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DUKE

SPRING 2013

MAGAZINE

How Far Have We Come?

Anniversary of integration invites introspection
along with celebration

20

A portrait of Anne Grossnickle, a woman with short, wavy brown hair, smiling. She is wearing a dark brown pinstriped blazer over a blue top. She is holding a white ceramic mug with both hands. The mug has the Duke University crest and the year '51' on it.

Anne Grossnickle

Gift of a Lifetime

DUKE UNIVERSITY
GIFT PLANNING

As a high school senior, Anne Grossnickle '81 was unable to visit any of the colleges she applied to, so she made her choice based on intuition. "It was probably the best decision I've made in my lifetime," she said. "Duke opened me up to new worlds, new thoughts, new perspectives, and new friends."

Anne comes by her love for learning honestly: Everyone in her immediate family has an advanced degree, most of them from Duke. Her grandfather taught at New Jersey City University, and her father spent 45 years on the faculty at East Carolina University. It was this family tradition, her Duke experience, and her desire to give back to the university that led her to create a combined endowment and bequest in 2012 that will fund financial aid in the Trinity College of Arts & Sciences. The Karsh Challenge will match her initial endowment gift to get the scholarship established, and her estate will fund the endowment further.

"Establishing a memorial scholarship in my parents' names was the best way to honor their legacy and give undergraduates an opportunity to get an education at one of the best institutions in the world," said Anne, who has also been a longtime supporter of the Duke Annual Fund and Trinity. She is a member of the Duke Heritage Society and the James B. Duke Society.

Anne has fed her own love for discovery in the last few decades through travel, taking a "trip of a lifetime" every few years. She went on an Alaskan cruise with her father through the Duke Alumni Association's travel program, swam with dolphins in Hawaii, and took a photography safari in Tanzania, her most memorable journey so far. "I have always been drawn to Africa," Anne said. "It was the most amazing experience of my life." Next up: a visit to South Africa this year.

She is also making plans to continue her lifelong learning. When Anne retires from her career as a communications consultant, she would like to pursue a Master of Liberal Arts degree at Duke.

To explore ways you can make a deferred gift to create opportunity for future generations, visit dukeforward.duke.edu/giftplanning or contact:

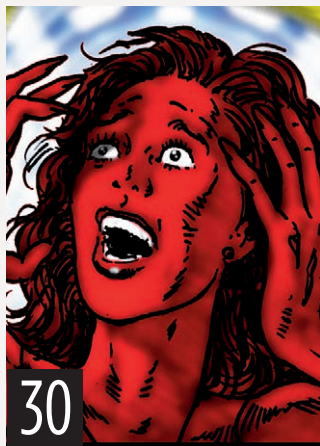
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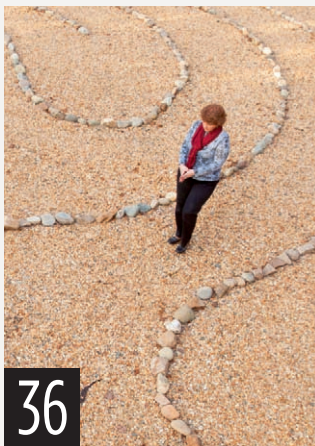
FEATURES



Duke Archives



Arlen Schurmer



Jon Gardnier



Los Todd

COVER

Let's Talk About Race

By Bridget Booher

Looking back on fifty years of black students at Duke—and considering the unfinished agenda

Modern Marvel

By Catherine Clabby

As he studies the basis of psychological disorders, neuroscientist Ahmad Hariri wants to take pictures of the brains of 1,200 undergraduates.

The Cure for the Common Medical Practice

By Bridget Booher

Integrative medicine bolsters health and contains costs. So why isn't it the standard of care?

Paint by Numbers

By Chris Vitiello

Mathematician Ingrid Daubechies crunches artistic expression into a set of data points, offering an unexpected avenue to art authentication.

COVER: Composite yearbook page created from 1966 and 1967 *Chanticleers*, showing the first five black undergraduate students.

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A season restores relevance to football



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Envisioning Africa, with some imagination



Duke Archives



FULLFRAME

Homeward bound: Evening commuters make their way along Broad Street near East Campus as darkness descends. *Photo by Megan Morr*





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Forum

UNDERTHEGARGOYLES

Sometimes *Duke Magazine* subjects doggedly branch off in new directions. Evolutionary anthropologist Brian Hare was featured just over three years ago in a cover story about the bonds that, over thousands of years, have linked dogs and humans. He runs the Duke Canine Cognition Center, described as having the “cheapest tuition and highest acceptance rate at Duke.”

This winter, Hare joined with a Duke law professor, Kip Frey J.D. '85, to found Dognition.com. The two met through one of Frey's students; Frey quips that they are “two guys who have no idea what the other does,” but that they quickly agreed they would “make a good team.” He directs Duke's Law and Entrepreneurship Program and is a “serial entrepreneur,” running various technology companies.

Hare and his wife, author and Duke researcher Vanessa Woods, have another new venture, a book, *The Genius of Dogs: How Dogs Are Smarter Than You Think*.

The Dognition site offers dog owners a series of tests (or games) to determine (\$59.95 for a one-time assessment) their pet's relative strengths and weaknesses in various thinking skills—empathy, cunning, memorization, and so on. One of the

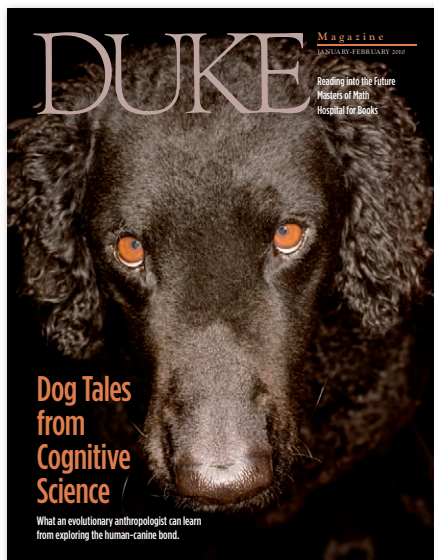
first tests, as Hare outlined it in *Science*, begins with the owner yawning. “You yawn five times within a minute, then you watch for two minutes to see if your dog yawns.” That's a measure of “contagion,” as Hare puts it, a possible precursor to empathy. From their individual “Dognition Profile,” users can discover whether their dog qualifies, in the canine context, as an “Einstein,” “Socialite,” “Charmer,” or even “Renaissance” dog.

As users enter the results of their dogs' behaviors, they will be adding to a data set that can be used by professional researchers. The canine-oriented “citizen-scientist” may be a new concept, but as Hare points out, the general idea is hardly new: The National Audubon Society, as one example, has long relied on citizen science for its bird-counting

projects, and there's a long history of science advancing through the contributions of amateurs.

Ultimately, says Hare, the idea is to collect dog-behavior data for research purposes. “There are questions,” he told *Science*, “that you just can't answer without big data.” Given the enduring human-canine connection, who would say he's barking up the wrong tree?

—Robert J. Bliwise, editor



The Chemistry of a Legacy

I read with sadness of the passing of our respected “Orgo” instructor, Professor Pelham Wilder [November-December 2012]. Many in Dr. Wilder’s class thought he [was] incredibly demanding but brilliant. Dr. Wilder taught generations of future M.D.s and more than a few future Ph.D.s like me. As I paced the aisles while giving my organic chemistry final exam this fall, I remembered Dr. Wilder’s masterful use of colored chalk, as he presented the beauty and logic of organic chemistry. I never missed one of his 8 a.m. lectures, and I majored in chemistry because of his class. I am proud to carry on his legacy to a new generation of organic chemistry students.

*Kimberley R. Cousins ’84
Professor of chemistry, California State
University, San Bernardino*

Fare Hike

Sounds like...a good experience? [“I Will Keep Up With Andrew Skurka,” November-December 2012]. I, along with many others, don’t necessarily have a lot of respect for Andrew Skurka: “I wouldn’t do anything I couldn’t profit from.” Wow. Calling this guy the Thoreau or Muir of this generation is beyond insulting. He’s a businessman with a big ego that needs to hike farther and faster than anyone else and doesn’t take the time to truly enjoy nature. This guy wouldn’t be hiking any pipelines, that’s for sure.

*Jesse [jsully124@yahoo.com,
commenting online]*

When the Bell Tolls

I opened the [November-December 2012] issue of your magazine and was pleased to see the very attractive portrait of my friend Sam Hammond. It’s an excellent photo. However, I would like to correct the text accompanying it. It says that Sam has been performing his weekday carillon concerts since 1986. That’s not quite right. When I was a freshman (1967-1968), Sam was a senior and had been playing the carillon regularly for at least a year. As now, Sam gave the daily weekday concert starting around 4:30 or so and finished up by tolling the big bell at 5 sharp. Astounding as it may seem,

Sam has been at it at least twenty years longer than your article states.

*Stanley Whetzel Jr. ’71
Louisville, Kentucky*

Crazy for Coursera

As one of the students enrolled in Professor [Mohammed] Noor’s class, I totally agree [with the sentiments in “The Coursera Experiment,” November-December 2012]. I live in Sydney, Australia, and would never have had the opportunity to study at Duke otherwise. My previous studies have been in the humanities and law, though genetics and evolution have long been an interest of mine. This class was not easy, and I loved that it didn’t lower its standards to try to pander to everyone. I’m quite sad that the course is over, as I enjoyed it enormously. Professor Noor is a wonderful teacher, and his passion shines through.

I realize, of course, that this is not a Duke University [credit-bearing] course, but any university that employs and values a great teacher like Noor surely cares about the student experience. And any university willing to share its knowledge with the whole world surely cares about education for its own sake—not just for the money it can make. Therefore, Duke University has certainly risen in my estimation—and undoubtedly also in that of the 31,000 other students who enrolled.

So, thank you Duke University and Professor Noor for this wonderful course!

*Jane Clements
[jane.clements@sydney.edu.au,
commenting online]*



around the world, to a football win over North Carolina, to the amazing story “The Save.” I read the article spellbound. Kendall Bradley ’11 deserves to be honored for her poise, resourcefulness, and wonderful, caring heart; and Nick Tsipis ’11 was unbelievably resilient and courageous. Article after article made me exceedingly proud to be a Duke graduate. Congratulations!

*Mielle Marquis ’85
Grafton, Massachusetts*

Fantastic story written in such a suspenseful manner that when I realized I had torn out the pages of the story without the last two pages, I was happy to find the website so I could read the ending!

*Betsy Byrd Lawson ’59
Clemson, South Carolina
[commenting online]*

Nick Tsipis is a lucky young man indeed. But there is no reference in the article of the comprehensive service contract Duke has purchased for its students and faculty and staff members who cross borders. For students between undergraduate and graduate school, like Tsipis and Bradley, who are not covered under Duke’s program, a commitment of less than \$200 would have provided up to \$1 million worth of International SOS coverage that the rest of Duke enjoys.

International SOS delivers comprehen-



Any university willing to share its knowledge with the whole world surely cares about education for its own sake.

—JANE CLEMENTS

Assurance and Insurance

There were so many things to be proud of in this [November-December 2012] issue of the magazine. From a Nobel Laureate, to the Coursera experiment that is bringing our Duke education

sive, integrated solutions to our scholastic clients, specifically to students when they need help. As the world’s leading medical assistance company, we receive more than 4 million calls annually and orchestrate more than 19,000 medical evacuations. Using a decentralized model, we deliver

our services through twenty-seven assistance centers and thirty-two clinics (requiring separate membership) around the globe. The clinics are deliberately placed in emerging markets where health-care services do not meet Western standards. Health-care advice and services are issued from a medical team from the closest assistance center (A/C) to the originating site of the request. Counsel thus is provided by individuals with expertise in the local health-care infrastructure. Each A/C recommends providers in their respective regions only if they actually have been vetted by the local medical team.

Duke's contract offers security assistance and online services. The former can facilitate the acquisition of new passports. The latter provides a communications portal, which, among other merits, would have allowed the students easy Internet access to International SOS's benefits and our dynamic country guides. Duke's plan also includes an emergency medical record, another online service accessible only to the student and the SOS medical team. It includes a centralized immunization management program, detailed medical history, and emergency contact data.

I applaud Duke for [its] commitment to scholastic duty of care, and I hope this letter serves to alert the ever-increasing population of Duke students and faculty and staff members to these services so they may avoid any unnecessary misadventures in the event of an illness or accident abroad.

*Robert Quigley H '91
Gladwyne, Pennsylvania*

Writing on the Wall

Your article on George-Frank Wall's gift to Duke ["Retro: One Hundred Reasons," September-October 2012] touched me greatly. I talked about it in my introductory remarks to my congregation in November and based my article for our synagogue's December newsletter around it. Like George-Frank Wall, the gift of your magazine and its article touched more than you might possibly imagine.

*Rabbi Craig Rosenstein '77
Las Vegas*

Sheesh, Maneesh

I sense that the author of "Living the Brand" [September-October 2012] worked hard to suppress his nausea. I was unable to suppress mine. Goyal is

not an "agent of change"; he is a party planner and a salesman. Surely lavish excess whitewashed by TED talks does not constitute doing good. I hope this portrait of "success" is not one Duke really celebrates now.

*[melanieelapointe@gmail.com,
commenting online]*

Measuring Entrepreneurship

I would like to congratulate James Sawabini, a finalist—but not a winner—of Duke's recent entrepreneurship



Intelligence, courage, and a belief in free enterprise—these things in a Duke student make an alumnus proud. —OLIVER SHEROUSE '09

competition ["Follow the Joy," September-October 2012]. Sawabini alone among the finalists did not answer affirmatively when asked if he would run his business as a nonprofit, with a generous but capped personal income, if a major foundation offered to fund it.

Businesses and nonprofits are not interchangeable. Businesses exist to create values for customers, creating the goods and services that consumers believe will make their lives better. Nonprofits, like the one where I work, provide goods and services that the nonprofits themselves believe will make either the recipients or society better off, regardless of what recipients or society think. The difference seems small, but isn't.

Sawabini showed not only wisdom but also courage in refusing to pretend that the pseudo-selfless gloss of the nonprofit label is somehow preferable to the creation of wealth and prosperity that a business can accomplish. Intelligence, courage, and a belief in free enterprise—these things in a Duke student make an alumnus proud.

So also do the other competitors, Ting-Tang Zhou and Vijay Agarwal, and the existence of an entrepreneurship competition at all in a time when the role of business in society is so misunderstood and even maligned. Society learns by doing—by trying, failing, and occasionally succeeding—as well as in the classroom. It warms the heart to see that Duke encourages both.

*Oliver Sherouse '09
Arlington, Virginia*

Stolen Away

Just finished *Cemetery John: The Undiscovered Mastermind of the Lindbergh Kidnapping* and was enthralled by Mr. Zorn's extensive research and even more by the emotion the book evoked in me ["Solving the Crime of the Century," September-October 2012]. An important piece of missing history has now been filled in, and Mr. Zorn artfully shares his investigation in a way that makes it read like a great novel. Well done!

jleer@verizon.net commenting online

By the Blogs...

Awesome interview, Maky! ["Look Out Blue Devil, There's a New Mascot in Town"]. It's amazing that the largest population of lemurs outside of Madagascar is right here in Durham. It's great that the Duke Lemur Center offers tours so we can see these wonderful, endangered mammals up close!

*Rhonda Sherman
[commenting online]*

Thanks for sharing *Getting the Best Out of College* with your students ["More Than a Lecture: Professors Are People, Too"]. Had the book been available when I was at Duke, I wish someone had done the same for me!

*Anne Crossman '00
Los Altos Hills, California
[commenting online]*

CORRECTIONS:

The "Duke360 Growing Lightly" graphs [November-December 2012] should have read 53,605 tons in 2008, not millions of tons.

Send letters to: Box 90572, Durham, N.C. 27708 or e-mail dukemag@duke.edu. Please limit letters to 300 words and include your full name, address, and class year or Duke affiliation. We reserve the right to edit for length and clarity. Owing to space constraints, we are unable to print all letters received. Published letters represent the range of responses received. For additional letters: www.dukemagazine.duke.edu.

A group of students are on a white boat with a blue stripe, sailing on a blue body of water under a clear blue sky. In the foreground, a young man in a plaid shirt is taking a photo with a DSLR camera. To his left, a young woman in a green jacket is looking forward. Other students are visible in the background, some looking at their phones. The boat has a red life preserver on its upper deck.

THE Quad

NOTEWORTHY FROM AROUND CAMPUS

All aboard for understanding the oceans: For three days in early January, students traveled to the Duke Marine Lab in Beaufort and received an intensive look at ocean ecology and conservation policy as part of Duke's fourth annual Winter Forum—"Blue Devils and the Deep Blue Sea: Can We Rescue the Oceans?"

BY THE NUMBERS

Club Sports

38

Club sports offered at Duke

6

NCAA-sanctioned sports Duke offers only at the club level (including ice hockey and water polo)

1 in 6

Undergraduates play a club sport

5

National championships won by Duke club teams

137

Current members of Duke's Outing Club, the largest club sport by membership

\$4.6 million

Amount of the Kevin Deford Gorter '87 Memorial Endowment, established in 1986 to allow club teams to attend nationals and take dream trips

25

Hours per week you could expect to practice if you signed up for Duke's crew club team

2

Recent varsity athletes (soccer players Chris '12 and Daniel '12 Tweed-Kent) who started out competing on club teams

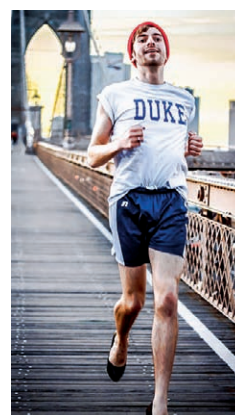
“Scientific funding is not ‘discretionary.’ Rather, it is essential to the competitiveness and future of our country.”

—**Victor Dzau**, president and CEO of Duke University Health System, on how public money makes Nobel-worthy research possible (*The Huffington Post*)

“Duke University has developed a working invisibility cloak. Now the Blue Devils’ Quidditch team will be unstoppable!”

—**Stephen Colbert** on the latest breakthrough from David R. Smith’s electrical and computer engineering lab (*The Colbert Report*)

“I wear high heels normally, it’s part of who I am, it’s how I express myself, and I figured I’d take my fabulousity and put it to a good cause.”



—**Jacob Tobia '14**, on running in 5-inch stilettos across the Brooklyn Bridge for his \$10,000 fundraising campaign for the Ali Forney Center, New York’s leading homeless shelter for LGBT youth, which was ravaged by Hurricane Sandy (MSNBC)



“One wonders what it would take to get America’s attention on this.... Thirty years from now, will we wonder how it is that we could have taken such great pleasure in watching people hit each other at very high speeds, causing brain injuries that then lead to suicide?”

—**Orin Starn**, professor of cultural anthropology, on NFL linebacker Junior Seau’s suicide (*The Los Angeles Times*)



Wild sight: Expeditioners on the Duke Travel program's tenth voyage to Antarctica witness a breaching whale in Wilhelmina Bay.

Hardy Vieux '93

“They need to feed. They need to breed. So essentially, they multitask.”

—**Ari S. Friedlaender Ph.D. '06**, assistant research scientist at the Nicholas School of the Environment, on research showing that humpback whales may sing while foraging for food in addition to when attracting mates

“He’s a living Jason Bourne with a Ph.D.”

—**Ben Affleck** on Rhodes Scholar and former Navy SEAL Eric Greitens '96, author of the autobiography *The Heart and the Fist* (*Entertainment Weekly*)



“I feel if I go there I can get a good degree.”

—No. 2 national basketball recruit **Jabari Parker** on his choice to commit to Duke (*ESPN.com*)

“We’ll make money when Coursera makes money.... I don’t think it will be too long down the road. We don’t want to make the mistake the newspaper industry did, of giving our product away free online for too long.”

—Provost **Peter Lange** on the monetization of the online course website Coursera (*The New York Times*)

“Taking schoolwork home provides an opportunity for kids to learn that the things that they’re learning in school have applications to things that they enjoy doing at home.”

—**Harris Cooper**, chair of the Department of Psychology & Neuroscience, responding to a proposal in France to end homework for elementary and junior-high students (*Wisconsin Public Radio*)

An Educational Transformation

Bass Connections targets innovative thinking around complex social problems.

A \$50 million gift from Anne and Robert Bass of Fort Worth, Texas, will launch an initiative to encourage students and faculty members to collaborate across academic boundaries—and to give them the tools to tackle some of the most vexing society-wide issues.

Duke has long promoted interdisciplinary scholarship, exemplified by seven university institutes that cut across academic boundaries. Bass Connections will build on this model through extensive new curricular options and team-based activities for students. The initiative will focus initially on five broad areas: brain and society; education and human development; energy; global health; and information, society, and culture.

According to President Richard H. Brodhead, “Because Bass Connections will involve students and faculty at all ten Duke schools, it will have a transformative impact on our entire campus.” In announcing the gift, Anne and Robert Bass said their aim was to “enable broad collaboration among scholars across multiple dis-

ciplines to develop truly innovative approaches to some of the most pressing societal problems.”

The initiative—an element of the \$3.25 billion Duke Forward campaign—will provide undergraduates with new classes and learning modules, internships, and civic-engagement experiences. It also will foster collaborative skills through project teams with graduate students, faculty members, and outside experts. Graduate and professional students will bring their specialized expertise to bear on complex problems and have new opportunities to mentor younger students.

Anne and Robert Bass have generously supported Duke over the past two decades, most notably through the Bass Program for Undergraduate Excellence, which aims to improve undergraduate teaching, and through the Focus program, which offers entering students integrated courses developed around interdisciplinary themes. Anne Bass has been a Duke trustee since 2003 and is co-chair of Duke Forward. The Basses are the parents of four children, including Christopher Bass ’97.

\$50M

ON THE PLAZA

Documenting a Personal Past

David Mayer never knew much about his grandfather, Paul. He knew his grandfather had escaped a Nazi labor camp in eastern Germany during World War II and emigrated to the U.S. in 1949. But Paul Mayer died in 1985, before David was born. The reality of that experience remained distant for David—until he found a translation of his grandfather’s journal.

“The thing that interests me most is that [my grandfather] never once talks badly about an individual Nazi,” says Mayer. “He never points a finger at a human being and says, ‘That’s their fault.’”

Fascinated, Mayer wanted to explore deeper. Having discovered a love for documentary filmmaking in high school, he applied for funding from Duke’s Kenan Institute for Ethics and the Center for Documentary Studies to make a film about his grandfather’s life. This past summer, he spent six weeks retracing his grandfather’s footsteps through a much-changed Germany. Accompanied by 100 pounds of



David Mayer ’14

Major: Public Policy

Hometown: Durham

video equipment, Mayer visited his grandfather’s childhood home, labor camp, and ten-mile escape route that led Paul to safety. He interviewed cousins, old friends, and other Holocaust survivors to create an intimate view of lives in crisis.

What he found, he says, was far from black and white. He cites an interview with Gunther Eisenhower, a former member of the Hitler Youth whom his grandfather befriended in later life. Eisenhower maintained that for a preteen boy in Frankfurt, joining the Hitler Youth was no more declarative than an American youth joining the Boy Scouts. Only as an adult could Eisenhower judge his participation in the movement.

Now, as Mayer edits more than 100 hours of footage into a ninety-minute film, he’s realizing that the journey explores his own life—and his own as-



Understanding history: Mayer retraced his grandfather’s life, including his escape from a Nazi labor camp during World War II.

sumptions—as much as it does his grandfather’s. “I think it’s going to be a story of growing up,” he says. “I think any film is about the filmmaker.”

—Dan Altman



An Enduring Commitment to Diversity

Fifty years ago, the university made a decision that changed its history forever.

What are the most significant years in Duke history? By my count, there are three. The first is 1892, when Trinity College moved from Randolph County to Durham, leaving its rural birthplace to seek a new urban setting and a new connection to the world.

The second is 1924, when James B. Duke's gift transformed a fine liberal-arts college into a comprehensive university.

Only one other year was comparably transformational in putting Duke on its upward course. This was 1963, when the first five African-American undergraduates were admitted to Duke.

With this change, Duke committed itself to equal opportunity, access based on talent and promise, and diversity as an agent of education—values that sustain our current strength.

This milestone is the focus of *Celebrating the Past, Charting the Future: Commemorating 50 Years of Black Students at Duke*. Over the next nine months, a rich program of events will celebrate the contributions of Duke's black students, faculty and staff members, and alumni, starting with these pioneers. No current student has a memory of 1963, and many here find it nearly impossible to imagine that Duke was not always the vibrantly diverse community it is today. This commemoration challenges us to recover a crucial chapter of our history and to reflect how that event transformed not only Duke's campus, but also the very philosophy and practice of a Duke education.

Throughout its history, Duke has had a

complex relationship to race. The Duke family, highly progressive for its time, gave financial support to many key black institutions in Durham, including the North Carolina College for Negroes, today's North Carolina Central University. But in its early decades, Duke University had no black students or faculty—not by accident, and not by written policy, but by conformity with the practices of the segregated South. In the 1940s, the brilliant African-American historian John Hope Franklin lived in Durham and did research for his classic *From Slavery to Freedom* in Duke's Perkins Library. Although he was free to

study here, it was unthinkable that he could be on the faculty here, or at any all-white college in the region. It was not until 1961 that Duke's board of trustees voted—even then, not unanimously—to admit black students to the graduate and professional schools.

What a change from then to now. Today, the vision of diversity that began with a focus on ending discrimination against African Americans has broadened, and Duke welcomes students from all races, ethnicities, socioeconomic backgrounds, and national

origins. Every part of this university has been strengthened by people of every background. Duke's global and multicultural character is now as much a part of our identity as our gothic architecture.

As it has changed our demographics, diversity also has proven its critical educational value. A seminar works best when students and faculty start from different places, express different perspectives, and

introduce each other to different ways of thinking. This mutual enlightenment takes place in classes, but also through the interactions students share at a laboratory bench, over a meal, and in the dance studio. In these countless everyday exchanges, individuals with divergent outlooks challenge each other to rethink unquestioned assumptions. This is twenty-first-century education at its best: a vital preparation for our interconnected world.

Our admissions office creates our community anew each year, shaping a class of young women and men who have the potential to contribute their intelligence, energy, and life experiences to Duke and to the world. This potential is assessed across a wide variety of measures: In addition to academic credentials, we evaluate character, drive, and the ability to overcome obstacles and maximize available opportunities. Believing strongly in this holistic assessment of candidates, Duke has joined a group of peer universities in an *amicus* brief in the affirmative-action case currently before the Supreme Court. Together, we argue that universities have a compelling educational interest in building a diverse student body—and that consideration of race and ethnicity as factors in admissions is a legitimate and necessary way to achieve this goal. This principle is one of the key values undergirding our intellectual community.

Fifty years ago, Duke made a decision and changed its history forever. That decision set Duke on the path toward becoming the institution it is today, a place where the brightest minds from across the country and around the globe come together to deepen our understanding of the world. As we celebrate the 50th anniversary of opening our doors to Duke's first five black undergraduates, let's remember how we have been enriched by the progress that began that day.

—Richard H. Brodhead

Duke's global and multicultural character is now as much a part of our identity as our gothic architecture.



Agitation Over an Asian-Theme Event

Student protest puts focus on fraternity party

About 200 people participated in an early-February protest sparked by a fraternity party that they said denigrated Asians. The protest sought to hold Kappa Sigma responsible for its “Asia Prime” party; the invitation to the party included stereotypical representations of Asian people and language.

The fraternity issued an apology, but at the protest, students asked that the apology be matched with actions, such as having members of the fraternity conduct a community social-justice project. Noting that the party was the latest in a line of social events targeting minority groups, often in offensive ways, the protesters demanded that the university create a student task force that could respond to discriminatory or offensive actions by student groups.



Circle of concern: gathering to proclaim “Race Is Not a Party”

In response to the party, Larry Moneta, vice president for student affairs, said, “This is a disappointing reminder that, despite our considerable efforts to educate students about cultural sensitivities, we have much work yet to be

done. We are resolved to use these events as learning opportunities.”

Duke’s Interfraternity Council issued a statement reaffirming its commitment to seeing its chapters adhere to “a high standard of excellence.” Pending further investigation, Kappa Sigma was suspended by its national organization.

Duke Delegates in Doha

M.E.M. candidates take on climate change.

From late November to early December, a bit of United Nations alphabet soup hit the sweltering heat of Doha, Qatar. As part of the course “U.N. Climate Change Negotiations Practicum,” ten select master of engineering management candidates from the Nicholas School of the Environment attended the eighteenth session of the Conference of the Parties (COP18) to the U.N. Framework Convention on Climate Change (UNFCCC). At COP18, the students were able to apply classroom lessons directly to the annual convention that sets environmental policy for the 192 member countries and countless NGOs.

The student-initiated and student-led course was piloted last year under the direction of earth and ocean sciences professor Paul Baker. Designed to give students experience with environmental policy, the class worked on the 2011 conference in Durban, South Africa. The Duke contingent engaged with nonprofit organizations in Durban, including Islands First, a group dedicated to serving small island countries. At COP18, the delegation from Palau, an island nation in the Pacific, specifically requested assistance from the Duke team.

While large countries such as the U.S. and China send large negotiating teams, developing countries often do not have enough resources to represent their interests at concurrent meetings. The imbalance is further underscored by the fact that developed countries usually create the bulk of carbon emissions, but small countries—particularly islands—face the brunt of rising sea levels, catastrophic storms, and the other hazards of climate change. “Logistically, the deck is stacked against island states and less-developed nations,” says Christa Owens ’14, a delegate to Doha and coordinator for next year’s class trip to COP19 in Warsaw.

—Elissa Lerner

BOOKBAG

ECONOMICS 343/ ART HISTORY 261:

THE CONTEMPORARY ART
MARKET

The catalyst: Economics professor Neil De Marchi began to teach the course in the early 1990s as an outgrowth of his fascination with the art market and the ways in which it fits and breaks traditional economic theory. “It’s a beautiful context to inject a bit

“It’s a beautiful context to inject a bit of critical thinking and skepticism into students’ previous economics coursework.”

of critical thinking and skepticism into students’ previous economics coursework,” he says.

The gist: The course highlights the roles of major players in the modern art world and the market currents that sway them. While De Marchi emphasizes application of microeconomic concepts, he also

wants his students to see that theory has its limits. For instance, the cost of production of a painting or sculpture is seldom a reliable determinant of price. Rather, sale price is driven largely by what economist Adam Smith called “fancy,” a subjective measure of desirability with little predictive power.

The twist: De Marchi is quick to point out that the art market is notorious for its utter lack of transparency. “It’s the largest worldwide market that is almost entirely unregulated,” he says. Accordingly, students spend time examining dubious practices in the marketplace, from forgery to collusion.

Assignment list: Students write a series of short response papers analyzing contemporary art issues, such as the rise of online auctions and the investment potential of modern artists. The latter half of the semester focuses on a fifteen-page research paper, completed in small teams on a topic of choice. Readings drawn on throughout the class consist of economics literature and art-market case studies.

What you missed: Midway through the semester, students played a virtual art collecting game, engaging in transactions with their classmates to acquire a fantasy art collection. The exercise allowed students to practice some of the same bargaining strategies and price-evaluation methods used by art gallerists and dealers. —Tim Lerow

Guantanamo Observed

From law clinics to military commissions

Duke Law School's Guantanamo Defense Clinic has been granted observer status by the Defense Department. Some clinic students are getting the chance to see military commissions in action. Law students Jesse Kobernick and Julie Coleman spent this past fall's study break observing hearings at Guantanamo Naval Base. Other students traveled there early this semester.

"It was very useful to take the research we do in the clinic—delving into legislative history and digging into cases that date back decades—and see how it might actually impact the pretrial hearings. It brought a lot of our work home to me," says Kobernick.

Entering the courtroom involved "three security checks, and you

could bring in paper, but not pens," recalls Coleman. "They provided pens once you were in. The viewing gallery was behind a triple pane of glass. We could see everything happening live, but the audio was on a delay. If anything classified or close to classified came up, it was muted. And all photos, even of the courthouse exterior, were banned."

The clinic gained observer status after demonstrating its "actual, traceable, substantive contributions" to military-commission cases through a review of faculty and student research and writing, says lecturing fellow Gabriela McQuade J.D. '10. She co-teaches the clinic with law professor Madeline Morris.

PLANETDUKE | Russia

Duke in Russia: At a Glance

Current students who were born in Russia:

20

Russian nationals working at Duke:

12

Alumni living in Russia:

97

Number of undergraduate students who traveled to Russia with university programs in 2012:

18

Key Duke connections:

- DukeEngage projects with the **Russian Ministry of Health** and the **Russian Rehabilitation Center for the Blind** enable students to help local sight-impaired persons at the center itself and in their homes with a variety of everyday activities.
- The **Center for Slavic, Eurasian, and East European Studies** offers a graduate certificate with a specialization in legal studies. This program, the first of its kind at an American university, allows graduate students interested in issues relating to the legal environment in this region to pursue an interdisciplinary study of the subject.



Don't Call It a Study Abroad

For the discerning Duke student who wanted to jumpstart his or her international exposure and couldn't get enough of the freshman Focus experience, last year's Duke INTense Global (DIG) fit the bill. The three-semester-

opportunity to change the meaning of the word "classroom."

"I've been thinking about [DIG] for a long time," Andrews says. "If students are trying to acquire languages, they need in-country experience and cultural knowledge. The sooner you get them there the better."

The fall semester of the Russia program offered a class on neuroscience and multilingualism, a theoretical linguistics course, and two credits of intensive Russian. The semester was punctuated by a three-week trip to St. Petersburg that culminated before Thanksgiving, featuring afternoon excursions to museums, churches, theater, and an opera master class. In the spring, the students took another Russian course together and were free to pursue other electives. Finally, in May, the DIG students returned to St. Petersburg, joining the pre-existing Duke in Russia summer session for another two language credits. All of the travel and associated expenses were covered by regular Duke tuition.

The perspective gained by the students between trips to Russia, not to mention the huge disparity in northern winter and summer seasons, made a big difference. "Two experiences abroad within one year is key," says Andrews. "I think the second time was like going home: We know where we are, we know where the grocery store is, we know the metro. And St. Petersburg is spectacular in the summer."

But the other key to DIG is its multidisciplinary approach. Andrews is adamant that DIG is not a language program; it's a program that includes language. "DIG is supposed to cut across the natural sciences, social sciences, and humanities," she says. "It's more like a Focus experience expanded out with an international program." Andrews also made sure to take advantage of existing Duke structures, allowing students to apply for DukeEngage in Russia and benefiting from an exchange with St. Petersburg University dating to 1988.

—Elissa Lerner



In-country immersion: Cultural excursions included St. Basil's Cathedral in Moscow's Red Square.

long interdisciplinary program had its test run in India and Russia and featured culture-and language-immersion components. For Edna Andrews, professor of linguistics and cultural anthropology and the initiator of the DIG proposal, the program was an

DUKE360

Duke's First MOOC

More than 12,000 people signed up for Roger C. Barr's **"Bioelectricity: A Quantitative Approach,"** Duke's first massive open online course (MOOC), when it went online on the digital-learning site Coursera this past September—more than ten times its typical on-campus enrollment. Barr '64, Ph.D. '68 is the Anderson-Rupp Professor of biomedical engineering. Here's a preliminary look at how those online learners fared:

Registered for the course: **12,461**

Watched at least one course video: **7,593**

Answered at least one question correctly on both week 1 quizzes: **1,267**

Earned at least one point on the final exam: **358**

Earned a certificate of completion: **313**

Earned a certificate with distinction: **260**

NOTABLE



- Senior **Kenneth Hoehn** was named a Marshall Scholar, joining a select group of thirty-four winners announced this fall. The prestigious award will allow Hoehn to pursue graduate studies at the University of Oxford in England. Hoehn, a biology major, plans to study human and pathogen genomics and work toward a doctoral degree in evolutionary genomics.
- **William Boulding**, who has been serving as dean of the Fuqua School of Business since August 2011, has been selected to serve a full term. A Duke faculty member since 1984, he has received multiple teaching awards. He has been recognized for writing one of the twenty most-influential papers over the past twenty-five years in the field of marketing.
- **Kelly Brownell**, a Yale University professor of psychology and also professor of epidemiology and public health and director of Yale's Rudd Center for Food Policy and Obesity, is the new dean of the Sanford School of Public Policy. Brownell is a widely cited authority on public policies to enhance nutrition and combat obesity.
- *Still: Notes on a Mid-Faith Crisis* by **Lauren Winner** M.Div. '07, assistant professor of Christian spirituality at the divinity school, was named one of *Publisher's Weekly's* top books on religion for 2012.
- Chemistry professor **Eric Toone** was appointed to head the university's Innovation and Entrepreneurship Initiative. Toone has been on leave since May 2009 to lead the U.S. Department of Energy's Advanced Research Projects Agency-Energy (ARPA-E).



Ideas

CANCER

Promising Immunity

In the ongoing struggle to find a better way to treat cancer, the hopes of doctors and patients have been buoyed recently by the revival of an old idea—using the body's immune responses to attack tumors. But while immunotherapies have shown tantalizing promise, they've presented

frustrating problems. In some cases, the immune system waged attack on healthy tissues and organs, as well.

A breakthrough by Duke medical researchers could change that. The team designed an artificial protein that tethers a tumor to the body's own T-cells, focusing the immune cells' lethal at-

tack. In tests with mice, the treatment eradicated brain tumors in six of eight cases without damaging other tissues.

"Our therapeutic agent is exciting, because it acts like Velcro to bind T-cells to tumor cells and induces them to kill without any negative effects on surrounding normal tissues," says senior

author John Sampson, a neurosurgeon at Duke's Preston Robert Tisch Brain Tumor Center. The results are especially noteworthy because they are from trials with brain tumors, which have proved particularly challenging to treat by any means.

Ideas

WILDLIFE

Nowhere to Roam

For millennia, African lions ruled a seemingly boundless kingdom, a sprawling, unbroken stretch of savannah one-third larger than the continental U.S. But today, 75 percent of that vast savannah is gone, and humans are fast chipping away at what remains. And Stuart Pimm is worried.

Pimm, the Doris Duke Professor of conservation ecology at Duke's Nicholas School of the Environment, led a comprehensive study of lion populations and habitat in Africa. The results, released this past December, are harrowing: Pimm estimates that as few as 32,000 lions live on the African savannah, down from nearly 100,000 fifty years ago. Those that remain survive in increasingly disconnected slices of habitat, hemmed in by human development.

"The word savannah conjures up visions of vast, open plains teeming with wildlife," says Pimm. "But the reality is that massive land-use change and deforestation, driven by rapid human population growth, has fragmented or degraded much of the original savannah."

Pimm and his colleagues used high-resolution satellite imagery, coupled with data on local human and lion populations, to map areas still favorable to the big cats. They identified only sixty-seven isolated areas of savannah across the continent with suitably low

human impacts and densities. Only ten were deemed to be "strongholds," where lions have an excellent chance of survival. Many of the strongholds are located within national parks.

"Existing maps made from low-resolution satellite imagery show large areas of intact savannah woodlands. Based on our fieldwork in Africa, we knew they were wrong," says lead author Jason Riggio M.E.M. '11, a former member of Pimm's lab who is now studying at the University of California at Davis. "Using very high-resolution imagery, we could tell that many of these areas are riddled with small fields and extensive, if small, human settlements that make it impossible for lions to survive."

The situation is particularly dire in West Africa, where human populations are growing fastest and the decline in lions is steepest. The team did not identify a single stronghold in all of West Africa, and the study estimates fewer than 500 lions remain in this region, scattered across eight isolated sites.

"Giving these lions something of a fighting chance will require substantial increases in effort," says Andrew Jacobson M.E.M. '10, a member of Pimm's lab. "The next ten years are decisive for this region, not just for lions but for biodiversity, since lions are indicators of ecosystem health."

—Tim Lucas



Fighting for survival: Lion populations are declining as humans encroach on their habitats, a pattern that has grave implications for biodiversity and ecosystem health.

WHAT WE'VE LEARNED: GETTING IN SHAPE

As winter recedes, millions of Americans renew their pledges to eat better and exercise more. And hundreds of scientists work to discover the keys to make those efforts more successful. Here's the latest on what Duke researchers are learning about **maintaining a healthy body**:

1 Hit the track, not the weights. Resistance training may be a great way to build lean muscle, but if it's weight loss you're after, nothing beats aerobic exercise. In the largest study ever comparing aerobics and weight training, Duke exercise physiologists have found subjects who walked twelve miles a week lost more weight than those who did just resistance training or combined aerobics with weights. And they did it while spending less time on average each week exercising.

2 Cutting carbs is still a good idea. Plans such as the Atkins diet, which slashes starchy, carb-laden foods in favor of meats, dairy, and vegetables, have drawn plenty of skepticism, but the data are hard to ignore. In a review of seventeen studies of patients on low-carb diets, Duke associate professor of medicine William S. Yancy Jr. '91 found that dieters lost an average of eighteen pounds in six months to a year, and they showed improvements in blood pressure, triglycerides, and blood sugar levels.

3 Make simple changes. People who set out to completely remake their diet and exercise habits often find the change too daunting, which only leads to frustration. Duke researchers have been experimenting with the power of small adjustments, such as adding one daily fiber supplement or eliminating one sugared beverage a day. Simple changes are easier to live with, and their healthy effects add up over time.

4 Can Twitter help your kids lose weight? Jennifer Li M.D. '87, Duke's chief of pediatric cardiology, recently led a group for the American Heart Association that studied the potential of social media in combating childhood obesity. While Li cautions that there's not enough research yet on the benefits and risks of talking about weight issues online, she says texts and tweets can play an important role in encouraging and rewarding healthy habits.



OFFICEHOURS

Luke Bretherton: Four Temptations of the Church

Newly arrived at Duke from King's College in London, Luke Bretherton brings a fresh perspective on how Christian churches and faith-based causes intermesh with American political life. In a recent Office Hours interview, Bretherton, an associate professor of theological ethics and a senior fellow at the Kenan Institute for Ethics, describes four key "temptations" that pose problems for the church as it carries out its public ministry.

Co-option: One of the problems is how the church can be co-opted by the state. The church simply becomes a kind of mechanism for generating social glue, and we can think of the slightly problematic nature of the White House's faith-based and neighborhood partnerships initiative along those lines.

Communalism: The church often adopts what one might call communalist discourses, ideas that we're just another identity group fighting for our place in the political, social, and economic order. And that obviously pits the church in conflict with its neighbors, so that they're not neighbors to be loved. We're in competition with them.

Commodification: The danger is that Christianity becomes just another lifestyle choice; you do tai chi or yoga one day, and you'll do a little bit of church the next.

Cientalism: That's the idea the church often falls into, which is a kind of noblesse oblige, the charitable giving to those less fortunate than ourselves. And with that there's a refusal of any notion of mutual, reciprocal life. It's "I give to others, but I don't want anything to do with them. I just write a check."

ENTREPRENEURSHIP

Advertising: the Final Frontier

So you've settled into the bathroom for a few minutes only to realize—too late!—you have nothing to read. Bryan Silverman '15 and his brother Jordan share your frustration. It's why they started Star Toilet Paper, toilet paper with advertisements printed on recycled paper in safety-tested, vegetable oil-based ink (like common printed napkins). Don't turn your nose up, though. The idea was com-

PELLING enough for Silverman to be named *Entrepreneur Magazine's* "College Entrepreneur of 2012."

"People say 'what a crappy idea' and things like that" when Silverman offers to advertise their businesses on rolls of toilet paper. "But once they get through cracking jokes, they usually love it."

The Silverman brothers operate out of Durham and Ann Arbor, Michigan, where the elder Jordan went to school. Thus far, they've persuaded restaurants, a bowling alley, a car wash, and more than sixty others to advertise on their rolls of bathroom tissue. Companies pay 62.5 cents per roll, which is half a cent per ad that repeats on a roll shared with five other com-

panies. Star Toilet Paper then offers the rolls for free to venues that would otherwise have to pay to supply their restroom stalls.

"Our printed toilet paper allows you to reach a targeted audience in a unique way that will certainly catch people's attention," says the company's website. "Ads and coupons on toilet paper provide customers with a convenient and fun way to talk about and learn more about your company."

BRAIN SCIENCE

The Mouse That Crooned

Birds do it. People do it. Now, Duke researchers are convinced that mice, too, can learn how to imitate songs to woo a mate. The surprising conclusion comes from a team of Duke neurobiologists who observed that male mice imitate the ultrasonic squeakings of other males. The researchers identified certain features in a mouse's brain that are similar to the parts of the brain humans and birds use to learn vocalization, which suggests mice can pick up a tune.

"We are claiming that mice have limited versions of the brain and behavior traits for vocal learning that are found in humans for learning speech and in birds for learning song," says Duke neurobiologist Erich Jarvis, who oversaw the study. That would overturn the conventional wisdom of biologists for the past sixty years—that mice have no ability for vocal learning. But maybe they just weren't in the mood.



Courtesy Bryan Silverman '15

On a roll: Silverman's targeted advertising idea

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Megan Worr

Pancakes and Donuts and Pizza, Oh My!

Freshmen kick off finals week with Midnight Breakfast extravaganza. | By Elissa Lerner

Imagine, just for a second, the night before the first finals period of your freshman year. Your first semester of Duke has gone by in a flash; there are only seven more to go. Between trying to meet everyone in your class, joining new clubs, memorizing the C-1 bus schedule, and perhaps occasionally keeping in touch with friends and family back home, you might have forgotten that other thing—studying. Mild panic sets in, but then, that's all right. Everyone else around you feels the same way. At least you can look forward to Midnight Breakfast.

Duke has had a few night-before-finals traditions in the past, but in recent decades, Midnight Breakfast has emerged as the staple event. When the Marketplace opened in 1995 on the newly all-freshmen East Campus, Duke Dining decided to hold a regular breakfast at midnight on the first night of finals for first-year students. "We thought we'd create some excitement and get them something to eat before exams, because they'd be up all night studying," recalls Barbara Stokes, assistant director of Dining Services.

But eventually, East Campus Council got involved. Midnight Breakfast was never quite the same.

This year's theme is Mario Kart, and decals of characters are being plastered around the walls, Nintendo consoles are set up in one of the back dining rooms, and a racing road of flimsy black crepe paper held down with strips of bright yellow tape begins to wind through the Marketplace. There's no way it's going to hold up to the foot traffic, but Lisa Beth Bergene, assistant dean of residence life and administrator for the event, is happy to let the freshmen learn from their mistakes.

"I help the group stay on task without getting in their way. It's their first semester, they haven't seen [the event], they're acting blind. But every year they do a good job and make the theme work," she says.

Stringing up racing flags from the balconies of the entrance to the Marketplace is freshman Beth Hoyler of Wilson dorm. She's already turned in three papers and has another paper and exam to go and still has managed to co-chair the breakfast. "It's a special bonding event," she says. "I've heard about it from upper classmen, but I didn't know how big and awesome it could be!"

Around 10 p.m., the line starts to form. A few students linger at the Trinity Café in the main lobby of the Marketplace, hoping that will keep their place at the head of the

an ECC rep explains, as they are ushered outside.

Sugar-laden air starts to waft through the Marketplace, shortly followed by the sharp, tangy smell that can only be hot wings, emanating from the "Rocket Power Wing and Tender" bar. In the weeks before the event, ECC met with dining staff to prepare a custom menu. Special items appear, including strawberry French toast, chocolate-chip pancakes, and sliced-apple, butter, brown-sugar, pecan, cinnamon, and vanilla-icing pizza, not to mention an impressive array of donuts and gummy worms. Standard breakfast meats, as well as a meat-lover's pizza and vegetarian pizza, complement the sweet staples. And for the health-conscious freshman: a station featuring a black bean, tortilla, pepper and onion scramble, vegan sausage, cage-free hard-boiled eggs, and salsa. (Its line remains pretty short throughout the night.)

The preparations continue down to the wire. The students assign themselves to posts by the door, greeting their classmates, giving out T-shirts. In one anteroom, a photo booth is being erected, replete with cartoonish hats and props. A DJ sets up a table in the larger dining room. "He's one of our own," says Luke Maier from Epworth. "Half the Marketplace will be a rave."

His words soon come to pass.

At 11 p.m. on the dot, the line, which had snaked across East Campus quad to Lilly Library and down in front of Giles

"This has been the highlight of finals week."

On Sunday, December 9, much like any other night, the Marketplace shuts down its dinner service at 9 p.m. But instead of fully closing up, fourteen freshmen start loading in boxes of decorations, props, streamers, T-shirts, and more, while the dining staff begins a manic turnover from dinner to a modified, special-menu breakfast. Freshmen will start pouring in at 11 p.m., ready for a feast, study break, and stress-outlet dance party all rolled into one.

The East Campus Council (ECC), made up of leaders from each dorm, is charged with planning and executing the theme of each Midnight Breakfast, which has run the gamut from "Under the Sea," to *The Fast and the Furious*, to "Candyland," to *The Nightmare Before Christmas*.

line. They are assured it doesn't count. "Think of it like you're in line for Tenting,"





Paging Homer Simpson: Heaping trays of donuts enticed sugar-craving, finals-frazzled students.

Elissa Lerner

dormitory, begins entering the Marketplace. ECC members, some of whom sport Mario Kart character costumes, greet each student with a high five, followed by a T-shirt that reads “Ready. Set. Eat.” (“Those T-shirts become a collectors’ item,” Bergene notes.) The students peel off into the food court, piling their plates with food combinations only eighteen-year-olds can digest. Between clusters of students, the ECC members marvel at the spectacle.

“This has been the highlight of finals week,” says Vaibhan Penukonda of Randolph, who co-chaired the event and designed the T-shirts. He has two papers and three exams for which he needs to prepare. But nothing will mar his enthusiasm tonight. Midnight Breakfast “is one of the only times that all freshmen come together,

besides convocation,” he adds. “Honestly, this is like another final, but more fun.”

Within twenty minutes, a few women start dancing around tables near the DJ booth. The sugar has started to kick in, and soon a dance-off is under way. Ten minutes later, the lights go off in the larger dining room, and more students start dancing. “It’s poppin’ on that side!” shouts one student, racing onto the dance floor. The Marketplace staff starts to cluster at the entrance of the room, watching what would otherwise look like a typical Saturday night at the popular Durham nightclub Shooters, save for the conspicuous absence of alcohol. Veteran Marketplace chef “Big Jamal” smiles and says he hasn’t seen a dance party this big at Midnight Breakfast in about four or five years. “They

didn’t come to eat; they came to party.”

Things proceed at a clip until about 12:50 a.m., when the lights come back on and the students quickly learn that all good parties must come to an end. Approximately 1,100 freshmen have come and gone, each with a new T-shirt and a belly full of sweets. Now the hard part will begin.

By 1:15, the Marketplace is empty. The food is gone, as are almost all of the decorations. The Marketplace staff finishes prepping the kitchens for regular morning service at 7 a.m. Will Bobrinskoy, of Aycock dorm, admits that as much fun as Midnight Breakfast has been, he’s headed straight to the library once he’s released from cleanup duties. Still, the work was worth it. “The best part was all the smiles,” he says. ■



Let's Talk About Race

From reflections by pioneers who broke the color barrier to frank conversations about the challenges that remain, a university-wide commemoration of integration offers an opportunity to assess Duke's commitment to diversity and inclusiveness.

BY BRIDGET BOOHER



Fifty years ago this fall, a black third-grader sat in the balcony of a Charlotte movie theater, segregated from the white children seeing the same movie, accepting as normal that his skin color meant he and his friends drank from separate water fountains, used separate bathrooms, rode at the back of the bus. On that same day, a few hours' drive north, the first black undergraduate students to enroll at Duke University were finding their way on a campus that had admitted black graduate- and professional-school students only two years earlier. It would be another three years before Duke hired its first black faculty member.

Today, that Charlotte student, D. Michael Bennett '77, is among dozens of people in the Duke community who worked throughout 2012 to plan and launch "Celebrating the Past, Charting the Future: Commemorating 50 Years of Black Students at Duke," a nine-month series of events. Three of those original five black undergraduates in the Class of '67—Wilhelmina

"Celebrating the Past, Charting the Future: Commemorating 50 Years of Black Students at Duke" includes a wide range of academic, artistic, and cultural events, culminating in a gala celebration on Founders' Day. For a complete list of events, news, and feature articles, and to share your own experiences and thoughts about race at Duke, visit spotlight.duke.edu/50years.

Reuben-Cooke, Nathaniel White Jr., and Gene Kendall—are still living, and serve as honorary co-chairs for the commemoration. (The original five were profiled in the September–October 1992 issue of *Duke Magazine*.) And while black faculty members can be found now in senior leadership positions in programs and departments across campus—as well as in the pulpit of Duke Chapel on Sunday mornings—the first black dean of a graduate or professional school wasn't appointed until 2012.

As the university embarks on the official 50th commemoration series of events, we spoke with a number of faculty, staff, student, and alumni leaders on the progress Duke has made in the last fifty years—and what unfinished business remains. ■

Brenda Armstrong '70 grew up in Rocky Mount, North Carolina, where she attended the segregated Booker T. Washington Senior High School. Armstrong was in the third integrated undergraduate class at Duke, where she cofounded the Afro-American Society and was its president during the Allen Building takeover in 1969. She is a professor of pediatrics in the division of pediatric cardiology, the associate dean of medical education, and director of admissions at the School of Medicine.

I had terrific high-school teachers. I was taught by faculty members who should have been college professors, but because of segregation were relegated to teaching high school. They gave up their Saturdays to teach us the advanced academics that they were forbidden to do during the regular school days. That was their gift to us, to teach us as if we were already college students, and make us prepared for the next steps that they were not allowed to have.

At Duke we were socially isolated. We had no transportation. There were no activities for us. If we went anywhere, we would catch a bus and go over to North Carolina Central. And in the process of that first year, we went into the Durham community to church, and that's where we met Philip Cousins and Ben Ruffin and Howard Fuller. They helped us get back our self-confidence and understand the lessons that our parents and communities had given us, but that we just didn't know how to call forward. It was such a wonderful gift, because I think had I not had it, I would have probably asked to transfer somewhere else.

The use of segregated facilities by the white students, faculty, and administration was the defining motivation for us to create the Afro-American Society. We wanted an organization to which we could retreat, which would embody our common heritage and culture in the absence of a formal recognition on campus, and that would give us a political voice. We decided to do a



"study in" in the Allen Building in protest. And we realized that we had some power....

By the fall of our junior year, it was clear that we weren't getting anywhere. And then Martin Luther King Jr. was killed [April 4, 1968]. We were devastated. We wanted the university to act in a much more obvious way, and they didn't. We marched over to the president's house and sat in for a while, and all the platitudes came out, but nothing of any substance. There were demonstrations on the quad, and the Silent Vigil.

In the fall of 1968, we decided that we needed to make a more powerful statement. We decided to take over the Allen Building. We had to learn the floor plan. We didn't want to be obvious about it, so we would walk through and make note of where the doors and transoms and windows were. We had a meeting and drew up the list of demands. I think there were a lot of people who were frightened and who weren't sure that we were doing the right thing.

None of us had told our families that we were doing this, and we decided not to until we were securely in the building. We knew they would be terrified that we were going to get hurt. I think all of us grew up that evening. We prayed. We talked about the fact that we might get put out of school. It was just an amazing, amazing meeting.

The takeover of the Allen Building [in February 1969] was a remarkable moment for all of us. Taking up this cause and stepping out [in] faith made us different people. It was so transformative. We had no idea at the time how important it would be, but we left that building with the sense that Duke would be different. We just didn't know how it would be different, and we were still frightened, because we didn't know what the repercussions would be for us....

For those of us who went through that, it was the defining moment of our lives. We still talk about it now. We are such accom-

Armstrong portrait by Jared Lazarus

Timeline of key events at Duke

Photography courtesy Duke Archives unless otherwise noted

1901

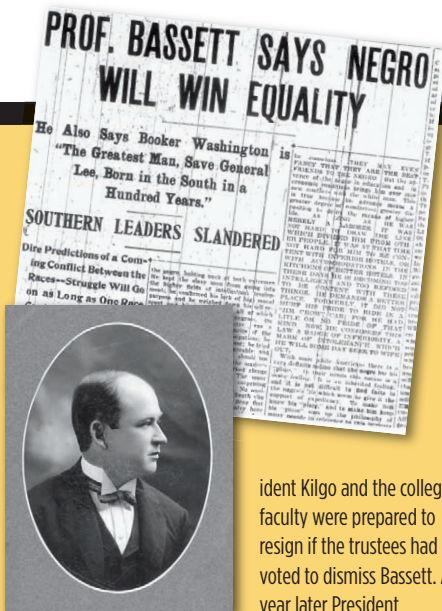
▼ Washington Duke gives \$85,550 to help establish Durham's **Lincoln Hospital**, founded by black physician A.M. Moore. The hospital provides medical care for black residents of Durham and surrounding counties.



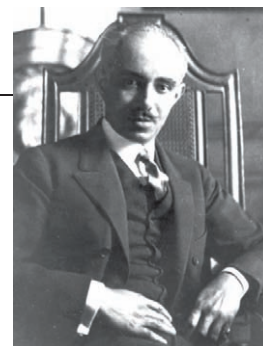
Courtesy Endangered Durham

1903

► History professor John Spencer Bassett writes an essay in the *South Atlantic Quarterly* titled "Stirring Up the Fires of Race Antipathy," in which he praises Booker T. Washington. State Democratic leaders who were also on the Trinity College board of trustees demand that he be fired. Bassett offers his resignation, but the trustees vote 18 to 7 not to accept it. Students build bonfires and celebrate until dawn. It's later revealed that Pres-



ident Kilgo and the college faculty were prepared to resign if the trustees had voted to dismiss Bassett. A year later President Theodore Roosevelt speaks in Durham, extolling Trinity's courageous stand for academic freedom.



1924

► Black architect **Julian Abele**, a member of the Philadelphia architectural firm owned by Horace Trumbauer, begins designing the new Duke University campus. Abele's designs included the chapel, the library, the school of religion, the football stadium and gymnasium, the medical school and hospital, and faculty houses.

plished people, not just because we went out and got degrees, but because we have never gone back on what we felt was our responsibility to always tell the truth, to always stand up for those things that we believed in, and to be willing to marshal the resources that we had to back up whatever we did.

And Duke is a better place because we did that. It was such a dramatic, cataclysmic sort of intervention. And they brought in Terry Sanford as president. In the history of this school, Terry Sanford was a person who led the way for Duke to come out of being a cloistered, provincial school to being ready to be a player globally. And you can trace it back to his vision, to his notion of how to heal.

I remember the first conversation I had with him after Allen Building. He asked us to come and talk with him, and he looked me in the eye, and he said, "You're somebody important." And then he said, "You all were right." We were stunned, because we thought everybody was just mad [at] us.

The 50th commemoration should be about reflection and the work we have to do now. What's the work for the next fifty years? What haven't we done well? In my opinion, the thing we aren't doing quite as well is raising our students to be a new generation of leaders. Many of them come from very privileged backgrounds, and they need a dose of the Allen Building experience and what led up to it to understand that they have a responsibility to exercise their privilege in a visionary way. I tell them that the shoulders they are standing on are broad and that people made extraordinary sacrifices so that they could be here. They've been bequeathed a legacy that many people don't have. And to not take it seriously, to not act on it, is a sin.

Duke will not be a great institution until it accepts the fact that everybody has an equal place at the table. The one lesson that I have learned in doing all of this work is that everybody has a gift, and nobody's gift is better than anyone else's. But that culture of sharing and appreciating each other's gifts has not yet been achieved on Duke's campus.



Luke Powery became dean of Duke Chapel this past September. Before arriving at Duke, he taught at Princeton Theological Seminary, where he was the Perry and Georgia Engle Assistant Professor of homiletics. Raised in the Holiness-Pentecostal tradition and ordained in the Progressive National Baptist Convention Inc., Powery is the author of *Spirit Speech: Lament and Celebration in Preaching* and *Dem Dry Bones: Preaching, Death, and Hope*.

As part of the 50th commemoration events, he is overseeing the compilation and publication of a Lenten booklet that will include contributions by faculty and staff members, students, and alumni around the themes of self-examination, suffering, lament, and renewal as they relate to Duke's desegregation. The chapel also is hosting an interfaith conversation on race and Muslim-Christian relations in honor of the late religion professor C. Eric Lincoln, and a moderated panel discussion featuring black trailblazers at Duke and the role that faith has played in their lives.

From my understanding, Duke has made progress around issues of race, both institutionally and as it relates to the Durham community. But to have people whom I don't even know, particularly African Americans, stop me and say, "You don't know what it means to have you here," I think implicitly says something about the desire and the need for a greater sense of truth and reconciliation around our racial history.

And so the Lenten booklet is a way to say that celebration is important, but so is lamentation and truth telling. Expressions of hope, expressions of gratitude, expressions of forgiveness, all of that is and should be a part of the conversation.

I think it's also important to say that even though we have come far, there's still much further to go, as evidenced by the fact that we're still having "firsts" here at Duke. There was a lot of media attention around the fact that I am the first black dean of the chapel. The way I see it, I am the dean of the chapel who happens to be black.

Powery portrait by Les Todd

1961

The board of trustees announces that **students will be admitted to the university graduate and professional schools without regard to race, creed, or national origin.**

Ruben Lee Speakes, the first African-American student to enroll in Duke Divinity School, is admitted as a special student; he already has received a divinity degree elsewhere.

Walter T. Johnson Jr. (J.D. '64) and **David Robinson II** (J.D. '64) are the first African-American students to enroll in Duke's law school.



1962

Matthew A. Zimmerman (M.Div. '65) and **Donald Ballard** (M.Div. '66) are the first two African-American students to enroll in the divinity school as official degree candidates; **James Eaton**, **Ida Stephens Owens** (Physiology Ph.D. '67), **James Roland Law**, and **Odell**

Richardson Reuben (Theology Ph.D. '69) are the first African-American students to enroll in the Graduate School of Arts and Sciences.

◀ The board of trustees votes to admit undergraduate students without regard to race.

1963

Five African-American undergraduates enter as first-year students: Wilhelmina Reuben-Cooke, Mary Mitchell Harris, Gene Kendall, Cassandra Smith Rush, and Nathaniel White Jr.

▼ **Delano Meriwether** is the first African-American student to enroll in Duke's School of Medicine.



1964

▼ **Samuel D. Proctor** is the first African American to preach at Duke Chapel.



Martin Luther King Jr. addresses the Duke community in Page Auditorium.

1966

► **Samuel DuBois Cook** becomes Duke's first African-American faculty member. He enters

I think another significant difference between my predecessors and me is my denominational affiliation. The Progressive National Baptist Convention, which was started by such individuals as Gardner C. Taylor and Martin Luther King Jr., embraces a more extroverted, ecstatic, and celebratory tradition compared to what I would say is a more contemplative tradition at Duke Chapel, which happens to be interdenominational. So what does that mean, as we talk about a variety of ecclesial traditions, which are interconnected with cultural and racial realities? How do we live into our interdenominationalism? How do we live into our interracial identity? Not because we have a black dean, but because of the beauty of God. How do we dream of a world where difference becomes the air we breathe, the music we play or perform, where difference becomes apparent in a congregation that crosses generational, denominational, and racial/ethnic divides?

People often see the issue of race as a challenge, because of our nation's difficult history. And it is a challenge because many times the language of diversity or the language of difference is demonized; it's seen as a bad thing. But I believe that it's actually the gift that we all need. It is the opportunity to be who, in my perspective, God has created us to be, in our particularity. Diversity expresses the beauty of God, but we don't present it that way many times. It is presented as a struggle, as a problem that perhaps we need to avoid.

So the dialectic between diversity as struggle and diversity as gift continues, balancing negative and positive perceptions in both subtle and overt ways. There's still a lot of teaching and understanding that has to happen around these issues, especially pertaining to the systems and structures that are in place, which perpetuate the cycle of racialized struggle. We need to have candid conversations about how resources are allocated or not allocated so we can do our part in stopping the ongoing cycle that too often never breaks down. It's time to take each situation that arises as an opportunity to change what has been the pattern and, together, begin to weave something new.



Karla FC Holloway is James B. Duke Professor of English and professor of law. She also holds appointments in Women's Studies and African & African American Studies. She has served as dean of the humanities and social sciences, chair (and member) of Duke's Appointments, Promotion, and Tenure Committee, and an elected member of the Academic Council and its executive committee. She is founding codirector of the John Hope Franklin Center and the Franklin Humanities Institute. She currently serves as a member of the board of trustees' committee on honorary degrees.

Iwish we as a community were more courageous about addressing the most difficult issues on campus, including race. But we're really quite timid. What do we value as a community? What are our core principles? This is what Martin Luther King Jr. meant when he talked about the content of one's character. And if we take him seriously, as we say we do every January, then we really need to think about the difference between skin color and content of character.

Currently the Black Student Alliance Invitational recruiting weekend is designed by black students for black students. Rather than delegating that assignment, I want the Duke administration to demonstrate, "That's our agenda. It's our responsibility to model an infrastructure that assures successful recruitment of a diverse class of matriculants." Instead, we're saying, "Black students at Duke are responsible for getting black students to Duke."

What would happen if Duke administrators felt it was their responsibility to make sure that Blue Devil Days [for admitted students] could attract and yield a diverse complement of students, while also showing white students that this institution is interested in a visible welcome extended to students of color? I'd like the in-

Holloway portrait by Chris Hildreth



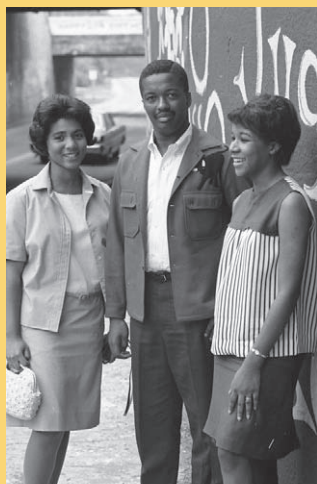
the political science department as a visiting professor and subsequently is appointed a full tenured professor.

Anthony Oyewole '66, A.M. '68, Ph.D. '70 is the first black undergraduate to earn his degree from Duke, after transferring as a junior in 1964 from a Nigerian university.

1967

▼ **Wilhelmina Reuben-Cooke, Mary Mitchell Harris, and Nathaniel White Jr.** become the first African Americans who entered as first-year students to receive their undergraduate degrees at Duke.

Reuben-Cooke is voted the first African-American May Queen.



Hope Valley Study-In: Thirty-five members of the Afro-American Society stage a day-long study-in protest in the lobby of then-university president Douglas Knight's office, denouncing the use of segregated facilities by student groups, as well as the membership of key university officers, including Knight, in the segregated Hope Valley Country Club.

1968

► In the wake of Martin Luther King Jr.'s assassination on April 4, **hundreds of students—black and white—gather on West Campus to protest Duke's discriminatory policies.** The primary issues that emerge are unionization, wages, and working conditions of the maids, janitors, and dining-hall workers. By the time the vigil ends on April 11, an



agreement is reached for increases in salary for the workers.

stitution's practice to model its stated principles. Since we want students of color here, what do we have to know? I'd rather it be, "Oh, you like the flute? Let me introduce you to faculty in the music department," rather than "You're black? Okay, we'll use your race as the designation that matters and make your primary introduction an engagement with other black students."

Ideally, and especially in an educational institution, we should let students know about the past and celebrate their potential without the institution's racial characterization of their identity leading the way. And I think it's a failure of leadership to avoid the messiness that a conversation like that would spur. Goodness knows, I appreciate something that's neatly packaged, but this isn't it. We hold onto the notion that there are boxes of identity that you check and that this gives us some useful information. About what? Identities are far more complicated. Yes, it is a hard and potentially fracturing conversation. It's hard nationally. We learned it in the last election. But the consequence of our pretense is far more damaging.

For me, this is part of a long history of understanding the mechanics in institutional infrastructures of race, culture, and identity and how they are utilized. For example, why doesn't the Mary Lou Williams Center have a critically visible presence in *all* our recruitment weekends? Certainly we can't think black culture is only for black people! But our practices suggest we do. I don't expect my students to come to campus fully aware of that history or those complexities. But as an educator and member of this community, I have an obligation to point them out, which is why I wrote the letter to *The Chronicle* [criticizing the "segregated" Black Student Alliance Invitational]. Do I think it's going to make a difference? No, because when a crisis involving race emerged, the BSA was given \$20,000 to "enhance" the recruitment weekend and to ameliorate the dustup. That's not much more than a payoff. It's funding without portfolio. I understand the politics of that. But it's a lost opportunity to do the difficult thing.



Marcus Benning is a junior from Stone Mountain, Georgia. He is president of the Black Student Alliance, a senator for the Duke Student Government, and a member of the Kappa Omicron chapter of the Alpha Phi Alpha fraternity. After graduating, he plans to attend Harvard Law School and pursue a joint A.M./J.D. degree, with an emphasis on social-sector consulting and urban planning.

Most of the colleges I applied to had strong academic programs, so I knew the differentiating factor would be where I felt most comfortable. I attended the Black Student Alliance Invitational weekend, and by the end of it, I knew I was coming to Duke.

What impressed me was that Duke had a vibrant black community that was both intertwined with the larger community, but also able to stand on its own. I liked that the BSAI is not a minority recruitment weekend; it was specifically tailored to black students. I came from a high school that was predominantly African American, so having a strong black community was of paramount importance to me.

Benning portrait by Chris Hildreth

1968 continued...

African-American students present the administration with **twelve points of concern**, including black enrollment levels, the low number of black faculty members, and the continuing membership of key university officials in segregated facilities.

1969

▼ **Sixty members of the Afro-American Society occupy the Allen Building for eight hours** and present the university administration with a list of demands. Nearly seventy Durham city policemen, twenty-five highway patrolmen, and twelve Durham County sheriff's deputies make arrests and use tear gas, with National Guard troops on standby off-campus.



1974

Black Studies Program instituted.

Office of Black Affairs established. It later becomes the Office of Minority Affairs and, in 1993, the Office of Intercultural Affairs.

▲ The university's first predominantly black fraternity, the **Omega Zeta chapter of Omega Psi Phi**, is founded. One year later, the university gives the fraternity its own housing.

During some of the recent controversies that involved race, the BSA has served as the campus conscience. Last spring, it was hurtful to have people questioning the academic caliber of black students. [An unpublished study by Duke economics professor Peter Arcidiacono implied that black students are more likely than white students to seek out less-challenging majors; Arcidiacono says the study has been misinterpreted.] Duke students, of all colors, are here because we chose to come here. Many of us [black students] had other options and could have gone to any school across the country. Our academic records speak for themselves. So it was discouraging to have our intelligence and potential for success called into question.

The blackface incident [when a member of the Duke women's lacrosse team donned blackface to assume the role of Buckwheat from the Little Rascals for her Halloween costume] was most upsetting because of the blatant lack of awareness—she had no idea that dressing up in blackface was a cultural taboo—a very offensive gesture, to be avoided at all costs. But we have to pick our battles. Not everything requires a public demonstration. Effective activism can take place behind the scenes, as well. Ultimately, the incident led to a policy change, so something concrete was achieved as a result. [Photos are now individually evaluated before being posted on GoDuke.com.]

My biggest role models are my mother, who is a two-time breast cancer survivor, and the men in my fraternity. After surviving two bouts with cancer, my mom enrolled in nursing school so she could help treat other cancer patients. She reminds me that no matter what difficulties you face, there is always someone who has had a more difficult experience.

I am also very proud to be a member of Alpha Phi Alpha, whose ranks include Thurgood Marshall, W.E.B. Du Bois, and Martin Luther King Jr. Their thoughtful activism continues to inspire people around the world. I'm inspired by the Alpha men on this cam-

pus—men who are University Scholars, on the *Chronicle* staff, and members of the mock-trial team. Our fraternity sponsors an annual charity ball and mentors kids through the Boys and Girls Club. There is a level of political and cultural awareness that inspires me to do better. I want Alpha to be as proud of me as I am of it. So I have a lot of work to do.

As the university prepares to commemorate fifty years of black students, what's missing for me is a strategy/plan for how the next fifty years will unfold. I look forward to working with the development office, senior administration, the alumni association, and the Mary Lou Williams Center to develop a comprehensive strategy for minority causes.



James E. Coleman Jr. is the John S. Bradway Professor of law and teaches courses in criminal law, legal ethics, negotiation and mediation, capital punishment, and wrongful convictions. He is codirector of the Wrongful Convictions Clinic and the Appellate Litigation Clinic. In 2006, he chaired the Lacrosse Ad Hoc Review Committee created by President Richard H. Brodhead.

During the lacrosse case, I got e-mails from people who criticized me for being involved and for defending the students, saying that I'm a traitor. I told them that they didn't know anything about me and that I reject the notion that if you're a black person, in a case where race may be involved, you've got to side with black people.

But I think that's something that runs deep in our culture. This is one of the things that bothered me about the case, which is that a lot of people saw the injustice of it because the students were white. People reacted as if this was the worst case of false accusation that ever happened. False accusations happen much more often than we would like to acknowledge, but usually the public doesn't know about it or doesn't pay attention to it. You know, we have a

Coleman portrait by Megan Morr

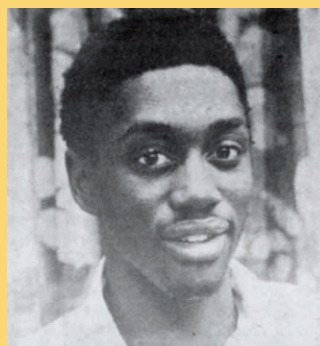
1975

Black sorority **Delta Sigma Theta** is established at Duke as the first recognized black sorority, followed by Alpha Kappa Alpha sorority.

One hundred students protest and present the administration with grievances and demands for action. Their priorities include making the Black Studies Program a full department and increasing the number of black faculty members teaching black studies courses.

1976

The Association of African Students is renamed the **Black Student Alliance**.



Duke Photography

▲ **Reginaldo Howard** becomes the first African American elected to the position of Associated Students of Duke University president. He is killed in an automobile accident before the beginning of his term, and the Reginaldo Howard Memorial Scholarship is established in his honor. The award eventually expands to cover full tuition, mandatory fees, and room and board, as well as up to \$5,000 for research or other educational enrichment programs.

1978

Frank Emory '79 is the second black student elected but first to serve as Duke's student body president. Emory is a current member of the board of trustees.

1982

Duke University Black Alumni Connection (DUBAC) is created as an affinity alumni group of the Duke Alumni Association.



◀ Historian **John Hope Franklin** begins his career at Duke, joining the history department faculty and later the law school faculty.

1983

▼ The **Mary Lou Williams Center for Black Culture** is established. The center is named for the jazz musician, a popular artist-in-residence on campus for several years.



case right now [through the Wrongful Convictions Clinic] where a guy has been in prison since 1976, and we're pretty sure that he's innocent. Where's the outrage about that?

But that's how race gets used. It gets distorted, and then it gets used to make a point. In the lacrosse case, there was the initial point, which was that these white guys are like plantation owners who go out there and exploit black women and sexually assault them and get away with it. That was the first story. That was [then-district attorney] Mike Nifong's story.

Then, when the facts started coming out and public opinion changed, there was a backlash. A lot of people were angry at the black faculty, as if black people generally were responsible for the false accusation. And then there were a lot of people in the community who were irritated at privileged Duke students and how they behave on weekends and saw this as an opportunity to focus on that. So everybody was using this for their own platform; you could use it for whatever cause you had.

I think that's why it's so difficult to talk about race, because people just don't know where the conversation is going to go. We have a big case in the Supreme Court on affirmative action and whether schools can take race into consideration during the admissions process. From a historical perspective, I think it's important to look at what people were saying about the role of education at the time that the country was founded. The concern then was not about black people, but about Europeans, about different people from different countries coming here and forming a country and a nation. Basically, what founding fathers like Thomas Jefferson and Benjamin Rush said was that education is necessary in a democracy, because you need educated people for a democracy to work. And that you needed to educate people broadly, not just the wealthy who could afford it. That was one of the impetuses for public education, a diffusion of knowledge.

So they started universities whose goal was to bring people from different backgrounds into a university and give them a common

education, common values, so that they could work together. That's what I think affirmative action should be about. For practical reasons, people aren't going to support spending a lot of money on education if only a narrow group of people is being educated. But also, when you've got such a racially diverse country, we have an obligation to educate people from all of those groups, because they're going to be the leaders. And if you don't get leaders who are African Americans, who are Latinos, who are Asians, who are white—if you're not educating people from all of those groups, then ultimately, you're going to have problems because the group that gets left out is going to be powerless and not part of the national conversation. And that's going to be a problem.

In the long run, I'm not sure that the lacrosse case has had any positive or negative impact on race relations and our ability to discuss and learn from situations involving race. Attorney General Eric Holder made a statement early in the Obama administration that Americans were cowards in talking about race, that we avoid dealing seriously with the issue, and he got roundly criticized for that by a lot of people. But I think he told the truth.



Chandra Guinn has been the director of the Mary Lou Williams Center for Black Culture since 2005. A sociologist, she has taught at the University of North Carolina-Chapel Hill and through Duke's African & African American Studies department. Her research interests include Africana studies historiography and pedagogy, educational entrepreneurship, and philanthropy.

I'm honest when I say that this is a good place. I genuinely believe that. But I know we can do better. I just wish that everyone—faculty, staff, students, administrators—would embrace the collective capacity we have to transform this place in ways it hasn't even imagined it's capable of.

I didn't study the history of race relations at Duke before pur-

Guinn portrait by Megan Morr



1986

◀ Duke's board of trustees votes to have the university **divest from companies that invest in South Africa** following anti-apartheid protests on campus.

1987

A portrait of **Julian F. Abele**, the chief architect of the Duke campus, is unveiled and later hung in the Allen Building. An Outstanding Achievement Award in Abele's honor is established for professional students and faculty members.

1988

The Academic Council passes a resolution to adopt the **Black Faculty Initiative**, which mandates the hiring of additional black faculty members in each department.

1989

▼ Student humor magazine *Jabberwocky* publishes "Grammar Guide to DUFs Workers," and "Kenny: A Day in the Life of a DUFs Worker," which portrays black food service workers as lazy and parodies their speech. Campus protests ensue, and the Publications Board fires the editor.



suing and accepting this opportunity. I just thought how amazing it would be to work with some of the brightest students in the country at a well-resourced institution. In taking this position, it was my intent to help cultivate a cadre of young people of African descent ready to change the world.

And though it is undeniable that progress has been made, from five black students in '63 to well over five hundred in 2013, from my perspective, the question still remains: "What promises do we make to students of color who come to this predominately white institution that is well-resourced? And are we living up to what should be our promise?"

I have great respect for people who have preceded me at this university who have endeavored to transform this place for the good. But I don't know that Duke has thought carefully about what it means to have black students as a part of this campus community. I think there was some acceptance of inevitability, but I don't know that that's the same as intentionality. And when I say intentionality, I mean to suggest the need for more culturally diverse professionals who can and who will properly support the students with sufficient attention and cultural resonance that would make the experience meaningful.

It's one thing to desegregate because of a Supreme Court ruling or because you are facing the loss of federal funding. But that's not the same thing as sitting down and saying, "How do we do this? What are the needs? How do we prepare for our changing campus community, our changing global context? How do we cultivate our own pipeline so that the students who arrive here on this campus are prepared to take full advantage of this place? How are we going to have space for students from Durham? What is the nature of our engagement with Durham Public Schools, with Durham private schools for that matter, such that students think seriously about us as an institutional option?" I just haven't seen the evidence that suggests to me that this has been addressed.

What I see is a lot of reaction to things: "This happened so there-

fore we did this; that happened so therefore we did that." To me, it's a lot like my discipline. Sociology is a dynamic and interesting field that provides us with all kinds of tools for social analysis, especially in terms of race. But mainstream sociologists failed to predict the civil rights movement. That's what this place feels like to me.

As a community we have to be willing to take risks, to get in there and wrestle with integration and accept that we may not get it right. But we're going to do this. And we're going to do it together; and even if we don't succeed, we will have shown the muscle of an institution of higher learning that is wrestling with complex problems, questioning everything, and looking for ethical, intellectual responses that have application embedded in them.

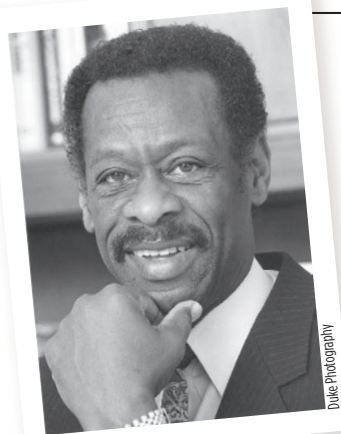
As director of the Mary Lou Williams Center, I have made an effort to embrace the cultural opportunities presented by this place. Student advocacy is something we have encouraged. We have tried to help the students recognize their agency and to help make Duke as good as its promise.



Paula D. McClain became dean of the Graduate School in 2012. She is a professor of political science and of public policy at Duke. She is codirector of the university's Center for the Study of Race, Ethnicity, and Gender in the Social Sciences (REGSS). Her research interests include racial minority group politics, particularly inter-minority political and social competition, and urban politics. Before coming to Duke, she was a professor at the University of Virginia's Woodrow Wilson Department of Government and Foreign Affairs and former department chair.

Desegregation, both at Duke and in higher education, began in the graduate and professional schools. In the 1930s, the NAACP brought a lawsuit against the University of Missouri law school, which had refused admission to an African-American man based on his race. Some

McClain portrait by Les Todd



1990

▲ **Leonard C. Beckum** is hired as the first African-American officer of the university and given the title university vice president and vice provost.

1991

▼ **Henry Louis Gates Jr.** leaves the Duke English department after less than a year to take a faculty position at Harvard. In a 1993 *New York Times* article, he calls his time at Duke "the most racist experience I ever had in my professional life."



▲ **Janet Smith Dickerson** is hired as the first woman and first African-American vice president for student affairs.

1992

The 30th Anniversary Committee is established by President Brodie to oversee the commemoration of thirty years of African-American students at Duke.

2002

▼ **Haywood Brown** becomes Duke's first African-American chair of a major department at the Duke Medical Center.



schools paid for black students to go to schools in other states rather than desegregate. But in the [*Missouri ex rel Gaines vs. Canada*] case, which was argued in front of the Supreme Court, the justices ruled that institutions had to allow blacks to attend if there was no separate school for blacks.

When I came to Duke in 2000, I was recruited by political science colleagues who recognized that you couldn't fully understand the role of government and politics in this country without taking race into account—and that in order to have a complete view of American politics, the study of race was important. (In fact, [current] provost Peter Lange was department chair when I was recruited.) They wanted me for my scholarship. The fact that I was African American was secondary, but clearly a plus in their efforts to diversify the faculty. I do not want to discount the last part, as it was important to diversify the faculty. What I am saying is that I did not have to make the case that the study of race was important; my colleagues had already reached that conclusion before I came. But that hasn't necessarily been the case across campus.

In 2012, I became the first black dean of any of the ten schools and colleges at Duke. Duke should be asking the question of why it took so long to get to that point. Other Southern universities are farther along than we are. Emory, for instance, has had a black provost for a number of years, and the University of North Carolina at Chapel Hill has had a black dean of the College of Arts and Sciences. Given that Duke is behind other institutions in this respect, I was encouraged and very pleased to hear President Brodhead address Duke's history of race at last spring's Academic Council meeting.

After I had left UVA, there were a series of racial incidents, and the president at the time, John Casteen III, addressed the campus from the Rotunda, the closest thing to sacred ground at UVA. He talked about UVA's values and the community's re-

sponsibility to condemn these incidents and stand alongside their colleagues of color who had been the targets of these events. He also talked about the fact that UVA only became a major, national institution when it opened its doors to blacks and women and that diversity and inclusiveness go hand in hand with excellence. At Homecoming that year, they replayed his speech on the jumbo screen at the football game (against Duke, by the way), so that all the alumni who were back on campus could hear it. That conveyed the importance that the institution put on the message. But that message—that diversity and excellence go hand in hand—wasn't just something he said during that series of events. It was a staple of all of his talks about what it meant for UVA to move into the ranks of leading U.S. institutions of higher education.

I'm proud of the work that's taking place at REGSS. It's a place where scholars interested in race, ethnicity, and gender, and the intersection of race and gender from a wide range of disciplines,

can collaborate with others interested in exploring issues that require a [multifaceted] approach. For example, we have sociologists and colleagues from the medical center looking at how race affects health disparities.

I have seen many faculty, administrators, staff,

and students who are committed to making Duke a more inclusive and diverse place. We're not there yet, but we are making progress. We have to keep working at it and remembering that diversity and excellence are two sides of the same coin. We have to keep pushing that boulder up the hill.

In 2012, I became the first black dean of any of the ten schools and colleges at Duke. Duke should be asking the question of why it took so long to get to that point.

2006

◀ Three white members of the Duke lacrosse team are accused of raping a black stripper they hired at an off-campus party. The case becomes an international scandal and fuels discussions around themes of race, class, gender, and Duke-Durham relations.



Duke's African & African American Studies program is elevated to department status.

2007

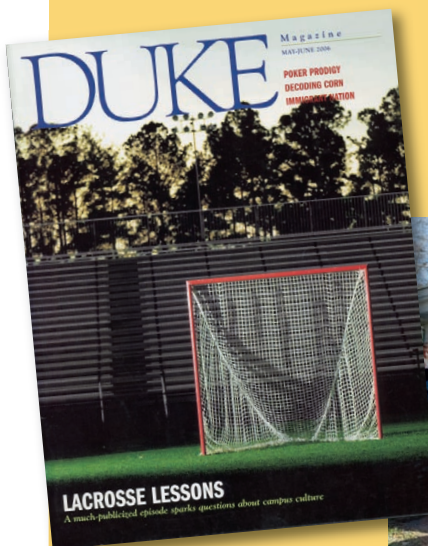
Political scientist **Paula McClain** is elected the first African-American chair of the Academic Council, the university's top faculty governing body.

2009

▼ North Carolina legislator **Daniel T. Blue Jr.** J.D. '73 becomes the first African-American chair of the board of trustees.



Duke Photography



D. Michael Bennett '77 is the senior vice president of information management and the chief information officer for BAE Systems Inc., a global defense, aerospace, and security company. He grew up in Charlotte and was recruited to play football at Duke, where he majored in political science. He helped launch DUBAC (Duke University Black Alumni Connection), is a vice president of the Duke Alumni Association's board of directors, and serves on the executive committee of the 50th anniversary commemoration.



In the fall of 1963, when I was in the third grade, students in the Charlotte schools went to see the movie *The Sound of Music*. I remember that we [black kids] had to wait in the back of the theater building until all the white kids were seated in the orchestra section. We then came into the theater through the back door and up to the balcony. There were still colored and white water fountains, and colored and white bathrooms. That same fall, just down the road from me, Duke University admitted five black undergraduate students. I was still riding in the back of the bus, by law in Charlotte, and could not have imagined that I would have been able to select Duke as the university I would attend. That is the context within which we should consider the significance of what happened in 1963 at Duke and the fifty years since then.

Duke was fundamentally changed by the presence of black students, but I'm not sure the broader Duke community always understood what it meant to be inclusive. This is the example I use. If you have a cup of coffee, and you put a test tube in the middle of it and add cream to the test tube, that cream is still separated out from the coffee. But if you add the cream to the coffee and stir it, it fundamentally becomes something different. You must

embrace fundamental change to be inclusive. This 50th commemoration at the university level is a good sign regarding embracing fundamental change.

As I've been working on the 50th commemoration, I've talked to dozens of black alumni who have not meaningfully been engaged with Duke since they graduated. There is still a lot of pain from the racially negative experiences many of us had as students. Regardless, there is tremendous excitement about the fact that the entire university community is marking this occasion, and black alums want to be part of it. This is a big deal. We recently put out a call for volunteers in the D.C. area to plan and execute the D.C. 50th Commemoration event, and we had thirty-six people on our first conference call. We did

the same thing in Atlanta and had twenty-five volunteers the first hour.

There are still black alums who have negative feelings about Duke because of their own personal experiences with racism while a student, but if anyone else says something negative about Duke, watch out! There's an intense pride most African-American Duke alumni feel about Duke. Everyone I've talked to is excited about coming back to campus, reconnecting with the people who they were close to, and experiencing the Duke of today.

There is still unfinished business at Duke around issues of race, just as there is in our society at large. But I believe we are all on the journey together. The 50th commemoration is a way for all of us in the Duke community—not just blacks—to make progress together and chart our course for the next fifty years. ■

These essays are from interviews conducted, edited, and condensed by Bridget Booher.

Bennett portrait by Les Todd

2012

The 50th Anniversary Committee is established by President Brodhead to oversee the commemoration of 50 years of African-American students at Duke.

At the annual meeting of the Academic Council, President Brodhead addresses Duke's legacy of race, saying that including African Americans in the top academic leadership "is a piece of unfinished business" and pledges to give the issue "continuing attention."

"We do not stand for that type of racist inquiry and that misuse of academia to mischaracterize the accomplishments of the African-American students at our institution."

— **The Chronicle** January 17, 2012

▲ An unpublished study by Duke sociologists implies that black students at Duke are more likely to switch to "easier" majors (the humanities and social sciences) than their white peers. Approximately three dozen students hold a silent protest.

► **Luke Powery** becomes the first African-American dean of Duke Chapel.

A member of the women's lacrosse team dons blackface for her Halloween costume as Buckwheat from *The Little Rascals*. The image is posted on the GoDuke.com site briefly before being taken down.

Paula McClain is named the first African-American dean of the Graduate School.

2013

Duke launches "Celebrating the Past, Charting the Future: Commemorating 50 Years of Black Students at Duke."

Henry Louis Gates Jr. is to receive an honorary degree at commencement.




Les Todd

Modern MARVEL

Neuroscientist and comic-book fan Ahmad Hariri wants to take pictures of the brains of 1,200 Duke undergraduates. Can his ambitious idea help us understand how to defeat depression and mental illness?

By Catherine Clabby | Illustrations by Arlen Schumer



One morning last semester, a Duke undergrad peeled off from a busy day on campus to hustle to a basement office in the Sociology-Psychology Building, where scientists were waiting to peer into her brain. Within minutes the slim first-year student, chic in a black-and-white shorts set, was sitting before a computer screen in a narrow, beige room. For more than an hour, her fingers clicked answers to hundreds of questions about her tastes, behaviors, quirks, and feelings.

Would you wait six months to receive a gift of \$100 or would you settle for \$70 today? What if you had to wait a year? Would you settle for \$20 now? What about \$80?

And not long after that:

Are you a planner or spontaneous?...Like puzzles?...Pay debt?...Temperamental?...

Trusting?...Regrets?...Dress well?...Throw things?...Arrive on time?

The student—we'll call her Ella—had signed up for the Duke Neurogenetics Study, the largest research project of its kind in the world. The project is the brainchild of Ahmad Hariri, a professor of neuroscience and psychology who is trying to unearth the biological basis for many of the vast differences in our personalities. Those differences, he's convinced, influence not just how we behave, but also our vulnerabilities to mental-health disorders such as depression, anxiety, and addiction.

In his detective work, Hariri combines traditional personality surveys with two of neuroscience's hottest new tools: genetic sequencing and brain imaging. Already more than 600 students have contributed to what is quickly becoming a mountain of data. In addition to the long survey, volunteers offer a DNA sam-

ple, which is sequenced by a private lab, and agree to have their brain imaged as it reacts to evocative experiences.

Before Hariri and his research team are done, they intend to record and analyze the brain activity, genetic variation, and personality traits of more than 1,200 Duke students, giving this study significant statistical muscle. Hariri plans to follow up with many of those volunteers for several years to add information on their evolving behaviors. If all goes as he expects, scientists around the world will have the chance to use the trove of data collected out of the basement lab to connect the dots among genes, brain, and behavior.

Hariri and other Duke faculty members are convinced that patterns revealed through the study could help rewrite fundamental views on what causes some psychological disorders. For decades, experts have viewed mental illnesses such as depression, anxiety, and addiction as distinctive illnesses with unique biological causes. Hariri is among a growing group of neuroscientists who are not so certain that's the case. If they can help clarify the true basis of mental disorders, better, more targeted approaches to diagnosing and treating those diseases may follow. Hariri imagines a day when someone's genetic profile might signal a potential problem in how his or her brain handles extreme stress, whether that be the death of a loved one or the brutality of combat.



Chler



That would enable intervention, and maybe prevention, before trouble strikes.

Every brain and every experience is different, and if science can perfect the tools to understand those differences, Hariri says, “we could really have an impact on public health.”

Ahmad Hariri has a favorite photograph. It’s that famed 1987 Annie Leibovitz portrait of basketball great Wilt Chamberlain standing next to jockey Willie Shoemaker at Santa Monica Beach. At seven feet, one inch, Chamberlain is a human tower in black shorts and a muscle shirt. Next to

him, Shoemaker is dignified in red-and-black racing silks, but tiny, a mere four feet, eleven inches tall.

“These are both human beings, but they could not be more different,” says Hariri. “But the reality is that differences in people’s behavior dwarf those physical differences. Differences in how people see and respond to the world are much, much greater.”

A desire to understand what causes those differences at a biological level drove Hariri to start his ambitious neurogenetics study at Duke. But the energetic forty-year-old didn’t travel a straight path to this quest. Born in Iran, Hariri moved to the U.S. with his family in the late 1970s, shortly before the revolution there im-

posed theocratic rule. First they landed in Arkansas, where Hariri’s mother, a language and literature scholar, had relatives. In time they migrated farther north, and in 1991, Hariri enrolled at the University of Maryland.

From an early age, the clever immigrant kid felt family pressure to become a doctor, a vocation he did not always feel called to. But the complexity and beauty of biology always grabbed him. He took premed courses at Maryland, but ended up rejecting medical school for a graduate training program using molecular tools to better understand evolutionary biology. When the chance to trudge through the jungles of Malaysia to collect flies required for his experiments did not wow him, Hariri realized that field research would never be his thing. “I’m what you call indoorsy,” he explains.

What really jazzed him, though, was encountering a new imaging tool in an animal-communications seminar. The emerging technology, called functional MRI (fMRI), uses a strong magnetic field to capture changes in blood flow in different regions of the brain. With fMRI, scientists could for the first time observe what parts of the brain turn on and off during tasks, creating a real-time image of a brain in action. “This could serve as a place to ask any number of questions about human nature, human behavior, human health, and illness,” Hariri remembers thinking.

After volunteering at a federal lab using fMRI for research, Hariri enrolled at the University of California at Los Angeles, where he studied with Susan Bookheimer, who was using fMRI scans to study autism. He went on to a postgraduate fellowship with the National Institutes of Health, where he used fMRI to make a link between observed brain activity and variations in a gene regulating serotonin, a brain chemical very influential in people’s emotions. For that study, Hariri and his mentor, Daniel Weinberger, showed research subjects stark, close-cropped, black-and-white photos of fearful- and angry-looking people while they lay inside the fMRI ring. People with a particular version of a gene that influences serotonin levels had more activity in their amygdala, the brain structure some scientists call the hub of fear, than did others. In 2002, when they published their results, Hariri and Weinberger were hailed for being the first to show how a gene influences how our brains work.

The findings caught the attention of

psychologists Terrie Moffitt and Avshalom Caspi, who had been exploring the influence of genes on behavior at King's College in London. That same year, Moffitt and Caspi had published research showing that abused children with a particular ver-

prevailing mental-health paradigm should be busted open. They are observing similarities in genetic profiles and in brain function across disease categories. "My science tells me that people who have depression and anxiety are very similar to

zipped up the few stone stairs to the Davison Building.

Walking down one hall after another in the teeming human hive that is Duke Medical Center at midday, Knodt briefed Ella on what was ahead. "Besides staying still, the most important thing is that you have to stay awake," she said. "We don't want to see what your brain looks like when you are asleep. We want to see how it responds to tasks."

Duke students get several things in return for taking that walk with Knodt or another member of Hariri's research team. The study, funded mostly by the university, pays each student \$120. Many participants report that the personality survey makes them reflect on parts of themselves they hadn't considered before. And they obtain a reward widely available only in the early twenty-first century: In exchange for two milliliters of spit deposited into a plastic test tube, they receive a detailed analysis of their DNA from the private genetics company 23andMe. In addition to giving participants private access to the secrets of their DNA, the company adds the results—scrubbed of any identifying information—to its own research databases.

Knodt told Ella she should expect to see both matching and guessing tasks

She saw the technician's screen. "Is that my brain?" she asked. "Can I take a picture?"

sion of a gene involved in chemical messaging in the brain were more likely to develop antisocial personalities than those without the variant. In 2003, they showed that having the gene variant that Hariri and Weinberger had reported on increased a person's vulnerability to depression after stressful experiences.

A few years later, when the husband-and-wife team was recruited to join the Duke faculty, they asked the university to bring in someone adept in both fMRI and genetics to help them advance their work in those areas. Specifically, they wanted Hariri, who by then was on the faculty at the University of Pittsburgh.

"This work requires so much specialty knowledge. You've got to be good at genetics and brain imaging, which are both difficult to learn," says Moffitt, the Knut Schmidt Nielsen Professor of psychology and neuroscience. "Ahmad is right out front." (Caspi is the Edward M. Arnett Professor of psychology and neuroscience.)

These days Hariri, who joined Duke's faculty in 2009, chases more complicated targets than he did at the NIH. Our three-pound brains hold billions of neurons, many of them connected to precise circuits. The ways those neural networks receive and process information in different regions of the brain allow us to learn, love, strategize, flee danger, and process pretty much every human experience. Differences in the function of those circuits may help explain some of every person's distinctive personality traits.

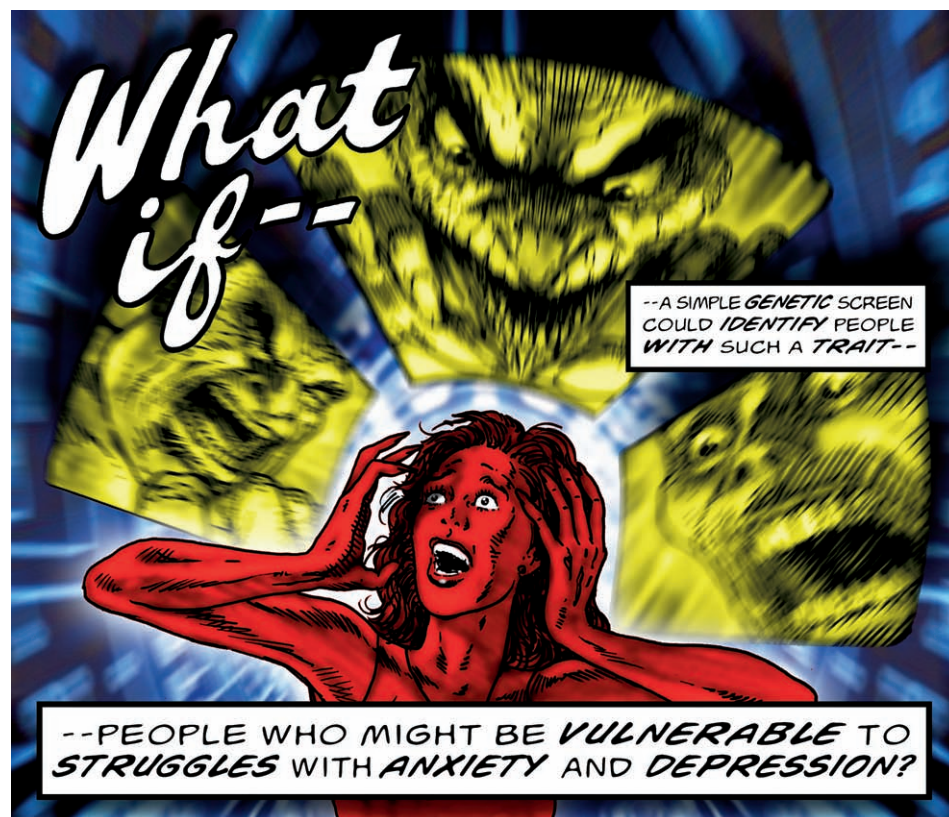
For many years, the prevailing idea has been that depression, anxiety, and addiction were different diseases with distinct neurological causes. If the behaviors differed, the reasoning went, the underlying biology must diverge, too. So researchers hunted for separate genetic seeds for those roots, knowing an influential gene could guide better drug therapy or give psychologists and psychiatrists better diagnostic tools.

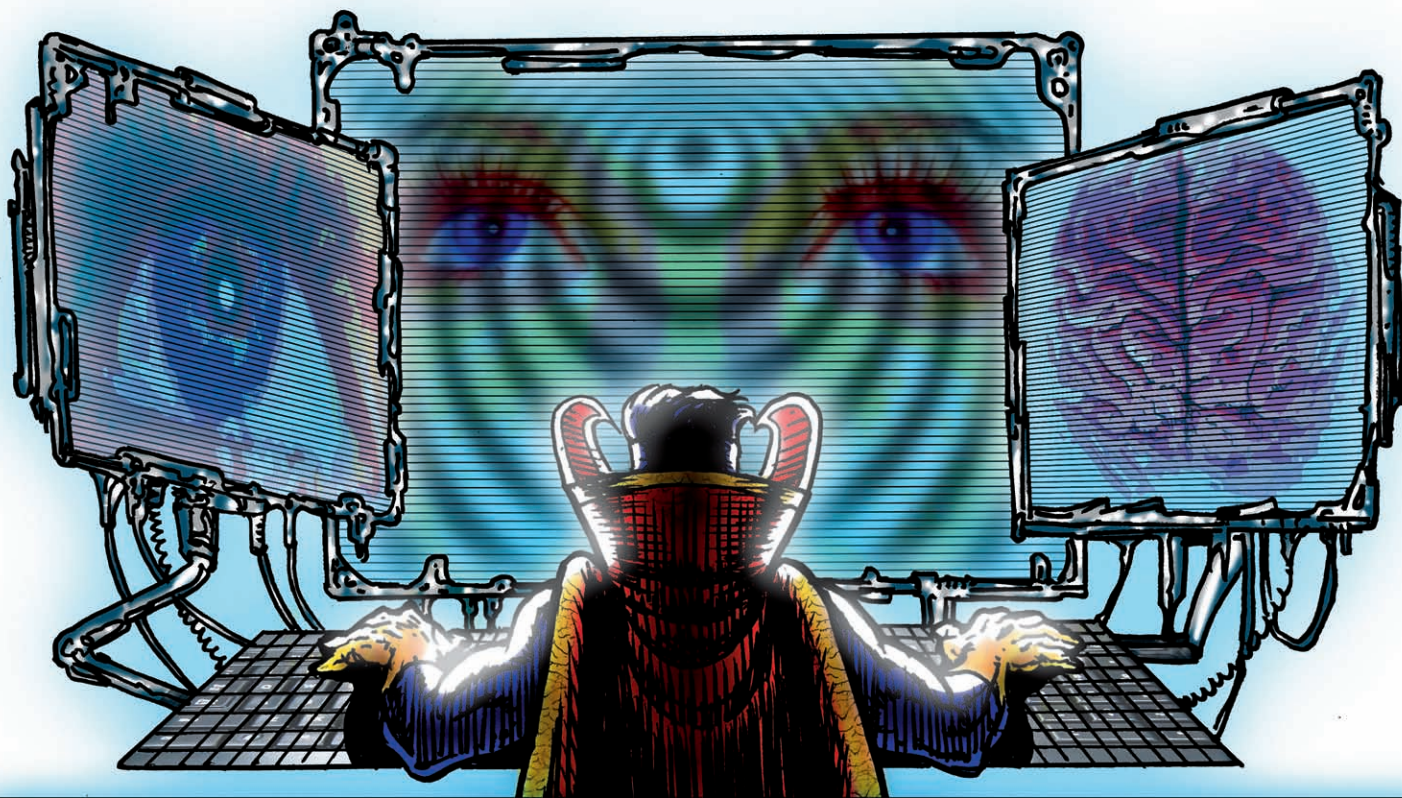
But Moffitt, Caspi, Hariri, and others are beginning to wonder whether that

one another. People with violent behavior and addiction are very similar to one another," Moffitt says. "How they act depends on how they were raised and what their opportunities are. One person may go into gambling, another into alcoholism. Underlying at the brain level, they are probably the same."

That's all the more reason to look at a lot of brains.

After Ella dutifully answered all of the personality survey questions, Annchen Knodt, a research analyst in Hariri's lab, asked if she was ready to walk to Duke Hospital to get her brain scanned. In minutes the women had stepped through a side door of the Sociology-Psychology Building and





WITH *fMRI*, SCIENTISTS COULD, FOR THE FIRST TIME, OBSERVE WHAT PARTS OF THE BRAIN TURN ON AND OFF DURING TASKS, CREATING A *REAL-TIME* IMAGE OF A BRAIN IN ACTION!

flash on a screen during her *fMRI* scan. In one task, she would guess whether a hidden number was lower or higher than the number five. In another, she would choose an image that matches another visible on the screen. Just use your first and middle finger to point to the answer on the screen, Knodt advised, promising to coach her through the exercises.

At the Duke Brain Imaging and Analysis Center, technician Luke Pool motioned Ella to walk through a metal detector to make sure she wasn't bringing anything magnetic into the *fMRI* chamber. Then he walked her into a dimly lit room and helped her settle on a flat bed that slides into the big ring that houses the *fMRI* magnet. Knodt watched Ella through a window in the control room.

"Are you okay, Ella?" Knodt asked over an intercom. Ella, who had appeared calm and relaxed from the moment she entered the basement lab, assured her that she was.

In the control room, black-and-white images popped up on Pool's screen, revealing three views of Ella's brain, a ridged mass of gray and white seeming to float

in the faint outline of her cranium. Knodt stared at another screen, which showed a close-up view of Ella's right eye. She would watch to make sure it stayed open—a number of students fall asleep during the scan, despite the loud clanging of the machine. "We're going to start the tasks," Knodt reported.

The test proceeded as Knodt had described, with a few surprises. For one thing, the number matching tests proved harder than the simple practice screens Ella had run through on a desktop computer earlier. The program is designed to ensure students fail at least some of the time so that the *fMRI* picks up both positive and negative reactions. Periodically, the screen flashed with black-and-white photographs of faces, the same sort that Hariri and his NIH mentor used in the serotonin experiment. Some photographs showed neutral expressions, but many of the faces revealed extreme anger, surprise, or fear. Although Ella probably didn't realize it, those photographs caused portions of her brain to light up with activity, giving Hariri a visual roadmap of how her brain processes emotion.

Hariri, a tall guy who wears crisp sports jackets with jeans on campus, has a reputation for being an enthusiastic and creative teacher. When the material gets tough in a lecture, he likes to lighten things up, driving home complex science with inspired goofiness. Sometimes he calls on Batman to help. In some DC Comics, he'll tell his students, the caped crusader squares off against a villain named Amygdala, a giant, raging mass of muscle who slams, stomps, and storms through cities. Only Batman can still the menace.

Hariri has had his own confrontations with Amygdala—or, at least, the real-life version, an almond-shaped structure found deep inside the brain. The amygdala processes information from the five senses and is particularly good at sounding alarms, shooting off signals when we sense danger. "This ancient structure in the brain exists in every animal with a backbone. It's been there for eons to protect you from harm in your environment.

It helps you learn what is important, avoid threat, seek reward—in other words, position you so that you live to fight another day,” Hariri says.

Much of Hariri’s work explores the interactions between the amygdala and the prefrontal cortex, which handles higher-level functions such as planning, decision-making, and social behaviors. (As many parents might guess, it’s a part of the brain that is still developing in teenagers.) One of its roles is to tamp down the alarm function of the amygdala and plan a measured response from its signals.

But in real life, the prefrontal cortex isn’t as successful as Batman. It can’t always quiet the amygdala, and in some people the alarm function keeps ringing even when there’s no apparent threat. “Most, if not all, disorders of mood and anxiety are [associated with] ineffective prefrontal regulation of the amygdala,” says Hariri. That’s one reason for the scary faces in Ella’s test. He wants to see whether those kinds of amygdala problems show up in our genes—and what other ways they influence our behavior.

One of Hariri’s graduate students, Yuliya Nikolova, already has used data from the study to make such a connection. Nikolova observed that a student’s propensity to binge drink might hinge on a three-way interaction among stress, the amygdala, and what are called reward circuits in the brain. Reward circuits evolved to reinforce actions that ensure a species’ survival, like eating or having sex, but other things, like drinking alcohol or using drugs, can trigger them. The study found that students with particularly active reward circuits were more likely to report binge drinking in times of stress—but only if they also had relatively weak threat signals from the amygdala. The research suggests that an amygdala on high alarm may be enough to keep someone from acting on their reward-seeking impulses.

Hariri anticipates some critique of the database he’s building one Duke brain at a time. He is quick to point out the obvious limitations of studying a population of Duke undergraduates, with their higher-than-average intelligence and socioeconomic status. But he says the stresses of college life, the diversity of Duke’s student body, and the sheer size of the study are enough to yield plenty of variation.

“There is this knee-jerk reflex that, oh, this is not representative,” he says. “That’s nonsense. They’re not aliens. We’re not studying Martians.”

Besides, he’s not looking for what distinguishes Duke students. He is hunting for commonalities in the brain activity, genetics, and behavior shared by some. Identifying such patterns could provide a shortcut to spotting and treating mental-health issues in many others. Although an fMRI scan may be able to spot an over-alert amygdala, brain-imaging technology is too expensive and unwieldy to be an effective diagnostic tool. But what if a simple genetic screen could identify people with such a trait—people who might be vulnerable to struggles with anxiety or depression? Such a test could help parents and health-care providers step in and try to prevent a slide into mental illness.

Hariri suspects those telltale genetic differences aren’t likely to be the rare, exotic

Although Ella probably didn’t realize it, those photographs caused portions of her brain to light up with activity, giving Hariri a visual roadmap of how her brain processes emotion.

mutations that medicine once hoped would explain such diseases. The key, he says, will be to understand how tiny, relatively common genetic variations called polymorphisms lead to a range of behaviors.

“You won’t simply put someone in a [diagnostic] category and then think of them only as that,” he says. “You can consider very core processes or symptoms and how you can address those symptoms. That could change the focus on treatment to some extent.”

Take, for example, something as universal as bouncing back from a disappointment. Most people who confront failure at an important goal are able to move on, but a few are not. They dwell on and repeat their mistakes, deepening their frustration and stress and, in some cases, leading to outright depression. Duke psychologist Tim Strauman is seeing evidence that a genetic variant Hariri first brought to his attention may explain why this group struggles with failure. He and his team have developed an intervention to help people protect themselves from that sort of spiral.

“Ahmad is a big thinker and a game changer,” says Strauman, a professor of psychology and neuroscience who helped recruit Hariri to Duke. “This could change how we understand the influence of genetic processes on behavior.”



Ella did well during her fMRI screening. Her one eye visible in Knodt’s screen seemed to start to close on a couple of occasions, but she did not fall sound asleep. She tackled the tasks that played out on the screen. After Pool helped her down from the fMRI bed, she entered the control room squinting a bit, preparing to take one more short survey and gather her things. Then she saw the technician’s screen. “Is that my brain?” she asked.

Ella explained that she signed up for the study after seeing a flier in a campus restroom stall that asked *Do You Have a Brain?* She does, of course, and a good one at that. The money DNS was paying was an inviting reason to sign up as a research subject, but like many DNS volunteers, she was driven partly by curiosity. She wanted to catch a glimpse of what she knew so well,

yet didn’t know at all.

“Can I take a picture?” she asked softly, reaching for her smart phone.

Ella landed the portrait and much more. In a few weeks, she received an e-mail message from 23andMe notifying her that she could access her DNA screen results. When she dug into her free account, she learned that she might have a slightly higher chance of developing Parkinson’s or Alzheimer’s later in life.

The news didn’t shake her. “This is what I’m born with,” she says. “There are things I can’t change.”

Of course that is true, she cannot change her brain. But as Ella left Duke Medical Center after her scan and reentered the bustle of West Quad, an intriguing possibility remained. She—and hundreds of her peers—may just change neuroscience. ■

Clabby is a journalist and the senior editor of E.O. Wilson’s Life on Earth, the E.O. Wilson Biodiversity Foundation’s digital biology textbook.



THE CURE

FOR THE COMMON MEDICAL PRACTICE

Integrative medicine is turning out to be a powerful approach for patients' physical, mental, and emotional well-being, and it could just help solve the health-care cost crisis. So why isn't it the standard of care?

By Bridget Booher

On Good Friday in 2009, Mary Ann Harrison made a phone call that changed her life.

Harrison was suffering from fibromyalgia, high blood pressure, and an assortment of gastrointestinal issues. She was used to living with chronic pain—pain so constant and systemic that restful sleep was impossible and any physical exertion was exhausting. But on this particular afternoon, her abdominal discomfort was so severe that she called her primary-care physician in her hometown of New Bern, North Carolina, only to discover that his office had closed for the Easter weekend.

She remembered a brochure she'd received a few months earlier from Duke Integrative Medicine, touting its patient-centered approach to health and wellness. She didn't really know much about integrative medicine beyond the fact that it combined Western medicine with holistic techniques. Health and wellness were foreign concepts to her at that point in her life; she just wanted relief. Desperate, she picked up her phone and dialed the number.

Within seventy-two hours, she had been seen by a Duke gastroenterologist to treat her acute GI symptoms and had spent an hour with physician Evangeline Lausier, director of clinical services at Duke Integrative Medicine. On a subsequent visit, she filled out a questionnaire that asked about her emotional, physical, and spiritual health—



everything from past surgeries, current medications, and level of physical activity to job satisfaction, spiritual framework, joys and sorrows, social networks, and sources of stress. The form pressed her to look beyond her immediate health problems, including items such as “If time and money were not an issue, describe the things you long to do in your life.”

With Lausier’s guidance, Harrison mapped out a personalized health plan with specific goals that addressed all aspects of her health. She was assigned a personal health-care team that included an integrative-health coach—a professional trained in behavior change—who would work with her between doctor visits and encourage her to take an active role in improving her health. Harrison’s coach talked to her about diet and exercise and helped her set a realistic plan for meeting her goals.

In the weeks and months that followed, Harrison started regaining control of her health. Although she was initially unsure about some of the complementary techniques her doctor suggested, she was pleased to discover that sessions of acupuncture and myokinesesthetic treatments—massage-like exercises designed to stimulate the nervous system—relieved her fibromyalgia. She also completed an eight-week mindfulness program aimed at reducing stress.

Walking meditation:
Stone labyrinth at
Duke Integrative
Medicine



Be here now: Mindfulness Based Stress Reduction classes, offered at Duke since 1998, use meditation and yoga to cultivate awareness and reduce stress.

Today, Harrison's fibromyalgia is gone and her blood pressure is almost at the point where she can go off of her prescriptions for Norvasc and Losartan safely. She walks five miles a day, does an hour of Pilates every week, and focuses on strength training twice a week—plus some occasional tai chi and cardio dancing. She sleeps soundly. When she runs into acquaintances she hasn't seen in months, they tell her she looks fantastic, like a different person.

"Three years ago, any physical activity was an effort," says Harrison. "Today, I feel tremendously better. I have a lot more energy. I've learned how to set boundaries so that I don't overcommit to things. I'm in control of my health. Integrative medicine has made all the difference."

Harrison may have come to integrative

than another pharmaceutical prescription, to reduce anxiety. Some aren't facing any medical crisis, but simply want health care that incorporates wellness practices such as yoga, homeopathy, and meditation.

And there's mounting evidence that this approach works. With its focus on patient-centered, preventive care, integrative medicine has been shown to reduce emergency-room visits, hospital admission and return rates, surgical interventions, and the need for prescription medications. Advocates argue it may be the best hope for reining in the skyrocketing costs of health care in the U.S.

It's a rallying cry that Ralph Snyderman HS '67, Duke's chancellor for health affairs from 1989 to 2004, has made the focus of his professional life. Ten years



provide universal coverage nor reward improved care or prospective planning. The second threat is intrinsic to our practice and must be solved from within. Facing the pressures of economic and bureaucratic strains as well as the seduction of technology, conventional medicine has become separated from its roots of caring, engaging with patients, and meeting their real needs."

Snyderman, also a James B. Duke Professor of medicine, speaks frequently to

...there's mounting evidence that

medicine out of desperation, but she is now among the growing numbers of patients, physicians, health-care providers, and policy experts who see it as an effective and common-sense approach to improving health. Many patients, like Harrison, initially come to Duke Integrative Medicine because of health issues ranging from high blood pressure and diabetes to infertility and depression. Others are referred by physicians—oncologists who have seen the benefits of acupuncture and massage therapy on reducing cancer-related pain, for example, or primary-care doctors who endorse guided imagery or hypnosis, rather

ago, he and co-author Andrew Weil, a Harvard-trained physician and integrative-medicine pioneer, wrote an essay for the *Archives of Internal Medicine* that advocated integrative medicine as a way to bring medicine back to its roots.

"The United States health system is in crisis," they wrote. "Amidst unprecedented opportunities to transform health care for the better, American medicine faces threats from two directions. One is financial and cannot be solved by the profession alone. Health-care technologies are more expensive, more people want access to them, and reimbursement mechanisms neither

scientific and academic audiences about the benefits of integrative medicine. He also participates in the Mind & Life Institute's conferences that feature the Dalai Lama in conversation with scholars and scientists around the nexus of contemplative traditions and contemporary scientific research. And he's writing a book, a memoir of sorts, about the changes he implemented at Duke University Health System and the need for academic health centers to take the lead in creating a new medical model that emphasizes "personalization, prediction, prevention, and patient participation."



Wellness warriors: Yoga class at Duke IM facility



New life: Mary Ann Harrison credits the integrative-medicine approach, including acupuncture, top, and working with IM-trained physician Susan Blackford, above, for restoring her health.

this approach works.

It was under Snyderman's leadership that integrative medicine took hold at Duke. A group of physicians, led by Martin Sullivan HS '86, Larry Burk '77, and Jeffrey Brantley, began exploring the range of scientific, cultural, and spiritual approaches to healing. In 1996, they sponsored the Duke Mind Body Spirit Conference, which attracted 400 health-care practitioners—an additional 200 had to be turned away for lack of space. Snyderman was convinced that Duke could serve as a leader for the burgeoning integrative-medicine model, and oversaw the establishment of the Duke Center for In-

tegrative Medicine in 1998. (Burk has just published *Let Magic Happen: Adventures in Healing with a Holistic Radiologist*, which chronicles his role as a former director of integrative-medicine education at Duke, among other themes.)

In 2006, supported by a grant from Christy Mack of the Christy and John Mack Foundation, the 27,000-square-foot Duke Integrative Medicine facility opened on Duke's Center for Living campus on Erwin Road. (Christy Mack is co-founder and president of the Bravewell Collaborative, a group of philanthropists dedicated to promoting integrative med-

icine. Her husband, John Mack '68, is a Duke trustee.) The building was the first medical facility in North Carolina to receive LEED (Leadership in Energy and Environmental Design) certification for its stewardship of the environment, and it has won a National Design Award from the American Institute of Architects. People from all over the world come here to seek medical care or to train and earn certification as integrative-health coaches, yoga instructors, and mindfulness-meditation teachers.

The building reflects the ethos of integrative medicine, including design elements that integrate nature and heighten the senses. Hallways curve rather than follow straight angles. The paint colors reflect the four seasons, a subtle allusion to the four seasons of life. North Carolina river rock lines the interior and exterior edges of walls, creating a continuum between the indoors and outdoors. Consultation and treatment rooms have bamboo floors, wallpaper, and sliding shoji screens rather than cold steel fixtures and bright fluorescent lights. A floor-to-ceiling water wall in the waiting room trickles continuously. In a room where yoga and mindfulness meditation are taught, windows along the bottom of the wall remind supine participants of their connection to the Earth. An inner courtyard features skyward-reaching bamboo and stone pathways. Savory aromas emanate from a café/ nutrition center that overlooks an outdoor courtyard and stone labyrinth for walking meditation.

The environment serves to reinforce one of the main underpinnings of integrative medicine: that health transcends the presence or absence of disease. "Chronic conditions such as obesity, diabetes, and heart disease are often caused or com-

pounded by lifestyle choices,” says Adam Perlman, executive director of Duke Integrative Medicine and associate vice president for health and wellness for Duke University Health System. “Of course, surgical interventions or prescriptions have their role. But we need to move in the direction of prevention and encouraging healthy lifestyle choices.”

shown that acupuncture helps reduce chemotherapy-induced nausea for cancer patients, that hypnosis prior to breast-cancer surgery reduces pain and speeds recovery, and that meditation can reduce acute respiratory infections and even have a positive effect on cardiovascular disease.

Duke Integrative Medicine is one of fifty-one academic health centers that be-

NIH-funded studies on the benefits of massage therapy for osteoarthritis of the knee. There are studies exploring mindfulness meditation as a therapy for conditions such as tinnitus and maintaining weight loss. And there’s a pilot study with Duke undergraduates, conducted in conjunction with student affairs and student health, to examine how individual or group sessions with health coaches might address issues such as stress and anxiety.

Research already has shown that health-care coaches are effective at getting patients to take a more-active role in their own health. In a ten-month study of non-compliant diabetic patients conducted at Duke eight years ago, those assigned a health-care coach saw their health improve significantly over a control group. When interviewed after the study about why they were able to adopt and maintain healthy habits when they’d been unable to do so in the past, the reasons were entirely personal: To play football with a grandson. To be able to bend over and tie a shoe. To travel to Machu Picchu with a spouse. None mentioned a medical goal such as lowering glucose levels, losing weight, or spending less money on prescription medications.

In the decade since his *Archives of Internal Medicine* essay, Snyderman says there has been movement toward what he calls “the transformation of American medicine.” But it’s not happening as fast as he’d hoped. “Despite notable areas where we’ve made progress, most of the progress is still in front of us,” he says.

Kevin Schulman, the Gregory Mario and Jeremy Mario Professor of business administration and the director of the Fuqua School of Business’ Health Sector Management Program, says that is partly due to the fact that the integrative-medicine model is a multipronged approach that can be interpreted and practiced in a variety of ways. “When we look at new concepts of health care, we want to see evidence that supports the benefits of those concepts and then explore ways that can be translated into clinical practice. So rather than saying that integrative medicine is the solution to current problems in the health-care system, health-policy analysts need to look at which discrete components are effective and what economic barriers need to be overcome in order to disseminate those components into the existing system,” he says.

One place where that’s already happening is at the Department of Veterans Affairs, which operates the largest health-care

BACKGROUND: Cancer-related fatigue afflicts up to 33 percent of breast-cancer survivors, yet there are no empirically validated treatments for this symptom.

TRIAL METHODS: The authors conducted a two-group randomized controlled trial to determine the feasibility and efficacy of an Iyengar yoga intervention for breast-cancer survivors with persistent post-treatment fatigue. Participants were breast-cancer survivors who had completed cancer treatments (other than endocrine therapy) at least six months before enrollment, reported significant cancer-related fatigue, and had no other medical conditions that would account for fatigue symptoms or interfere with yoga practice. Block randomization was used to assign participants to a twelve-week, Iyengar-based yoga intervention or to twelve weeks of health education (control). **The primary outcome was change in fatigue measured at baseline, immediately post-treatment, and three months after treatment completion.** Additional outcomes included changes in vigor, depressive symptoms, sleep, perceived stress, and physical performance.

RESULTS: Thirty-one women were randomly assigned to yoga or health education. **Fatigue severity declined** significantly from baseline to post-treatment and over a three-month follow-up in the yoga group relative to controls. In addition, the yoga group had **significant increases in vigor** relative to controls. Both groups had **positive changes in depressive symptoms and perceived stress.** No significant changes in sleep or physical performance were observed.

CONCLUSIONS: A targeted yoga intervention led to significant improvements in fatigue and vigor among breast-cancer survivors with persistent fatigue symptoms.

INTEGRATIVE CONCEPT



Cancer 2012. © 2011 American Cancer Society.

Perlman, who has a master’s degree in public health with a focus on epidemiology and biostatistics, says there is growing acceptance in the medical community and among consumers of integrative medicine and non-Western approaches to health and wellness. “I think we’ve moved beyond much of the resistance or skepticism because we’ve amassed a body of evidence that supports the integrative approach,” he says. For example, multiple studies have

long to the Consortium of Academic Health Centers for Integrative Medicine, a network that includes Johns Hopkins, Yale, Harvard, Northwestern, and Mayo Clinic. (Perlman was chair of the consortium in 2010, a year before he came to Duke.) In addition to providing patient care, these academic centers conduct a host of clinical-research studies to assess the impact of certain integrative-medicine tools. At Duke, Perlman is conducting

system in the country. Tracy Gaudet '84, M.D. '91, former executive director at Duke Integrative Medicine, heads the VA's recently founded Office of Patient-Centered Care and Cultural Transformation. (She first learned of the VA's interest in integrative medicine during a VA task force site visit to Duke.) She says she is excited about the prospect of scaling a successful, academically based model of integrative medicine into a system that serves 6 million veterans who are seen at the VA's more than 1,000 facilities.

"Our goals at Duke Integrative Medicine and at the VA are exactly aligned—both places want to create a paradigm shift in how we think about health in this country, and in doing so, improve the health-care system in a fundamental way," says Gaudet. "Our number-one goal at the VA is to provide veterans with personalized, proactive, patient-driven health care."

Gaudet says that the integrative-medicine approach resonates with veterans. "They understand that in order for a mission to be successful, you need to have a battle plan, training and skill building, and support from and trust in your fellow team members. Those are the exact same values we are building on in our approach to health care. Veterans come up with a personalized plan for their own health, get the training they need to make it work, and have a health-care team that includes their health-care providers that is dedicated to making sure they succeed. This is about helping them become mission-ready for their lives."

But while the VA makes strides to replicate the integrative model across its system, the rest of the country is lagging far behind. Despite the cost-effectiveness of preventive medicine, the current reimbursement model rarely covers integrative-medicine therapies, says Snyderman. "Physicians and other providers are reimbursed for providing interventions around specific episodes of high-intensity care, rather than for preventive measures that improve patient health and save money in the long run. It's a reactive model rather than a proactive one."

At places like Duke, that's starting to change. Duke Integrative Medicine opened its first primary-care practice in July 2012, and the insurance plans that cover most Duke employees now allow for an annual primary-care visit to an integrative-medicine physician and follow-up visits. "We are increasing access to our model of patient care," explains Perlman. "Now patients can see an integrative physician

for a consult and have it covered by their insurance. In our primary-care practice, we spend more time with each patient, take a whole-person approach that considers physical, emotional, and even spiritual well-being, and provide ongoing support for some of the toughest challenges people have in the way they live their lives day to day. This is how we are going to have a lasting impact on patient health."

But insurance still doesn't cover many aspects at the heart of integrative care, including 24/7 access to an integrated-health team that includes a physician, nurse, and health coach. For those services, primary-care patients at Duke Integrative Medicine pay an annual fee of \$1,500, which also gives them access to classes and educational workshops.

Organizations such as the American Public Health Association, the Robert Wood Johnson Foundation, and the

An integrative-medicine model could shift the focus back to helping patients live healthily. And, as Adam Perlman notes, it could ease pressure on physicians by surrounding them with teams of health-care providers working to sustain patients' progress between trips to the doctor. "The hope is that physicians will be able to spend more time with patients, but that a lot of the health support between physician visits will be handled by other health-care providers such as nurse practitioners, physician assistants, integrative-health coaches, nutritionists, and others trained in complementary and preventive care," he says.

Can a patient-centered approach that emphasizes health, wellness, and prevention become the standard of care? Can integrative medicine drop the adjective and become simply *medicine*?

"When we look at the future of health care in this country, the best thing one can

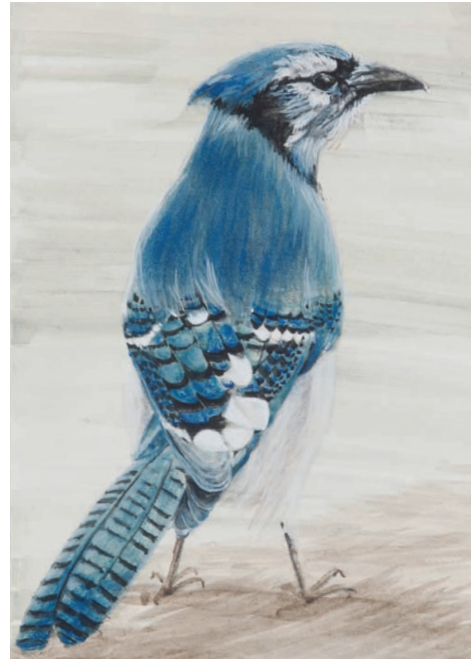
"When we look at new concepts of health care, we want to see evidence that supports the benefits of those concepts and then explore ways that can be translated into clinical practice."

Consortium on Academic Health Centers for Integrative Medicine are expecting that implementation of the Affordable Care Act (ACA) may open up new opportunities to expand integrative medicine. The ACA's Community Transformation Grants, for example, encourage cost-efficient initiatives that focus on nutrition, physical activity, emotional well-being, and overall mental health.

Health-care analysts also point to a national shortage of physicians—the American Association of Medical Colleges projects a shortfall of more than 100,000 doctors by 2025—as another impetus to reform the system. Fuqua's Kevin Schulman, director of the Health Sector Management program, notes that reimbursement models that favor invasive procedures are creating an economic incentive for medical students to eschew primary care for specialty fields. "The business of medicine is getting in the way of the practice of medicine," he says.

say is that despite the inadequacies and enormous cost of the current unsustainable system, we know how to do it far better," says Ralph Snyderman. "Most of the people who are concerned about health policy and delivery systems fear the possibility of a major health crisis as we try to increase access while managing the high costs of health care. The current approach is so expensive and ineffective in improving health that major change must occur. So the question is, as change occurs, will there be a soft landing or a hard landing?"

"I'm an optimist, so I think we can create a soft landing. Which means that while we can't continue the way we are doing things now, we can transition to a more rational, integrated, and personalized approach to delivering care. Integrative-medicine approaches involving the individual in his or her care can make health care not only cheaper, but also make it more effective and compassionate. And that's something everyone wants." ■



Paint BY NUMBERS

Duke mathematician **Ingrid Daubechies** crunches artistic expression into a set of data points. And that may be a very good thing for the authenticity of art.

By Chris Vitiello • Photography by Les Todd

Ingrid Daubechies' eyes dart down at her plate of mixed salad greens. She stabs a hefty chunk of endive hiding beneath an arugula leaf and chews it quickly. The words are coming fast now.

"We don't get a three-dimensional map," she says. "We have a much higher-dimensional map. More like eighty. But I can only explain it in three dimensions."

Backlit by a wall of windows in the Refectory, a bustling cafeteria in the divinity school made bright by a gush of autumn sun, Daubechies is describing how she turns a painting into a massive stream of data. It's esoteric stuff, even when she describes it in three dimensions. The process revolves around a mathematical tool known as a wavelet transform, essentially a formula for identifying patterns in large sets of data. Daubechies (pronounced doh-bee-SHEE), who arrived at Duke in 2011 as a James B. Duke Professor of mathematics, has pioneered the use of

wavelet transforms with complex data sets such as digital images—whenever you upload a cell-phone picture to your Facebook page, her formulas are at work compressing the image.

Daubechies' mastery of wavelets—not to mention her ability to think in eighty dimensions—has made her one of the most prominent mathematicians in the world. Born in Houthalen, Belgium, she studied physics at the Vrije Universiteit in Brussels, completing a doctorate in theoretical physics in 1980. She met American mathematician Robert Calderbank (now dean of natural sciences in Trinity College of Arts & Sciences) five years later and moved to the U.S. when they married in 1987.

After several years of research work at AT&T Bell Laboratories in New Jersey, she joined Princeton's faculty in 1993, garnering recognition for her work in the interdisciplinary Program in Applied and Computational Mathematics. In 2000,

she became the first woman to receive the National Academy of Sciences Award in Mathematics. Ten years later, she was the first woman elected president of the International Mathematical Union.

But for some years now, she's been as interested in art as math. While picking through her salad, she spells out an idea she's been working on for several years—that mathematical analysis can illuminate art, that it can help us see things that are hidden to even the most well-trained eye. Like style. Like spontaneity. And like forgery.

Since arriving at Duke, Daubechies has been honing a tool that uses nothing but computational analysis to detect an artist's original work from a copy. And while reducing art to numbers may unsettle some purists, it's a high-stakes prospect for collectors and museum directors who may fork over tens of millions of dollars for a masterpiece.



Daubechies grew up appreciating art from family visits to European museums. "Often it was old art—medieval, Renaissance mostly—and then maybe more recent, seventeenth and eighteenth century,"

Reducing art to numbers may unsettle some purists, but it's a high-stakes prospect for collectors and museum directors who may fork over tens of millions of dollars for a **masterpiece.**



Authentic or impostor? Daubechies' mathematical analysis of artworks can help distinguish a copied painting of a hummingbird, left, from the original.

she recalls. "I like the Flemish Primitives very much because people in Belgium are proud of them. I also like Impressionism, and I liked Fauvism very much at some point." She has even tried her hand at the arts, dabbling in sculpture and ceramics. To her, multidimensionality means direct involvement in an art context. She prefers the handling of clay to the daubing of a paintbrush.

But her involvement with art became a professional matter in 2007, when she was at Princeton. The television series *NOVA* staged a friendly competition, challenging mathematicians at three universities to come up with a way to ferret out a commissioned forgery from a stack of original Van Gogh masterpieces. Under the supervision of the Van Gogh Museum in Amsterdam, teams from Princeton, Penn State, and Maastricht universities all took similar approaches to analyzing the paintings, using mathematical processes to convert high-resolution scans into detailed maps of the painter's brushstrokes.

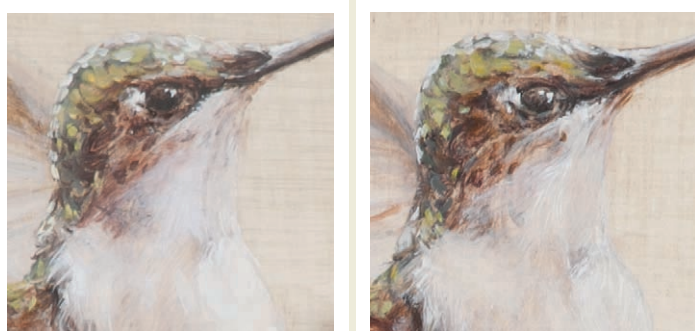
Why brushstrokes? "If you try to make a copy, you pay so much attention to what you're doing that you probably paint it more slowly and with a more restrained hand than Van Gogh himself would have

Painted it," Daubechies explains. A forger will be less spontaneous, making shorter, more precise brushstrokes, she says. The difference may not be easily detectable to the casual eye—the pictures may appear identical. But it's quantifiable.

Using this analysis, all three teams picked the same painting—a version of Van Gogh's elegant 1899 work *Reaper With Sickle After Millet*—as the fake. In the show's big "reveal" scene, the teams are assembled in the Van Gogh Museum when Charlotte Caspers, a young Dutch artist and conservator, enters with her copy of the painting. The mathematicians all cheer when they find out they got it right. Daubechies even high-fives one of her colleagues.

But for Daubechies, the celebration marked a beginning, rather than an end. After the show, she contacted Caspers and asked her to make more copies of paintings. The painter and the mathematician formed a partnership to expand on the time-constrained *NOVA* experiment to see what else wavelet transforms might reveal.

Last year, Daubechies helped Caspers secure a joint grant from the North Carolina



Museum of Art and the Duke Council for the Arts' Visiting Artist program to spend two months at Duke. Working out of a makeshift studio in Duke's Smith Warehouse, Caspers could be found most days in deep concentration, brush or pencil in hand, her nose a few inches from her work surface. For much of September, she painted small images of songbirds that would make Audubon jealous. During October, she copied each of her own songbird paintings with the same diligence with which she'd copied Van Gogh's *Reaper* five years before.

The plan is for Daubechies to analyze the pairs of paintings without knowing which is original. In the *NOVA* test, she reasons, there were two variables—Caspers' copy of the *Reaper* was the only painting not created spontaneously, but it was also the only one not painted by Van Gogh. These experiments will test whether Daubechies' algorithms can distinguish between an original and a copy painted by the same artist.

"We will have a richer data set than what we had for the Van Goghs," Daubechies explains. "It's not that there's all of a sudden a quantum leap to a different kind of data. It's just that we will have many more things in our new data set. We have many more paintings. And we will have copies that are painted immediately after the originals were painted."

"I think Ingrid is just interested to see what happens," Caspers says while working on a redheaded woodpecker's wing. "So I paint some originals and copies with different materials, and I change technique sometimes. They have to find out what things the mathematics can do." As she paints, she makes meticulous notes about the brushes and materials she uses. Every nuance is documented, from differences in underdrawings to variations in stylistic bases.

Caspers' training in art history and conservation has taught her that copying a painting means more than just duplicating its brushstrokes. When painting the woodpecker's tail feather, for instance, she's not overly concerned about exactly matching the number of stripes. It's about capturing the spirit of the tail feather, she says.

"If you're copying you could be counting strokes, but a good copy's also about doing it in the same way and trying to get the same atmosphere. And of course every painting is quite personal. The copy as well."

Therein lies much of what makes Daubechies' project so counterintuitive. It seems impossible to capture something as intangible and personal as the spirit of a tail feather in the absolute realities of data.

It's certainly possible, Daubechies argues. Just incredibly complicated. See: eighty dimensions.



The first step in crunching a painting into data is to make a high-resolution scan of the work. A scanner breaks the painting down into tiny squares—pixels—and assigns each a color value. Daubechies uses an eight-bit color scan, which is capable of expressing 256 shades of red, green, and blue, creating more than 16 million distinct hues. Each one has a specific numeric code. A nice olive green would show up as R:128 G:128 B:0. Plug in R:128 G:0 B:128 and you get magenta.

"All we have are pixels and their neighbors," Daubechies points out. "Colors and their contrasts and similarities are all we have to work with. However, we have it in such a fine scale that indirectly you



Quantifying the spirit of a tail feather: Mathematician Daubechies, above, analyzes multidimensional color patterns to determine an artist's inimitable style, the better to spot a forgery.

have brushstroke information there."

She slices the paint-by-numbers scan into half-inch-square "patches" before applying formulas to transform the data in various ways. These transformations are strictly mathematical—they don't relate to any specific aspect of the painting or how it was made—but they sometimes reveal patterns of similar numbers, which Daubechies calls "clusters." Those clusters don't map to any line or shape that the human eye could detect on the canvas, but she thinks they may represent unique characteristics of an artist's style. A deep, granular look into color patterns is like a fingerprint in which swoops and swirls can reveal a person's identity while telling you nothing about personality or physical appearance.

Daubechies offers a sonic metaphor. "In sound, in voice, we're very good at recognizing the speaker—not just in understand-

ing what is said, but also in recognizing the speaker. We're good at that even if we're hearing an utterance that we've never heard that speaker say," she says. "You can tape sound with a microphone and sample it. You analyze it piece by piece, and you can find ways of visualizing it as spots in a many-dimensional space, particularly using two dimensions. Where those cluster islands lie is not dependent, if you think for a minute, on what words you've said. But the whole archipelago is really characteristic of the speaker."

And that's where the multiple dimensions come into play. Sorting through the patches of a painting, Daubechies says, is like matching pieces of a jigsaw puzzle. "Even if you don't know what the pieces stand for, you can already start sorting them. You say, 'This looks very similar to that. And this one looks lighter in color.'



And so you sort them and this helps you solve the puzzle.”

But, she adds, there are multiple ways to sort the pieces. “I’ve had times that I was making a jigsaw puzzle with my daughter, for instance, and there were pieces that I thought were in similar families and that she thought were completely different. So we were not looking at the same characteristics.”

Daubechies’ formulas essentially sort the pieces again and again, each time using a different set of characteristics, each time looking at the unsorted patches in a new dimension. “What we are trying to find is the right characteristics so that when we sort them according to those characteristics, they end up in a pile that is mostly correctly segregated between original and copy pieces.”

Her programs are trained to search out

clusters that occur again and again in a particular artist’s work—and not in works by others—suggesting that they are inherent to that artist’s particular style. Many dimensions will yield no insight, but Daubechies is banking on the chance that some will.

“A data set doesn’t know anything, but it is a collection of things that have a lot in common,” she says. “What we’re trying to do is to learn how to see it.”



The wooden panel shines with the flat gold of gaudy tableware. William Brown, chief conservator at the North Carolina Museum of Art, plunks it onto a table and holds up a finger to indicate he’ll be right back. On the panel, St. John the Evangelist peers from the gold field in half-profile, depicted in fresh, bright tempera colors.

His arm is raised in a benevolent gesture, hand extending from his sleeve.

In a moment Brown returns with a second panel, which he sets alongside the first. This one has a similar scene but is dull and clouded, its beige and brown tones oxidized by time. There’s St. John again, but it’s harder to tell what he’s up to.

We’re in the basement of the museum, in a spacious laboratory that houses the museum’s conservation department. Science is no stranger here—Brown and his staff are used to crossing art history with scientific techniques in their efforts to preserve and restore ancient works of art. Brown is intrigued by the idea that statistical analysis could be another tool at his disposal, even if it is something of a black box.

Brown glances back and forth between the two panels on the table. One is ancient, part of an altarpiece created by fourteenth-century Italian painter Francescuccio di Cecco Ghissi. At some point, the altarpiece, depicting the life of St. John the Evangelist, was cut into eight pieces. The NCMA owns three, and it has made plans to borrow four others from museums in New York, Chicago, and Portland, Oregon, for a 2013 exhibition. The eighth panel is likely lost to history.

Enter Caspers, with her knowledge of medieval and early Renaissance materials and techniques. Based on contemporaneous works on the same subject, art historians know what scene the missing panel likely portrayed. As part of her grant with NCMA, Caspers recreated the scene in historically accurate fashion, using eggs to make her tempera paints and applying gold with the technique of Ghissi’s day.

Daubechies, meanwhile, is unleashing her wavelets on the original Ghissi panels in the NCMA collection. Using Caspers’ new painting as a baseline, she’s building a mathematical model to quantify the effects of more than six centuries of aging. Her tool will analyze patterns of color degradation and cracks that have formed in the surface of the paint and then “undo” them, offering a digital picture of what Ghissi’s panels might have looked like on the day the altarpiece was installed. She also is developing a tool to work in the opposite direction, aging Caspers’ new panel to show how it might look if it were 650 years old.

“It helps us visualize what a painting would look like without the crack pattern,” Brown says, “which would help us understand what the painting would have looked like closer to when it was an original. But sometimes it helps with restoration issues, too. So it’s an interesting

Daubechies' mathematical analysis can reveal things that are hidden to even the most well-trained eye. **Like style. Like spontaneity. And like forgery.**



practical application that has connoisseurship applications and also puts it in more of a historical perspective.”

“That’s the benefit of these interdisciplinary interactions, and I know Duke is all about that,” he says.

It’s not the first time Brown has seen the power of math to enlighten others about art. Earlier he worked with one of Daubechies’ graduate students in studying panels of an altarpiece by the fourteenth-century painter Giotto. Brown and his team had been trying to discern the master’s handiwork from that of his studio’s hired hands. With no background

tone of wonderment downshifts to matter-of-fact. “But then where she got with that was very consistent with where the connoisseur got through breaking it down subjectively. She applies her totally objective mathematical analysis and gets to the same point.”

A curator might shrug, but every museum has a file on every work in its collection. Those files are filled with opinions about each work, gathered over generations of scholarship. But opinions can change.

There’s a moment in the *NOVA* episode, for example, when a museum curator marvels at the uncanny similarity of Caspers’

mimicked Vermeer’s finish, wouldn’t fool anyone today. “You can’t understand how anybody could have thought these were Vermeers,” Daubechies says. “I mean, there’s no way.

“I don’t believe that we’ve become that much smarter than the experts were then. I think we just have added a dimension to our looking. We have learned to see things that they weren’t paying attention to. Seeing is very different. It’s not just that there’s an objective reality and we sense it. We do a lot with it in our brains, and some people see things that others don’t see.”

What Daubechies understands is that



Iterative interpretations: Sophisticated mathematical methods can help experts discern whether a painting is an original, a copy, or a copy of a copy, from left.

in art history and perhaps never having heard of Giotto, the student independently reached the same conclusions that professional art historians had.

“A connoisseur breaks it down visually based on iconography and other tools that the art historian has,” Brown says, caressing the airspace above St. John’s purposeful gesture. “And the conservator understands the materials and how they were applied. Art historians don’t always know that. So you apply that to the Giotto, and you can see differences in how the brushstrokes were applied and so on. But that’s not what Ingrid’s doing. She’s breaking it down into a total abstraction.”

Looking up from the panels, Brown’s

Reaper to its original. At a casual glance, any museum visitor would mistake it for a Van Gogh. But Daubechies believes that won’t always be the case.

She points to the case of Han van Meegeren, a Dutch artist who in 1937 claimed to have found a new Vermeer painting, a discovery from which he profited handsomely. By 1942, six more Vermeers had surfaced, stunning experts who unanimously and vehemently declared their authenticity. Only in 1945, facing trial as a Nazi collaborator for having sold one of his supposed Vermeers to Nazi officer Hermann Goering, did van Meegeren admit to forging the paintings. His technique, using handmade pigments that

it’s not about whether her wavelet functions can beat an art connoisseur in identifying a masterpiece. Connoisseurship and science are both accretive processes, where new information is quickly absorbed across a wider community of practitioners. She’s envisioning a day when statistical analysis will teach us how to look at art differently, to appreciate a dimension we haven’t been able to grasp before. And when it comes to grasping new dimensions, Daubechies is already about seventy-seven steps ahead of the rest of us. ■

Vitiello is a writer and art critic based in Durham. His most recent book of poetry, Obedience, was published in March 2012.

Muse

A photograph of a traditional homestead in Northern Togo, West Africa. The scene is dominated by a large, rounded, earthen structure with a small, dark, circular opening. To the right, a thatched roof made of dried grass or straw is visible. In the foreground, a large pile of brown, round baobab nuts is scattered on the ground. A colorful, patterned cloth with blue, yellow, and pink floral designs is draped over the nuts. The overall atmosphere is one of traditional life and natural abundance.

Still life: *Spilled*, by Allie Middleton '13, shows baobab nuts scattered on the second level of a homestead in Northern Togo, West Africa. Middleton was conducting fieldwork research for her cultural anthropology thesis on traditional medicine when she happened upon the scene. The photograph is featured in the thirty-second volume of *Latent Image*, Duke's fine-arts photography publication edited by undergraduates.



Never the Same

Composer John Supko creates carefully calibrated, utterly unpredictable music that requires listeners to confront ambiguity.

When the Swiss-based group ensemble baBel began planning its headline presentation for the 20 Heures de Musiques-Romont music festival this past fall, it first considered performing a work by avant-garde French composer Erik Satie, whose abstract, minimalist works have inspired artists ranging from John Cage and Philip Glass to Coldplay and Lana del Ray. The piece, a short but challenging piano composition titled *Vexations*, was ostensibly meant to be played 840 times in succession, although some scholars question whether Satie, who collaborated with the Dadaists and Surrealists, was joking.

Rather than take on the vexing *Vexations*, the ensemble reached out to John Supko, the Hunt Family Assistant Professor of music at Duke. Trained as a classical composer, Supko had branched out into other forms of music, including multilay-

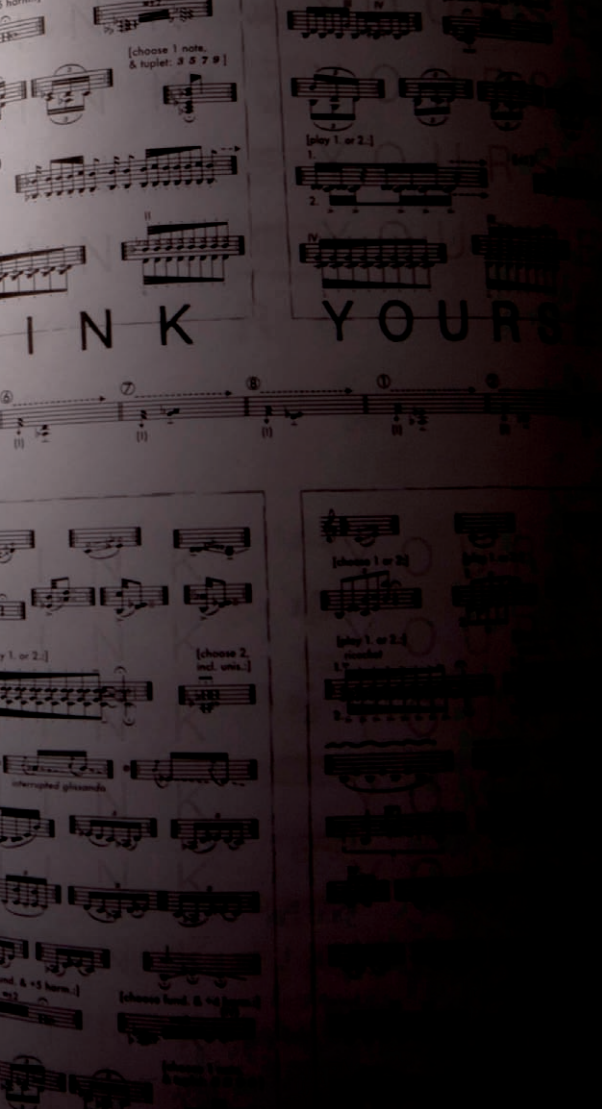
ered, computer-assisted compositions that rely on what he calls “tuned randomness.” His works have garnered international attention, including the BMI Student Composer Award, two ASCAP/Morton Gould Young Composers awards, and the Grand Prize of the National Young Composers Competition. He’s also a student of Satie, having written his doctoral dissertation on Satie’s work.

“Satie and his contemporaries embraced the idea that a composition or piece of writing could be challenging or unpredictable, instead of creating art to fulfill the expectations of an audience,” he says. “Such works often require people to confront ambiguity and to derive their own meaning from it.”

Supko’s computer-generated compositions are created meticulously. He claims he is not a technology expert, but he writes computer code and uses the Max/MSP

software program to set parameters for tempo, rhythm, and harmony. The process sometimes relies on Markov chains, a statistical model of randomness that is used in everything from chemistry and physics to baseball and game theory. Supko adds excerpts from existing works from the classical canon, spoken word clips, poetry, odd noises, and other ephemera to the mix, depending on the atmosphere he’s hoping to create.

This past September, in the cold, pre-dawn stillness of a Swiss morning, the six-person ensemble baBel began playing Supko’s *Usine* (“factory” in French). The work consisted of two musical cycles (one in b-flat minor and one in g minor) that ran on ninety-second loops. On top of that tonal foundation, a carefully calibrated, but randomly chosen, assortment of computer-generated sounds emerged. There were fragments of works by Ravel and Mozart, snippets of interviews with Surrealists André Breton and Philippe Soupault, odd bleep-blaps of noise. The resulting



Take note: Supko with sheet music from his original composition "Inland Ocean" for string quartet

loops emerged from the nearly 24 million different combinations of sounds possible.

Against this ever-changing aural landscape, the musicians responded with their own interpretations of the score and instructions from Supko they had in front of them, as well as constantly adjusting to what they were hearing the computer do. Supko designed *Usine* to be performed with at least two musicians at any given time, so as the electric guitarist or bass clarinet player took a break, for example, the composition morphed yet again.

Curious listeners dropped in for twenty minutes or so; others stayed for five- or ten-hour stretches. Supko was there, taking note of how his creation took flight, changed direction, dodged and weaved toward unforeseen destinations. He'll be there again this April, when ensemble baBel performs *Usine* in Amsterdam, and in July when it's performed at the Montreux Jazz Festival.

He has (almost) no idea what to expect.

—Bridget Booher



PAGE TURNERS:

Betsy Prioleau Ph.D. '80 explores what women really want from men in *Swoon: Great Seducers and Why Women Love Them*. Photographer and Center for Documentary Studies faculty member **Alex Harris** collaborates with biologist and writer Edward O. Wilson to document the rich history of Mobile, Alabama, in *Why We Are Here*. **Ana Homayoun '01** helps parents of pre-teen and teenage girls navigate the choppy waters of adolescence with *The Myth of the Perfect Girl: Helping Our Daughters Find Success and Happiness in School and Life*.

MAKING THE (ART) SCENE

Venturing to downtown Durham during Reunions? Be sure to stop by the Durham Arts Place, celebrating its "Sweet Sixteen" anniversary with a special spring exhibition. Lawyer **Dan Ellison '77** created the Arts Place to provide affordable studio spaces to more than twenty artists. The current configuration is an outgrowth of The Art Loft, started in 1979 by Ellison, **Alan Weider '77**, and **David Katz '78, M.D. '83**.



Pilgrimage: Johnson at Sun Studios in Memphis, Tennessee

MANAGING MERLEFEST

Steve Johnson M.H.S. '02 is the new artist-relations' manager for MerleFest, a four-day celebration of bluegrass, old-time music, Americana, country, blues, and rock. He'll be in charge of selecting and scheduling the nearly 100 artists who perform on fourteen stages during the April event in Wilkesboro, North Carolina. MerleFest was founded in 1988 in memory of the late Eddy Merle Watson, son of Doc Watson, the American music legend who died this past May.

Before joining MerleFest, Johnson was president and CEO of Mountain Music Entertainment, a company he started in 2010. He's a member of the International Bluegrass Music Association, International Folk Alliance,

and Americana Music Association, and plays guitar with the Asheville, North Carolina, band No Strings Attached.

Sports

A Story Worth Telling

At the close of a football season, heads were held high. | By Taylor Sisk

Here's to you, Mrs. Merritt, one-time lunch lady at Banks High School, Birmingham, Alabama.

It is the day before the 2012 Belk Bowl at Charlotte's Bank of America Stadium, and coach David Cutcliffe is discussing what he looks for in a potential recruit to his Duke University football program.

"I go in every one of these kids' homes; in schools, I talk with teachers, counselors, principals, head coaches, assistant coaches," Cutcliffe says of his Blue Devils, who, the next evening, will take the field against the University of Cincinnati Bearcats in hopes of returning to Durham as the first Duke

to be gained, character is born, and character is what he wants on his football team.

Make no mistake: Talent comes first. "We obviously watch tape," Coach says. "We're in the business of recruiting real good football players. I hope that's starting to show."

It is. For many Duke football fans, the 2012 season—the university's centennial season of football—will be remembered as the year a long-floundering program began to take hold of itself, the season some kids set about, in senior wide receiver Conner Vernon's words, "making Duke football relevant again."

unit, and we came together and learned from it."

"Coach Cutcliffe said we're going to have to pull each other together; we're going to have to support each other," senior quarterback Sean Renfree says. "We did; we picked each other up."

The team had been experiencing injuries and dismissals, as all teams do, but was feeling particularly snake bit, a sensation exacerbated, no doubt, by that legacy of losing. Still, the promise of a turnaround was within view.

A number of guys on the team had worked hard over the summer, on their own initiative, in pairs and clusters, on practice fields and weight rooms, and that extra work was beginning to pay dividends.

"As we came out of spring practice, we knew we had a good football team," Cutcliffe says, "a real good football team. I don't think anybody in our program would doubt we were going to be in postseason play." Cutcliffe sensed this team had a collective character that would prevail, and he told his players they had "a story worth telling."

"He would say that quite frequently," Crowder says. "It meant a lot." For this young man who'd been through a potentially debilitating experience, the message was instructive: "You write your own story."

Through the summer and into the fall—inspired by Holliday's recovery and adjusting to the loss of several other starters to injury—Cutcliffe watched his team rally: "I'm watching nineteen-year-olds, twenty-year-olds, twenty-one, twenty-two handle

"You write your own story."

football team since 1994 to finish with a winning record. Cutcliffe's team would be the first to win a bowl game for Duke since January 2, 1961, a 7-6 victory over Arkansas in the Cotton Bowl.

"If I can, I'm going to talk with the people in housekeeping, I'm going to talk with the people in the lunchroom," Cutcliffe continues. "If a young man's not nice to that lady ..." and here he pauses, a brief homage to Mrs. Merritt, who worked at Cutcliffe's high school while he was a student and, later, head football coach. "I knew her, I respected her, and I can see her clearly in my mind's eye."

Through such interactions, Cutcliffe believes, across age, gender, position, with no social-status points

It certainly was one roller coaster ride, a ride that began, in many respects, with a Fourth of July gathering of several players on Lake Tillery, about fifty miles east of Charlotte. That day, sophomore wide receivers Blair Holliday and Jamison Crowder collided with each other on jet skis. Holliday was very seriously injured; Crowder, unhurt, pulled Holliday, unconscious, from the water.

Though he's still not back to a hundred percent, Holliday's recovery has been remarkable. But when the team convened for fall practice, his presence was sorely missed. "Blair is a very outgoing, funny, joking kind of guy," Vernon says.

"Him not being there was kind of tough. But it made us stronger as a



LACROSSE: Lacrosse players **Casey Carroll** '07, right, **Jake Tripucka** '13, and **David Lawson** '13 were selected in the 2013 Major League Lacrosse Collegiate Draft. The 18th overall pick, Carroll is pursuing a master's degree at the Fuqua Business School after serving multiple tours of duty as an Army ranger in Iraq and Afghanistan.

DUKETICKER

WOMEN'S GOLF: Senior golfer **Lindy Duncan** and UCLA partner Erynne Lee won the women's title at the 2013 Copa de las Americas, defeating Canada by one stroke. The competition is an amateur team competition for countries in North, Central, and South America and the Caribbean.

WOMEN'S BASKETBALL: Junior guard **Chelsea Gray** became just the third player in ACC history to register two career triple-doubles, as she recorded 18 points, 11 rebounds, and 10 assists en route to a 90-53 win at Boston College on January 6. She was named ACC Player of the Week.





Jon Gardiner

Making a statement: Despite Belk Bowl loss, the football team is banking on a solid foundation to carry it onward and upward.

adversity better than most adults.”

The Blue Devils finished the regular season with a 6-6 record, the apex coming in game eight, a 33-30 win at home against UNC, snapping an eight-game losing streak to the Tar Heels and making the Blue Devils bowl eligible. Crowder, having moved into Holliday's position in the starting lineup, was the hero that day, making an acrobatic catch for the winning touchdown on a five-yard pass from Renfree with thirteen seconds left.

“Don't think for a second that [taking over Holliday's position] wasn't a factor in this,” Cutcliffe says. “He was going to get it done right.”

“Jamison was huge,” Vernon says. Crowder finished third in the ACC in receiving yards per game and fifth in receptions and was honorable mention All-ACC.

Meanwhile, Vernon was setting ACC records for career receptions and receiving yards. Renfree was named one of fifteen

recipients of the 2012 National Football Foundation Scholar-Athlete Award and is a finalist for the national Senior CLASS Award for football, given for excellence in competition, the classroom, the community, and character. Junior cornerback Ross Cockrell and freshman punter Will Monday were selected first-team All-ACC.

On the eve of the Belk Bowl, Cutcliffe takes his team's pulse: “very hungry, very determined, very close,” he says. The team has spent Christmas together, eating each meal as a team. School's on break; it's all football—like being a pro team for just these few days.

Cutcliffe says that, regardless of the outcome of the game, he's going to tell his seniors that “a lot of people, me included, are very appreciative of them leaving this place better than they found it.” This game, he says, is an opportunity to make a big statement on a big stage.

But the ideal outcome isn't to be. The Blue Devils go up 16-0, fall behind 27-16, then, true to character, rally. With 1:20 left and the game tied, they drive to the five-yard line, where sophomore running back Josh Snead fumbles. Four plays later, Cincinnati scores on an eighty-three-yard touchdown pass. Once again, Duke mounts a drive, but on first and ten from Cincinnati's forty, Renfree is hit hard and intercepted for a touchdown—48-34 is the final.

After the game, the Blue Devils hold their heads high. Vernon attests to his teammates' resiliency: “We had 115 guys who got behind each other.... This is a team; we're going to be family for a long time.” He calls the game a step in the right direction: “This team will be back in a bowl game, I promise.”

The adage is that you learn more in defeat than in victory. Maybe coach Cutcliffe can feel illuminated by his Mrs. Merritt lamp in the night of this loss, feeling rewarded for his interest in character, or perhaps, he will upon reflection. It's a good story, anyway, well worth telling, the narrative arc yet unfolding.

“I want every bit of it remembered,” Cutcliffe says after the game. “You don't select and choose what you want to learn from a year; you make use of all of it. And it's been that kind of year. We've had the highest of highs and felt some of the lowest of lows, when you're looking at a youngster in the hospital. We've used every bit of that to grow.”

“We're stronger, we're better,” he says, and building from a solid foundation.

Somewhere, wherever she may be, Mrs. Merritt should be smiling.

Sisk is a North Carolina-based writer and editor.

THE SCORE

Photos by Jon Gardiner

SOCCER: Soccer players **Cassie Pecht '16** and **Laura Weinberg '14**, right, were recognized in Soccer America's 2012 end-of-season awards. Pecht was named to the All-Freshman first team, and Weinberg was named to the MVP second team. The Duke women's soccer team compiled a 15-6-2 record and advanced to the Elite Eight in the NCAA tournament during the 2012 season.

SWIMMING: Junior **Hunter Knight** set a Duke home-meet record in the 100-meter breaststroke, with a time of 55.65 seconds during a January meet against South Carolina. Knight has won the event in four of the five meets he has entered this season.

73

Number of digs junior **Ali McCurdy** needs to become the second Blue Devil ever to reach the 2,000 mark. McCurdy received All-ACC and All-East Region honors for leading the conference with 672 digs and averaging 5.25 digs per set in the 2012 volleyball season. McCurdy also set Duke's single-season record, topping her mark of 653 in 2011. She is the only player in Duke history to average more than five digs per set.



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School spirit: Duke fans gathered for a lively pregame tailgate party at the Belk Bowl in Charlotte this past December.

Forever

Duke

DUKE ALUMNI ASSOCIATION

Madagascar moment: Duke Travel programs allow participants such as Sara Miller to meet the locals—in this case, a trio of brown lemurs.



www.dukealumni.com



Courtesy Duke Alumni Association

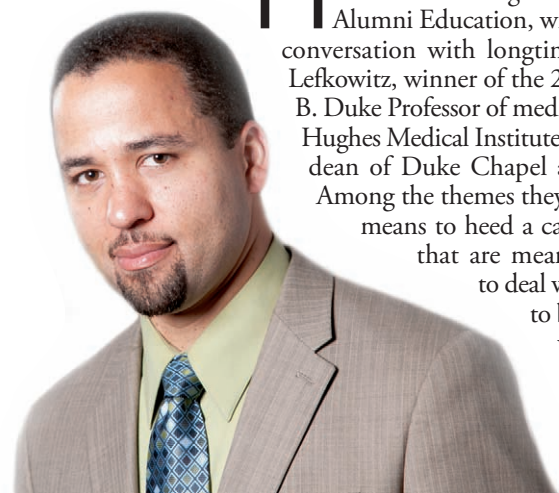
Looking back: Gene Kendall, Wilhelmina Reuben-Cooke, and Nat White, three of the five undergraduate students who integrated Duke in the fall of 1963, during a January media event to kick off the 50th Commemoration of Black Students at Duke.

DAAConnections

ENGAGE. CONNECT. CELEBRATE.

Two Public Figures, One High-Energy Event

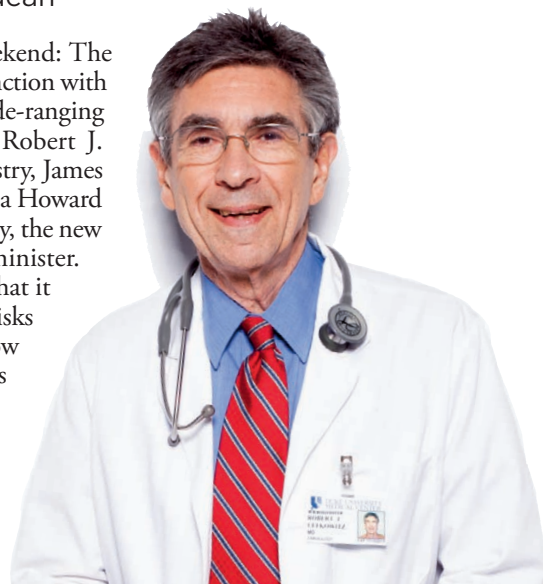
Duke Magazine Forum features Nobel winner, Duke Chapel dean



Partners in conversation: from left, Powery and Lefkowitz

Here's another reason to return for Reunions Weekend: The annual Duke Magazine Forum, planned in conjunction with Alumni Education, will feature a probing and wide-ranging conversation with longtime Duke faculty member Robert J. Lefkowitz, winner of the 2012 Nobel Prize in Chemistry, James B. Duke Professor of medicine and biochemistry, and a Howard Hughes Medical Institute researcher; and Luke Powery, the new dean of Duke Chapel and an ordained Baptist minister. Among the themes they're likely to engage with: what it means to heed a call to service, how to take risks that are meaningful but reasonable, how to deal with failure, and what it takes to be a good mentor. The conversation is set for Friday, April 12, at 2 p.m. in Card Gym.

Les Todd



Chris Hildreth

Trustee Additions

Tapping new talent, from consulting to venture capital

Three alumni have been nominated to Duke's board of trustees by the executive committee of the board of directors of the Duke Alumni Association—two for the first time and one for a renewed term. Steve Pagliuca '77, Carmichael Roberts Jr. '90, Ph.D. '95, and Laurene Meir Sperling '78 will be elected to six-year terms, beginning July 1.

Duke's charter calls for the election of one-third of its trustees by graduates of the university. Every two years, in odd-numbered years, the terms of four of the twelve alumni trustees expire. The DAA's executive committee nominates and submits a list of names to the university secretary for submission to the trustees. Nominees then are approved for final submission to the alumni body, with additional nominations permitted by petition. The fourth trustee position is traditionally held by the current president of the DAA board of directors.

Pagliuca is a managing partner at Bain Capital, which he joined in 1989 as a managing director. Previously he managed client relationships in the information-services and health-care industries. He was a member of Duke's Trinity board of visitors from 2001 to 2008, serving as its chair from 2005 to 2007. He also served on the Arts & Sciences Campaign Committee from 1997 to 2004. He lives in Boston.

Roberts is a general partner with the venture-capital firm North Bridge Venture Partners. His main interest is in companies that

make products using chemistry, materials science, and materials engineering. He focuses on very early-stage ventures, including helping founders launch companies from initial formation. Roberts has served on the Duke Alumni Association board of directors since 2007. He lives in Brookline, Massachusetts.

Sperling is being nominated for a second term, her first full six-year term after completing the final three years of a previous board of trustees member's term. She is president of the Sperling Family Charitable Foundation, where she plays an active role investing in the social-service sector, with a particular emphasis on education and youth development. Sperling was a member of Duke's library advisory board from 1997 until 2010, serving as chair from 2006 through 2010. As a trustee, she serves as a member of the Institutional Advancement and the Medical Center Academic Affairs committees. She lives in Wayland, Massachusetts.

After notice appears in print, alumni may submit a petition within thirty days signed by one-half of one percent (748) of the alumni body (149,538) to nominate additional candidates. **Send names and biographical information by April 1, 2013, to Sterly Wilder '83, Associate Vice President, Alumni Affairs, Box 90572, Durham, N.C. 27708.** Wilder maintains a confidential roster of alumni recommended as trustees and encourages alumni to submit nominations to her at any time. The next election will take place in 2015.

NEXTSTEPS

CONNECT Duke Alums Engage helps alumni all over the world tap into the spirit of service and community. In conjunction with local partner organizations, Duke alumni work on a wide range of initiatives that include addressing hunger and homelessness, enhancing educational opportunities for disadvantaged youth, promoting community health and wellness, and contributing to beautification and restoration projects in outdoor spaces. April 19-28. dukealumsengage.com

• • •

CELEBRATE Reunions Weekend includes encounters with nature (Primate Center and Duke Forest tours); kid-friendly diversions (Science Spectacular!); info sessions and open houses; President Brodhead's state of the university address; drinks, dinner, and dancing at class parties and the Saturday night Gala; brunch in Duke Gardens; plus ample opportunities for such unofficial pursuits as finally talking to that cute classmate you never had the nerve to approach as an undergrad. April 12-14. dukealumni.com/reunions-homecoming

• • •

ENGAGE Is your high-schooler facing the complicated, daunting college application process? Your friends at the Duke Alumni Association are here to help. Sign up for the annual Jumpstart College Admissions Forum to learn the best ways to prepare for college. Topics include how to determine which college is right for you, the importance of essays (and how to make yours great), standardized tests and other credentials colleges consider, and how to estimate the costs of—and how to pay for—higher education. Geared to rising tenth-, eleventh-, and twelfth-graders; offered exclusively for Duke alumni families. June 21. dukealumni.com/get-involved/volunteer/alumni-admissions

How are you ForeverDuke?

For **Aisha Taylor '05**, Duke provided a clear life-changing experience: a "Women as Leaders" course. The course was taught by Betsy Alden '64, who spearheaded service-learning at Duke and is now an adjunct lecturing fellow in the Program in Education. Alden also helped start Duke Alums Engage, which plans service experiences for alumni in dozens of cities each year.

One aspect of "Women as Leaders" had Taylor and the other students mentoring girls, especially those at risk of dropping out, every week at Durham's Chewning Middle School. They designed the curriculum on a variety of topics, chosen in consultation with the students at Chewning—topics that included wrestling with self-image issues, managing academic challenges, responding to family violence, increasing personal confidence, and supporting other students. Alden saw in Taylor someone with a "passion for contributing to her own and others' growth."



Courtesy Aisha Taylor

Since graduating, Taylor has heeded the lessons—and the inspiration—from that undergraduate experience. She's been the organizing force for the Detroit alumni club's version of Duke Alums Engage. Under Taylor's leadership, the Duke Alums Engage project has focused on the Detroit-based Children's Center, one of the area's largest and most comprehensive child- and family-service agencies. On a weekend last spring, alumni volunteers recruited by Taylor worked with children in the center's foster-care system; the volunteers provided life-skills workshops on saving and budgeting, how to conduct oneself professionally, and the meaning of entrepreneurship. The overall idea, as she puts it, was to "teach young adults self-sufficiency"—an echo of her time working with the Chewning students.

Shortly after that inaugural project with the Children's Center, Taylor wrote a "Duke Alums Engage Reflection." She looked back to the shaping influence of the "Women as Leaders" class, noting that "I always know when I've neglected the urge to give back, because I start to feel off balance, like I'm missing something in life."

After she became project coordinator for Detroit, she "jumped headfirst into planning and trying to identify a partner that would allow the team to do a one-day volunteering blitz with children," she wrote. "It was important for me to work with kids," she added, "because I noticed that

many kids were looking for someone to listen to them and to serve as a role model. Unfortunately, many kids look to television and celebrities, and I always talk to friends about the need for kids to see 'regular people' who are successful. This Duke Alums Engage event was the perfect opportunity for me to not just talk about it, but also to be about it."

Taylor says she's come to recognize that "I have been blessed enough to have amazing people in my life and that it is important to be a blessing to other people. This is how I keep my balance and feed my passion."

The dates for this year's Duke Alums Engage are April 19-28; information about the program can be found at dukealumsengage.com.

Life's Broad Sea

ALUMNI IN THE SPOTLIGHT | By Bridget Booher



Courtesy ACTFL

Felicitations! **Noah Geisel '01** is the 2013 National Language Teacher of the Year, selected by the American Council on the Teaching of Foreign Languages (ACTFL). Geisel, right, who teaches Spanish at East High School in Denver, was selected from a finalist pool of five regional winners. He also was named the 2012 Teacher of the Year by the Southwest Conference on Language Teaching and has received many awards since beginning his teaching career twelve years ago. At Duke, Geisel majored in English with a minor in Spanish.

Tampa lawyer **Gwynne A. Young '71** has been elected the sixty-fourth president of the Florida Bar. A shareholder at Carlton Fields, where she has worked since 1977, Young specializes in complex state and federal litigation.

Young has a particular interest in pro bono work. "We are facing a crisis—there's no other word for it—in funding legal services for low-income people throughout our country and in our state," she wrote in her president's column in *The Florida Bar Journal*. "I do not exaggerate when I say we teeter on the brink of a two-tiered justice system: one for the haves and one for the have-nots."

In addition to a wide variety of civic activities in her community, Young maintains close ties to her alma mater. She established the Gwynne Young Women's Athletic Scholarship for members of the women's basketball team (she's a season ticket holder), as well as a Trinity College scholarship. She also has served on a number of advisory boards and was president of the Duke Alumni Association (DAA) from 1999 to 2000. In 1995, she received the DAA's Charles A. Dukes Award for outstanding volunteer service to the university.



Jon Gardiner

Natalia Antonova '06 is the deputy editor and acting editor in chief of *The Moscow News* and writes a weekly column in English called "Trendwatcher" on trends in Russian society for the RIA Novosti, the Russian International News Agency. Her writing has been featured in a number of online and print publications, including *The Guardian*, *Foreign Policy*, and *Russia Profile*. She's also a documentary film producer and playwright; her Russian-language plays have been featured at the Lyubimovka Festival in Moscow and Gogolfest in Kiev, Ukraine. Her blog is nataliaantonova.com.



Courtesy Natalia Antonova



Courtesy Apple

Eddy Cue '86, senior vice president of Apple Inc.'s Internet Software and Services division, has been in the news for his expanding portfolio since the death of company founder Steve Jobs. In addition to managing iBooks and the iAd service that oversees the App Store, Cue has been in charge of resolving the highly publicized problems with Apple's mobile maps and iCloud and iMessage outages. A twenty-three-year veteran of the company, Cue works closely with Apple CEO and fellow Blue Devil **Tim Cook M.B.A. '88**.

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ClassNotes

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1930s

R. Tazewell Creekmore B.S.E. '32 celebrated his 103rd birthday on July 12, 2012. He resides in Fort Thomas, Ky.

1940s

Ben V. Branscomb M.D. '47 received the Asheville School's Award of Merit, which honors alumni and friends for lifetime achievement. He is retired after a 60-year career in which he was a doctor, a researcher of pulmonary medicine, and a professor emeritus at the University of Alabama-Birmingham.

1950s

Thomas F. Dorn '54 published *Death of a Policeman, Birth of a Baby: A Crime and Its Aftermath*. It recounts the story of Beatrice Snipes, a South Carolina woman who killed a policeman in 1932 while pregnant. She originally was given the death penalty, but due to public backlash, her sentence was commuted to life imprisonment.

1960s

'63 50th Reunion April 12-14, 2013

A. Barrie Bergman '64 was appointed to the board of trustees at the University of California-Santa Barbara. He is a motivational speaker.

'68 45th Reunion April 12-14, 2013

1970s

'73 40th Reunion April 12-14, 2013

Nancy J. Muller '74 was elected chair of the board of directors of the Worldwide Fistula Fund, a public charity that provides treatment and assistance for women who have sustained childbirth injuries from prolonged labor without medical intervention. In addition, she serves as executive director of the National Association For Continence.

George St. Anthony Ferguson '76 became a contract specialist for Washington Headquarters Services, a provider for the Department of Defense. He previously worked at Horizon Industries as a contract manager.

Michael K. Kuhn '76 was named in *The Best Lawyers in America* 2013. He practices real-estate law at Jackson Walker in Houston.

M. Jackson Nichols A.M. '77 was named in *The Best Lawyers in America* 2013 for administrative law. He is a partner at Allen, Pinnix & Nichols in Raleigh.

'78 35th Reunion April 12-14, 2013

1980s

Katina Makris '80 published *Out of the Woods*, a memoir intended to raise Lyme disease awareness and serve as a resource for those combating or recovering from the disease. She is a Certified Intuitive Healer and a Lyme disease consultant.

Glenn E. Cravez J.D. '81 was named in *The Best Lawyers in America* 2013 for his work in mediation. He lives in Anchorage, Alaska, and chairs the Alaska Bar Association's alternative dispute resolution section.

James Robert Moxley III '82, J.D. '85 delivered the commencement speech for the Glenelg School of Abu Dhabi, in the United Arab Emirates. He is past chairman of Glenelg Country School in Howard County, Md., and serves as a director on the board of the Columbia Bank. He works in real-estate development.

'83 30th Reunion April 12-14, 2013

Michael A. Lampert J.D. '83 was elected chairman of the tax section of the Florida Bar Association. He manages his own law office in West Palm Beach, Fla., where he focuses on taxation, business and estate planning, and administration.

David T. Thuma J.D. '84 was sworn in as a U.S. bankruptcy judge for the District of New Mexico. He will serve a 14-year term.

Michael Adlin '87 was appointed an administrative trademark judge by the Secretary of Commerce to the Trademark Trial and Appeal Board. He was previously an interlocutory attorney with the TTAB.

'88 25th Reunion April 12-14, 2013

Staige Davis Hodges '88 is co-owner, graphic artist, and designer for her new company, Girly Greek Sisters. The company produces a loungewear and pajama line for sorority women and donates a portion of the proceeds to individual sorority foundations.

John Ching-Tsung Hung '88 is a utilization management medical director at Keystone Mercy Health Plan, Pennsylvania's largest Medicaid man-

Call for Nominations for Volunteer Awards

The Duke Alumni Association seeks nominations for its three prestigious alumni volunteer awards: the Distinguished Alumni Award, the Charles A. Dukes Award, and the Forever Duke Award. To learn more about the awards, or to nominate a candidate, please fill out and submit the online nomination form at www.dukealumni.com/about-daa/awards-scholarships/awards. **The deadline for all award nominations is March 1.**

aged-care health plan. He was previously a physician adviser at Executive Health Resources.

Lynn Levy Spencer '88 published *Touching History: The Untold Story of the Drama That Unfolded in the Skies Over America on 9/11*. The book is an account of Sept. 11, 2001, as witnessed by commercial airline pilots, air traffic controllers, jet fighter pilots, and other key military personnel involved.

Marriages & Commitments

Karen Perfetto Pierce B.S.N. '81, M.H.A. '86 to **Barry J. Kendall** M.H.A. '86 on Aug. 17, 2012. Residence: Summerfield, N.C.

1990s

Stacey Ann Marshall '90 published *Captain Courage and the Fear-Squishing Shoes*, a children's book about developing self-confidence. She manages her own public-speaking company.

William W. Norrett '91 published *The Vanilla Gigolo Prescription*. The semi-autobiographical novel, set in modern-day Hollywood, follows a writer as he struggles to make his mark in the entertainment industry.

Nikola R. Djuric '92 was awarded the Distinguished Service Award by the Atlanta Bar Association's estate planning and probate section. He is a partner in the Atlanta office of Sutherland Asbill & Brennan, where he practices in estates, wills, trusts, and private foundations. He also serves as chairman of the board of directors of Catholic Charities Atlanta.

Suzanne E. Gilbert '92 was elected president of the American Counsel Association, an association of independent law firms composed of 300 members. She is a partner in the Orlando office of Holland & Knight, where she practices business and commercial litigation, real-estate litigation, and bankruptcy and creditors' rights.

'93 20th Reunion April 12-14, 2013

John P. Cleveland M.T.S. '94 became director of the tutoring center at NYU-Polytechnic in Brooklyn, N.Y. He was previously associate director of the tutoring center at Pace University.

Kimberly A. Coie B.S.E. '95 taught at a University of Denver summer engineering camp. She also taught an introductory engineering course at a Colorado high school.

Sarah Katherine Laughon '95 is an investigator in the division of epidemiology, statistics, and prevention research at the Eunice Kennedy Shriver National Institute of Child Health and Human Development in Bethesda, Md. Her research explores how changes in socio-demographic and body-composition characteristics in the obstetric population have affected the rate of pregnancy complications. In addition, she continues to practice as a staff maternal-fetal medicine physician at MedStar Washington Hospital Center in Washington.

Susan N. White '97 was named executive director of North Carolina Sea Grant and the Water Resources Research Institute of the University of North Carolina. In both roles, she directs programs to address current and future coastal, ocean, and water resource issues.

'98 15th Reunion April 12-14, 2013

Marriages & Commitments

Brendan M. Davin '95 to Sarah Mitchell on Sept. 15, 2012. Residence: Stamford, Conn....

Jennifer L. Giesler '95 to Mark Axmacher II on June 16, 2012. Residence: Washington, D.C....

Scott C. Craig B.S.E. '98 to Susanna Simpson on Sept. 2, 2012. Residence: Austin, Texas.

Births & Adoptions

Kendall Riley to **Sally Yowell Barbour** '90 and Todd Barbour on Aug. 27, 2012...Zachary Blachman to **Dara Blachman Demner** '94 and Maury Demner on Sept. 26, 2012...Zachary David to **Evan M. Katz** '94 and Bridget Marnane Katz on Sept. 22, 2012...Samuel Massing to **Michael E. Stashak** '95 and **Sarah Massing**

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	70		5.1%	
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Stashak '96 on July 28, 2012...Marc Daniel Obando to **Margaret Burr Hendrickson** '99 and **Roberto I. Obando** M.P.P. '02 on Feb. 22, 2012...Morgan Katherine to **Steven E. Williams** B.S.C.E. '99, M.E.M. '00 and **Melanie Moyer Williams** '00 on Sept. 7, 2012.

2000s

Ken J. Walden M.Div. '02 published *Challenges Faced by Iraq War Reservists and Their Families: A Soul Care Approach for Chaplains and Pastors*. He is the university chaplain and an assistant professor of philosophy and religion at Claflin University in Orangeburg, S.C.

'03 10th Reunion April 12-14, 2013

Emily Barrett Brady '05 was selected to join Leadership South Carolina, an intensive nine-month leadership development program. She is the manager of public affairs in the Columbia, S.C., office of Chernoff Newman, a public relations and marketing communications business.

Christopher H. Henkels Ph.D. '05 became an assistant professor of chemistry at Wilkes University in Wilkes-Barre, Pa.

Amy E. Kim Crook '06 received a Ph.D. in industrial and organizational psychology from Rice University in 2012. She is an assistant professor of management at Belmont University's College of Business Administration in Nashville, Tenn.

Naci N. Sigler '07 manages a chain of child-care centers in Texas while pursuing a master's degree in accountancy at Lamar University. She received a child-care wellness grant from the Texas Department of Agriculture to provide families with immersive nutrition education and to promote consumption of local produce.

'08 5th Reunion April 12-14, 2013

Elizabeth B. Crawford Josephs '08 joined Bradley Arant Boult Cummings in the law firm's office in Birmingham, Ala., as a first-year associate. She practices in the litigation and intellectual property groups.

Rebecca F. Shlien '09 joined the FOX affiliate in St. Louis as an on-air news reporter and fill-in anchor.

Marriages & Commitments

Lisa Marie Jones '04 to Victor R. Lane on Sept. 1, 2012. Residence: Cleveland Heights, Ohio...**Andrew L. Walls** B.S.E. '05 to Sara Leifer on Sept. 29, 2012. Residence: Draper, Utah...**Carolyn Yarian** '05 to Ross T. Morgan on Sept. 9, 2012. Residence: Oyster Bay, N.Y....**Elizabeth L. Harper** '06 to **Jeffrey M. McCormick** B.S.M.E. '06 on Aug. 11, 2012. Residence: New York...**Victoria W. Krone** '07 to **Benjamin M. Sacchetti** '07 on Sept. 29, 2012. Residence: Evanston, Ill....**John H. Corey** '08 to **Laura W. Dickey** '08 on Sept. 1, 2012. Residence: New York...**Elizabeth B. Crawford** '08 to **Eric A. Josephs** B.S.E. '08 on Aug. 4, 2012. Residence: Homewood, Ala....**Alison T. Perlberg** '08 to **David B. Wynn** '08 on June 23, 2012. Residence: Palo Alto, Calif....**Johanna R. Collins** '09, L '13 to **Benjamin P. Wood** L '13 on Oct. 13, 2012. Residence: Durham.

Call for Nominations for Board of Trustees

The Duke Alumni Association seeks your help in identifying alumni for nomination to the Board of Trustees of Duke University. This ongoing process relies on the suggestions from all segments of our broad and diverse alumni community. Nominations are reviewed by the Executive Committee of the Duke Alumni Association's board of directors, which then submits a list of candidates to the Trustee Committee on Trusteeship. For information or to submit names, please contact Sterly L. Wilder '83, associate vice president, alumni affairs, at trusteenominations@daa.duke.edu.

Births & Adoptions

Lucas Edward to **Carla W. Yarger Benigni** B.S.E. '00 and Scott Benigni on March 11, 2012...Madeleine Dagny to **Eric J. Forman** '00 and Sara F. Forman on Sept. 29, 2012...Jackson Patrick to **Kristin Robinson Poolos** '00 and **Stephen P. Poolos** '01, J.D. '04...Morgan Katherine to **Melanie Moyer Williams** '00 and **Steven E. Williams** B.S.C.E. '99, M.E.M. '00 on Sept. 7, 2012...Heidi Linda Payne to **Shirin Odar** '01 and **Theodore Payne** '02 on Sept. 27, 2011...Honora Kate to **Howard S. Steel IV** '01 and Kate Steel on Sept. 29, 2012...Abigail Elizabeth to **Lauren Sardina Cosulich** '02 and Jared Cosulich on Oct. 16, 2012...Santiago Gabriel Easton to **Paul C. Easton** '02 and **Aura Maria Obando** '02 on Sept. 26, 2012...Walton Valliant to **Anna Rankin Ehrich** '02 and Rob Ehrich on July 16, 2012...Amy Lois Johnson to **Merritt S. Johnson V** '02 and Leah Cohen on Oct. 21, 2012...Marc Daniel Obando to **Roberto I. Obando** M.P.P. '02 and **Margaret Burr Hendrickson** '99 on Feb. 22, 2012...William Thomas to **Matthew J. Atwood** '03 and **Anne Warner Atwood** '04 on Sept. 12, 2012...Jason K. Zhu to **Xiaoyan Cira Qin** M.B.A. '03 and Jin Zhu on April 6, 2012...Rachel Elizabeth to **Daniel P. Rhodes** M.Div. '03 and Elizabeth H. Rhodes on Oct. 9, 2012...Beckett Richardson to **Robert D. Doty** '04 and Brady

M. Doty on Sept. 29, 2012...Hermione Lily Youngblood to **Vanda F. Chou** '05 and **Thomas S. Youngblood** '06 on Aug. 31, 2012...Brogan Thomas to **Ty A. Webb** M.B.A. '08 and Amy Webb on Sept. 12, 2012.

2010s

Rebecca A. Feinglos '11 is in her second year as a Teach For America corps member. She teaches at T.A. Sims Elementary School, an English and Spanish bilingual kindergarten in Fort Worth, Texas.

Kari L. Shepherdson-Scott Ph.D. '12 became an assistant professor of art and art history at Macalester College in St. Paul, Minn. Her research and teaching interests lie in 19th- and 20th-century Japanese visual culture.

Marriages & Commitments

Elizabeth T. Cirulli Ph.D. '10 to **David J. Rogers** G '15 on Sept. 23, 2012. Residence: Hillsborough, N.C....**Emily N. Devine** M.H.S. '10 to Geoffrey Bain on Oct. 22, 2011. Residence: Baton Rouge, La....**Samantha E. Turko** D.P.T. '12 to Jim Launer on Sept. 29, 2012. Residence: Elizabethtown, Pa....**Benjamin P. Wood** L '13 to **Johanna R. Collins** '09, L '13 on Oct. 13, 2012. Residence: Durham.

'05, '07, '08, '09

Forbes "30 Under 30" is a who's who of people who are changing music, media, the sciences, education, finances, food, biotech, and other fields. The most recent list includes an impressive assortment of Blue Devils: **Eric** '09 and **Ian** '07 **Holljes**, lead members of the rock-blues-gospel-country group Delta Rae; **Jimmy Soni** '07, managing editor of The Huffington Post; **Joshua Sommer**, a former student who left Duke in 2008 to launch the Chordoma Foundation; **Kathryn Minshew** '08, founder and CEO of The Daily Muse website; **Claire Herminjard** '05, CEO, cofounder, and board director of California-based Mindful Meats; **David Strauss** '05, M.D. '10, medical officer at the Food and Drug Administration; **Dylan Smith** '08, cofounder and chief financial officer at the cloud-based content storage service Box; and **T.J. Abrams** M.B.A. '09, a brand manager for Coca-Cola North America. Read more: today.duke.edu/forbeslist.

http://t.co/ga8XV6wq
via Twitter

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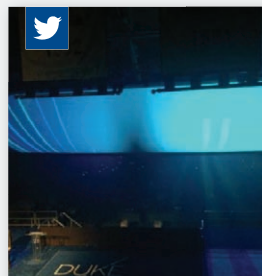
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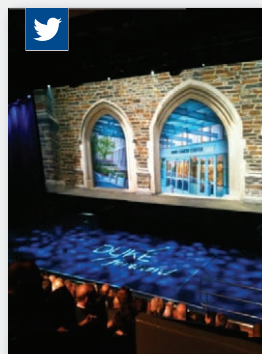
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via Instagram



Luke Maslow @lukemaslow
Duke moves Forward!!
#dukeforward
http://t.co/oszavFgq
via Twitter



Ting-Ting Zhou @tingsquaredz
"We have already reached \$1.32 billion of our \$3.25 billion" - Brodhead #Duke-Forward #WOW http://t.co/tTPsYPw7
via Twitter



Chris Lam @GTHCDuke
Cameron Indoor Stadium transformed. #DukeForward launch gala #DukeForward- http://t.co/TyCVoXY
via Twitter

Erik Michielsen @ErikMichielsen
At Cameron for the #dukeforward campaign kickoff gala w/ @jaypb23@lastmileleader @Cameron Indoor Stadium- http://t.co/cUtwBfb6
via Twitter

Ben Izaguirre @IzaguirreBen
6 countries 16 months amazing exposure to real live business models while covering 18 countries for work, amazing MBA program. #Dukeforward
via Twitter



Patrick Oathout @patrickoathoutz

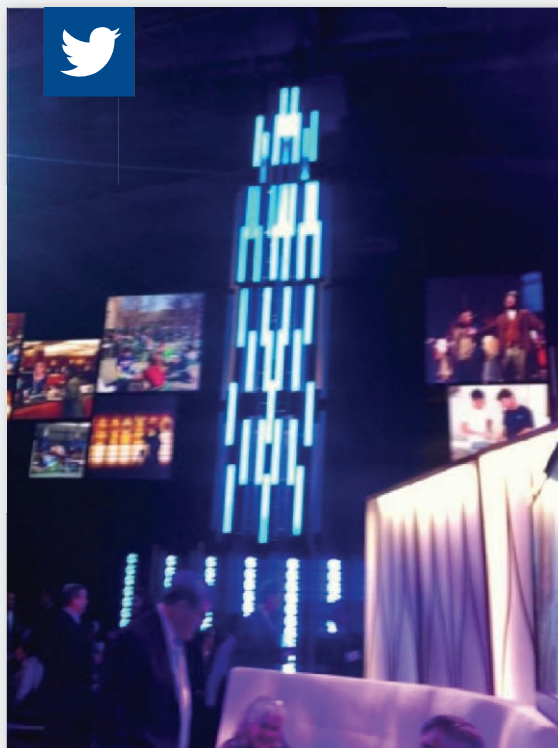
At the #DukeForward Gala.
Duke students of the past and present working for the future.
#GoDuke http://t.co/k4e4aP8u

via Twitter

Elizabeth Dixon @queenedix
"If you have the ability to be better, you have the responsibility to be better."-Coach K #dukeforward http://t.co/vx6wiOCp
via Twitter

Patrick Cacchio @PatrickCacchio
Those interested in learning more about #DukeForward campaign, which includes improvements to Wade and Cameron, visit http://t.co/Mep17C91
via Twitter

Ed Thomas @edthomas25
#dukeforward loving the launch party! A capella groups sound awesome in a transformed Cameron
http://t.co/dmFIBuNg
via Twitter



dioptrica @dioptrica

Great night at the Duke/Forward Gala. Humbled to be amongst such amazing people.#dukeforward. #dumlcs
http://t.co/tKAGgyPZ

via Twitter



The (Duke) Chronicle@DukeChronicle

tTPsYPw7

via Twitter

e 2 and @queenedix

via Twitter

http://t.co/ga8XV6wq

via Twitter



ana homayoun @anahomayoun

How often do you get to do a strolling supper through Cameron Stadium?#dukeforward @DukeU (cc:@luke-maslow @queenedix)

via **Twitter**



Julia Gaffield @JuliaGaffield

Coach K having a phone conversation with "Mr. Duke" - "we are as good as anyone else, but we're hungrier" #dukeforward <http://t.co/vx6wiOCp>

via **Twitter**

*Share
your stories
and photos*



Michelle Sohn @michelle_s33

So impressed and happy to be in Cameron Indoor celebrating #DukeForward

via **Twitter**

Derek Rhodes

Great speech
Coach K at
Forward eve
et <http://t.co>

via **Twitter**



Cameron Thor

via **Instagram**

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SPRING 2013

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New York	April 26
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Washington, D.C.	June 1
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London	June 22
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Call for Nominations for DAA Board

To nominate someone for the Duke Alumni Association's board of directors, go to www.board-om.dukealumni.com/about-daa/board-directors and complete the online form. Or you can send names and qualifications (no self-nominations, please) to Sterly Wilder '83, associate vice president, alumni affairs, Box 90572, Durham, N.C. 27708 or sterly.wilder@daa.duke.edu. **The deadline is March 1.**

Births & Adoptions

Mary Eloise to **Jack C. Lowndes** M.Div. '11 and Jennifer F. Lowndes on Oct. 16, 2012... Stuart Jack to **Shannon M. Ritchie** M.P.P. '12 and Carl W. Ritchie on April 10, 2012.

IN MEMORIAM

William B. McGuire LL.B. '33 of Charlotte, on Aug. 15, 2012. At Duke, he was president of the Law School Student Bar Association and was a member of the Order of Coif, an honorary scholastic society. He then joined the legal department of Duke Power Co., where he worked until retirement in 1971, serving as president for his last 12 years. From 1965 to 1988, he was a trustee of The Duke Endowment and a board member of the Charlotte branch of the Federal Reserve Bank of Richmond. He is survived by three sons, including **John O. McGuire** M.D. '71; a daughter; nine grandchildren, including **Grace Robinson Dominique "Nikki" Appel** '91, J.D. '95; and 10 great-grandchildren.

Frances C. Ware Bliss R.N. '34, B.S.N. '39 of New Vineyard, Maine, on June 20, 2012. She

helped start a rural health service in North Carolina before joining the Army Nurse Corps as a second lieutenant. She is survived by her husband, Francis; two daughters; a son; and two grandchildren.

Carlos D. Moseley '35, Hon. '85 of Spartanburg, S.C., on Oct. 1, 2012. He spent many years working as managing director, president, and chairman of the board of the New York Philharmonic. He appeared as a piano soloist with a number of symphony orchestras and performed recitals in the U.S. and France. He is survived by a sister.

Helen B. Parker Smith '35 of Lexington, S.C., on July 30, 2012. She served for seven years as a medical social worker at the Johns Hopkins University Hospital, followed by two years in the D.C. Department of Health. She was a charter member of the National Association of Social Workers. She is survived by a daughter, a son, and three grandchildren.

George W. Barley '37 of Wilmington, N.C., on Feb. 28, 2011.

W. Thomas Cottingham Jr. '37 of Douglas, Ga., on Aug. 14, 2012. After Duke, he received a

master's in English at Emory University before teaching at North Georgia College. In World War II, he served in the Coast Guard. After working in his father's business, he served as a teacher, registrar, and dean of students at South Georgia College. He received a Ph.D. from Florida State University in 1966 and moved to North Carolina, becoming dean of instruction at Gaston College, president of Southeastern Community College, and a professor at Appalachian State University. He is survived by his wife, **Farrar J. Babcock Cottingham** '40; four sons; two daughters; 11 grandchildren; and five great-grandchildren.

Walter J. Doniger '38 of Los Angeles, on Nov. 24, 2011. He graduated from Harvard School of Business before beginning a career in the film industry. He started as a scriptwriter for Universal Pictures and collaborated on training films for the Army during World War II. He was a writer, director, and occasional producer of films. In 1957, he started a small production company, Bettina Productions Ltd., and transitioned to television, developing westerns, soap operas, and crime series. Survivors include his wife, Susan; a son; and a grandchild.

Eleanora L. "Pat" Patterson Harman '38 of Wilmington, N.C., on June 26, 2012. She earned a master's in sacred music from Union Theological Seminary, as well as a master's in library science from Rutgers University. She was an active member of the American Library Association and was a school-library consultant for the state of Vermont. She played the organ at Christ Episcopal Church in Montpelier, Vt., and at the Emma Anderson Chapel in Surf City, N.C. She is survived by a daughter and a son.

Building Champions

From the moment you walk onto campus at Duke University and gaze at the prestigious buildings and pristine scenery, you know you are among greatness. This greatness extends far from the accolades and achievements that our student-athletes produce year after year. It is something inside Duke student-athletes which separates them from everyone else. This is what makes Duke student-athletes the best in the nation. At Duke University, we don't just win. We Build Champions.

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Wangechi Mutu, *Funkalicious fruit field* (detail), 2007. Ink, paint, mixed media, collage, and plastic pearls on Mylar; 92 x 106 inches. Collection of Glenn Scott Wright, London.

Wangechi Mutu A Fantastic Journey

March 21 - July 21, 2013

Wangechi Mutu's first major solo museum exhibition was organized by the Nasher Museum and will travel to the Brooklyn Museum in fall 2013.

This exhibition is made possible by The Andy Warhol Foundation for the Visual Arts.

Roger J. Sherron Jr. B.S.E.E. '39 of Sebastopol, Calif., on Aug. 9, 2012. After Duke, he worked in the communications department of Pan American Airlines as an expert at Morse code and a ham-radio operator. Later, he worked on the Boeing 314 flying boats as a radio operator and navigator. In 1940, he was on the Pan Am crew that evacuated Queen Wilhelmina from Holland during the Nazi invasion. He later received his commercial license and was subsequently hired by Pan Am as a pilot. His final flight was an around-the-world journey that ended in San Francisco. He is survived by three sons, a daughter, three stepchildren, eight grandchildren, and a great-grandchild.

William R. "Randy" Boggess M.F. '40 of Austin, Texas, on July 18, 2012. He served in the Navy in the Aleutian Islands. After a career in forest research, he retired in 1973 as chair of the forestry department at the University of Illinois-Urbana-Champaign. He was then a research associate at the University of Arizona's Laboratory of Tree Ring Research and worked in hydrology consulting until 1993. He was active in the American Water Resources Association, serving as president in 1969 and as editor of the *AWRA Journal* for 10 years. He is survived by two sons, including **Samuel F. Boggess** Ph.D. '70; two daughters; six grandchildren; and nine great-grandchildren.

Lawrence Brett Jr. '40 of Wilson, N.C., on Oct. 3, 2012. At Duke, he lettered in cross country and track. He was a lieutenant commander in the Navy during World War II on the USS *Arkansas*, USS *Lexington*, and USS *Hancock*. He worked for the Hospital Corp. of America, eventually becoming

vice president of the international division. In 1985, he served as his reunion class chairman. He is survived by his wife, Barbara; a son; a daughter; two stepdaughters; a stepson; six grandchildren; three step-grandchildren; and four great-grandchildren.

Norman T. Jester '40 of Washington, D.C., on May 5, 2012. He served in the Army during World War II. He made a career in car dealerships. Survivors include a son, four grandchildren, and four great-grandchildren.

Laurette A. "Bobby" Ryan Plunkett '40 of Miami, on July 13, 2012. While at Duke, she learned to fly as part of the Civilian Pilot Training Program. She was a lieutenant in the Navy during World War II. She spent her career in administration at the University of Miami, retiring as director of research and sponsored programs. She is survived by a son, a sister, and two grandchildren.

Jacqueline Lentz Carriker '41 of Ellerbe, N.C., on April 19, 2010.

Trilby Hewitt Duncan '41 of Savannah, Ga., on July 23, 2012. An active-duty Navy wife, she traveled across the country and later to Europe and Asia. She volunteered for the Navy Relief Society, Meals on Wheels, and Navy Submarine Wives Clubs, and she was an award-winning flower arranger. Survivors include her husband, Max; daughter, **Trilby M. Duncan Llewellyn** '70; son-in-law, **Jonathan F. Llewellyn** '70; two granddaughters, **Cristin Llewellyn Lawrence** B.S.E. '95 and **Catherine S. Llewellyn** '99; and two great-grandchildren.

William A. Goodson Jr. '41 of Winston-Salem, on July 8, 2012. He served as a master sergeant at Barksdale Air Force Base during World War II. After his service, he returned to Winston-Salem and served as chairman and president of his father's tobacco business, Winston Leaf Tobacco and Storage Co. Survivors include two sons, a daughter, seven grandchildren, and five great-grandchildren.

Frances Knight Horton '41 of Chapel Hill, on Sept. 3, 2012. She served on the North Carolina PTA board of directors. Survivors include a son; two daughters; two grandchildren, including **William S. "Sid" Horton III** '91; and a great-grandchild.

Margaret F. Dulin Jackson R.N. '41 of Bowling Green, S.C., on June 23, 2012. A military wife until her husband's retirement in 1963, she later taught nursing at Gaston Memorial Hospital School of Nursing in Bowling Green and health occupations at Ashbrook High School in Gastonia, N.C. She was a lifelong member of Bowling Green Presbyterian Church, where she taught Sunday school, served as a deacon, elder, and clerk of session, and sang in the choir. She is survived by a son, a daughter, two sisters, three brothers, and a grandson.

Robert. H. Lineberger '41 of Lincolnton, N.C., on July 21, 2012. He was a captain in the Air Force and flew "hump" missions over the Himalayan Mountains during World War II. After the war, he eventually returned to Lincolnton to join his family at Lineberger Brothers Cotton. In 1970, he became the commissioner of Lincoln County. He is survived by a son, a daughter, four grandchildren, and a great-grandchild.

Mildred S. Hanby Thompson '41 of Greenville, Del., on Sept. 8, 2012. She was president of the George D. Hanby Co., her family's business, for more than 50 years. She is survived by a daughter, two grandchildren, and two great-grandchildren.

John P.D. Kauffman '42 of Darien, Conn., on June 28, 2012. He ended his career as chairman of the Newspaper Advertising Bureau in New York. Survivors include a daughter, a son, a grandchild, and two great-grandchildren.

James W. Lipscomb '42 of Salt Lake City, on March 2, 2012.

Page V. Thacker Smith '42 of Baltimore, on Aug. 12, 2012. She earned a master's of library science from the Johns Hopkins University in 1966. After teaching English in Baltimore, she became a librarian for Baltimore County public schools. She also worked as a librarian for the city of Fort Collins, Colo., and Colorado State University. She is survived by two daughters, **Page H. Smith** '69 and **Ellen G. Smith** B.S.N. '72, M.S.N. '76; two sons, including **M. Ward Smith** '75; and seven grandchildren.

Donald L. Somerville '42 of Adamstown, Md., on July 12, 2012. He graduated from Harvard Medical School before serving in the Army as a flight surgeon in Germany in 1945. After returning, he practiced internal medicine for 42 years. In addition, he was a baritone soloist in many Baltimore-area churches and synagogues and performed with the Baltimore Comic Opera



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Company. Survivors include three daughters, three stepdaughters, a brother, 11 grandchildren, and a great-grandchild.

Lura C. Self Tally '42 of Fayetteville, N.C., on Aug. 27, 2012. During World War II, she worked at the Pratt & Whitney jet propulsion laboratory in Connecticut. She was active in many civic organizations and successfully ran for the N.C. House of Representatives in 1972. She served 11 terms in the House and the N.C. Senate, retiring in 1994 as the longest-serving female legislator in history to that time. In 1995, Methodist College established the Lura S. Tally Center for Leadership Development. Survivors include a son, **Robert T. Tally** '70, J.D. '76; a brother; and five grandchildren, including **Robert T. Tally Jr.** '91, J.D. '01.

Mary F. Van Middlesworth Torrans '42 of Kennett Square, Pa., on Aug. 16, 2012. During World War II, she taught physics at Rutgers University and analyzed the chemical content of Japanese weather balloons sent over the U.S. during the war. She is survived by two daughters, including **Margaret Van Torrans Kaluk** '71; two sons; and five grandchildren, including **Jean E. Kaluk** '99.

James F. Booker '43 of Wilmington, Del., on June 30, 2012. He joined the Air Force in 1942 and became a captain, earning the Distinguished Flying Cross with an Oak Leaf Cluster and four Battle Stars. He worked in marketing and advertising in DuPont's textile-fibers department for 40 years. His father was founder and owner of the Durham Bulls. He is survived by his wife, Mar-

jorie; two daughters; a son; two sisters; six grandchildren; and two great-grandchildren.

Donald E. Hoeland '43 of Dayton, Ohio, on Aug. 24, 2012. He joined the Navy after graduation and was stationed in England. He participated in the Normandy invasion, landing a craft for offloading tanks onto Omaha Beach on D-Day. After the war, he was a CPA for several firms, eventually joining F.A. Requarth Lumber Co. as an officer and principal before retiring in 1978. Survivors include a daughter, a son, and four grandchildren.

Mary G. Lentz Lamb '43 of Gothenburg, Neb., on July 21, 2012. After Duke, she attended Croft's Business College. She then worked for several years as a dental assistant. She volunteered for several civic organizations. Survivors include two daughters.

Elisabeth L. Spangler Pultz '43 of Davis, Calif., on June 5, 2012. She cofounded a political lobby called Citizens for Rail Transportation and was active in the League of Women Voters. Survivors include four daughters and four grandchildren.

Connor Wright "Holly" Hollingsworth '44 of Jacksonville, Fla., on July 16, 2012. In 1942, he joined the Marine Corps and represented the Corps as a finalist in the decathlon at the 1948 U.S. Olympic Trials. He served in China and Korea and was awarded the Purple Heart in 1950 and the Bronze Star in 2008. He was an administrator and director at the Florida Alcoholic Rehabilitation Program, the Florida Department of Public Welfare, and the Florida Department of Health and Rehabilitative Services. He also wrote

Florida's State Medicaid Implementation Plan, which was adopted in 1970. He is survived by two sons, two daughters, and seven grandchildren.

Walter N. "Mac" McDonald '44, B.D. '48 of Louisburg, N.C., on Aug. 28, 2012. He served Louisburg College for 31 years as professor of religion and education, dean of students, and assistant to the vice president. He was also the school's public-address announcer for basketball and the scorekeeper for baseball and was inducted into the inaugural class of the Louisburg College Hurricane Hall of Fame. He was associate minister of Central Methodist Church of Springfield, Ohio, and minister of Riverside Methodist Church of New Bern, N.C., and Franklinton Methodist Church of Franklinton, N.C. He is survived by his wife, Joyce; three sons; two daughters; a sister; nine grandchildren; and four great-grandchildren.

Lester Q. Chandler '45 of Salisbury, Md., on Sept. 15, 2012. He was a first lieutenant in the Army in World War II and fought in Germany, Japan, and France. After the war, he went into business with his father at Lloyd Chandler and Son Real Estate and Insurance. Later, he started Chandler Properties with his son. He is survived by two sons, a daughter, nine grandchildren, and two great-grandchildren.

Jacqueline Barthen Hunter '45 of Colorado Springs, Colo., on June 22, 2012. She was a member of the Washington Valley Garden Club and the New Jersey Garden Club. She is survived by her husband, John; a daughter; a sister, **Adrienne Anita Barthen Ward** '49; a brother-in-law, **Robert L. Ward** '49; and two grandchildren.

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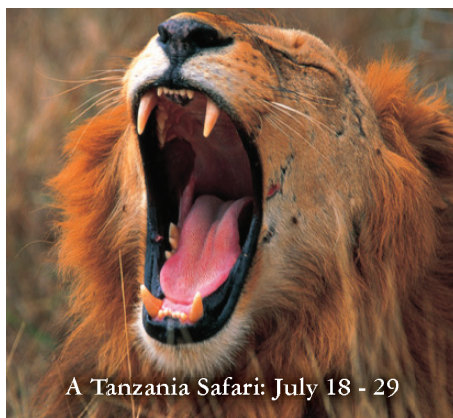
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Betty Jane Metzner '45 of Cortland, N.Y., on July 27, 2012. She worked for the commercial attaché at the American Embassy in Bern, Switzerland, and later was an office administrator for the U.S. Operation Research Office in Chevy Chase, Md. She was the office manager for Raytheon Co.'s government liaison office in Washington, D.C., and later became Marriott Corp.'s first female corporate officer. Survivors include a brother and several cousins, including **Katrina J. Sherry Ferreyra** '95.

Ruth R. McDonald Vingiello '45, M.D. '48 of Monroe, La., on June 22, 2012. She maintained a private pediatric practice in Blacksburg, Va., from 1950 to 1968. After relocating to Monroe, she worked at E.A. Conway Memorial Hospital and received her certification from the American Board of Pediatrics in 1974. She was medical director of Region 8 of the Louisiana State Health Department until 1986. She is survived by a daughter, two sons, a sister, a brother, eight grandchildren, and two great-grandchildren.

Carolyn F. Hines Ackerman '46 of Green Valley, Ariz., on Sept. 2, 2012. She worked for American Airlines and later was a paper conservator at the New England Document Center. Together with her husband, she started Valley View Travel Agency in Green Valley, now owned by Bon Voyage Travel. Survivors include her husband, Alfred; two sons; a daughter; and two grandchildren.

Russell E. Griffin '46 of St. Paul, Minn., on Aug. 30, 2012. He was an engineer and worked for the U.S. Bureau of Mines Research Center. He is survived by his wife, Enid; four daughters; four sons; 18 grandchildren; and five great-grandchildren.

Harry S. Progler B.S.E.E. '46 of Vancouver, Wash., on May 27, 2012. Before Duke, he enlisted in the Navy V-12 college program and attended Emory University. He later joined Westinghouse Electric, working in Pittsburgh, Cincinnati, Philadelphia, and Portland, Ore., during a 40-year career. He was president of the Technical and Scientific Societies Council of Cincinnati. Survivors include his wife, Margie; a son; and a daughter.

Richard M. White B.S.C.E. '46 of Jacksonville, Fla., on June 28, 2012. He was a lieutenant in the Navy in naval intelligence before Duke and became a commercial real-estate and trust-and-estates lawyer in Miami. He became managing partner at Shutts & Bowen, then started his own firm, White & Brown. He taught Sunday school and sang in the University Christian Church choir in Miami for more than 30 years. He is survived by his wife, Carol; five sons; a daughter; two stepsons; a sister; two brothers; 15 grandchildren; and two great-grandchildren.

Richard Crane '47 of Casper, Wyo., on July 24, 2012. He served in the Navy in World War II. After Duke, he worked in the sales divisions of Berwind Coal and Consolidated Coal companies before moving to Greensboro and finishing his career with Amherst Coal Co. Survivors include three daughters, six grandchildren, and eight great-grandchildren.

Virginia Waits Crane '47 of Montgomery, Ala., on April 8, 2012. She is survived by four daughters, a brother, nine grandchildren, and 17 great-grandchildren.



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Patricia L. Barrett Klove Cert. '47 of Springfield, Va., on July 24, 2012. She is survived by three daughters, including **Nancy B. Klove** '80; a brother; a brother-in-law, **William N. Klove** '36; three grandchildren; and two nieces, **Karin L. Klove Harris** '79 and **Carole Ann Klove** B.S.N. '80.

Bernie B. Lucas Jr. '47 of Roswell, Ga., on Sept. 14, 2012. He served in the Navy in World War II and continued in the Navy Reserve until 1954. After being honorably discharged as a lieutenant, he worked for Celanese Corp. for 28 years before retiring to Roswell in 1983. He is survived by his wife, Lois; two sons; two daughters; 10 grandchildren; and 13 great-grandchildren.

Edward T. Mulvey Jr. B.S.M.E. '47 of Winston-Salem, on Oct. 1, 2012. He was an officer in the Navy Seabees during the Korean War, then an engineer at R.J. Reynolds Tobacco Co. for 37 years. He mentored at-risk students at Easton Elementary School in Winston-Salem. He is survived by a son, a sister, and a grandchild.

Billie R. Beckerdite Robinson '47 of Morganton, N.C., on Aug. 21, 2012. She was active in community organizations, such as the Burke United Christian Ministries soup kitchen and the Burke Literary Council, and served on the altar guild of Calvary Lutheran Church. Survivors include two sons and five grandchildren.

Richard C. Smith M.E. '47, D.F. '50 of Columbia, Mo., on July 12, 2012. He was an engineering officer in the Navy during World War II, inspecting

ship construction. After Duke, he was a professor of forestry at the University of Missouri for 35 years, becoming assistant dean of forestry, fisheries, and wildlife and the director of graduate studies. He was a founder of the Missouri Society of American Foresters and received the first Karkhagne Award for meritorious service. Survivors include a son, **Chandler C. Smith** '72, M.E.M. '75; a brother; and a grandchild.

William R. Winders '47, J.D. '50 of Durham, on Oct. 15, 2012. Before Duke, he served in the 875th Airborne Engineers and spent three years in the South Pacific building airstrips and roads on the way to Tokyo. He later practiced law in Durham for 46 years. He is survived by a daughter, **Cheryl K. Winders Harris** '79, M.H.A. '81; a son, **William R. Winders Jr.** '81; a daughter-in-law, **Judi Jakobi-Winders** '81; and four grandchildren, including **Blair M. Winders** '14.

Mary Carol Kerr Barr R.N. '48 of Westerville, Ohio, on Sept. 20, 2012. She worked as a registered nurse for 40 years, retiring from Riverside Methodist Hospital, where she worked on the oncology floor. Survivors include three daughters, a son, a sister, eight grandchildren, and three great-grandchildren.

Mary F. Kornfeld Beck '48 of Cincinnati, on Sept. 2, 2012. She earned a master's degree in teaching from Spalding University in Louisville, Ky. She was an elementary-school teacher until 2003. She is survived by two sons and two grandchildren.

Everett P. Bethune Jr. '48 of Louisville, Ky., on June 20, 2012. He played football at Duke and

served in the Army Air Corps in World War II. He was awarded two Distinguished Flying Crosses, two Air Medals, and an Asiatic-Pacific Area Campaign Medal with five Battle Stars, among many other medals. He later became an executive of Brown & Williamson Tobacco Corp., serving the company for 32 years. He is survived by a daughter, a son, and eight grandchildren.

John C. Callahan M.F. '48 of Bradenton, Fla., on Aug. 17, 2012. During World War II, he joined the Army Air Corps and received a Purple Heart after being wounded in the Battle of the Bulge. He later moved to Arizona and worked for the U.S. Forest Service before earning a doctorate from Purdue University, where he then became a professor of forest economics. Survivors include his wife, Jacqueline; two sons; a daughter; and two grandchildren.

William D. Cameron '48, L. '51 of Rancho Santa Fe, Calif., on Aug. 17, 2012. He served in the 8th Air Force, 91st Bomb Group on a B-17 in World War II and was a charter member of the National World War II Museum. He was a founding partner and chairman emeritus of Reef Industries Inc. in Houston. He was president of the board of directors of Trinity Episcopal School and was a member of the president's cabinet of the University of Texas Medical Branch in Galveston, Texas. He is survived by his wife, Betty; a son; a daughter; a brother; three sisters; and two grandchildren.

Elizabeth DeLoach Campbell B.S.N. '48, R.N. '48 of Montgomery, Ala., on Aug. 4, 2012. She was a nurse at Grady Hospital in Atlanta in 1950. After a deployment to Germany, she eventu-

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ally moved to Montgomery and became active in the adult choir of First Baptist Church, the Alabama Shakespeare Festival, and the Montgomery Symphony, on whose board she served for 15 years. She is survived by three sons, a daughter, seven grandchildren, and three great-grandchildren.

Fred W. Dennerline Jr. '48 of Fort Pierce, Fla., on July 8, 2012. After Duke, he owned Indiana Wheel & Rim for more than 30 years. Survivors include a son, two daughters, four grandchildren, and seven great-grandchildren.

Jack E. Farrell '48 of Germantown, Tenn., on July 9, 2012. He served in the Marine Corps in World War II and in the Korean War. He retired from Owens-Illinois Inc. as regional manager. He is survived by his wife, Mary, and four sons.

William E. "Hamp" Hampton B.S.M.E. '48 of Charlotte, on Aug. 29, 2012. He began his career as a mechanical engineer designing heavy military vehicles at Corbitt Co. Later, he served as vice president of Johnson Motor Lines and Commercial Equipment Corp. for more than 30 years. He held multiple patents for heavy vehicles and transportation equipment. He taught himself to sail and built his own Y-class boat. He and his wife, Nancy, won the 1971 Y-class National Championships. He is survived by a son and two grandchildren.

Ernest G. Myatt B.S.M.E. '48 of Greensboro, on Aug. 3, 2012. A consulting engineer, he ran Ernest G. Myatt & Associates until his retirement. He is survived by two sons, two daughters, and three grandchildren.

Thomas W. Spilman B.S.C.E. '48 of Fort Pierce, Fla., on June 15, 2012. He joined the Navy V-12 and served in World War II. After graduating, he worked for Bethlehem Steel Corp. He was a member of the American Society of Civil Engineers and served as a deacon at his church. He is survived by his wife, **Barbara E. "Bobbie" Blackham Spilman** '49; two daughters; and four grandchildren.

Curtis W. Brown Jr. '49 of Charlotte, on Dec. 21, 2011. He served in the Army during the Korean War and later was a chemist and salesman for Union Carbide. He is survived by his wife, Rita; a son; two daughters; and five grandchildren.

Betty Barnhart Friedman R.N. '49 of Middletown, Conn., on Sept. 19, 2012. She is survived by her husband, **Edward L. Friedman** Ph.D. '56; two daughters; two sons; and four grandchildren.

William M. "Mac" Hensley P.T. Cert. '49 of Johnson City, Tenn., on July 24, 2012. During World War II, he was a pilot in the Navy Air Corps and researched captured enemy technology. He was the first licensed physical therapist in Tennessee. He helped establish the East Tennessee State University School of Physical Therapy, where he was a clinical and adjunct instructor and served on the admissions committee. For 37 years, he was a board member of Munsey Memorial United Methodist Church, where he also was church school superintendent and chairman of the commission of education, of leadership development, and of the administrative board. He is survived by his wife, Mary; a son; a sister; three grandchildren; and two step-grandchildren.


George W. Lipscomb B.S.E.E. '49 of Durham, on July 14, 2012. He served in the Navy

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on a destroyer in the Pacific theater during World War II. He later worked for Westinghouse Electric Corp. for 35 years. He is survived by a son, a sister, and a grandson.

Clifton B. Marlin M.F. '49 of Fulton, Miss., on Aug. 24, 2012. He was a professor of forestry at Mississippi State University and Louisiana State University and served as the state forester of Mississippi. A World War II Army veteran, he landed in France on D-Day and received a Purple Heart. Survivors include a brother, a sister, and three grandchildren.

William Philip Moore Jr. B.S.M.E. '49 of Greenville, N.C., on June 18, 2012. He served in the Navy during World War II before returning to Duke, where he graduated third in his class in mechanical engineering. He worked for General Electric, Coastal Refrigeration, Allison Erwin, and ultimately Burroughs-Wellcome, where he developed fluid-bed dryers for sterile products, which are still used throughout the pharmaceutical industry. He was a Scoutmaster, served on the building committee at Jarvis Memorial United Methodist Church, and assisted the Methodist Student Center at East Carolina University. He is survived by his wife, Peggy; a daughter; a son; and two grandchildren.

Elizabeth Derr Sulzer '49, '53 of Linwood, N.J., on Aug. 17, 2012. She is survived by her husband, **Richard L. Sulzer** '47, A.M. '50, Ph.D. '54; three sons, including **John M. Sulzer** '73; a daughter; two sisters; eight grandchildren; and six great-grandchildren.

Goodrich A. Thiel '49, A.M. '50 of Asheboro, N.C., on Aug. 5, 2012. He served 13 years in the Army and the Air Force as a mathematician and physicist and was awarded the National Defense Service Medal. He also conducted pioneering civilian work in computer applications ranging from defense planning to inventory and payroll management. He is survived by his wife, Elizabeth; two daughters; a son; and five grandchildren.

Ruth E. Davis Wilson B.S.N. '49 of Greensboro, on Sept. 8, 2012. She had a career as a nurse, retiring from Wesley Long Community Hospital. She is survived by her husband, **Walter G. Wilson** B.S.M.E. '50; two daughters; and two grandchildren.

Mary Lee Elkins Dennerline '50 of Vero Beach, Fla., on June 11, 2012. Survivors include a son, two daughters, a sister, a brother, four grandchildren, and seven great-grandchildren.

Martha C. Harris '50 of Greensboro, on Sept. 22, 2012. She earned a master's degree in social work from Richmond Professional Institute and worked for the Guilford County Department of Social Services for 40 years helping abused and neglected children. She is survived by two sisters.

Van N. Ruffner '50 of Raleigh, on July 3, 2012. He served in the Marine Corps in World War II before attending Duke. After graduating, he worked in human-resources management for Scandinavian Airlines and, later, Eastern Airlines. He also worked for Black & Decker and Cutter Laboratories. He is survived by two daughters and a grandchild.

Nicholas W. Schiffli '50 of Charlotte, on June 29, 2012. He served in the Navy in World War II. He worked for Owens-Corning Fiberglass in Anderson, S.C., and then Pacific Mills in Lyman, S.C. He joined the spindle tape company Barber Manufacturing Co. and later became its president and owner. He was once a board member of the North Carolina Textile Manufacturing Association and an associate member of the Georgia Textile Association. At St. Patrick's Cathedral, he was an usher and member of the parish council. He is survived by his wife, Sybil; a son, **William Schiffli Jr.** '76; a daughter, **Mary A. Schiffli Scarborough** '79; a daughter-in-law, **Karen S. Kummer** A.M. '83, M.H.A. '85; two brothers, including **John R. Schiffli** '55; three grandchildren, including **John C. Scarborough** '08; and an aunt, **Martha Erwin Uzzle** '55.

Jean Pugh Adams '51 of Greensboro, on Sept. 29, 2012. She was an original member of Star-mount Presbyterian Church. She is survived by three sons, including **Morgan R. Adams III** '77 and **David H. Adams** '79, M.D. '83; six grandchildren; and five great-grandchildren.

Kenneth E. Beane M.Div. '51 of Fayetteville, N.C., on July 4, 2012. He flew 25 combat missions in the Army Air Forces after joining in 1944. He re-joined the Army Reserve as a chaplain after Duke, serving in that capacity during the Korean War. He retired as a lieutenant colonel after 20 years of service and continued to serve as a civilian minister. The Air Force awarded him its Meritorious Service Medal and Commendation Medal. He is survived by two sisters, two brothers, four granddaughters, and two great-grandchildren.

Wilmer J. Coggins M.D. '51 of Tuscaloosa, Ala., on Sept. 9, 2012. He was a second lieutenant and commander of a medical collecting company near Sapporo, Japan, during World War II. He was released from active duty as a first lieutenant and paratrooper and returned to Duke for medical school. After private practice in Boca Grande, Fla., and Madison, Wis., he taught at the University of Florida College of Medicine, where he later became director of the university health service. He worked on a study of heavy users of marijuana, documented in the book *Cannabis in Costa Rica*. In 1980, he became dean of the College of Community Health Sciences and associate dean of the Tuscaloosa Program at the University of Alabama School of Medicine. He is survived by his wife, **Deborah F. Reed Coggins** M.D. '51; three daughters, including **Audrey A. Coggins Hyson** '79; two sons; a son-in-law, **Christopher P. Hyson** '77; and eight grandchildren.

Blair P. Coleman M.D. '51 of Wichita Falls, Texas, on Sept. 4, 2012. He served in the Navy during World War II on a ship that participated in the invasion of Okinawa, Japan. After his medical training, he returned to Wichita Falls and opened a private practice in internal medicine and cardiology for 38 years. He is survived by his wife, Ann; two sons; two daughters; a sister; seven grandchildren; and four great-grandchildren.

James H. Godsey A.M. '51 of Salt Lake City, on July 15, 2012. He served in the Army during World War II before working for Hercules Powder Co. for 41 years. He received numerous patents for heat-resistant rocket propellants. He is survived by his wife, Norma; three daughters; a son; 11 grandchildren; and six great-grandchildren.



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George G. Henley B.Div. '51 of Aylett, Va., on Sept. 25, 2012. He was a World War II veteran who served Virginia United Methodist Church for 40 years before retiring in 1987. Survivors include a son and a sister.

Robert L. Hershberger M.D. '51 of Houston, on March 1, 2012. He joined the Navy in 1941, flew B-24s in the Pacific, and received the Distinguished Flying Cross. He practiced internal medicine in the Houston area from 1954 to 2000. Survivors include a sister.

Thomas C. Reeves '51 of Nitro, W.Va., on July 22, 2012. He served three years in the Navy and later attended Duke on a track scholarship. After returning to West Virginia, he was the owner, operator, and president of Graceland Memorial Park and Graceland Memorial Park Mausoleum for several years. He was the state's track official for more than 40 years. He is survived by his wife, Eleanor; a daughter; and a granddaughter.

Robert H. Rosenberg '51 of Brookline, Mass., on June 11, 2012. He was a co-owner of the former Rose-Bro. Shoe Co. Inc. Survivors include a son; a daughter; a brother; and a cousin, **Elizabeth Jane Lesser** '89.

John J. Ross '51 of Gainesville, Fla., on July 17, 2012. He was captain of the tennis team at Duke before attending Harvard Medical School. He served two years in the Navy Reserve in San Diego, working at Balboa Hospital. Later, he became the second pediatric neurologist in Florida and worked at Shands Hospital at the University of Florida College of Medicine for 47 years. He is survived by his wife, Nancy; two sons; a daughter; a brother; a sister; and nine grandchildren.

James H. Anderson B.D. '52 of Sylva, N.C., on Aug. 30, 2012. He received a doctorate in education from the University of Tennessee. He held pastorates in North Carolina, Texas, and Virginia and was a school principal in North Carolina and Virginia. He taught for 24 years at Western Carolina University. He is survived by his wife, Wynona; a daughter; a sister; two grandchildren; and two great-grandchildren.

Bradley E. Faircloth '52 of Greensboro, on Aug. 25, 2012. He officiated college football for many years, retiring from the Atlantic Coast Conference as assistant to the commissioner in charge of football officials. He was inducted into the College Football Hall of Fame, the North Carolina Sports Hall of Fame, and the Guilford County Sports Hall of Fame. Survivors include two sons, a daughter, a brother, four grandchildren, and three great-grandchildren.

James L. Houser '52 of Oxford, Pa., on July 20, 2012. After graduating, he served for eight years in the Navy and Navy Reserve at the Bethesda Naval Hospital. He was a director of marketing and research in the gypsum industry for 40 years, retiring with three patents. He also worked at the U.S. Bureau of Standards. He is survived by his wife, Harriette; two daughters; two sons; 12 grandchildren; three step-grandchildren; and two great-grandchildren.

Winston Jerome Jackson Jr. Ph.D. '52 of Kingsport, Tenn., on Aug. 1, 2012. He served in the Navy for two years and was a member of Phi Beta Kappa. In the summers during college, he

worked in the research laboratories of Tennessee Eastman Co., then continued to work there for 39 years after graduating. He was an inventor on more than 170 U.S. patents and many foreign patents and specialized in liquid crystal polyesters. In 1989, he was featured in *Tennessee Illustrated* magazine as one of 20 outstanding persons in Tennessee. He is survived by his wife, Louisa; a daughter; a son; a sister; and two grandchildren.

Richard S. Johnson '52 of Palm Beach, Fla., on Aug. 25, 2012. He founded and was president and shareholder of the West Palm Beach insurance agency Cornelius, Johnson & Clark Inc. and later founded Flagler National Bank, where he served as chairman. He founded Johnson Investment Group and worked with his sons in real-estate acquisition and development. He was president of Johnson Farms Inc. and managing partner of Flagler Center. A well-known philanthropist, he donated \$1.25 million to the Historical Society of Palm Beach County to help build the Richard and Pat Johnson Palm Beach County History Museum, which opened in 2008. He also donated more than \$1.3 million to Duke University Medical Center. He was a lifelong Palm Beach resident, serving as a director of the Palm Beach Civic Association. He received numerous community awards and served on many boards, including the Duke University Medical Center, the Johns Hopkins Brady Urological Institute, and the Norton Museum of Art. He is survived by his wife, Pat; three daughters; two sons; a brother; 14 grandchildren, including **William H. Sned III** '06; and two great-grandchildren.

Jean Bowers Withrow '52 of Marietta, Ga., on Feb. 22, 2012. She and her husband started and operated many businesses, mostly involving food, wine, and travel. She is survived by her husband, **Pat B. Withrow** '51; a son; a daughter; and two grandchildren.

Charles E. Berger '53 of Litchfield, Conn., on June 23, 2012. He was a telephone supervisor for 25 years with SNET. He is survived by his wife, Helen; two sons; a sister; five grandchildren; and three great-granddaughters.

Betty J. Richardson Caperton R.N. '53 of Strasburg, Va., on July 3, 2012. She worked in the Kingsport city school system in Tennessee as a school nurse for 25 years. Survivors include three sons, six grandchildren, and three great-grandchildren.

Richard N. Fredericks '53, M.D. '56 of Fort Lauderdale, Fla., on Aug. 8, 2011.

Henry L. Hoey Jr. '53 of Dallas, on Aug. 22, 2012. He was a member of the 181st squadron in the Air Force and later had a career as a pilot for American Airlines. He loved climbing; he summited Mount Kilimanjaro and climbed to Base Camp Everest. He is survived by two daughters, a son, and seven grandchildren.

Paul A. Mabe Jr. M.D. '53 of Augusta, S.C., on Oct. 7, 2012. He served in the Army in Europe in World War II. He practiced family medicine in Reidsville, S.C., from 1959 to 1996. He also was clinical instructor for Allied Health at Wake Forest University School of Medicine and clinical preceptor for Duke University School of Medicine, Guilford County Technical Institute, UNC School of Medicine, and Wake Forest University School of Medicine. Survivors include his wife, Grace; a son;

a daughter; four grandchildren; eight great-grandchildren; and two great-great-grandchildren.

Diane M. Evans Tannehill '53 of Tupelo, Miss., on July 4, 2012. She earned a master's degree in library and information science from the University of Mississippi and was church librarian at First Presbyterian Church of Tupelo. She is survived by three sons, including **Jeffrey W. Tannehill** '86, and three grandchildren.

Robert W. Driscoll '54 of Charlotte, on July 6, 2012. He founded Driscoll Realty Co. and was a real-estate broker instructor at Queens College and Central Piedmont Community College. He also belonged to the National Association of Realtors and owned and operated Robert Driscoll & Associates Real Estate Appraisals. He was a certified beekeeper and mentor with Mecklenburg Beekeepers Association. He is survived by his wife, Judith; three sons; two daughters; and nine grandchildren.

Robert Dorset Graves A.M. '54, Ph.D. '66 of Chadron, Neb., on Sept. 1, 2012. He served three years in the Navy during World War II. He taught for two years at Idaho State College-Pocatello between his master's and doctoral degrees. He joined the faculty at Chadron State College in 1958, and was appointed chairman of the division of language and literature in 1961. He held the post until 1987, when he was named department head. He retired in 1990 but remained an adjunct faculty member until 2005. Survivors include his wife, Meredith; two sons; and six grandchildren.

Everett Leo Mast J.D. '54 of Sugar Grove, N.C., on July 15, 2012. He was a paratrooper in the Army's 11th Airborne Division and served in northern occupied Japan during World War II. He briefly taught in the North Carolina and Florida public schools, then became an attorney for the Florida Securities Commission and later for the U.S. Securities and Exchange Commission. He is survived by his wife, Anne; two daughters, including **Barbara Mast James** '81; a son-in-law, **Scott James III** '80, M.D. '84; a brother; and three grandchildren.

Charles W. Murray Jr. '54 of Cooperstown, N.Y., on Aug. 13, 2012. He was chosen for Navy officer training and was stationed in Norfolk, Va., aboard a destroyer for three years. Later, he worked for two research and development firms, Melpar Inc. and Aero Geo Astro Corp. He worked for NASA at the Goddard Space Flight Center from 1966 until 1987 and worked on the Apollo project. He played trombone in several bands and orchestras. He is survived by his wife, Carolyn; two daughters; a son; a sister; six grandchildren; and a great-grandchild.

Bill L. Smith LL.B. '54 of Cumberland, Md., on July 10, 2012. He served in the Navy in World War II and the Korean War. After practicing law in Richmond, Va., for 15 years, he moved to Cumberland and opened his private law office in 1982, practicing there until 2009. He is survived by his wife, Sandra; seven daughters; a sister; 12 grandchildren; and 13 great-grandchildren.

William C. Yengst B.S.E.E. '54 of Solana Beach, Calif., on Oct. 15, 2011.

John H. Saylor Jr. '55 of Winston-Salem, on Aug. 31, 2012. He served in the Army in Korea before graduating from Duke. Afterward, he was

employed by R.J. Reynolds Tobacco Co. for 33 years, primarily in the marketing research department. He is survived by his wife, Astrid; three daughters; a stepson; a stepdaughter; seven grandchildren; five step-grandchildren; and three step-great-grandchildren.

William I. Wooten Jr. '55 of Greenville, N.C., on July 2, 2012. He served in the Army before earning a law degree at UNC-CH. After working as a law clerk in Raleigh, he had a law practice in Greenville for 49 years. He is survived by his wife, Donna; two daughters; a son; and four grandchildren.

Lawrence H. Greenwood Jr. M.Div. '56 of Fallston, N.C., on July 3, 2012. He preached for 42 years at seven churches in West Virginia. Survivors include his wife, Jane; a daughter; a son; two brothers; and three grandchildren.

C. Fred Harper M.Div. '56 of White House, Tenn., on Sept. 10, 2012. He served as a United Methodist minister for 60 years in many Tennessee churches. He is survived by his wife, Patty; three daughters; a brother; three grandchildren; and a great-grandchild.

Jacob C. Howell Jr. B.S.M.E. '56 of Savanna, Ga., on April 25, 2012. He is survived by his wife, Anita; a son; a stepson; a brother; and four grandchildren.

James S. Jenkins '56 of Atlanta, on July 11, 2012. He was a page in the U.S. House of Representatives in the 82nd Congress and served in the

Army. Later, he served as a research associate and editor of publications at the Center for Research in Social Change at Emory University. He published *Atlanta in the Age of Pericles*, *Murder in Atlanta*, and *Murders and Social Change*. He is survived by two nieces and two nephews.

John H. King B.S.M.E. '56 of Maryville, Tenn., on July 13, 2012. He served in the Navy from 1956 to 1958. He retired from the University of Tennessee in hospital administration. Survivors include his wife, Joyce; two daughters; two sons; a brother; a sister; and seven grandchildren.

James H. Lane B.S.C.E. '56 of Pensacola, Fla., on Sept. 3, 2012. He served in the Marine Corps as a cargo airplane pilot and earned a doctorate from N.C. State University. An active member of Friends of Perdido Bay, he lobbied for decades for clean water in Pensacola's Perdido Bay. Survivors include his wife, Jackie; five daughters; four sons; two sisters; a brother; 13 grandchildren; and a nephew, **Alan L. Griffin** '79.

Martin M. Rose '56 of Los Angeles, on March 8, 2012. Survivors include his wife, Lucy; a daughter; and two grandchildren.

Patricia A. Smith Woodward P.T. Cert. '57 of Flat Rock, N.C., on July 24, 2012. She had a 40-year career as a licensed physical therapist, working in Virginia, Connecticut, and North Carolina. She retired from Pardee Hospital in Hendersonville, N.C., in 1995. Survivors include a daughter, a son, two brothers, and three grandchildren.

M. Wayne Heine M.D. '58 of Tucson, Ariz., on July 24, 2012. After a residency in obstetrics and gynecology at the University of Florida, he was a research fellow in endocrinology at the Worcester Foundation in Massachusetts. He served in the Army at Fort Benning in Georgia during the Vietnam War and received a commendation medal for introducing oral contraceptives to his patients in the base clinics. Over his 46-year career, he held academic positions at the University of Florida and the University of Arizona. He became the founding chair of the ob-gyn department at Texas Tech University, later returning to that position at the University of Arizona. He is survived by his wife, Millie; two sons; a daughter; and two grandchildren.

Neill R. Lightfoot Ph.D. '58 of Abilene, Texas, on Sept. 18, 2012. He taught at Abilene Christian University for 47 years and was a preacher for more than 50 years. He published several books, including *How We Got the Bible* and *Everyone's Guide to the Book of Hebrews*. In 1978, he received the Outstanding Teacher of the Year Award. He is survived by his wife, Marjorie; three daughters; two stepdaughters; a sister; 13 grandchildren; and seven great-grandchildren.

Zane B. Fisher '59 of Sparta, N.C., on July 4, 2012. He was a second lieutenant in the Marine Corps and served two combat tours in Vietnam. His service earned him the Vietnamese Cross of Gallantry. He is survived by his wife, Carol, and a sister.

Mary Ellen Jones '59, A.M. '59 of Springfield, Ohio, on Aug. 3, 2012. She was an educator for 44 years, teaching at Bakersfield College in California, in Greece on a Fulbright grant, and as professor of English and director of American Studies at Wittenberg University in Springfield. While in Greece, she received a Navy commendation for service as liaison between the 6th Fleet and the people of Corfu. An author and editor, she also raised and showed championship German shepherds for more than 20 years.

Robert Albert Pittillo M.Ed. '59, Ed.D. '61 of Mount Pleasant, S.C., on Feb. 2, 2011. Survivors include his wife, **Elen Sain Pittillo** Ed.D. '75.

Hurley N. Seaford LL.B. '59 of New Port Richey, Fla., on June 27, 2012. He was a lawyer with the U.S. Treasury Department for 41 years. He is survived by his wife, Miriam, and a son.

Lynn A. Smith B.S.M.E. '59 of Bath, N.C., on July 3, 2012. He was a first lieutenant in the Marine Corps and later made his career in international marketing and sales management at IBM for 30 years. He is survived by his wife, **Martha Pyle Smith** B.S.N. '59; a son; a daughter; and three grandchildren.

Rebecca H. Rodgers Terrill '59 of Hampton, Va., on April 15, 2012. She taught for 32 years, 28 of which were in the Hampton public school system. Survivors include a stepdaughter, a brother, four grandchildren, and four great-grandchildren.

Frank B. Thompson M.D. '59 of Pasadena, Calif., on Sept. 18, 2012. He was an ophthalmologist who pioneered scleral reinforcement surgery. He is survived by his wife, Joan; two sons; a daughter; and six grandchildren.

Mary E. Church Williams '59, A.M. '62 of Santa Barbara, Calif., on July 8, 2012. She pursued



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a career in print and TV journalism and was editor of *Home Decorating* magazine and the home magazine section of the Sunday *Los Angeles Times* and a writer for *New West* magazine. Survivors include stepchildren.

John R. Moore A.M. '60, Ph.D. '62 of Lafayette, La., on Aug. 7, 2012. He was a professor emeritus of history at the University of Louisiana-Lafayette, where he began teaching in 1962. He was chairman of the history department from 1970 to 1978 and from 1992 to 1998. He wrote two books and received three Fulbright grants, which he spent teaching in Taiwan, Bangkok, and Shanghai. He is survived by four daughters, a son, a half-brother, and nine grandchildren.

Joseph M. Parker Jr. LL.B. '60 of Winston-Salem, on Aug. 6, 2012. He was a lieutenant colonel in the Marines. After graduating from law school and joining the North Carolina and Virginia state bar associations, he joined Lawyers Title of North Carolina, eventually becoming president and general counsel of the company. In 1995, he formed his own company, Parker Title Insurance Agency Inc. He is survived by his wife, Linda; a son; two daughters; a stepson; and nine grandchildren.

David. B. Stattenfield B.S.M.E. '60 of Columbus, Ind., on May 21, 2012. He worked in marketing for Cummins Engine Co. for 20 years, then for Allison Transmission until his retirement. He is survived by his wife, **Merrie "Jo" Seymour Stattenfield** '61; two sons; a brother; a sister; and five grandchildren.

Laurence A. Stephens B.S.M.E. '60 of Marble Falls, Texas, on July 9, 2012. He attended Duke on a naval scholarship and subsequently served in the Navy. Later, he was a plant engineer for DuPont. Survivors include his wife, Sondra; two daughters; a brother; and two grandchildren.

Robert A. Swanson B.S.M.E. '60 of York, Pa., on June 29, 2012. He worked for the former Telcordia, AT&T, and Bell Corp. and earned two master's degrees in engineering from the Johns Hopkins University. He was a member of the Train Collectors of America. He is survived by his companion, Valerie; a son; three daughters; a brother; and seven grandchildren.

Merwin A. Todd III '60 of Orlando, Fla., on July 14, 2012. He completed dental school and served three years in the Navy's Dental Corps during the Vietnam War, first reporting to the Marine Corps. He began his dental practice in Florida in 1967 and was an early adopter of computerizing dental practice. Survivors include his wife, Toni, and two brothers.

John H. Venable Jr. '60 of Nashville, Tenn., on July 17, 2012. After earning a doctorate in biophysics from Yale, he joined the faculty at Vanderbilt University in 1967. His research was published in a wide range of scientific journals. He won the 1980 Ellen Gregg Ingalls Award for Excellence in Classroom Teaching and was the associate provost for faculty affairs from 1993 to 2000. He is survived by his wife, Alys; a daughter, **Carol L. Venable** '94, M.D. '99; and two grandchildren.

George Robert Wileman '60 of Ironton, Ohio, on July 3, 2012. He attended Georgetown Law School, where he was on *Law Review*. A member of the Ohio and Texas state bar associations, he

started his career at O'Melveny & Myers and later specialized in medical malpractice. He is survived by a son, a daughter, and four grandchildren.

Bess P. Powell Autry '61 of Chapel Hill, on Sept. 4, 2012. While in Washington, D.C., she was a staffer and personal assistant for Vice President Hubert Humphrey. She later received a master's of social work degree from UNC-CH and became a clinical social worker. She worked at the Durham Child Guidance Center with a faculty appointment in Duke's psychiatry department. In 1987, she and a colleague founded Forest Associates, a psychiatric social work practice. She is survived by a son, a daughter, and four grandchildren.

Anne O. Palmer Cromer '61 of Southport, N.C., on July 22, 2012. She had a long teaching career, with positions in grade schools in Columbia and Anderson, S.C., and later in special education in Nashville, Tenn., and Spartanburg, S.C. She also taught Sunday school. She is survived by two sons, a brother, and three grandchildren.

Helen Suzanne Amann Diaz B.S.N. '61 of Corpus Christi, Texas, on Aug. 4, 2012. She joined the Air Force after graduating and was stationed at Scotts Air Force Base in Illinois. She is survived by her husband, Ralph; three daughters; two sisters; and four grandchildren.

James H. "Jerry" Moore Jr. '61, on Feb. 14, 2012.

Mary Moorhead '61 of Clearwater, Fla., on June 14, 2012.

James N. DuPuy '62 of Lincoln, Ill., on June 16, 2012. He served eight years in the National Guard. A CPA, he worked for Arthur Andersen and the State of Illinois Department of the Lottery. Survivors include a son, a daughter, two brothers, and five grandchildren.

Edith Hutto Holt H.S. '62 of Asheville, N.C., on March 4, 2010. She was the first female dermatologist to enter private practice in North Carolina. She is survived by her husband, Joel; two sons; and three grandchildren.

Madeline Hartsell Lamb '62 of West Chester, Pa., on July 8, 2012. She was an Angier B. Duke Scholar, and after positions in teaching, insurance, and retail, she went to law school and had a 34-year career as a lawyer. Survivors include a daughter, **Amanda H. Lamb Griffin** '88; a son; a sister; and two grandchildren.

Allan D. Bray J.D. '63 of Las Vegas, on May 24, 2012. From 1963 to 1969, he was a special agent in the FBI and served on the task force that investigated the assassination of President John F. Kennedy. Later, he practiced family and personal injury law in Las Vegas for 40 years. Survivors include two sons and a brother.

Charles L. Winchester '63 of Durham and Phoenix, on June 12, 2012. He played football at Duke on scholarship. After college, he was a teacher, then became an entrepreneur. He managed multiple businesses, including Winchester Paving Co. in Durham. He was a guitarist and wrote more than 100 country songs. He is survived by his for-



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mer wife, Sandy; a son; three brothers; two sisters; and four grandchildren.

James K. Zink Ph.D. '63 of Cape Girardeau, Mo., on Sept. 14, 2012. He taught at Harding University and its graduate school of theology. Later, he received a full scholarship to the University of Chicago School of Library Science. He then taught library science at the University of Texas-Austin and was assistant director for public services at the University of Oklahoma. He spent 19 years at his last position as professor and library director for Southeast Missouri State University. He is survived by his wife, Glenda; two daughters; a son; a brother; and five grandsons.

Nicholas S. Battelle '64 of White Stone, Va., on July 1, 2012. He was a Navy lieutenant on the USS *Kearsarge*. Later, he was an investment manager and cofounder of Lee Munder Capital Group. He was a former trustee of Blair Academy. He is survived by his wife, Dorothy; two daughters; and two brothers.

E. Harry Broome Jr. '64 of Matthews, N.C., on June 29, 2012. He was an investment banker and retired as head of the bond-trading floor of First Union Corp. Survivors include his wife, Lynda; a son; a daughter; a sister; two grandchildren; and a cousin, **Grady T. Helms Jr.** B.S.C.E. '66.

Donald Haury '64 of Tempe, Ariz., on Sept. 6, 2012. He was a sales manager in the steel-wire industry. He was also an AA counselor and published a self-help book for people struggling with addiction issues. Survivors include his partner, Marie; a son; a daughter; and three grandchildren.

James W. Hooker M.S. '64 of Durham, on July 31, 2012. He worked primarily for Bell Laboratories, doing advanced research and development of communications systems under contract with the U.S. Department of Defense. He contributed to the nation's missile defense systems and several security and intelligence applications. He is survived by his wife, Joanne; a son; a daughter, **Lynn M. Hooker** '90; a brother; and two grandchildren.

Roy K. Patterson Jr. Th.M. '64, Ph.D. '67 of Richmond, Va., on Aug. 30, 2012. He was a draftsman in the Army and later attended Union Theological Seminary. He served as department head of social studies at Peace College and as a history instructor and academic dean at Davidson Community College. He also was president of Southern Seminary, vice president for development for Mary Baldwin College, and president of King College. He is survived by his wife, Pauline; two sons; and four grandchildren.

Sigurd C. Sandzen Jr. H.S. '64 of Vero Beach, Fla., on July 11, 2012. He completed his orthopaedic residency at Duke and later joined the practice of Stelling, Meyer, Riddle & Sandzen in Greenville, S.C. He also practiced in Abington, Pa.; Dallas; Shreveport, La.; and Sacramento, Calif. He published several books, including three on hand and wrist injuries. From 1967 to 1969, he was a Navy commander and developed procedures that helped servicemen regain use of their upper extremities. He is survived by his wife, Pamela; two sons; a daughter; two stepchildren; and three grandchildren.

Russell E. Harner M.D. '65 of Travelers Rest, S.C., on Jan. 29, 2012. He served in the Vietnam War as a lieutenant colonel in the Navy. After graduating, he was a Baskin Palmer Eye Institute resident and an American Academy of Ophthalmology fellow. He practiced ophthalmology in Greenville, S.C., from 1972 to 2003. He is survived by his wife, Mary; a daughter; three sons; and four grandchildren.

Noel J. Kinnamon '65 of Mars Hill, N.C., on Sept. 13, 2012. He was a retired professor of English at Mars Hill College, where he served on the faculty for more than 40 years. He collaborated on six books related to the life and letters of the Sidney family in England from 1500 to 1700. Survivors include a sister, **Rebecca A. Kinnamon Neff** M.A.T. '67, Ph.D. '74.

Ronald G. Seeber J.D. '65 of Winston-Salem, on June 22, 2012. He worked for 42 years in city planning and municipal law, spending 37 of those as city attorney of Winston-Salem. He was president of the North Carolina chapter of the American Planning Association and president of the North Carolina Municipal Attorney's Association, and he led other community and professional organizations. In addition, he taught at Wake Forest University law school. He led the singing at Our Lady of Mercy Parish for more than 20 years and was an officer of the Secular Franciscan Order. He is survived by his wife, **Sandra W. Frederick Seeber** '64, A.M. '65; two sons; a daughter; two sisters; and 10 grandchildren.

Cynthia Ann Gilliatt '66 of Harrisonburg, Va., on Aug. 16, 2011. She helped found and support Integrity/Virginia, an organization that provides safe spiritual space for LGBT people. She was a priest associate at Emmanuel Episcopal Church, where she also served as chaplain to its Canterbury Club, and priest-in-charge at the Church of the Good Shepherd. She helped found Safe Zones at James Madison University, where she was an associate professor of English.

Thomas H. Garret III '67 of St. Paul, Minn., on Aug. 19, 2012. After law school, he joined Lindquist & Vennum, where he practiced corporate securities law, with expertise in drafting documents for public offerings. He then became a director of St. Jude Medical in 1979, a position he held for 32 years. The company recently renamed its employee scholarship program in his honor. He also won the 2001 Minnesota State Senior Amateur Championship in golf. He is survived by his wife, Linda; two daughters; a son; three brothers; two sisters; and six grandchildren.

Thomas J. Grilliot Ph.D. '67 of Piqua, Ohio, on Sept. 10, 2012. He taught at Penn State University for five years before becoming an ordained Roman Catholic priest in 1976. After serving as associate pastor at multiple churches, he became a visiting associate professor at the University of Notre Dame and later taught at Miami University in Oxford, Ohio. He served as pastor of several churches and retired in 2011 as parochial vicar to the pastor of St. Mary and St. Boniface churches in Piqua. Survivors include two sisters.

Jane E. Horsley M.Ed. '67 of Hampton, Va., on Aug. 15, 2012. She retired in 2011 after 42 years of federal government service. She worked at Quantico Marine Base; the Department of Defense-Mannheim, Germany; the Justice Department Attorney General's Office in Houston; and



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Hampton Veterans Affairs Medical Center. She is survived by two brothers and a sister.

John F. Lavach Ed.D. '67 of Williamsburg, Va., on Aug. 30, 2012. He was a professor at the William & Mary School of Education, where he taught since 1967. He served in the Army in the 82nd Airborne Division at Fort Bragg from 1956 to 1958. He is survived by his wife, Pat; a son; a daughter; two brothers; a sister; and five grandchildren.

Susan J. Barnes Dresser '69 of Sacramento, Calif., on July 2, 2012. She joined Volunteers in Service to America, serving in San Antonio. In Sacramento, she worked at the Human Rights Fair Housing Commission and later became a teacher and school administrator, serving as principal of Joseph Bonheim Elementary School for seven years. She is survived by her husband, Robert; a son; a daughter; a sister; and two grandchildren.

William P. Freitag Ph.D. '69 of Southern Pines, N.C., on Aug. 22, 2012. He served in the Navy in World War II. He taught and was an administrator in the Chicago public school system and the Raleigh school system. In 1990, he retired as assistant superintendent of personnel for Wake County public schools. He was a Mason for more than 50 years and served as master of his Blue Lodge in 1964. He is survived by a daughter, a son, and two grandchildren.

John A. Hunter Sr. M.Ed. '69 of Durham, on July 10, 2012. He was a Richardson Fellow with the Learning Institute Center while at Duke. He later became a teacher in Charlotte and Durham public schools and served as principal of four schools during his career. He is survived by his wife, Selenia; a son; a sister; a brother; and a grandson.

Richard G. Laporte J.D. '69 of West Hollywood, Calif., on Dec. 24, 2010. He was an associate in the New York and Paris offices of Cahill, Gordon & Reindel before joining the legal staff of Wells Fargo Corp. He became a specialist in commercial and banking law and retired in 1998 as associate general counsel. He is survived by a brother.

Bruce C. Dunn '70 of Edmond, Okla., on Aug. 27, 2012. He was a partner in Heartland Pathology Consultants and a member of the Oklahoma State Medical Association, the College of American Pathologists, and the American Society of Clinical Pathologists. He is survived by his wife, **Kathryn L. Hinds Dunn** B.S.N. '70; two sons; a brother; and two grandchildren.

Joyce A. Clayton Nichols A.H.C. '70 of Durham, on July 29, 2012. She was the first female graduate of the physician assistant program. She is survived by her husband, McArthur; two daughters; and a son.

Gregory S. Liptak M.D. '71 of Retsof, N.Y., on March 4, 2012. For 27 years, he was a neurodevelopmental pediatrician at the University of Rochester's Strong Memorial Hospital, where he became a professor of pediatrics. Later, he became a professor at Upstate Golisano Children's Hospital in Syracuse, N.Y., serving as chief of the division of developmental pediatrics.

Josephine C. Perry Eure M.Ed. '73 of Pfafftown, N.C., on May 16, 2010. She had a career as a teacher. Survivors include three sons, a daughter, and two granddaughters.

Paul G. Hodges '73 of Mount Airy, N.C., on Sept. 5, 2010. He was the coordinator for the Mount Airy Downtown Business Association. He acted in the community theater and was an accomplished poet, playwright, and essayist. He also edited several books and magazines and taught writing in the Stokes County and Durham city schools, as well as Surry Community College. Survivors include a daughter, a stepdaughter, a stepson, and two granddaughters.

Frank D. Spiegelberg J.D. '73 of Tulsa, Okla., on July 28, 2012. He served in the Air Force at Randolph Air Force Base in San Antonio. He moved to Tulsa and worked in the litigation departments at Cities Service Co. and Apache Oil. Later, he went into private legal practice in the oil and gas industry. He served multiple terms as board president of the Union public schools. Survivors include his wife, Linda; a son; a daughter; a sister; and a granddaughter.

David S. Marsh '74 of San Angelo, Texas, on June 25, 2012. He served in the biology department at Angelo State University for 29 years. He was an active member of the Texas Academy of Sciences, serving on many committees and as its president. He is survived by his wife, Patti; three daughters; a son; a sister; a brother; and three grandchildren.

David L. Richardson M.D. '74 of Lumberton, N.C., on Aug. 29, 2012. He entered private practice with Lumberton Medical Clinic in 1978 and maintained a connection with Duke Medical Center throughout his career. He is survived by his wife, Sylvia; a son; a daughter; a stepson; his mother; and three grandchildren.

David L. Dalton H.S. '75 of Jacksonville, Fla., on June 20, 2012. He was a major in the Army Reserve Medical Corps from 1970 to 1976 and later practiced urology in Jacksonville for 36 years. He was on the board of governors of the Florida Urological Society from 1988 to 1991 and was a founding board member of K-Life Jacksonville, serving for five years. He is survived by his wife, Suzanne; three sons; two daughters; two sisters; a brother; and two grandchildren.

Garland K. Linkous Ph.D. '75 of Durham, on June 26, 2012. Survivors include his wife, Joanne.

Daniel Pendarvis III M.B.A. '78 of Virginia Beach, Va., on July 30, 2012. He was a supply officer in the Navy, earning the Legion of Merit, Meritorious Service Medal, and the Navy Commendation Medal. After retiring from the Navy, he worked for Portsmouth schools as assistant superintendent of budget and planning. He is survived by his wife, Dale; two sons; his mother; and a sister.

William Scott Funger '79 of Potomac, Md., on Aug. 31, 2012. He became a lawyer and focused on helping those who were injured, ill, or destitute. He also served as the chairman of the Duke University Medical Center heart board. He collected rare coins and enjoyed numismatics. He is survived by his wife, Holly; three sons; his parents; two sisters; and a brother.

David M. Lane Ph.D. '79 of Dover, N.H., on Aug. 25, 2012. He received his doctorate in botany, then earned a master's in library science from Syracuse University. He was a biological sci-



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ences librarian and associate professor at the University of New Hampshire, and from 1999 to 2000, he served as president of the Council on Botanical and Horticultural Libraries. He won that organization's Charles Robert Long Award of Extraordinary Merit. He is survived by two sisters and a brother.

Jordan R. Miller '79 of West River, Md., on Oct. 17, 2010, in South Africa.

Carl B. Ziegler Jr. Ph.D. '81 of East Lyme, Conn., on Aug. 14, 2012. He completed a master's degree in organic chemistry at the University of Delaware. While there, he worked for Nobel Laureate Richard Heck and contributed to the development of the Heck reaction, used in both academic and pharmaceutical research. After Duke, he pur-

sued postdoctoral studies at Oxford University. He worked for Lederle Laboratories (American Cyanamid) in New York and later for Pfizer Inc. He is survived by his wife, Jillian; two sons; three sisters; and a brother.

Timothy J. Hazen M.Div. '82 of Poquoson, Va., on July 18, 2012. He served in the Navy before attending Duke and retired as a minister. He is survived by his wife, Eddice; a son; a daughter; a sister; a brother; two half-sisters; and a half-brother.

Susan McDonald White '82 of Charlotte, on June 20, 2012. She was an art conservator and restorer. Before starting her own company, she worked for the Metropolitan Museum of Art, traveling internationally for business, with a specialty in

restoring ancient art objects. She was also an officially recognized Massachusetts artist, with numerous shows in the Boston area. Survivors include her parents; two sisters, **Cathy L. White Graham** '77, B.H.S. '79 and **Mary Jane White** J.D. '77; a brother; and several nieces and nephews, including **Robert Michael Owen** '12.

Cornelius Gallagher Jr. '83 of Lanesville, Mass., on July 10, 2012. He was an ESL teacher in both Germany and the U.S. He also worked as a counselor for adults with schizophrenia and other severe mental illnesses. He is survived by his wife, Marion; his mother; three sisters; and three brothers.

Adam S. Fowler B.S.E. '84 of Durham, on July 28, 2012. He had a career in telecommunications and worked for Nortel, Tekelec, and Catalyst Communications. Most recently he was director of marketing in the Americas for Aeroflex Test Solutions. He is survived by his wife, Sheryl; a son; a daughter; his parents; and two brothers.

Anthony C. Busic M.Div. '88 of Salem, Va., on July 23, 2012. A minister in Virginia and North Carolina, he served the Orange Charge in Orange County, N.C.; Mount Pleasant United Methodist Church in Roanoke County, Va.; the Bethel/Emmanuel Charge in Lancaster County, Va.; Central United Methodist Church in Salem, and Chestnut Hill United Methodist Church in Lynchburg. Survivors include his wife, Vickie; a son; two daughters; a brother; and a sister.

Christopher J. Hussey M.B.A. '91 of Indianapolis, on Aug. 19, 2012. He served as a Navy submarine officer from 1984 to 1989. A former Hill-Rom Holdings employee, he co-owned the Interface Financial Group, a business with his wife. He is survived by his wife, Sheila; a son; his parents; two sisters; and a brother.

Ronnie R. Dawson M.Div. '96 of Surf City, N.C., on Aug. 7, 2012. He served several pastorates in North Carolina within the United Methodist Church, including Concord, Warrens Grove, Cedar Cliff, Shiloh, and Mount Bethel. Before entering the ministry, he was a personal aide to the late U.S. Sen. John P. East of North Carolina. He is survived by his wife, Debra; a son; and a brother.

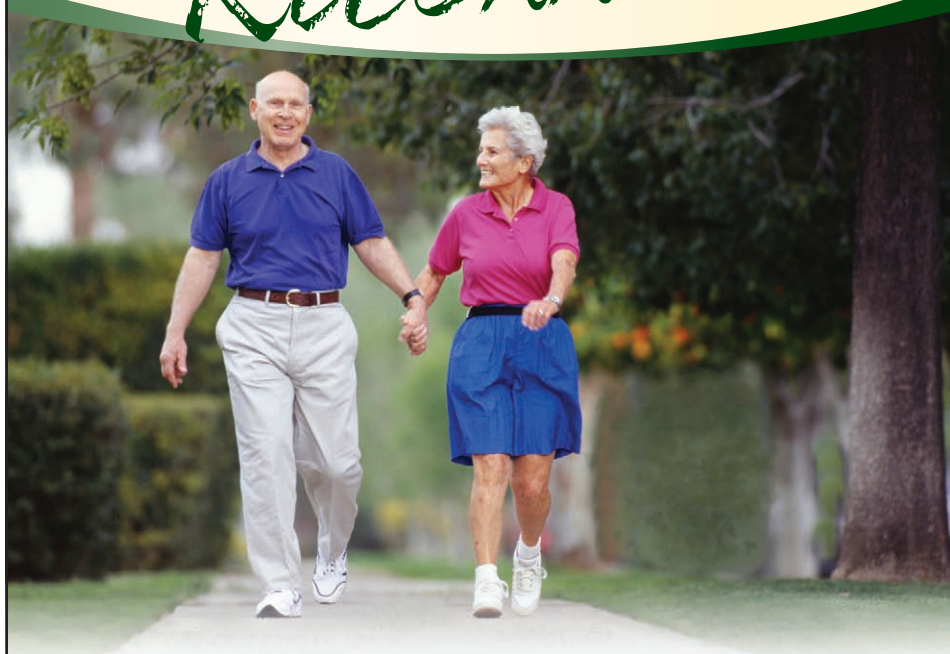
Anish A. Joshi M.B.A. '97, M.E.M. '97 of Newark, N.J., on June 18, 2012. After law school, he opened his own practice in New Brunswick, N.J., in 2003. In 2007, he received the General Practitioner of the Year Award from the New Jersey State Bar Association. He served as a volunteer investigator for the Middlesex County Attorney Ethics Committee. He is survived by his parents and two brothers.

Neal E. Wingfield M.Div. '98 of Raleigh, on Jan. 15, 2012. Survivors include his wife, Page; a son; and a daughter.

Robert E. Shelton M.Div. '99 of Graham, N.C., on Sept. 20, 2011. He was an ordained elder in the North Carolina Conference of the United Methodist Church. He was in his 17th year of ministry and served in pastorates throughout North Carolina, including the towns of Franklinville, Ramseur, Washington, Roanoke Rapids, and Graham. He is survived by his wife, Janna; two daughters; two sons; his mother and stepfather; his father and stepmother; a brother; and a stepbrother.

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Clinton S. McHugh '02 of Greenwood Village, Colo., on July 17, 2012. After Duke, he attended the University of Virginia law school and was working toward a master's of public policy and policy administration at Northwestern University. He was an associate at Kirkland & Ellis and Skadden, Arps, Slate, Meagher & Flom in Chicago. He also served as general counsel for the Rapid Transit Authority in Chicago until June 2012 before moving to Colorado. He is survived by his wife, **Susan Keeler McHugh** '01; his parents; and a brother.

Nadiya Yakovleva M.B.A. '04 of Moscow, in January 2011. Survivors include her husband, Konstantin, and a daughter.

Li Chen Kramer M.B.A. '07, Cert. '07 of Marlborough, Mass., on Aug. 26, 2012. She was an associate director at Millennium Pharmaceuticals. Born in China, she received a doctor of medicine degree at the University of Peking before earning a Ph.D. in molecular biochemistry from the University of Maryland and later an M.S. in information technology. She was a research fellow at the National Institutes of Health, a principal consultant with Oracle Corp., a software engineer at Celera Genomics and Applied Biosystems, and a manager of strategy consulting for Booz Allen Hamilton. She is survived by her husband, Keith; her parents; and a brother.

Derrik J. Chan '11 of Minneapolis, on Aug. 17, 2012. He enjoyed performing magic, playing soccer, and exploring technology. He is survived by his parents and a sister.

Marcus L. Johnson A.H.C. '12 of Durham, on July 19, 2012. After graduating from Morris Col-

lege in 2005, he worked with the South Carolina Department of Health and Environmental Control. In 2010, he was accepted to Duke Medical School to become a physician's assistant. He is survived by his father, two grandparents, and a sister.

Professor Emeritus Maddox

George L. Maddox of Durham, on Aug. 9, 2012. He served as a first sergeant in the Army, fighting in Europe and the Philippines during World War II. He earned a master's degree in social ethics from Boston University in 1952 and a doctorate in sociology and labor relations from Michigan State University in 1956. He was a professor and chairman of the sociology department at Millsaps College before accepting a fellowship at Duke University Medical Center in 1959. He joined the sociology department at Duke and, in 1972, was appointed director of the Duke Center for the Study of Aging and Human Development. He had fellowships at St. Thomas Hospital (England), the London School of Economics, the University of Toronto, and Green College at Oxford. He was named professor emeritus at Duke in 1995 but remained active in aging research and policy until 2011. He was president of the Gerontological Society of America and received the Robert Kleemeier Award, its highest award for research. He was a founding member of the National Advisory Council for the National Institute on Aging, and North Carolina honored him with the Order of the Long Leaf Pine for outstanding public service. For his teaching accomplishments, he was recognized with the Distinguished Mentorship Award of the Behavioral and Social Sciences section of the Gerontological Society of America, as well as Duke's

Humanitarian Award. He is survived by his wife, Evelyn; a daughter; a son; and a brother.

Trustee Emeritus Patterson

Eugene C. Patterson Hon. '78 of St. Petersburg, Fla., on Jan. 12, 2013. A Pulitzer Prize-winning journalist, he was a professor at Duke and served on the board of trustees from 1988 to 1994. Patterson was influential in the formation of the Sanford School of Public Policy and the DeWitt Wallace Center for Media and Democracy. After spending the Depression on a small farm near Adel, Ga., he studied journalism at the University of Georgia. He fought in the Battle of the Bulge in the Army during World War II and earned Silver and Bronze stars for his service. Upon his return, he started working at United Press. He worked in various capacities for *The Atlanta Journal-Constitution* from 1956 to 1968, during the height of the civil rights movement. Patterson's 1967 Pulitzer Prize-winning editorial contributions urged Southerners to embrace integration peacefully. Patterson spent three years as managing editor of *The Washington Post* before coming to Duke, where he taught public policy in 1971 and 1972. He later became editor of *The St. Petersburg Times*. He retired in 1988 as chairman of the board of the Poynter Institute, a professional school for journalists. The institute endows a Duke faculty position named in his honor—the Eugene C. Patterson Professor of the Practice of Journalism and Public Policy. He is survived by a daughter, **Mary Patterson Fausch** '76; a son-in-law, **James C. Fausch** B.S.E. '75; a sister; and three granddaughters, **Laura Carter Fausch** '06, **Molly Patterson Fausch** '08, and **Emily Carr Fausch** '11.

Classifieds

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MISCELLANEOUS

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Retro

The King Paucus Affair

Mocked by an outrageous play script, Duke administrators searched in vain for its secret author. | By Kimberly Sims

One of the most notorious pieces of Duke's theatrical history—an anonymously written play titled *The Vision of King Paucus*—never actually appeared on a campus stage. But when 300 copies of the three-page script showed up mysteriously in student and faculty mailboxes in late 1933, it caused a stir felt across the university.

The script laid out a bitter lampoon of a Duke administration more concerned with football, grand campus buildings, and paying homage to the university's rich benefactor than with the wants and needs of its students. The play's central characters, thinly veiled parodies of university leaders, were given outrageous descriptions that left little doubt as to the target of their ridicule. President William Few was represented as King Paucus, "a thin, awkward man with a goatish beard." Vice President Robert Flowers was characterized as Prince Struttabout Blossoms, "a self-important sonorous say-nothing dressed in a curious suit of armour fashioned from coins." Dean William Wannamaker was Lord Willie Wanna-be-King, "a pasty sort of ham-and-egg man wearing an academic robe."

The play's most-pointed lambasting was directed at Henry Rudolph Dwire, Duke's director of public relations, who appeared as Henri Rudolphus Fatpaunch, "the King's eunuch and Lord of Ballyhoo, a man-sized infant with a head like a pumpkin and a croaking blah-blah voice. His

eyes are beady, his face rat-like. His breath comes in short pants, but nevertheless he wears no pants, and is arrayed sometimes in the disguise of a fairy and at others à la Mahatma."

University administrators searched urgently for the identity of the author, apparently believing the author could be charged with sending obscene material through the mail (based on the fact that Fatpaunch was described as not wearing pants). Suspicion centered on Janet Earl '35, a student from Iowa, because a spelling mistake in the play matched one she was known to make. But the author's identity remained unknown for decades.

It wasn't until 1979, in an interview with former classmate Susan Singleton Rose '35, A.M. '87, that Earl admitted to writing *King Paucus*. She said she had been frustrated by the administration's seeming indifference to student concerns and what she saw as administrators' outmoded attitude toward academic freedom. Ernest Seeman, then-editor of Duke University Press and a vocal critic of the administration, encouraged her to express her feelings in writing. She drafted her play and gave it to Seeman, who had an out-of-state printer make 300



Duke University Archives

Subject to ridicule: Few and Flowers became King Paucus and Prince Struttabout Blossoms in thinly veiled theatrical parody.

The play's central characters, thinly veiled parodies of university leaders, were given outrageous descriptions that left little doubt as to the target of their ridicule.

copies. Earl and two friends took the copies to Raleigh, where they anonymously mailed them to students and faculty.

During the university's investigation, Earl admitted her participation to law professor Leslie Craven, whom she had sought out for advice. He told her that Duke had hired the famed Pinkerton National Detective Agency to hunt for the author and that one of his classes had been assigned to

THEN&NOW

UNIVERSITY THEATER

1891

Students of Trinity College in Randolph County put on *The Womanless Wedding*—an appropriate production for the all-male student body.



1922

Female students in the Dramatic Club played all the roles in a production of *Monsieur Beaucaire* in March 1922. The Dramatic Club was coached by Gladys Gross, wife of chemistry professor Paul Gross.



Duke University Archives

Devil's Own

Livio Sanuto's *Geografia*, published in 1588 in Venice, is the first edition of the first printed atlas of Africa. It contains twelve double-page engraved maps showing the continent. For its date, the maps are surprisingly detailed and accurate, correcting many of the earlier errors in French and German maps.

Nevertheless, Sanuto perpetuated many preconceived European notions about Africa. He also introduced new errors in the text of the atlas, making the work a fascinating case study of European views of Africa in the sixteenth century. He included some fantastical tales of the inhabitants of Africa, claiming that in Cairo, for example, murderers were cut in two and the top

half was put on a plate with quicklime, where it would remain alive for as long as fifteen minutes and even answer questions. And he took some notable liberties strictly from a geographic standpoint: Many of the bodies of water in the interior of the continent are guesswork or conjecture, and Madagascar is obviously distorted.

The work is important for the study of European depictions of Africa. It will be a cornerstone for African collections in the John Hope Franklin Research Center for African and African-American History and Culture—one element of the David M. Rubenstein Rare Book & Manuscript Library.



World view: Sanuto was a Venetian mathematician and geographer who intended *Geografia* to be the first in a series of maps of the world.

Mark Zupan

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