

# fellowship

The Newsletter of the Woodrow Wilson National Fellowship Foundation



THE WOODROW WILSON  
National Fellowship Foundation

FALL/WINTER 2017

## WW Academy Receives Degree-Granting Authority; Design Fellows Begin Work

At the end of October, the Woodrow Wilson Academy of Teaching and Learning was formally approved as a graduate school by the Massachusetts Board of Higher Education. The competency-based master's in education degree offered by the WW Academy will blend online, face-to-face, and clinical education to prepare graduates for 21st-century classrooms.

In 2015, the Woodrow Wilson National Fellowship Foundation announced its intent to develop competency-based master's degree programs in teaching and school leadership through the new WW Academy. In 2016, the Commonwealth of Massachusetts granted informal approval for the Academy to offer initial, post-baccalaureate licensure for middle and secondary school teachers in biology, chemistry, and math.

In September, the WW Academy's inaugural class of Design Fellows set about their work helping Academy faculty and staff redesign teacher preparation. The ten Fellows will spend the next year testing and refining the WW Academy's curriculum and brainstorming and designing elements of the program, and exploring the skills that today's—and tomorrow's—educators need.

Fellow Mustafa Abdul-Rahim comes to the WW Academy after a year of teaching math at an independent school in Connecticut. A world-ranked decathlete, Mr. Abdul-Rahim holds a B.A. in engineering and a master's of engineering management from Dartmouth. "I see this as an opportunity to be a part of something big, something groundbreaking," he says.

As a recent statistics graduate from Yale, Jane Strauch considered her options for getting teacher licensure. Not entirely convinced of the affordability of other graduate schools, or of the quality of preparation in teacher-corps programs, she decided the WW Academy was the perfect fit.



The 2017-18 WW Academy Design Fellows (L to R): Mustafa Abdul-Rahim, Breana Campbell, Alexandra Trunnell, Jane Strauch, Jason Heitler-Klevans, Lucinda Robinson, Katarina Rolf, Xavier Tirado, Doyung Lee, Genevieve O'Connell.

"I really knew I wanted to walk into my first classroom being as prepared as I possibly could be. It's so amazing here that not only is someone teaching me how to teach, but I also get to think about what might be the best way for me to learn," says Ms. Strauch. "I'll come out of the program with more than one kind of expertise—not only will I hopefully be a great teacher, but I'll have all this knowledge about the teacher education field."

Breana Campbell is an Olin College grad who left her job as a validation engineer in Indiana to enroll at the WW Academy. She hopes to tap all the available resources, from partner districts to MIT researchers, to help inform the program.

"I am excited to be a part of forming the Academy from the ground up—to think about not just becoming a teacher, but what makes for a good teacher and what makes for a good learning experience on the student side as well," says Ms. Campbell.

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## MISSION

The Woodrow Wilson National Fellowship Foundation identifies and develops leaders and institutions to meet the nation's most critical challenges.

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## From the Editor

Last spring's issue of *Fellowship* looked at Fellows from various Woodrow Wilson Foundation programs who studied the universe—that is, the outer universe. In this edition, we're turning inward.

Across a range of fields—philosophy, psychology, physiology, neuroscience, cognitive science, and more—Fellows are working to understand the mind and the brain. Their purposes are as varied as their fields, from improving our understanding of memory and learning to changing higher education to reducing stress to solving the puzzle of who we are.

Some of these Fellows' views are diametrically opposed—perhaps—but among them they represent an extraordinary array of perspectives on the mind and how it works. Just as with the last issue, the Fellows featured in these pages are asking some of the great questions of the ages.

As the mailer panel of this edition notes, one of the Fellows featured last spring, Kip S. Thorne, recently won the Nobel Prize for his work on gravitational waves, becoming the 15th Woodrow Wilson Fellow so honored. The WW honor roll also includes 38 MacArthur Fellows, two Fields Medalists, two U.S. Poets Laureate, 19 Pulitzer Prize winners, and many others. Clearly, the Foundation's history is full of some of the best minds of the last century, and it is a point of pride for us that the organization has played a role in recognizing such emerging leaders early in their careers.

It is equally a point of pride that the Foundation seeks to identify future leaders from all demographics, from all circumstances, and to help create opportunities for them to develop their skills and knowledge—both by supporting their own promise and by helping to provide educational leaders who will open doors for them. The Woodrow Wilson Board of Trustees recently reiterated this commitment, as expressed by its Chair, Tom Hudnut, in a statement to the Trustees: “High bar. High standards. Get everyone to the starting line together. Give everyone a chance. That's why we're here.” The question of how to provide educational and intellectual opportunity for every mind may be one of the greatest questions of our age.

In the last issue we noted Fellows' interest in hearing from others who are asking big questions about humanity and its future. What, to you, are the greatest of the great questions? Please feel free to share your thoughts with us at [newsletter@woodrow.org](mailto:newsletter@woodrow.org). As ever, we would love to hear from you. 

### Abbreviations used in this issue:

CEF = Career Enhancement  
Fellow

CN = Newcombe Fellow

MCI = Millicent C. McIntosh  
Fellow

MN = Mellon Fellow

PP = Public Policy/  
International Affairs  
Fellow

SP = Spencer Fellow

TF = Teaching Fellow

WF = Woodrow Wilson  
Fellow

WH = J&J Women's Health  
Fellow

WS = Women's Studies  
Fellow

## Design Fellows Begin Work

*Continued from page 1*

Despite their varying backgrounds and experiences, the Design Fellows share both an excitement and a sense of determination about transforming education.

“I’m doing it to make an impact, to change the world,” says Xavier Tirado, a recent Oberlin graduate (biology/sociology) from Chicago. “I just want to take the tools and the information that I’ve been given and have learned and take that back home and make change in the communities that need it the most.”

Alexandra Trunnell just completed her B.S. in physics and astronomy at Vassar at the age of 19. She decided to pursue science teaching thanks to a high school physics teacher who had real zeal for the subject.

“I had this concept of someone who loved something so intensely that they didn’t

want to study it, they didn’t want to sit in a lab and do research, they wanted to share it,” says Ms. Trunnell. “That sparked a love of education in me.”

As the Design Fellows get settled into Cambridge this fall and continue to work with the WW Academy model, they are hopeful about the future impact of the master’s program.

“I’ve always seen education and the accumulation of knowledge of the world as a way for society to be more equitable,” says Ms. Campbell. “I hope that we attract other teacher candidates who are excited about the future of education.”

“It’s a once in a lifetime program,” says Ms. Trunnell. “It’s a once in a lifetime opportunity, and it is creating the future that I wanted in science education.” For bios on each of the DFs, visit [woodrowacademy.org/design-fellows](http://woodrowacademy.org/design-fellows) 



Above: Design Fellow (DF) Jason Heitler-Klevans works on a trebuchet for his team’s STEM activity. Below, left to right: DFs get a tour of MIT; Lucinda Robinson, Breana Campbell, and Jane Strauch work with local students; Mustafa Abdul-Rahim and Xavier Tirado collaborate on a project.



## Nearly 100 New WW MBA Fellows Named to School Leaders Program

This summer, the Woodrow Wilson MBA in Education Leadership Fellowships in Indiana and New Mexico announced their newest classes.

In New Mexico, 48 current educators seeking careers as school leaders were selected to attend participating MBA programs at the University of New Mexico and New Mexico State University.

The WW New Mexico MBA Fellowship program was launched in 2015 to develop a new model in education leader preparation, equipping graduates to head changing 21st-century schools across the state. The WW New Mexico MBA blends school-based clinical practice with innovative business school coursework to ensure graduates have the knowledge, skills, and abilities to guide schools and

districts in a new kind of education environment while closing achievement gaps. The number of WW MBA Fellows in New Mexico now exceeds 100.

“After teachers themselves, school leaders have the greatest impact on the success of our students,” said WW President Arthur Levine. “New Mexico has committed to providing aspiring leaders with the knowledge, skills, and support they need to head the public schools and school systems of the future.”

In Indiana, building on the success WW has had in helping to strengthen that state’s pipeline of both outstanding STEM teachers and school leaders, 51 new Fellows were named to the state’s WW MBA programs.

In 2014, the first cohort of the Woodrow Wilson Indiana MBA Fellows in

Education Leadership began their work at the University of Indianapolis. This year, the second cohorts of MBA Fellows at Indiana State University and Indiana University’s Kelley School of Business will join a fourth UIndy cohort.

Unlike programs that recruit career changers from other fields to work in schools, the Woodrow Wilson MBA Fellowship is intended for education professionals nominated by their school districts or charter school leaders. Those school systems partner with participating universities to establish internal leadership talent pipelines and cultivate new leaders. Fellows selected have demonstrated effective leadership and will use their knowledge of the education context to help transform schools from within. 

# Summer of Progress for WW Teaching Fellowship: New Classes, STEM Camps



WW Georgia Teaching Fellows at Mercer University during a STEM camp.



Lynetria Sanders TF '17 prepares the students for the car race.



Dezmon Gay TF '17 works with students.



Joey Chan TF '17 helps students with their bridge builds.



The cars that students have built, lined up and ready to race.

The Woodrow Wilson Teaching Fellowship had a busy summer.

In June, at an event with Georgia Governor Nathan Deal and his wife Sandra, the Foundation announced its 2017 class of WW Georgia Teaching Fellows. This year's Fellows will attend programs at Columbus State University, Georgia State University, Kennesaw State University, Mercer University, and Piedmont College. The 63 aspiring educators named for 2017 are among 159 teachers who have been prepared through the WW Georgia Teaching Fellowship program to lead STEM (science-technology-engineering-math) classes in the state's high-need secondary schools.

July saw the announcement of the fourth class of WW New Jersey Teaching Fellows, who began course work this summer at the College of New Jersey, Montclair State University, Rowan University, Rutgers University-Camden, and William Paterson University. The 2017–18 class of WW New Jersey Teaching Fellows brings to nearly 200 the number of candidates

selected through this program to prepare as STEM teachers for high-need New Jersey schools.

Fellows also stayed busy this summer at STEM camps. Two WW Georgia Teaching Fellowship partner universities, Mercer and Piedmont, hosted local students for various day camps. WW Teaching Fellows helped run hands on STEM activities—at the Mercer camps. For Dezmon Gay TF '17, working with students during camp gave him the opportunity to show real-world applications for science and math: "If students can relate to it they will more than likely understand it a lot better."

Shakevia Robinson TF '17 got experience helping students work through activities and concepts. "My favorite moment during the STEM camps was when students overcame their frustrations," she says. "I was able to motivate them to keep trying the various activities and help them understand. It meant so much to me when a student would smile because he or she got it after being frustrated."

Beyond leading activities and teaching students during camp, the Mercer Fellows also got some hands-on learning themselves. Mr. Gay learned the importance of organization and pre-planning when putting together activities and lessons, while Ms. Robinson practiced thinking quickly on her feet. Lynetria Sanders TF '17 worked on different ways of presenting content. "The information has to be differentiated so that all children have a chance at understanding what they are doing," says Ms. Sanders. "Now while I teach, I can continuously be aware of students' needs related to how they learn."

By gathering students from different schools for a summer experience, Ms. Sanders hopes the STEM camps will "plant a seed of interest in those children that came."

"As a result, [the children] can take what they learned back to their classrooms as well as their peers," she says.

"They can be the foundation for extended learning in another school, simply from this experience." 

# Fun and Games: 2017 HistoryQuest Fellows Attend Summer Institute

**U.S.** History teachers from Connecticut, Massachusetts, New Jersey, and Pennsylvania went back to school this fall with a toolbox full of game-based learning strategies. Nearly 50 Fellows in the 2017 class of HistoryQuest Fellows gathered in Princeton, NJ, this summer for the weeklong institute where they relied on design thinking to create games. Developed with the Institute of Play, the WW HistoryQuest program blends games, play, and digital tools to transform both teacher practice and student engagement.

During this year's institute, Fellows had the opportunity to "play-test" with local students. At the midpoint, Fellows took their games to the Lawrenceville School in Lawrenceville, NJ, to demo them with students attending summer camp. Each group of students gave feedback so Fellows could refine their games.

The WW HistoryQuest Fellowship was created in 2015 with a generous grant from Woodrow Wilson Foundation Trustees Walter Buckley and Bill Lilley WF '58, who are deeply committed to improving the teaching of American history.

The 2017 Fellows come from 43 schools in 33 districts across the four participating states. Throughout the school year following the all-expense-paid institute, Fellows have access to virtual workshops and individual coaching as they incorporate the game-based learning principles into their curriculum. All Fellows were first nominated by their schools and/or districts and then chosen through a rigorous selection process at the Woodrow Wilson Foundation. Schools and/or districts were particularly encouraged to nominate teams of teachers, to support collaboration in between formal HistoryQuest sessions, and help in disseminating the game-based strategies throughout the schools and districts.

"These are impressive teachers who will seize the opportunity that HistoryQuest program offers," said Stephanie J. Hull, WW Executive Vice President and Chief Operating Officer. "Some already use games in the classroom, and others are looking



The 2017 WW HistoryQuest Fellows.



Stephanie Hull and program officer Jane Foran observe game play.



WW HistoryQuest Fellows playtest the games they've designed.



Students at the Lawrenceville School play the WW HistoryQuest games.



WW HistoryQuest Fellows tested and got feedback on their creations from local students.

for new instructional strategies. They are all committed to presenting U.S. history in a way that is fresh and engaging—that gets students to think creatively about the forces and decisions that drive historic events and movements. Game-based learning does that. It draws students in."

The key, Dr. Hull said, is not only teachers' use of games in the classroom, but their learning to teach students to think like game designers.

"It's one thing to play something like 'History Bingo' to reward students' memorizing dates and facts," she noted. "In this approach, however, teachers work with students to help them understand the relationships between goals, assets, and outcomes that drive historic developments, and to see how small changes can have large effects. This is a powerful and lasting approach to critical thinking and collaboration." [WW](#)

# Emerging Faculty Leaders Named 2017 Malkiel Scholars

This fall, the first ten emerging faculty leaders in the expanded Nancy Weiss Malkiel Scholars Award Program are working on a wide range of topics: the FBI's mid-20th-century connections with religious organizations in communities of color, the revision of Native American history and cultures by settlers, the legacy of cross-cultural adoptions after the Korean war, and more.

Funded by the Andrew W. Mellon Foundation, the Malkiel Scholars Award supports junior faculty whose research focuses on contemporary American history, politics, culture, and society, and who are committed to the creation of an inclusive campus community for underrepresented students and scholars. Each of the 2017 Malkiel Scholars receives a 12-month award of \$17,500 while working toward tenure. The award is structured to free the time of junior faculty who have passed their midpoint tenure review—including those from underrepresented groups and others committed to eradicating disparities in their fields—so that they can both engage in and build support for systems, networks, and affinity groups that make their fields and campuses more inclusive.

"These are exceptional scholars, every one of them doing impressive work in a field related to 20th-century history, civil rights, and gender issues," said Stephanie J. Hull, the program's director and Executive Vice President and Chief Operating Officer of the Woodrow Wilson Foundation. "Yet all have faced the well-documented pressures that the academy places disproportionately on women and people of color—to serve on additional committees, mentor more students, and take on other kinds of service that, while important, may hinder their own work. This award is designed to assist them in balancing their commitments while continuing to progress toward tenure."

Established in honor of Dr. Nancy Weiss Malkiel, the Malkiel Scholars Awards Program was created on the occasion of her 40th year of service on the Woodrow Wilson Foundation Board of Trustees, including 10 years as its Chair. Dr. Malkiel, who in 1969 became the first woman to join the faculty of the Princeton University Department of History, is a leading scholar of civil rights and race relations in early and mid-20th-century America; she also served for a record 24 years as



Lerone Martin



Susie Woo



Willow Lung-Amam

Princeton's Dean of the College, the senior officer responsible for undergraduate education at the university. Dr. Malkiel is a 1965 Woodrow Wilson Fellow.

The 2017 Malkiel Scholars are poised—like the program's namesake—to play a significant role in shaping American higher education. [WW](#)

## The Nancy Weiss Malkiel Scholars Award: 2017 Recipients

**Lamonte Aidoo** • Duke University, *Romance studies*

**Caree Banton** • University of Arkansas, *African American studies*

**Cara Caddoo** • Indiana University, *history/media*

**Eddie Cole** • College of William & Mary, *education (higher education)*

**Ebony Coletu** • Pennsylvania State University, *English/African American studies*

**Ashley Falzetti** • Eastern Michigan University, *women's/gender studies*

**Sara Gonzalez** • University of Washington, *anthropology*

**Willow Lung-Amam** • University of Maryland, *public policy*

**Lerone Martin** • Washington University in St. Louis, *religion and politics*

**Susie Woo** • California State University — Fullerton, *American studies*

# New Class of Newcombe Fellows Announced



Ean High



Sarah Islam



Daisy Vargas



Hannah Scheidt



Kalonji Nzinga

In late spring 2017, the Woodrow Wilson National Fellowship Foundation named 21 exceptional scholars as Charlotte W. Newcombe Doctoral Dissertation Fellows.

The Newcombe Fellowship is the nation's largest and most prestigious award for Ph.D. candidates in the humanities and social sciences addressing questions of ethical and religious values. The highly selective program provides each Fellow with a 12-month award of \$25,000 to support the final year of dissertation work.

Sarah Islam learned of her Newcombe Fellowship on her birthday. "Little did I know that I'd receive such an incredible birthday present," she said. "I was ecstatic but also incredibly grateful. With the Newcombe, I knew I'd now be able to dedicate an entire year to finishing my project and achieving the quality of work that I was aiming for."

The 2017 Newcombe Fellows are writing on such topics as literary representations

of the Religious Society of Friends, or Quakers, from 1650 to 1865; the definition of sin as a violation of divine law; how religion has shaped institutional structures and experiences of mass incarceration in the United States; and blasphemy as a legal category in early and medieval Islamic history. (See the full list of Fellows in the side bar.)

"Support from the Newcombe has given me a renewed confidence in the cultural value of the work I am pursuing," says Ean High. "This Fellowship means space, and time, and care that would otherwise not be possible."

"It feels incredible to receive such a show of support for the work I am so passionate about," says Hannah Scheidt. "I am humbled knowing how many valuable and insightful projects there are in the fields of religious studies and ethics. This Fellowship is further inspiration to make my contribution as meaningful as possible."

Funded by the Charlotte W. Newcombe Foundation, the Fellowship was created in 1981 and has supported more than 1,200 doctoral candidates, most of them now noted faculty and thought leaders in their fields. The Fellowships are designed to encourage original and significant study of ethical or religious values in all fields of the humanities and social sciences.

"This fellowship gives me the freedom of time," says Daisy Vargas, "time to think about my work, time to write without constraint, and time to engage with broader scholarship."

"The balancing act between teaching, research, writing, and applying for funding is a tricky one, especially if your dissertation project is one that you are passionate about," says Ms. Islam. "I knew that I would need an additional year of funding to be able to work on my research full-time and produce the highest quality of work possible." 

## Charlotte W. Newcombe Doctoral Dissertation Fellows, 2017

**Daniel Cochran** • University of Wisconsin—Madison, art history

**Zebulon Dingley** • University of Chicago, anthropology

**Samuel Gavin** • University of Pittsburgh, philosophy

**Ean High** • Northwestern University, English

**Randeep Hothi** • University of Michigan—Ann Arbor, Asian languages & cultures

**Craig Iffland** • University of Notre Dame, theology

**Sarah Islam** • Princeton University, Near Eastern studies

**Gustavo Maya** • Princeton University, religion

**Alexander McKinley** • Duke University, graduate program in religion

**Kalonji Nzinga** • Northwestern University, learning sciences

**Cyrus O'Brien** • University of Michigan—Ann Arbor, anthropology and history

**Daniel Platt** • Brown University, American studies

**Jennifer Quigley** • Harvard University, Harvard Divinity School

**Hannah Scheidt** • Northwestern University, religious studies

**Brian Smithson** • Duke University, cultural anthropology

**Debby Sneed** • University of California—Los Angeles, archaeology

**Emiko Stock** • Cornell University, anthropology

**Elizabeth Thelen** • University of California—Berkeley, history

**Sabine Tsuruda** • University of California—Los Angeles, philosophy

**Daisy Vargas** • University of California—Riverside, history

**Arthur Zárate** • Columbia University, history

To learn more about the 2017 Newcombe Fellows visit [woodrow.org/newcombe-2017](http://woodrow.org/newcombe-2017)

# “The Most Powerful Instrument in the World”

## Gordon Bower WF '54 on mind and memory

With a father who read the entirety of the *Encyclopedia Britannica*, a high school teacher who took an interest in his intellectual development over his pitching arm, and influential mentors throughout his graduate career, Dr. Gordon H. Bower WF '54 was primed early on not only to love to learn, but to love the very subject of learning.



Gordon H. Bower WF '54

Over the course of his 50-year career as a psychologist, Dr. Bower's research has ranged over a variety of topics, most notably aspects of human memory. In particular, Dr. Bower's research has elucidated the many ways in which memory is influenced by the emotions that people are feeling at the moment. In 2002, the *Review of General Psychology* named Dr. Bower one of the most notable psychologists of the 20th century. In 2005, President George W. Bush awarded him the National Medal of Science for "his unparalleled contributions to cognitive and mathematical psychology, for his lucid analyses of memory and learning, and for his important service to psychology and to American science."

This productive and prodigious career is thanks, in part, to a year Dr. Bower devoted to studying mathematics and philosophy of science at the University of Minnesota as a Woodrow Wilson Fellow.

"It was that year at Minnesota that got me perfectly set up for a graduate career and academic career that I subsequently had, including being an educator and professor of psychology at Stanford," said Dr. Bower.

Out of high school, Dr. Bower turned down multiple offers to play professional baseball and attended Western Reserve University (now Case Western Reserve) on a baseball scholarship. His Fellowship year at Minnesota allowed him to explore further in the philosophy of science and higher mathematics, narrowing down his choice of graduate programs and professors.

He went on to Yale University to study the psychology of learning with Neal Miller, his lifelong mentor. After completing his Ph.D. in learning theory in 1959, Dr. Bower was hired in Stanford University's Department of Psychology, where he would spend his entire career.

As an educator and professor, Dr. Bower spread his intellectual curiosity to his students and advisees.

"I used to hold group meetings at my research lab where we would have think sessions," remembers Dr.

Bower. Students would consider the latest research, and he would exhort them: "Think of some new way to go with our work, with your work, with my work. What's next? How can we dig a little deeper?"

Dr. Bower has served as senior advisor for roughly 54 Ph.D. candidates and received numerous awards for his mentoring. He was a mentor to Stephen Kosslyn (p. 9) and many other notable psychologists. "I'm primarily interested in cloning myself and

them becoming college professors in experimental psychology," he admits.

"A good mentor provides students with the goals and motivation to carry on," says Dr. Bower. "They say to themselves 'I want to have good ideas like those my mentor has.' Moreover, a good mentor serves as a discriminating reinforcement dispenser or critic of students' work. Students learn to value that feedback and encouragement."

Even today, as Stanford's Albert Ray Lang Professor of Psychology, Emeritus, Dr. Bower seeks knowledge and explores his interests by attending classes with his wife on the Stanford campus.

"Being a Stanford professor for 50 years I got to know who were the really good lecturers," he says. "So I could go to classes they were giving that had a big enough crowd that I wouldn't stand out."

While he was working, Dr. Bower would take classes like computer science, artificial intelligence, or other psychology classes. Now that he is retired, he explores interests outside his work, like literature and history. Recently, he and his wife have taken courses ranging from drama to politics, the Great Depression to the short stories of Chekhov.

By following his own sense of curiosity and encouraging students to ask big questions, Dr. Bower has helped to unlock the possibilities of memory and the mind, establishing himself as one of the most influential psychologists of his time.

"The mind is the most powerful instrument in the world," Dr. Bower says in a video produced by the National Science and Technology Medals Foundation. "The mind generates our abilities and it drives what we are. It is the essence of our biography, it contains the processes by which we have evolved. ... Learning and memory is central to the development of human powers." 

# Rethinking Higher Ed Through Cognitive Science

Stephen Kosslyn WF '70 and Minerva's online approach

What would higher education look like if every aspect of the experience was rooted in the science of learning?

Stephen M. Kosslyn WF '70, is exploring this question as founding dean and chief academic officer of the Minerva Schools at the Keck Graduate Institute.

"The Minerva Schools started absolutely from scratch, with no stakeholders or legacy," says Dr. Kosslyn. "That allowed us to step back and do things in a very principled way."

Minerva, which aims to reform the traditional liberal arts college, was founded in 2012. Classes are all taught seminar-style (lectures are banned), online, and are capped at 19 students. The seminars, which take place on a proprietary platform in real time, focus on active learning. The Minerva platform puts students' faces up front on the computer screen during class—there's no avoiding being called on or refraining from debate and one must take part in role playing, problem solving, or other types of activities—and instructors, who are limited to five minutes of remarks at a time, call on all participants. Research on active learning suggests that this kind of personalized, intensive, discussion-driven structure leads to deeper understanding and retention of content and allows students to better apply the concepts to other situations.

"We've been able to use the science of learning in every single class," says Dr. Kosslyn. "We've tapped the vast literature



Stephen M. Kosslyn WF '70

on the nature of how information is taken in, processed, stored, retained and retrieved and done our best to integrate the fruits of such research into every part of the curriculum."

Dr. Kosslyn's work with Minerva is a culmination of work begun during his own college days. He earned his B.A. in psychology from the University of California, Los Angeles and his Ph.D. from Stanford. His research interests center on the science of learning, visual cognition and visual communication.

As a new graduate student, Dr. Kosslyn says, he was inspired by his advisor and mentor, Gordon Bower WF '54 (p. 8). Dr. Kosslyn happened upon a line in the pre-print of a chapter Dr. Bower was publishing in an edited book, which suggested that, if mental images are like pictures, we should be able to scan them. This inspired Dr. Kosslyn to test how distance affects retention and processing of visual mental images, launching his career.

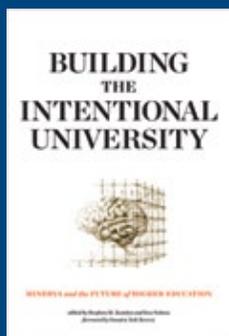
"Gordon is a no-nonsense person," he says. "He really helped me become a critical thinker. I had to learn how to conceptualize and clearly communicate the questions, theories, methods, and findings in cognitive research."

Dr. Kosslyn, best known today for his work on mental imagery, taught for 36 years, authoring hundreds of articles and over a dozen books. He served as the dean of social science at Harvard and the director of the Center for Advanced Study in the Behavioral Sciences at Stanford University. He is a member of the American Academy of Arts and Sciences and a Guggenheim Fellow.

By understanding the how and the why of learning, Dr. Kosslyn says, individuals and schools can gain a greater understanding of themselves and their students, allowing better preparation for the rapidly changing environment and economy of the 21st century. To explore what works best in learning, Minerva is poised to use A/B testing—simultaneously deploying different versions of the same material and approaches—in some seminars: "We can vary the way we teach and see the outcomes and adjust the curriculum accordingly."

Relying on the science of learning and testing what works, Minerva has been developing best practices that other institutions of higher education can implement. The Minerva Schools promise that each student who graduates will have the practical knowledge needed to navigate the professional world of the future.

*Continued on page 13*



## Building the Intentional University: Minerva and the Future of Higher Education

Edited by Stephen M. Kosslyn and Ben Nelson

Want to learn more about the Minerva School's model? Dive deeper into the school's design, methods, and curriculum in this new book edited by the founders of the school. In it, they present the origin story of this new institution as well as offer a path for changing higher education.

# Are Your Cells Listening to Your Thoughts?

Elissa Epel WH '97 on stress and cellular damage

It's been more than 80 years since endocrinologist Hans Selye first noticed, in experiments, the lasting physiological effects of mental and environmental stress. Today it's clear that those effects, says Elissa Epel WH '97, extend all the way to the cellular level—specifically, to the telomeres, the caps on the ends of chromosomes.

Dr. Epel, a health psychologist, recently named to the National Academy of Medicine, is Professor of Psychiatry at the University of California, San Francisco, where she also directs the Aging, Metabolism, and Emotions Lab. With her colleague, 2009 Nobel Laureate Elizabeth Blackburn, she is co-author of 2017's *The Telomere Effect*.

Telomeres, Drs. Epel and Blackburn explain, grow shorter naturally with age, like aglets at the end of shoelaces wearing away. As they do, proteins in the chromosomes are more easily damaged, triggering inflammation, cancer, and cell death.

It is not only age, however, that causes telomeres to wear away. They are also affected by physiological changes connected with diet, exercise, level of fatigue—and mental states. One subsection of *The Telomere Effect*: “Your Cells Are Listening to Your Thoughts.”

“We don't mean that literally,” says Dr. Epel. “The telomeres are more sensitive than any other part of the DNA to the chemicals surrounding them. Like a canary in coal mine, they can send out help signals.” Dr. Epel's and Dr. Blackburn's studies show that people who live with chronic stress—such as caregivers, victims of ongoing violence, even pessimists—have shorter telomeres as the result of hormonal and other physiological changes.

These findings differ somewhat, Dr. Epel explains, from warnings about the now-shorthand “type A personality” first identified in the late 1950s. “We have more knowledge now about what was so bad about being type A. The personality style that makes us more vulnerable to heart disease is hostility—especially cynical hostility, feeling that others have bad intentions. This is also associated with shorter telomeres, especially in men. In women depression appears more important.” Other long-term mental habits that may be associated with telomere damage, she says, include rumination and a style of overreacting to stress by feeling that one's ego is threatened.



Elissa Epel WH '97

“We don't know what came first,” she is quick to add. “If you change personality, do you change telomere length? We do see that an inclination toward hostility or pessimism or impulsivity correlates with cell aging.”

Dr. Epel notes—and *The Telomere Effect* elaborates—that not all stress is “bad” stress. “We are evolved to be efficient at mounting a big stress response and then getting over it.” Indeed, positive challenges, of the sort that come with an athletic competition

or a major presentation, can be highly adaptive, yielding healthy performance and recovery. It's the negative construction of a threat, a long-term habit of anxious or fearful responses, that correlates with shortened telomeres. Any of a number of approaches, from different cognitive habits to diet, exercise, and meditation, show promise for protecting the telomeres and decreasing the rate of cellular senescence.

Even social networks seem to make a difference, Dr. Epel says. “Our cognition unfolds in complete interaction with the social and physical world. There is a concept called extended mind—the new understanding that the mind is not limited to the brain; the brain is necessary for cognition but cognition doesn't solely reside there. Rather, we have a cognitive and emotional ecosystem that involves the body, our environment, other people—even our smartphones. It's fascinating to realize how much more interconnected we are than we think.

“Telomere science shows this. The quality and number of our relationships, the quality of our neighborhood, possibly even the level of greenery—as one study shows so far—may impact us all the way down to the level of the cell.”

In summer 2017, Dr. Epel brought this perspective to the Mind and Life Summer Research Institute, an annual interdisciplinary conversation originated by the Dalai Lama. She is also studying the effects of mindfulness meditation. Smartphone-based studies have shown that a wandering mind correlates with lower levels of happiness; her own research also correlates mind wandering with shorter telomeres. “Mindfulness training,” Dr. Epel says, “is exactly geared to help people be more present and stop being discontent with what is.

“We all spend too much time on screens. It's important to spend time with whatever, or whoever, is right in front of you.” **WWW**

# Philosophical Provocation

## Daniel Dennett WF '63 H on mind

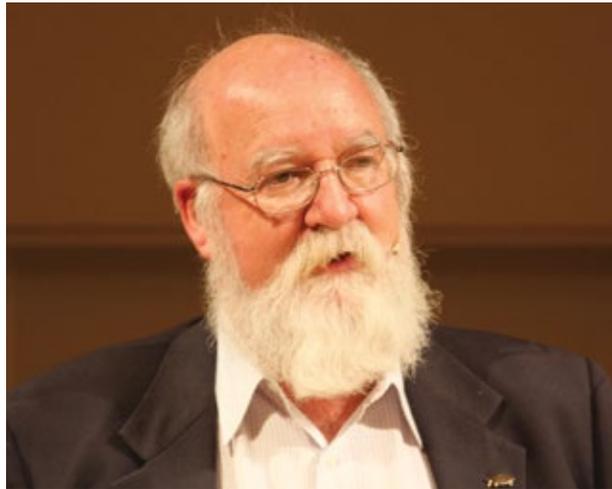
What is this mind that senses and sorts, learns and creates, thinks and therefore is certain that it is? Despite centuries of speculation, religious belief, and philosophical consideration, one thing is certain, says Daniel C. Dennett WF '63 H: "Everybody's an expert," but most of us have no idea of what our minds really do.

"People are calmly prepared to be instructed about the chemical properties of calcium or the microbiological details of cancer," Dr. Dennett writes in his latest book, *From Bacteria to Bach and Back: The Evolution of Minds*, "but they think they have a particular personal authority about the nature of their own conscious experiences that can trump any hypothesis they find unacceptable."

Dr. Dennett is co-director of the Center for Cognitive Studies and the Austin B. Fletcher Professor of Philosophy at Tufts University. Over the past five decades, he has become one of the world's best-known proponents of a physicalist view of consciousness—the contention that what we refer to as consciousness emerges strictly from biological and physiological processes. A leading contemporary thinker on the role of biology and evolution in cognition, free will, and religious belief, he is one of the "Four Horsemen"—along with Richard Dawkins, Sam Harris, and Christopher Hitchens—whose criticism of religious belief ignited widespread debate in 2007.

In the philosophy of mind, the physicalist stance typically opposes Descartes' classic dualism of a metaphysical mind housed inside a material body—"the ghost in the machine," in the famous phrase of Dr. Dennett's mentor Gilbert Ryle. In his multiple drafts model of consciousness, Dr. Dennett famously argues, instead, that consciousness comprises many ongoing mental events and processes which influence each other but have no central author/editor.

Drawn to mathematics and logic early as an undergraduate at Wesleyan University, Dr. Dennett soon transferred to Harvard



Daniel Dennett WF '63 H

**From Bacteria**  
The Evolution  
of Minds **to Bach**  
**and Back**



**DANIEL C. DENNETT**

to work with the renowned naturalist philosopher W.V.O. Quine, whose *Word and Object* he sought to refute in his senior honors thesis. On the day he was to defend the thesis, Dr. Dennett wrote in *Philosophy Now* in 2008, "Quine showed up with maybe half a dozen single-spaced pages of comments. I knew at that moment that I was going to be a philosopher."

During the interview season for the 1963 Woodrow Wilson Fellowships, Dr. Dennett pondered doctoral study at Berkeley or Harvard. Ultimately, however, Ryle's work drew him to Oxford, and he declined the Woodrow Wilson award to go there.

There, in a meeting of a philosophical society, he wondered aloud how the science of the brain might inform the philosophy of mind. "My suggestion was met with incredulous stares," Dr. Dennett recalled in 2008—but it also launched his fascination with neuroscience and other scientific disciplines. As his Harvard classmate (and 1958 Woodrow Wilson Fellow) Thomas Nagel notes in a 2017 *New York Review of Books* account of *From Bacteria to Bach and Back*, Dr. Dennett has a "gargantuan appetite for scientific knowledge."

Indeed, across his 18 books, Dr. Dennett's work has engaged such fields as evolutionary biology, chemistry, computer science, physics, and linguistics, through such volumes as *Consciousness Explained*, *Darwin's*

*Dangerous Idea*, *Sweet Dreams: Philosophical Obstacles to a Science of Consciousness*, and *Breaking the Spell: Religion as a Natural Phenomenon*. His eclectic, relatively accessible, even playful style has made several of Dr. Dennett's books best-sellers; Darwin's *Dangerous Idea* was also a finalist for a National Book Award and the Pulitzer Prize.

In *From Bacteria to Bach and Back*, Dr. Dennett paints expressions of human creativity as their own "intelligent design," emerging naturally from the many "twigs on the Tree of Life" that have preceded them. All the necessary biological and cultural preconditions, he argues, have yielded such geniuses as Bach, Gaudí, and Alan Turing.

So is a central intelligence, he asks, a necessary precondition for learning and creativity? And what happens when the artifacts we create, like artificial intelligences, develop seeming sophistication? "The real danger, I think, is not that machines more intelligent than we are will usurp our role as captains of our destinies," he writes, "but that we will over-estimate the comprehension of our latest thinking tools, prematurely ceding authority to them far beyond their competence."

It is the latest provocative question from one of contemporary philosophy's great provocateurs—a role Dr. Dennett seems to enjoy. 

## BOOK SPOTLIGHT



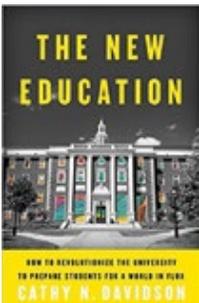
### Russia: The Story of War

By Gregory Carleton MN '87

War is stitched into the very fabric of Russia. Since the thirteenth century, Moscow has served as a battlefield in nearly every century, battling enemies from Mongols to Nazis. In his new book, *Russia: The Story of War*, Gregory Carleton MN '87 explores the way frequent war has influenced the worldview of the Russian people:

*Yet war has had its deepest impact on how Russia sees itself in the world. Here the quantitative factor of saturation leads to a qualitative one, arming it with the impression that its experience of war is unique. Other nations fight, die, attack, and defend, but no other, runs this belief, has faced such a persistent wave of challenges and threats for century upon century. This perceived distinction is so great that it serves as the foundation for a Russian myth of exceptionalism.*

The book “provides a fascinating cultural history,” says the *New York Journal of Books*, and lends an interesting context for the current role Russia plays on the world stage. Dr. Carleton is a professor and department chair at Tufts University.



### The New Education: How to Revolutionize the University to Prepare Students for a World in Flux

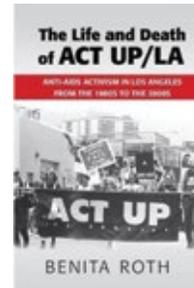
by Cathy N. Davidson WF '70

Higher education as we know it today dates back to the turn of the century, defined by departments and majors and Carnegie units. But in today's world, defined by rapid technological change and a gig economy, are these institutions equipping students with the right tools?

In her most recent book, *The New Education*, Cathy N. Davidson WF '70 introduces education innovators who are reimagining college. With an emphasis on each individual learner, skills like creativity, communication, and adaptability are measured and taught, rather than concentration and proficiency in a single subject. From the Ivy League to large research institutions to small community colleges, Dr. Davidson shows how schools can better prepare

students to succeed in the world today and face the challenges of tomorrow.

Dr. Davidson is the founding director of the Futures Initiative and distinguished professor in the Ph.D. program in English at the Graduate Center, CUNY.



### The Life and Death of ACT UP/LA: Anti-AIDS Activism in Los Angeles from the 1980s to the 2000s

by Benita Roth WS '95

At the height of the AIDS epidemic in the 1980s, a direct action advocacy group called the AIDS Coalition to Unleash Power (ACT UP) was formed. In her new book, *The Life and Death of ACT UP/LA: Anti-AIDS Activism in Los Angeles from the 1980s to the 2000s*, Benita Roth WS '95 chronicles the history of the Los Angeles chapter of ACT UP. The group organized multi-targeted protests locally and nationally, fostering an anti-AIDS activism that resonated throughout the country. Dr. Roth explores the political, cultural, and physical landscapes that affected the L.A. chapter, using a feminist lens to examine the interactions among members and the results of their actions.

“Melding archival data with participant observation and in-depth interviews, Roth connects the local struggles to the national political climate of the times and presents the complexity of intersectionality as both lived experience of community and as a matter of political choices in confronting structured inequalities that are more layered than parallel,” says Alice H. Cook Professor of Sociology at the University of Wisconsin-Madison Myra Marx Ferree.

Dr. Roth is a professor of sociology and women's studies at Binghamton University in New York. This is her second book. Her first book, *Separate Roads to Feminism: Black, Chicana, and White Feminist Movements in America's Second Wave*, won the Distinguished Book Award from the Sex and Gender Section of the American Sociological Association in 2006. [WW](#)

## National Book Awards

As this issue went to press, **Frank Bidart WF '62** won his second National Book Award for his poetry collection *Half-light*. Two Fellows were finalists in non-fiction: **Erica Armstrong Dunbar CEF '03** for *Never Caught: The Washingtons' Relentless Pursuit of Their Runaway Slave, Ona*

*Judge*, and **Nancy MacLean CN '88** for *Democracy in Chains: The Deep History of the Radical Right's Stealth Plan for America*. **Richard Rothstein WF H '63**, was on the non-fiction longlist for *The Color of Law: A Forgotten History of How Our Government Segregated America*.

# NOTES ON FELLOWS

Five WW Fellows received Guggenheim Fellowships this year: **Wendy Brown WS '81**, **John E. Cort CN '87**, **Michael David-Fox SP '92**, **Sharon Marcus WS '92 CN H '93**, and **Adela Pinch WS '87**.

**Alan Dowty WF '60** received a lifetime achievement award from the Association for Israel Studies. Dr. Dowty is professor emeritus of political science at Notre Dame.

**Michael O'Donnell WF '66** marked his 50th year of service at the University of Virginia's College at Wise.

**Hunt Hawkins WF '66** has received a Fulbright Distinguished Chair Scholarship to spend the 2017–18 academic year in Krakow, Poland at Jagiellonian University. He will work in their Joseph Conrad Research Centre and teach literature courses to M.A. students.

Historian and author **Beth Baron WS '87** is the latest CUNY Distinguished Professor at the City College of New York. She is just the 15th current faculty member at CCNY to earn that distinction.

**Ralph Bolton WF '61** was awarded the degree of Doctor Honoris Causa by the National University of the Altiplano in Puno, Peru. Bolton was recognized for his contributions to the understanding of Andean cultures and for his humanitarian work in the Puno region.

**Kirstin Milks TF '09** received an Alumni Excellence in Education award from the Stanford Graduate School of Education for “her work



Alan Dowty WF '60

with students, university faculty and teachers across the country to design authentic science experiences for high school classrooms.”

**Sara Scalenghe CN '04** won the 2016 DHA Outstanding Book Award from the Disability History Association for her book *Disability in the Ottoman Arab World, 1500-1800*. [WW](#)

## RECENT PUBLICATIONS

**Miriam Cohen WS '75**—*Julia Lathrop: Social Service and Progressive Government* (Westview Press)

**Ella Maria Diaz CEF '15**—*Flying Under the Radar with the Royal Chicano Air Force: The Ongoing Politics of Space and Ethnic Identity* (University of Texas Press)

**Katja Garloff MCI '06**—*Mixed Feelings: Tropes of Love in German Jewish Culture* (Cornell University Press)

**Ann Grodzins Gold CN '83**—*Shiptown: Between Rural and Urban North India* (University of Pennsylvania Press)

**Reiko Ohnuma CN '95**—*Unfortunate Destiny: Animals in the Indian Buddhist Imagination* (Oxford University Press)

**Arden Reed WF '70**—*Slow Art: The Experience of Looking, Sacred Images to James Turrell* (University of California Press)

**Marshall Shapo PP '61**—*Shapo on the Law of Products Liability, 7th edition* (Edward Elgar Publishing)

**Rihan Yeh MN '03**—*Passing: Two Publics in a Mexican Border City* (University of Chicago Press) [WW](#)

## Stephen Kosslyn Rethinking Higher Education

*Continued from page 9*

“This idea of practical knowledge can be broken into two categories, based on cognitive function and interpersonal skills,” says Dr. Kosslyn. “The first category includes two core competencies, namely critical thinking and creative thinking; the second category includes another two core competences, using effective communication and effective interaction. These core competencies, in turn, end up defining scores of distinct learning outcomes.”

These learning outcomes also define metrics to assess the students' progress, allow them to assess their own limits, and ensure they will be able not only to understand a given concept, but also to apply it to whatever new situation arises. Minerva's

founders intend that the “leaders, innovators, broad thinkers, and global citizens” who are their alumni will be able to thrive in any careers they choose—even those that don't yet exist.

Testing his own limits, Dr. Kosslyn said, was a notion to which the Woodrow Wilson Fellowship introduced him. When interviewed for the Fellowship, the aspiring graduate student had to prove what he knew in what he describes as a “stress interview.” While the panel gave him a tough grilling, he saw it as an opportunity he hadn't had before.

“For me, it wasn't so much that other people were testing me,” says Dr. Kosslyn. “It gave me the opportunity to prove to myself that I really knew the stuff I thought I knew.” [WW](#)

# FOUNDATION UPDATES

## WW Elects New Trustee

The Woodrow Wilson Foundation Board of Trustees has elected **Anita Manwani Bhagat** to a seat on the Board. Ms. Manwani is the founder and CEO of Carobar Business Solutions, a software services company based in California. An industry expert in operational efficiency, she has worked at startups and established organizations, such as NASA Ames Research, HP, and Agilent Technologies. She has held a variety of executive positions, including heading up global sourcing and serving as the Chairman of Agilent's subsidiary in India.

Ms. Manwani was one of 80 U.S. women selected as a "Technology All Star" for her executive leadership in technology in 2002. She received the YWCA TWIN award



for executive leadership and impact in 2003. In 2011, she was recognized as one of the top 100 Women of Influence in the Silicon Valley and is an American Leadership Forum Senior Fellow. An active community leader, she is deeply committed to education, job creation, and empowering women. She serves on Foothill and DeAnza Colleges Foundation Board and Silicon Valley's Workforce Investment Board (NOVA), and is a founding trustee of Ashoka University. Ms. Manwani holds bachelor's and master's degrees in chemistry, history, and marketing management. She attended the University of Bombay and the University of Cincinnati, where she pursued a Ph.D. in diplomatic history. 

## Longtime WW Employees Receive Service Awards

Two Woodrow Wilson staff members recently received awards for long and outstanding service to the Foundation. Stephanie Hull, serving as Acting President during summer 2017, presented a 20-year service award to **Sue Lloyd**, Manager of Fellowship Application Administration, at the annual Woodrow Wilson staff picnic in August, while **Maria Stigale**, Receptionist and Development Assistant, received a 30-year service award at a subsequent coffee hour. The Foundation thanks and congratulates both of these dedicated employees for their ongoing commitment to excellence. 



Sue Lloyd



Maria Stigale

## WW ON SOCIAL MEDIA

Follow the Foundation and its programs on social media to receive updates and to let us and other Fellows know about your accomplishments.

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## PROFILES: GIVING BACK

When offered the Woodrow Wilson Fellowship, Dr. Saul Sternberg WF '54 turned down two other fellowships for the opportunity to take his studies in a different direction.

"I decided to explore the possibilities in the social sciences by going to a department that would permit that, which turned out to be Harvard's Department of Social Relations," says Dr. Sternberg. There he was able to explore anthropology, sociology, clinical psychology, and social psychology, at a graduate level.



As a young mathematician looking to do something useful for the world, Dr. Sternberg found Harvard a congenial place to hone his skills and interests. The opportunity granted by the Woodrow Wilson Fellowship led to Dr. Sternberg's long and productive career using mathematics and laboratory experiments in the study of human information processing.

After completing his Ph.D. at Harvard in 1960, Dr. Sternberg held a postdoctoral fellowship in mathematical statistics at the University of Cambridge, took up his first academic post at the University of Pennsylvania, and then went on to a research position at Bell Telephone Laboratories for more than two decades. While there, he conducted research in perception, memory, and the control of action, and for fifteen years headed the Human Information Processing Research Department.

"I thought of myself as a teacher at the university level," says Dr. Sternberg, "even with 20 years at Bell Labs, which was not a teaching institution but at which a lot of teaching happened." In 1985 he returned to Penn, where he is a Professor of Psychology.

The impact of Dr. Sternberg's theoretical and empirical contributions to psychology has been recognized by several organizations, including the National Academy of Sciences, which elected him a member in 1982.

Continuing to seek ways to do good for society, Dr. Sternberg supports organizations he believes in and gives back to those from which he has benefited. He has been a loyal donor to the Woodrow Wilson Foundation for many years.

"I was in favor of the goals of the Foundation when I got my award," said Dr. Sternberg. "Of course, some of the goals have changed, but they've changed in a direction I also favor: Developing good teachers at the secondary school level is really important." 

## The Woodrow Wilson National Fellowship Foundation Needs Your Support

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## Kip S. Thorne WF '62 Wins Nobel Prize in Physics



The 2017 Nobel Prize in Physics was awarded to Kip S. Thorne WF '62 and his colleagues Rainer Weiss and Barry C. Barish “for decisive contributions to the LIGO detector and the observation of gravitational waves.”

The three scientists founded LIGO (the Laser Interferometer Gravitational Wave Observatory) in 1984. On September 14, 2015, the universe's gravitational waves were observed for the very first time. The waves—predicted by Albert Einstein a hundred years ago—were the result of a collision between two black holes.

The discovery, according to the Nobel Prize committee, is “already promising a revolution in astrophysics. Gravitational waves are an entirely new way of observing the most violent events in space and testing the limits of our knowledge.”

Dr. Thorne is the Feynman Professor of Theoretical Physics, Emeritus at Caltech. He was featured in the spring issue of *Fellowship*. That story can be found online at [woodrow.org/news/perspectives/stellar-career-kip-thorne](http://woodrow.org/news/perspectives/stellar-career-kip-thorne).



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