential pitfalls. Several also mention an increasingly popular alternative to the double major, referred to as “Emory’s best kept secret,” which allows students to design their own interdisciplinary major.

“That is one thing that we have many students who double major is partly indicative of the evolution of their interests and their ability to pursue more than one—that’s a great positive,” says Joanne Brzinski, senior associate dean for undergraduate education.

Sometimes students take courses toward one major, and then as their interests emerge or expand, they choose another direction. Many students also enter college with enough high school AP course credit to give them a leg up on GRE requirements and more freedom to earn credit in two majors.

Of course, some of the most popular double majors at Emory pair departments or disciplines that are practically cousins—biology and chemistry, for example (read: pre-med), or history and political science, or psychology and sociology. Students who venture further afield to major in, say, music and psychology might choose one major based on their own passions—to maintain a connection with something they love—and the other to satisfy the demands of a practical job (or those practical-minded parents).

And sometimes students make connections that aren’t obvious even to scholars, said Brzinski. The College’s new minor in sustainability is one example, a direct result of students who were looking for a fit between anthropology and environmental studies.

Nicole Azores-Gococo 11C came to Emory with the intention of being pre-med. Then she fell under the spell of a freshman seminar class taught by Marshall Duke, Candler Professor of Psychology, which examined the psychological makeup of literary characters. After taking a creative writing class, she found herself on a path to a double major in psychology and creative writing, “And sometimes students make connections that aren’t obvious even to scholars,” said Brzinski. The College's new minor in sustainability is one example, a direct result of students who were looking for a fit between anthropology and environmental studies.

One reason that creative writing is a popular partner in double majors is that it isn’t offered as a minor. Garrett Turner 11C combined it with music because he found the two disciplines indistinguishable when it came to his passion for singing and poetry. It also didn’t hurt that when he looked around at other art students, most of them were pursuing double majors.

“Emory’s culture of liberal arts in itself almost pushes you toward exploring more than one area in depth,” Turner says. His senior project is eloquent testimony to what can happen when students make their own disciplinary connections: he combined poetry, theater, music, and film in his production of I Dream A World: The Life and Work of Langston Hughes.

“I’m using the interdisciplinary work I’ve done as an undergraduate to go to graduate school and do interdisciplinary scholarship in American studies,” says Turner, who plans to join the professorial ranks one day.

Kristen Gwock 10C found her calling in theater administration through a circuitous route that involved first the business school and then math courses focused on actuarial science. She did theater on the side before realizing, with the help of a few drama classes, that she could “combine my love of theater with my logical side.” Now a communications coordinator for Emory’s Center for Creativity & Arts, she was a double major in theater and mathematics until September of her senior year, eventually graduating with a major/minor because of two interesting internships that she just couldn’t pass up.

“A lot of my friends who go to other schools don’t get that liberal-arts-based education,” says Gwock. “They don’t get the opportunity to try things out and learn about subjects that they may never use again—or that may change their lives.”

The double major isn’t for everyone, though.

Some Emory faculty have expressed concern that students might pursue a double major more for the sake of credentials—or to impress potential employers or graduate schools—than out of a true passion for the subjects.

So why the move to double up?

And for the Truly Adventurous

Who’s behind the Dooley mask may be Emory’s best kept secret. But some students and faculty believe that Emory’s interdisciplinary Studies in Culture and Society (IDS) program is kept just about as well under wraps. It’s the only major at Emory that allows students to structure their own program of study around interests that they themselves define.

Michaela Salvo 11C chose Emory because it was one of the few colleges in the U.S. with an undergraduate department dedicated to interdisciplinary scholarship. Since her sophomore days in high school, she knew she wanted to learn more about stem cell research and bioethics—a field of study that doesn’t fit entirely within one or even two majors.

“I knew IDS would let me have a little more independence and freedom in deciding what I wanted to study and how to formulate my ideas,” says Salvo.

With the help of Peter Wakefield, IDS director of undergraduate studies, and faculty mentor Arni Eisen, a senior lecturer in biology, she mapped out a course of study spanning biology, sociology, philosophy, ethics and political science.

“The IDS department has been really great in encouraging us to think outside the box and to find a unique way to do our senior projects,” said Salvo. “There’s something to be said for going outside the bounds of disciplinary fields.”

The IDS secret may be getting out. Since Wakefield took over the program in 2006, the number of students has grown from five majors to thirty. He’s helped students work in areas such as nutrition programs in Vietnam, film and religion, and art in Latin America.

“Our major is designed for those students who work very well independently, who can meet a lot of demands—especially with the required senior project—and who are really falling between the defined disciplines,” said Wakefield. “The very existence of an interdisciplinary major recognizes that students may well be the ones who start defining questions that will shape the academy in the future.”
But there are different kinds of memory, and even the more familiar ones don’t necessarily work (or fail) the way we think they should.

Certainly memory isn’t entirely our servant. Everyone has struggled to come up with a test answer and felt it lurking mad-deningly just out of reach, or been startled when a memory, buried for years, pops up unbidden at some sound or smell, like Proust with his madeleine.

These are common, if not universal, phenomena. But talk to a few Emory faculty doing memory research, and it quickly becomes clear that memory is even less under our control than such anecdotes suggest. It starts to look as though the problem—to steal a line often attributed to Twain—isn’t what we don’t know but rather what we do know that just ain’t so.

For one thing, memories are made and stored all over the brain, not in particular spots labeled “The time I broke my leg” or “Kinds of people to avoid.” When our brains work they network, no less than the computers they’re often compared to, and even something as seemingly straightforward as your broken leg can be laid down differently depending on whether it takes the form of an episodic memory (I broke my leg at age six) or a semantic one. Robyn Fivush, Samuel Candler Dobbs Professor of Psychology, explains the difference. “Semantic memories may have started out as specific episodes, but they’ve lost those tags and become general information about the world—in this case perhaps ‘You’re likely to break a bone if you jump out of a tree.’”

The same line separates knowing the capital of France from remembering sitting by the Seine with your girlfriend on a July night in 1986.

Fivush, who studies early autobiographical memory, makes a further distinction. “Both of those are forms of what’s called explicit or declarative memory, because I can declare: Paris is the capital, and I went there on my senior trip. Another kind, called implicit or procedural memory, means remembering how to ride a bike, or drive a car, or brush your teeth. It’s not necessarily available to consciousness, so it might not feel like memory. But it is, and of course these things can be lost too. And even within the declarative category, there’s now good evidence that semantic and episodic memory are distinct brain systems.”

Systems, importantly—not discrete brain locations. The notion that we can map the brain like those old phrenology busts, with patches devoted to “cautiousness” and “hope” and so on, is no more accurate in this era of functional magnetic resonance imaging (fMRI) and other technological tools than it was in the nineteenth century. But the idea feels “somewhat satisfying,” says associate professor of psychology Stephan Hamann. “And it’s certainly fed by news items headlined ‘Love Area Found in Brain’ or ‘Scientists Find Brain Region Devoted to Traumatic Memory.’ Then they’ll have an illustration of a dark brain with just one small area glowing.

“It doesn’t work that way,” says Hamann, who uses neural imaging to study episodic memory. “There’s a grain of truth to it, because not every area of the brain is involved in every kind of memory. There are areas that specialize—like the hippocampus, which is kind of the glue that lets us connect things. If you’re learning a new language, it’ll help you link a picture of a horse with the Spanish word ‘caballo.’ But the brain is a network, and like any other large organization there are different parts contributing, and one can take over another’s role to some extent. It’s much more complex than this over here, that over there.”

If you’re a music or film fan, especially of a certain age—if you were alive and aware in 1974—there’s a good chance the title above prompted a brief Streisand audio clip in your brain’s private iPod. The phrase “All alone in the moonlight” might have done the same for a snippet from Cats.

When we think about memory, we tend to consider the voluntary kind: the rapid recall of a date, or the details of an event, to the tips of our fingers (or tongues). Either that or its frustrating flip side, the failure to dredge up a phone number or latch onto the name that goes with that smiling face advancing toward us at a party.
Another way our memories don’t work is like a computer. It’s a tempting metaphor, given the wondrous network of connections in the brain, the electrical impulses racing through them, the speed at which we calculate and react. But to a specialist, “the analogy really doesn’t work for memory at all,” says Fivush. Not every input is stored, for one thing. After a few seconds, that thought you’re thinking is either sent to long-term memory or it’s flushed out, gone. Beyond that, brain-as-computer “doesn’t allow for the kind of fluidity we see, or the social influence,” Fivush says. “It’s true in only a very limited sense. If you program a computer with lots of examples, for instance, it’ll extract a generalized script. We do that too. I’ve been to a thousand airports, and I can’t remember every one but I pretty much know what’s going to happen when I get there. So we have that in common.

“But as long as the hardware or software isn’t faulty, what you put into a computer’s memory is what you get out. And that’s where we’re different.”

We often speak of memory as a skill, like playing the cello or recognizing bird calls. We can train ourselves, but some people just seem naturally better at it. This is Japan (both true and false. Many might be better at remembering facts than Joe, but if we turn to events, her memory will differ not only from Joe’s but from . . . her own.

“Who can that be? Partly it’s because memory is an “inter nal phenomenon, but also a social one,” according to Fivush. “Memory may seem mostly about ‘Who am I?’ but think about it: who are you exactly, outside your social groups? What would that even mean for a human being? And as it happens, every time we remember something in a social situation, we re-construct and consolidate the memory, it changes.”

“You are re-encoding a memory every time you retrieve it,” asserts Patricia Bauer, Asa Griggs Candler Professor of Psychology and the College’s senior associate dean for research. “Memory is in the connections. And even if your neurons are the same from one year to the next, the connections aren’t. So a memory you stored when you were four is represented now with a very different neural pattern. It’s been linked to other memories, you’ve forgotten bits and added pieces. Though it might seem counterintuitive, in some sense a thing recalled fewer times is more pristine.

“Which leads to an interesting paradox: people with brain damage of a very particular kind, in the hippocampus region, can’t recode events. So their memories are actually better in that respect. They remember the same way the rest of us do, just more consistently.”

The other paradox here is that the really important events—your wedding, as opposed to your last trip to the coffee shop—are the ones we recall and retell, again and again. And in doing so we subtly change them; in effect, we change our past. This isn’t a weakness of those of us with “bad” memories but something we all do, all the time. So where does that leave us? If our memories are fluid, and not the computers or video recorders we might prefer to imagine—if we are our memories, and they’re not reliable—what can we trust about ourselves? Many an annoyance-themed movie and novel raises that frightening question, as does the very real spec-
tre of memory loss due to aging, dementia or Alzheimer’s.

Fortunately our memories “are actually pretty accurate, for the most part,” Fivush says. “We wouldn’t be able to navigate the world very well if they weren’t.” And most of the time, remembering a blue jacket as red or reshuffling the guests at last year’s Christmas dinner makes no substantive difference.

Hamann agrees that very often memories can be quite accurate. And “heightened emotion,” he adds, “can render a memory more vivid. In a laboratory setting, if you show people pictures that are moderately emotionally arousing, like snarling dogs and things like that, you can get better detail memory.”

You would think, then, that the greater the emotion, the bet-

ter the memory. People refer for example to “flashbulb memo-

 ries,” which, as the name implies, are thought to be indelibly formed by such events as JFK’s assassination, or more recently the space shuttle disasters and 9/11. Everyone knows precisely where they were and what they were doing at those moments.

Unless they don’t. Multiple studies have demonstrated that extreme emotion, at times like those, can have the opposite effect, rendering us less likely to remember accurately.

“There’s an optimal level of stress when it comes to memory,” Bauer explains. “At very low levels, your memory’s not good because you’re not paying a lot of attention. And at very high levels, your body’s being flooded with chemicals that are actu-

ally quite detrimental to memory.” Cortisol and other steroids released by the adrenal glands can prevent the brain from laying down a new memory or accessing old ones, and sustained stress can damage the hippocampus itself.

Stressful events are also subject to the telling and retelling effect, and there’s still another reason to doubt the memories that result. Adrenaline and other fight-or-flight chemicals “cause you to focus on the immediate danger in a situation,” says Bauer. “So in a mugging, for example, you might remember the pointed gun very clearly, but not the color of someone’s eyes or the model of a car passing by. At that moment your body doesn’t care about those things.”

So how do we deal with counterintuitive result. Eyewitness accounts are considered by many, in or out of a jury box, to be unimpeachably vivid and lasting, a forensic form of flash-

bulb memory. But they can be much less reliable than most of us believe. “In court, of course, blue jacket versus red jacket makes a huge difference,” notes Fivush, who has consulted on children’s testimony. “Unfortunately the rules of prov-

ing guilt or innocence don’t mesh well with the evolution of memory and how it works in the world. Eyewitness testimony can in fact be the worst kind, unless it involves someone you know. The absolute worst conditions for memory are: a stranger, a short period of time, and a lot of stress. Of course a robbery or attack is a perfect recipe for that.

“Still, people believe eyewitnesses. And eyewitnesses believe themselves—they’re not lying. We can conjure up very vivid pic-

tures that can be absolutely convincing, but we don’t take into account that our memories are often conglomerations, assem-

bled over time. That’s how our sense of things.”

The rock group Talking Heads urged us years ago to Stop Making Sense, but that seems to be the one thing our brains won’t (maybe can’t) do. We’re driven to create meaning, to make coherent narratives out of the jumble of our exis-

tence. In a famous experiment Sir Frederic Bartlett, one of the pioneers of cognitive psychology, told Cambridge under-

graduates a fable featuring subtle incongruities and narrative jumps, then asked them after various periods of time to recall the story. In retelling, the students tended to omit or modify those elements that challenged logic and sense. “We try to make things comprehensible, including our memories,” says Hamann, “by using our ideas of what makes a good story. There seems to be a psychological need not to have things disconnected, random, or inexplicable. But of course things sometimes are.”

We try to make things comprehensible, including our memories, by using our ideas of what makes a good story. There seems to be a psychological need not to have things disconnected, random, or inexplicable.
The Emory Dance Company in a work premiered at their 2010 spring concert.
As the plane lifts over North Gulfport, over Turkey Creek, turning to sweep out over the sound before heading north and east to Atlanta, I try to see all the places of my childhood that I am once again leaving, putting them, like my past, behind me—though the scrim of loss hangs before my mind’s eye. Bessie Smith’s lyrics come back to me again: I went and stood up on some high old lonesome hill, then looked down on the place I used to live.

He found a hill where his cell phone worked and called to say, “Everything is gone.”
By the time you reach 100, blocks and the answer climbs above 600. Thirty? Nearly 6,000. The problem involves the partition function, which asks how many different ways you can break up a natural number. Take kids’ blocks. Four of them can be grouped all together (4), or three together with one to the side (3+1), or 2+2, or 2+1+1, or individually (1+1+1+1). That makes five ways to partition them, so $p(4) = 5$.

Move to larger numbers, though, and you quickly rise out of the nursery and into the stars. Ask the same question for twenty numbers like that: lay them out, go for a walk, and every time I tell you to look you’ll see the same kind of tree. The two phenomena linked up last September as Ono and Kent were hiking in the north Georgia mountains. Noticing patterns in the trees around them—clumps and spaces, different kinds and colors—they imagined a similar hike through numbers. Wham, it hit: partition numbers are fractal. “Look out at the endless fractal forest. But now it isn’t just those special red trees: Ono has found a way to determine just how long a walk will bring you to $p(n)$ for any $n$ at all. “It’s the formula we’ve all been looking for,” he says delightedly.

Recently Ono and his Emory post-doc colleague Zachary Kent explained in layman’s terms what they’ve accomplished. (The third team member is Amanda Folsom, who now teaches at Yale.) It begins, Ono says, with “child’s play.”

The problem involves the partition function, which asks how many different ways you can break up a number. Take kids’ blocks. Four of them can be grouped all together (4), or three together with one to the side (3+1), or 2+2, or 2+1+1, or individually (1+1+1+1). That makes five ways to partition them, so $p(4) = 5$.

Move to larger numbers, though, and you quickly rise out of the nursery and into the stars. Ask the same question for twenty blocks and the answer climbs above 600. Thirty? Nearly 6,000. By the time you reach 100, $p$ is close to two hundred million, and $p(1000)$ is a number thirty-two digits long—enough blocks to fill 400,000 Earths. “The function grows at a phenomenal rate,” Ono says. “It explodes.”

Calculating such enormous results without a formula has long been out of reach of even the finest mathematical minds. Many in the math pantheon have wrestled with the problem, and a few—Euler in the eighteenth century, Jacobi in the nineteenth, Ramanujan and Rademacher and others in the twentieth—chipped away at it. But their ingenious hints at a solution worked only for relatively small numbers, or primes, or else gave only approximations or were unwieldy and resistant to proof. Now Ono and his team have gone beyond even these celebrated names to develop the first precise formula for calculating $p(n)$. And the key to this most stubborn of locks? Fractals. Fractals are complex, proliferating (and often beautiful) geometric shapes that on close inspection are composed of patterns repeated at different scales. They can be found in frost, ferns, peacock feathers, even broccoli. You can visit the most famous fractal, the Mandelbrot set, on the Web and zoom into its endless paisley swirls and outgrowths, watching as the patterns renew themselves endlessly.

The problem Ono and his team have tackled—though he’s quick to caution that expressions of interest should “evoke wonder,” Ono says. “Often simple tasks and ideas should “evoke wonder,” Ono says. “Often simple tasks and questions are the sources of the deepest structures in abstract mathematics.” —David Raney

At an Emory symposium in January, Ken Ono, Asa Griggs Candler Professor of Mathematics, announced the solution to a problem that has eluded some of the greatest mathematicians of the last three centuries, setting off shock-waves across the math world. “The problems his team cracked,” Scientific American trumpeted a few weeks later, were “the holy grail of number theory.”

Lawrence Barsaleau, Samuel Candler Dobbs Professor of Psychology, Michelle Lampi, Samuel Candler Dobbs Professor of Anthropology, and David Lynn, Asa Griggs Candler Professor of Chemistry and Biology, have been selected as fellows of the American Association for the Advancement of Science.

David Ellis, Robert W. Woodruff Professor of History, has won the American Publishers Association prize for best book, as well as the R. R. Hawkins Award, for his book Atlas of the Transatlantic Slave Trade.

Notable Faculty Achievements

Student Honors

Stefanie Carter won the 2010 Emory University Student Employee of the Year award.

Rosy Gomez was one of three college students in Georgia to receive a scholarship funded by President Barack Obama’s Nobel Peace Prize award.

Deborah Lipstadt, Dorot Professor of Modern Jewish History and Holocaust Studies, received the 2010 James Weldon Johnson Medal for humanitarian service.


Kristin Mann, professor and chair of history, was awarded an NIH fellowship for 2011–12.

Michael Peletz, professor and chair of anthropology, had his book Gender Pluralism designated an Outstanding Academic Title by Choice.

Sharon Strocchia, professor of history, was awarded the 2010 Helen and Howard Mannaro Prize by the American Catholic Historical Association for her book Nuns and Nunneries in Renaissance Florence.

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As “Institutional Advancement” professionals, we use the terms “fundraising” and “development” interchangeably in our daily conversations. Our job is to ask for your support because we believe in the power of paying it forward, lighting the way for the future as others have done for us. We’re slightly biased, of course, as we’re both College alumni.

We thank those of you who share this mindset, and we’re especially grateful to those of you who have given your time and talent in support of Emory College. Donors and volunteers like you allow the College to pursue excellence.

Whether you’re already supporting Emory College or considering making an investment in this tremendous institution, we encourage you to learn more about the many ways you can leave a legacy for the Emory community.

—Claudia Borgelt 10C and Ben Corley 07C

Recent Faculty Grants

Ann Abramowitz, psychology—Centers for Disease Control
Timothy Acke, chemistry, Uriel Kitron, environmental studies, Donna Maney, psychology, Edward Ramos, biology, Leslie Real, biology, Yun Tao, biology, Wildaad Zaman, psychology—National Institute of Health
Eugene Agichtein, math and computer science, Keith Berland, physics, Thomas Clark, political science, Jacobus De Roode, biology, Nicole Gerardo, biology, Ronald Gould, math & computer science, Craig Hadley, anthropology, David Nugent, anthropology, Parimala Raman, math & computer science, Todd Schlenke, biology, Thomas Walker, political science—National Science Foundation
Geoffrey Bennington, French and Italian—University of Southern California
Gregory Berns, economics—Office of Naval Research
Rudolph Byrd, African American studies—Arcus Foundation
Alejandro Cote and Scott Stewart, music, and Debra Vidali, anthropology—Center for Creativity & Arts
Huw Davies and Dennis Liotta, chemistry—Georgia Research Alliance
Michael Elliott, senior associate dean for faculty—American Council of Learned Societies
Justin Gallivan, chemistry—Air Force Office of Scientific Research

Thomas Gillespie, environmental studies—Morris Animal Foundation
Lance Gunderson, environmental studies—Battelle
Craig Hill, chemistry—TDA Research
Harvey Klehr, political science—APGAR Foundation
Gary Laderman, religion—Social Science Research Council
Bruce Levin, biology—Practor & Gamble
Stella Lourenco, psychology—John Merck Foundation
Stefan Lutz, chemistry—Georgia Institute of Technology
David Lynn, chemistry—U.S. Department of Education
Patricia Marsteller, Center for Science Education—Arthur M. Blank Family Foundation
Andrew Mitchell, philosophy—National Endowment for the Humanities
Deboleena Roy, women’s studies—National Academies Keck Future Initiative
Elaine Walker, psychology—University of California, Los Angeles

Lighting the Way

The Power of Your Gift

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Professor Stephen Nowicki leads a “Classroom in the Living Room.”
Leaders take action, create change, and inspire others. At Emory College, we’re proud to say that our donors do all these things, and more. Members of Emory College’s Leadership Giving Society have made leadership gifts to the College. Many of these are allocated to the Emory College Fund for Excellence, which fuels the College’s efforts to provide a learning experience like no other by supplying support in the key areas of scholarships and financial aid, faculty and research support, and social and physical environments.

Emory College invites you to become a member of the Leadership Giving Society by joining one of the following giving circles through annual support:

• Longstreet Circle $5,000–$9,999
• Dean’s Circle $2,500–$4,999
• Lamplighters $1,000–$2,499
• Young Alumni Lamplighters (graduating less than 10 years ago) $500 and up

Interested in learning more about the Emory College Leadership Giving Society? Contact Ben Corley 07C, associate director of development, at bcorley@emory.edu or 404.727.1157.

Cultivating a culture of philanthropy begins well before students graduate from Emory College. Student giving at Emory harkens back to 1985 when the first Senior Class Gift Campaign was instituted. Since that time, the program’s goals and aims have grown along with its success. In 2004, the Freshman Class Gift Campaign was officially launched, with campaigns for sophomores and juniors coming in 2005 and 2006, respectively. The Blue Pig arrived on campus in fall 2007, and has served as the mascot of the Class Gift Campaigns (CGC) ever since.

The Class Gift Campaigns have two main objectives: to secure the maximum support and participation for the Emory College Fund for Excellence and other Emory funds (every gift counts, no matter the size) and to educate the student body on the importance of annual giving to the Emory community. The most effective way to generate support for the Class Gift Campaigns is through peer-to-peer contact. The campaigns would not be possible without the work of Class Gift Advisory Board members. A primary function of the board is to develop student philanthropy toward the university, while educating students about the importance of staying connected to the Emory community during their college career and after graduation. Members of the Board represent each undergraduate class (freshman through senior) and participate in the planning and execution of CGC events, solicitations, and marketing strategies.

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At the beginning of freshman year, all students are given a plastic blue piggy bank (aka the Blue Pig) and asked to fill it with spare change. Periodically throughout each semester “piggy round ups” occur. These primarily happen during Wonderful Wednesdays in Asbury Circle and at each semester’s end as a study break. Students are encouraged to bring their blue pig, donate their change, relax, and more often than not enjoy pizza, ice cream, or hot chocolate. Another main event is Bowing Day, which occurs every year during Founders Week, when large blue bows and information sheets are placed on buildings and other physical spaces around campus made possible by donations. Bowing Day serves as a visual reminder to think of those who have paved the way and those still to come.

Questions about Class Gift Campaigns? Are you a parent wishing to donate to your child’s Class Gift? Please contact Claudia Borgelt 10C, program development coordinator, at claudia.borgelt@emory.edu or 404.712.8964.

In the demonstration kitchen of Few-Evans Residential Hall: a cookie-baking fundraiser for Volunteer Emory and a coffee “cupping” event sponsored by Counter Culture Coffee of Atlanta.