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The promise of PERSONALIZED LEARNING

FAST FOOD and social change

The JOHN LEWIS Pardee RAND Commencement Address

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Remembering Charles Wolf Jr. A pioneer in public policy, a legend at RAND

On the ground in Uganda
Researchers fight to save lives from HIV

Voices Countering the Islamic State, one social media post at a time

Giving A commitment to diversity

at RANDom RAND’s man in the moon

Journalist and RAND trustee Soledad O’Brien hosted the opening night of RAND’s signature postelection Politics Aside forum in November 2016.
Cocaine Nosedive

It might be one of the most stunning drug-policy success stories in recent history: From 2006 to 2010, cocaine use in the United States appears to have collapsed by roughly 50 percent, according to RAND estimates.

There’s only one problem. Nobody is quite sure why it happened.

RAND researchers measured the drop in 2014 as they estimated the size of illicit drug markets for the White House Office of National Drug Control Policy. They cautioned that there was uncertainty in those estimates, but they seemed to show cocaine consumption crashing from roughly 300 pure metric tons in 2006 to 150 in 2010.

That would be one of the sharpest drops ever seen in the use of any illicit drug, anywhere. But as a recent RAND paper noted, no fewer than a dozen theories have emerged about what caused it.

Many of those focus on the tightening supply of cocaine reaching the United States. They point, for example, to eradication efforts in Colombia, more drug seizures across Central America, and better cooperation between the U.S. and Mexico to stop traffickers.

But other factors could be at play. Some Colombian farmers were abandoning their coca harvests in favor of illegal gold mining. Some heavy cocaine users in the U.S. may have aged out of the market—or switched to marijuana or opioids. The Great Recession may have priced some users out as cocaine prices rose.

The answer could influence how policymakers and researchers think about drug policy—but it’s entirely possible there is no single answer, RAND researchers wrote. Instead, they argued, it may have taken a “perfect storm” of policies and events to cause America’s cocaine nosedive.

MORE AT
WWW.RAND.ORG/T/EP66463

A Taste for Waste

Americans waste billions of dollars every year on medical tests and treatments that have little value. A recent RAND study provided a first-of-its-kind look at the scope of the problem, and the cost savings that could come from addressing it.

Researchers examined a random sample of insurance records from nearly 1.5 million people to see how often they used one of 28 procedures singled out by health experts as providing little medical benefit. It was a relatively small subset of procedures, from only a sample of patients—and yet the researchers found nearly $33 million in one year of unnecessary spending on such low-value treatments.

Those included hormone tests for thyroid problems, imaging for uncomplicated headaches, and, accounting for $12.1 million alone, spinal injections for lower-back pain. Spending on such low-value health care was highest among white and higher-income patients, and in the Southern, Mid-Atlantic, and Mountain states, the researchers found.

The study was the first to examine low-value care in a nationwide group of adult patients with commercial health insurance. Its prescription for fighting that kind of health-care waste: renewed efforts by policymakers, insurance plans, and providers to discourage such low-value treatments, and special attention to patient groups at greatest risk of overusing them.

Reducing the use of low-value treatments and services would not just reduce the cost of American health care, the researchers concluded; it could also improve the quality.

MORE AT
WWW.RAND.ORG/T/EP66620
The Skinny on Healthy Habits

A program that teaches middle-school students to eat healthier and exercise appears to make a difference for those who need it most, RAND researchers found—about nine pounds of difference, in fact.

The program, called Students for Nutrition and eXercise, or SNaX, combines five weeks of student training, peer advocacy, and education with take-home activities and healthier fare in the cafeteria. Its goal is to not just educate students about diet and fitness, but to teach habits that stick after the five weeks are over.

Researchers tracked hundreds of students from 10 Los Angeles schools, half of which were chosen at random to get the program and half of which did not. For most students, they found, the program did not affect body-mass measurements over two years—with one major exception. Obese students who went through the program had body-mass indexes two years later that were more than two percentile points lower than those of their obese peers in the other schools. Those students were about nine pounds lighter, on average, than they would have been without the program.

The study was one of the first to assess a school obesity-prevention program with the rigor to show such a clear cause-and-effect impact. It suggests, the researchers wrote, that even brief school-based interventions can have long-term consequences for student health.

FAIL! Evidence of Disproportionality in School Discipline

African-American students in a recent RAND study were suspended or expelled from school at nearly twice the rate of their white classmates, a disparity that could not be explained by risk factors other than race.

A growing body of research has documented that same racial divide in school discipline, and the damage it does to individual students and society at large. The RAND study surveyed thousands of students in California high schools to take a deeper look at the dynamics of school discipline—and at ways to keep more kids in class.

Race was not the only association it found.

Marijuana use, for example, was a strong predictor of school discipline problems, despite a common perception among teenagers that it has few consequences. Another risk factor: skipping homework. That may seem intuitive, but it suggests after-school study hours or tutoring could help keep students out of trouble at school.

Students whose parents had higher levels of education were less likely to be disciplined than students whose parents had less education—even for the same behavior, such as marijuana use.

But none of those risk factors could explain away the racial disparities the study revealed. Around 8.5 percent of the African-American students said they had been suspended or expelled in the past year. That compared to 6 percent of the Latino students, 4.3 percent of the white students, 3.7 percent of the multiracial students, and 1.9 percent of the Asian-American students.

That underscores the need for structural change in how schools discipline students, the researchers wrote. That might mean better teacher training, a reassessment of school policies with an eye toward ensuring equal treatment—or entirely new forms of discipline that keep students in school.
RAND hosted its fifth Politics Aside forum on November 11–12, 2016, at its headquarters in Santa Monica, California. This signature postelection event engages policymakers, business leaders, and RAND experts for a series of nonpartisan discussions on critical issues of national and global importance. Friday evening’s festivities were hosted by journalist and RAND trustee Soledad O’Brien; Saturday’s all-day event was hosted by journalist and RAND trustee Malcolm Gladwell.

“RAND is home to an extraordinary collection of thinkers, academics, and policy wonks. It’s the greatest intellectual playground in America, and I’d like to welcome you here for Politics Aside, during which we’ll look at the complexities of decision-making and the surprising places facts and objectivity can lead us.”

—Malcolm Gladwell
RAND’s president and CEO, Michael Rich, spoke on The Erosion of Truth. “A policy debate featuring different interpretations of the same facts, that’s healthy. It promotes compromise and consensus. But a policy debate featuring opinions about opinions? Without an agreed-upon common set of facts? That’s a recipe for gridlock.”
MORE AT www.rand.org/b16pola-rich

In a discussion with O’Brien, DJ Patil—deputy chief technology officer for data policy and chief data scientist in the White House Office of Science and Technology Policy—offered an example of how data science can help reduce the number of Americans who cycle through the nation’s 3,100 jails each year.
MORE AT www.rand.org/b16pola-patil

What might daily life be like once autonomous vehicles populate the roads? With the help of her RAND colleague Timothy Bonds, information scientist Nidhi Kalra described what may occur in the not-too-distant future.
MORE AT www.rand.org/b16pola-kalra

Journalists Soledad O’Brien and Leslie Sanchez discussed challenges to their profession in the age of social media.
MORE AT www.rand.org/b16pola-sanchez

MORE AT www.rand.org/b16pola-rich

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MORE AT www.rand.org/b16pola-patil
“When we look at school level effectiveness, we oftentimes see that some of the schools that parents think are the best are not actually getting the most gains in student outcomes,” said V. Darleen Opfer (left), director of RAND Education, during a panel discussion on Measuring the Unmeasurable with Gladwell and behavioral scientist Laura Hamilton (right).

MORE AT www.rand.org/b16pola-teaching

Susan Dentzer, a health policy expert and director of the Network for Excellence in Health Innovation, moderated a discussion with cardiologist Eric Topol, director of the Scripps Translational Science Institute, and Mark Friedberg, a physician scientist at RAND, on The Price of Personalized Health Care.

MORE AT www.rand.org/b16pola-topol

Gayle Tzemach Lemmon, a Council on Foreign Relations senior fellow, interviewed former U.S. defense secretary William Perry, whose memoir My Journey at the Nuclear Brink, was published in 2015.

MORE AT www.rand.org/b16pola-perry

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MORE AT www.rand.org/b16pola-teaching

At the event’s concluding reception, Gladwell interviewed Jeff Luhnow, general manager of the Houston Astros, to discuss The Art of Data in Baseball. According to Luhnow, the traditional baseball scout’s keen eye is no longer deemed sufficient to rate talent. Analysts check curveball spin rates, computer-modeled swing mechanics, and even players’ sleep habits.

MORE AT www.rand.org/b16pola-luhnow
Global Engagement

A Conversation with Antony Blinken

Antony Blinken, then U.S. deputy secretary of state and former deputy national security adviser for President Obama, delivered a keynote address at RAND’s Politics Aside event in November 2016 to a group of RAND researchers, Pardee RAND students, and RAND supporters. Here are excerpts from his remarks.

On our national interests
Our national interests demand our global engagement, and our global engagement has profoundly advanced our national interest. More than 70 years in the making, the global international order of institutions, of rules and norms, has helped create stability and space needed for countries to prosper and for human beings to innovate. Virtually every advantage that we enjoy draws a direct line to this international order—from the goods that we buy that flow freely across borders, to public health systems we rely on to stop outbreaks from becoming epidemics, to environmental safeguards we’re counting on to preserve the planet, to the high standards of rule of law and accountability that help our ideas blossom into business. And we know that the resulting progress has lifted billions of people out of poverty.

When you step back and look at the big picture, people are healthier, wealthier, better educated, and more tolerant than at any time in human history.

On trusted institutions
The information revolution has brought more information to more people in more places in real time. But that same abundance also fuels greater polarization and amplifies a sense of chaos. When I started working in government back in the early ’90s, everyone did two things that they no longer do. At 6:30, you’d stop what you were doing, turn on your TV, and watch the national evening network news—CBS, ABC, NBC. In the morning, you’d pick up a copy of the New York Times or Washington Post or Wall Street Journal. We operated from a shared, accepted fact base, defined by trusted curators. Now we’re hooked up to an intravenous feed of unvalidated information, locked in an infinite echo chamber that tends to reinforce our own beliefs and crowd out—not bring in—different perspectives. In this Wild West of information flow, mistruths rapidly gain legitimacy and bot-led disinformation operations escape exposure, undermining trust in civic institutions.

Social media’s connected billions on the planet and helped communities find common ground, but it’s also become the tool of choice for trolls to bully, violent extremists to recruit. Taken together, these unintended consequences have created almost a perfect storm of discomfort, discontent, self-doubt—indeed, even the utter rejection of the global system that’s helped produce unprecedented progress in the first place.

On the dignity of work
A year ago, I visited a UNICEF-run community center for Syrian refugees in Jordan and sat down with ten or twelve young people. Despite enduring extraordinary hardship and uncertainty, they each had a vision for what they wanted to do. One young woman wanted to be a fashion designer, another a doctor, a couple of the young men wanted to be in business and computers. We got to talking about computers. I wanted to know,Did they have access to computers? To my pleasant surprise, virtually all of them did. I got out my own smartphone and asked if they knew what it was. They said, Sure, that’s an iPhone. I asked them if they knew who makes the iPhone, and they said, Apple. Then I asked, Do you know who founded Apple? One of them said, Yeah, Steve Jobs. Then I asked, Do you know where Steve Jobs’ father came from?—and there was silence. And the answer, of course, is Syria. Every single one of those young men and women could be the next Steve Jobs.

Our job, if we can, is to just give them that opportunity. And even if they’re not going to become the next Steve Jobs, even if a refugee from Syria or Jordan or someone from an underserved community here is not going to reach that level, they can, they must become productive members of our society, able to contribute, to provide for themselves, provide for their families, to have the basic human dignity of feeling like they are in some way making a difference. Every single person deserves that opportunity, and that in a larger sense is the challenge before us.
Senior international defense policy analyst Sina Beagley spent more than a decade in government service, most recently as director for intelligence and information security on the National Security Council (NSC) staff and on the Disclosures Task Force at the White House. At RAND, her research focuses on counterterrorism policies; cyber strategy; electronic intelligence; and balancing between intelligence, privacy, and national security. Thanks to unrestricted donor support that RAND receives, she recently was able to quickly mobilize a research team to analyze the effects of a widespread data breach of more than 20 million U.S. government personnel and security files.

What drew you to RAND?

I was at a point of satisfaction with my government service—both what I contributed and what I experienced. My hope in coming to RAND was to be able to continue to leverage what I learned to further policy-making and strategic thinking about hard national security problems. In government, I worked on a number of national security issues that frequently were more crisis management and response—cyber issues, counterterrorism issues, or response to unauthorized disclosures. Coming to RAND allowed me to take a much-needed strategic step back, to really think about the lessons learned and what that might mean for a strategic approach moving forward.

My government experience very much is shaping my RAND research. One project I’m working on is focused on countering violent extremism and making recommendations on how programs that do so might be evaluated effectively. Another is on helping the government find solutions to the significant challenges with the current classification system—from classification, to overclassification, to declassification, to leaks and unauthorized disclosures. A third project is looking at how attitudes toward privacy might shift over time globally, and how that might affect governmental and national security interests. Truly, it has been a very natural fit to combine my government experience with RAND’s research capabilities to offer well-researched, objective recommendations for policymakers to consider.

Before joining RAND, you helped coordinate the government’s response to unauthorized disclosures by Edward Snowden. Has the leak changed how the government handles sensitive information?

In the wake of the Snowden disclosures, the U.S. government bolstered insider threat programs, announced reforms to certain intelligence programs, and issued additional guidance to the intelligence community on parameters for conducting surveillance. And in the wake of the data breach suffered by the Office of Personnel Management in 2014–2015, the government launched a cybersecurity ‘surge’ to bolster security measures protecting similar sensitive data on other government unclassified systems. But no system or protective measure is likely to be 100 percent foolproof. A determined adversary may well get access to sensitive information again despite increased security. Looking to that future, it is important for the government to prioritize efforts to better protect sensitive information in a responsible manner through technology and policy, and to ensure the custodians of Americans’ secrets are trustworthy through effective and modern screening processes.

How does one balance intelligence, privacy, and security?

The challenges to balancing intelligence, privacy, and security are many—they span domestic privacy concerns, international affairs, counterterrorism, and commercial-sector trust and profitability. There’s no one-size-fits-all approach. A government cannot govern if it doesn’t have the faith and trust of its citizens. And today, a government also cannot conduct the intelligence activities it must without encountering commercial-sector technology that we all use to communicate, connect to the internet, measure our health, and conduct our daily activities. In a world where technology is changing capabilities and raising more privacy and security questions faster than government policy can address them, balancing privacy and security will have to be a continual process of dialogue with the public; good governance and risk management; and evolving law, policy, and oversight parameters.

What comes next for you?

The challenges we face in the national security realm are very complicated. If I can offer some measure of helpful research to address them—informed by my experience at the Pentagon, the National Counterterrorism Center, and the National Security Council—then I will feel like I’m contributing to the solution and enhancing national security overall.
Kids with high attendance performed better in math and reading after two summers compared with students in the control group, who were not invited to participate in the programs.

These findings are correlational but very likely due to the summer learning programs. The differences in the performance between the “high attenders” and the control group are the equivalent of about 20%–25% of a year’s learning in language arts and math at this age. These benefits persisted throughout the 5th-grade school year.
Research in Action

On the Ground in Uganda

By Doug Irving, Staff Writer

Over the past ten years, RAND researchers have been having a measurable impact on the lives of Ugandan men and women struggling with HIV and depression.

ENTEBBE, UGANDA

He was thirty-nine years old but moved like an old man, his body weakened by HIV, his right side withered by stroke. At a crowded clinic here, he confessed that he could not stop crying, and a voice in his head kept telling him to end it.

He had already bought a rope.

His HIV diagnosis would have once been a swift and sure death sentence here. But stunning advances in antiretroviral drugs have helped transform the disease into something in many ways more complicated: a chronic condition—a life sentence.

A small team of RAND researchers has spent years working with local clinics in Uganda to help people not just survive HIV, but learn to live with it, and even thrive. Their work has helped treatment-weary patients keep up with their medicine, delivered care to itinerant fishermen, and let one desperate man, aged beyond his years, see the way to another day.
RAND researchers have worked with local clinics in the capital city of Kampala, and surrounding districts near Lake Victoria, to help deliver health care in Uganda.
HIV is ubiquitous in Uganda

It might not seem that an American trucker has much in common with a fisherman on the rough waters of Lake Victoria. Or that lessons learned in the busy HIV clinics of Kampala could improve diabetic care in the United States. But there are common threads here, and they run through the research RAND has been doing in Uganda for more than a decade: the difficulty of getting treatment to people on the move; the social and psychological costs of chronic disease; the day-in, day-out drudgework of keeping up with a drug regimen.

The reality of life in Uganda puts those challenges into stark relief. The country is about the size of Oregon, with a population approaching that of California—and, with 1.5 million cases, more people living with HIV than in the entire United States.

“Everybody is touched by the epidemic. Everybody has a family member that is touched by the infection. Everyone is impacted,” said Glenn Wagner, a senior behavioral scientist who leads RAND’s work in Uganda.

“It’s an opportunity to really have an impact,” he said, “to go beyond the completion of a study, the publishing of a paper, and really change how community services are provided.”

Meeting people where they are

That’s what led senior behavioral scientist Laura Bogart to the fishing islands of Lake Victoria. She had asked clinic staffers in this rural part of Uganda where they needed help the most. In response, they took her to a remote village—to a tent where fishermen were being tested for HIV.

They were desperately poor—men whose very lives depended on chasing migrating schools of fish across the African Great Lake. Bogart watched them emerge from the tent staring at pieces of paper that said they were HIV-positive, with the name of a clinic some thirty miles away for treatment.

She could see from their faces that those thirty miles might as well be three hundred. They would never make it.

Bogart and the community clinicians started making trips to the islands themselves, sometimes making the rough crossing as water swirled around their feet in the bottoms of the boats. The clinicians tested hundreds of fishermen and their families in those few months, at times going door to door, and then delivered drugs to the more than one in ten they found infected with HIV.

It was not as easy as setting up a tent. But it demonstrated that meeting people where they are—not just with tests, but with treatment—could save lives in such hard-to-reach, on-the-move communities.
RAND senior behavioral scientist Laura Bogart made trips to the islands of Lake Victoria to deliver health care services to desperately poor fishermen and their families.
“It’s about not just making incremental change,” Bogart said. “It’s the potential to do something, to get treatment to these fishing villages that never had it before. There’s still a long way to go, but this one piece is significant.”

**Behavioral economics in situ**

Sebastian Linnemayr knew the people he saw at the HIV clinics had been up since before dawn, waiting in line for hours for a few minutes with a doctor. They were on drug regimens that demanded near-perfect adherence, no excuses. They could live with the disease they carried if they kept up—but their lives would never be the same.

Linnemayr is a senior economist at RAND whose work in Uganda had focused on labor markets and loan programs. He wondered whether basic economics could give those people standing in line a little reward—a nudge—to help them keep their appointments and stick to their drug regimens.

He put numbered cards in a bag and announced a lottery, open to anyone who kept up with the treatment. The prizes were little more than tokens: an umbrella, a thermos, a $2.50 mug. It wasn’t buying adherence—it was playing on a simple principle of behavioral economics, turning a chore into a challenge, a grind into a game.

And it worked. The number of patients with near-perfect adherence jumped by 20 percentage points. Just as astonishing: People left the clinic laughing.

“It really showed how we can use economics to get people healthier,” Linnemayr said. “Put yourself in the shoes of the people in Africa who have so many competing demands. You’re trying to do something that makes a difference in their lives, not just something that makes sense from a research point of view.”

**Hope for people with depression**

That’s a message Wagner has tried to live for more than a decade. He was part of RAND’s earliest work in Uganda, a 2006 study on expanding access to life-saving drugs. He’s returned at least a few times almost every year since then, building a tight partnership with clinic leaders and local researchers that has helped shape and strengthen RAND’s research there.

He also helped found a nonprofit shelter in the capital city of Kampala—Covenant Youth Home—that now houses, educates, and counsels fifteen former street boys.

His recent research has focused on improving not just the physical health of people living with HIV, but their mental health as well. It’s driven by what he saw at clinics across Uganda, where people would describe crushing sadness, sleepless nights, trouble concentrating—what one woman described as bad feelings.

Depression and other mental health problems are common in people with HIV. But the clinics often had only a few nurses, a medical officer—and patient lists hundreds of names long. Few had the time, much less the experience, to screen patients for depression and get them the help they needed.

Wagner teamed up with local researchers to develop a simple checklist protocol that nurses and other clinic staffers could use to quickly assess patients for depression. In hundreds of cases, it has proven just as effective at getting depressed patients into treatment as evaluations by trained doctors.

“It just brings hope to people,” Wagner said.

He didn’t have to wait long to see the impact. One of the first patients the clinics screened with the new protocol was that thirty-nine-year-old man, half-paralyzed by stroke. He told his story as a nurse worked through the questions: He was HIV positive. His wife had left him. He couldn’t work. He had lost sleep, lost his appetite, lost the energy to keep up with his daily routine.

The nurse diagnosed him with severe depression and assured him he could get treatment. “You mean ‘it’ has a name?” he asked. And then he smiled.

He asked if someone would accompany him home. He had a rope, he explained, but he didn’t think he’d need it, and he wanted someone to take it off his hands.

RAND’s work in Uganda benefits from strong partnerships with Mildmay Uganda, an organization that operates HIV clinics there, and with researchers at Makerere University in the capital city of Kampala.
“It’s a partnership, a collaboration. What makes it so good is, we have a common goal. We exchange ideas, we come to a consensus: ‘This is what we need to work.’”

TONNY KIZZA OF MILDMAY CLINIC IN UGANDA, WHO HAS WORKED AS A STUDY COORDINATOR WITH THE RAND TEAM
A Legend in His Own Time

By Valerie J. Nelson, Staff Writer

Charles Wolf Jr., a leading economist and founding dean of what is now the Pardee RAND Graduate School who was regarded as one of the intellectual founders of modern policy analysis, passed away in October 2016 at the age of 92.

"Charlie Wolf was a significant figure at RAND for much of its history," said Michael D. Rich, RAND’s president and CEO. "As a leader of our Economics Department and founding dean at the school, he helped shape generations of economists, statisticians, and policy analysts. And his personal research made impressive scholarly contributions to several fields at critical junctures in time."

Within RAND, Wolf held another unique distinction—he was the first employee to mark 60 years with the institution, joining it as a senior economist on June 23, 1955. He remained professionally active until days before his death, a familiar figure at both RAND’s headquarters campus in Santa Monica and at Stanford University’s Hoover Research Institution, where he was a senior research fellow.

Wolf was also committed to RAND as a philanthropist, making major and regular contributions to the graduate school’s endowment with his wife, Theresa.

In the early days of RAND, the Cold War was a dominant issue and Wolf was considered one of "the two or three most authoritative and insightful analysts of Soviet economics," senior fellow David C. Gompert wrote in a 2015 tribute marking Wolf’s 60th year at RAND. "When Wolf spoke, everyone listened."

Years before it happened, Wolf predicted the demise of the Soviet Union through economic exhaustion and ethnic dissension. His analysis proved prescient when the collapse finally came in 1991. And in the early ’60s, he had been the first RAND researcher to visit Vietnam in an official capacity, as an economic expert on a presidential commission assigned to survey the situation in Southeast Asia.

A prolific researcher, Wolf had nearly 300 academic publications to his name and had written more than a dozen books. His research focused largely on economic development, particularly in Asia; the economics of communist systems and their later transitions to market-oriented societies; foreign aid and security assistance; and burden-sharing among allies.

From 1967 to 1981, when Wolf led the Economics Department, he hired and nurtured notable new talent at a time when the institution was working to sustain its reputation in national security research while expanding its research on domestic policy. His new hires were soon designing the RAND Health Insurance Experiment, begun in 1971 and widely regarded as one of the largest and most important studies of health insurance. Its conclusions encouraged the restructuring of private insurance and helped increase the stature of managed care.

When RAND launched a graduate school in policy analysis as a five-year experiment in 1970, Wolf became its founding dean. He led the school for nearly 30 years. From the start, it was regarded as
one of the most rigorous policy analysis programs in the country. The school has awarded doctorates to hundreds of graduates, many of whom have become leading thinkers and decisionmakers in government, business, academic, and nonprofit organizations.

In the late 1990s, alumni of Pardee RAND and other donors honored him by establishing the Charles Wolf Jr. Endowed Lecture Series to bring noted economists and speakers to the school to address important and timely policy issues. In 2014—the year Wolf turned 90—alumni and Wolf’s friends set up another tribute fund to support future students of the school.

Born in 1924 in New York state, Wolf attended Harvard University, earning a bachelor’s degree in economics in three years. After graduating in 1943, he enlisted in the Army and was soon serving in Italy as a corporal in the Office of Strategic Services, the wartime intelligence agency of the United States during World War II. He spent part of 1943 at Stanford University, where the intelligence agency taught him Dutch. Wolf was also fluent in French.

He twice served as a Foreign Service Officer with the Department of State, from 1945 to 1947 and again from 1949 to 1953. Wolf also received a master’s in public administration in 1948 and a doctorate in economics in 1949 from Harvard.

In the early 1950s, he taught economics and Asian and Far East studies at Cornell University and the University of California, Berkeley.

In 2007, the government of Japan presented Wolf with the Order of the Rising Sun, Gold Rays with Neck Ribbon—one of the highest honors it awards an academic. It was given in recognition of the role he and his research played in facilitating the maturation of Japan’s relationship with the United States.

As a pioneer in the field of policy analysis, Wolf helped found its flagship professional organization, the Association for Public Policy Analysis and Management, in 1979 and served as its second president. He also helped launch the group’s policy analysis journal and wrote widely on the subject.


Charles Wolf passed away on October 24, 2016. A version of this essay appeared on rand.org the following day.
The Islamic State in Iraq and Syria (ISIS) has made headlines with its dramatic and effective exploitation of social media. The organization has drawn on a variety of social networking applications to promote its cause, including Facebook, Instagram, Tumbler, Ask.fm, and, most prominently, Twitter.

ISIS has used Twitter to disseminate slick yet violence-ridden propaganda videos, promote its religious ideology and state-building efforts, and make one-on-one connections with prospective recruits. Its social media prowess has quite possibly played a part in ISIS’s enormous success in recruitment and in inspiring deadly attacks throughout the world. These successes have led to the perception that ISIS is “winning the war” on Twitter. However, the reality is a little more complicated.

While Twitter serves up ISIS propaganda and helps the group achieve its goals, it also gives the broader public a unique window into the social networks of extremist supporters and allows researchers to study the impact of extremist messaging. In addition to exposing ISIS supporters, Twitter provides an opportunity to assess the structure and messaging of ISIS opponents, since it is home not only to ISIS recruiters and advocates but also to many in the Middle East who do not support the Islamic State. ISIS supporters talk up themes of defending Islam, recruiting new fighters, promoting state-building efforts, and critiquing the West, while ISIS opponents fight back by accusing ISIS of subverting Islam, highlighting ISIS violence, and trumpeting its terrorist threat.

Countering ISIS in the real world also requires countering its messaging online. However, it has been widely
acknowledged that overt U.S. messaging against ISIS will likely fall flat. The United States is not trusted in the region and is poorly positioned to directly address theological or other factors that motivate young recruits.

Because of this, it is critical that the United States and its international partners work with influential communities in the region that can more effectively and credibly counter the ISIS narrative. A successful counter-ISIS messaging campaign requires understanding of the unique audience segments that constitute both the ISIS supporter and ISIS opposition networks, as well as the key themes that motivate them.

RAND’s recent report, Examining ISIS Support and Opposition Networks on Twitter, analyzed ten months of Twitter data between July 2014 and May 2015. Using these data, we determined that, contrary to public perception, ISIS is not dominating the Twitter conversation. Counting pro- and anti-ISIS user accounts, ISIS opponents generally outnumber supporters six to one. Anti-ISIS content outnumbers pro-ISIS content four to one. However, per user, supporters produce 50 percent more tweets, 60 per day on average, compared to opponents’ 40 per day. More importantly, supporters employ a sophisticated social media strategy to push a cohesive and alluring message.

Unfortunately, ISIS opponents are deeply divided along sectarian and national lines. Employing network and text analysis, we distilled 23 million tweets from 771,321 users into 36 distinct communities and ultimately into four major metacommunities: Shia, Syrian mujahedeen, Sunni, and the aforementioned ISIS supporter community. Within the Sunni community, ISIS opponents are further fractured, with very distinct resonant themes that appear to align with different Middle East nation-states.

So what do these findings imply for a counter-messaging strategy? Most importantly, such a strategy needs to take into account the different issues and concerns of the various communities opposing ISIS and tailor messaging accordingly. ISIS opponents are plentiful but may require assistance from the U.S. State Department—in the form of social media training and other engagements such as security education and providing unique content—to enhance the effectiveness and reach of their messaging.

It is crucial that opposition to ISIS come from credible voices within each community—a “one size fits all” message from an outsider will not be effective. The findings in this report will be helpful in determining the various themes to emphasize for each community, in partnership with non-governmental organizations, community leaders, and others interested in countering ISIS online and in the real world.

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Wang’s commitment to giving minorities and other underrepresented groups a foothold on opportunity drives his support of Pardee RAND.

David Wang calls them muddy-shoe assignments. Those were the jobs at International Paper Company that led to a big desk and a nameplate on the door—supervisory jobs at the muddy front lines of factories or forests. And Wang, an executive vice president, spent his career trying to get more minorities into those assignments to move them up the corporate ladder.

That same commitment to diversity—to giving minorities and other underrepresented groups a foothold on opportunity—now inspires his support of the Pardee RAND Graduate School. His gift of $500,000 has allowed the school to provide diversity scholarships and expand its diversity initiatives. He and his wife, Cecile, are also members of RAND’s Legacy Society, having pledged to the school an additional $1.5 million in their estate.

“Policy, whether it’s national or regional, affects every American, regardless of background,” Wang said. “Those policies ought to be researched and developed by the same people.”

Wang speaks from experience. He was born in China and moved to the United States as a teenager. He earned degrees in mechanical engineering and then worked his way up the ladder, through those muddy-shoe assignments, until he was a vice president at one of the largest paper-and-pulp manufacturers in the world. He retired from International Paper in 1991.

His support of Pardee RAND dates back nearly a decade and includes six years of service on the school’s board of governors. He was drawn to the school by its commitment to top-level research and analysis, and to applying it in the real world and not just in the classroom.

That kind of rigorous, nonpartisan research has become especially important in this era of politics by ideology—what RAND’s president, Michael Rich, has described as a national epidemic of truth decay.

“We’ve become completely detached from the factual world,” Wang said. “There’s a real need for creative, analytic research. The most complicated engineering problems are not solved by ideology; they’re solved by discovering facts.”

And that, Wang said, requires approaching problems from a diversity of viewpoints. His gifts in recent years have not only helped to support that wider perspective at Pardee RAND, but also aimed to raise the school’s profile in minority communities.

With his help, for example, the school has been able to launch a training program for faculty leaders recruited from historically black and Hispanic-serving colleges. It recently partnered with an international leadership organization, the Eisenhower Fellowships, to bring mid-career professionals from Africa for a three-day policy boot camp.

The David I.J. Wang annual diversity scholarships attract minority students from nontraditional sources, to help get their shoes muddy in public policy research. Additionally, Wang’s dissertation funding is advancing students’ work on topics such as homelessness in Los Angeles, the financial choices of college students, and workers’ compensation for migrant workers—crucial issues for which RAND has no traditional research sponsors.

“We know that by investing in these students, we are making a difference,” Wang said, “not only in their lives, but in the lives of those who will be touched by their work.”

Pardee RAND 2016 Eisenhower Fellows

Pardee RAND was founded in 1970 as one of eight graduate schools created to train future leaders in the public and private sectors in policy analysis.

For more about Pardee RAND, visit www.prgs.edu.
Moon Express, SpaceIL, and Synergy Moon are just a few of the competitors vying to be the first private companies to reach the moon. Meanwhile, RAND is already there.

Three craters on the far side of the moon are named for Ernest Harry Vestine, a physicist who worked at RAND from 1957 until 1968. Formerly known as Crater 111, Crater Vestine was renamed by the International Astronomical Union (IAU) in 1970, two years after the scientist’s death. In 2006, the IAU designated Vestine A and Vestine T—two smaller craters that are satellites of the original.

The naming isn’t his only honor. Vestine was also awarded the American Geophysical Union’s prestigious Fleming Medal in 1967. The citation describes not only an illustrious career—including leading a Canadian expedition to set up a magnetic observatory in Alberta and guiding the publication of several influential volumes—but also a genuinely nice guy. “Throughout his active purposeful highly successful scientific career, he has remained his modest, kind, balanced, helpful, unassertive self” and “absolutely avoid[ed] self-advertisement,” the citation says.

While Vestine made his mark in research, he has another creation to his credit: Son Henry played guitar for Canned Heat (and briefly for Frank Zappa’s The Mothers of Invention) until his death in 1997. In 2003, Rolling Stone named him one of the 100 greatest guitarists of all time.

It should be no surprise that the rock star had an affinity for rocket ships. He asked that his ashes someday be transported to the crater that bears his family’s name.

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