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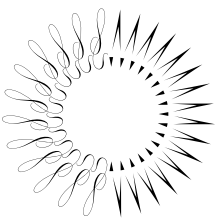
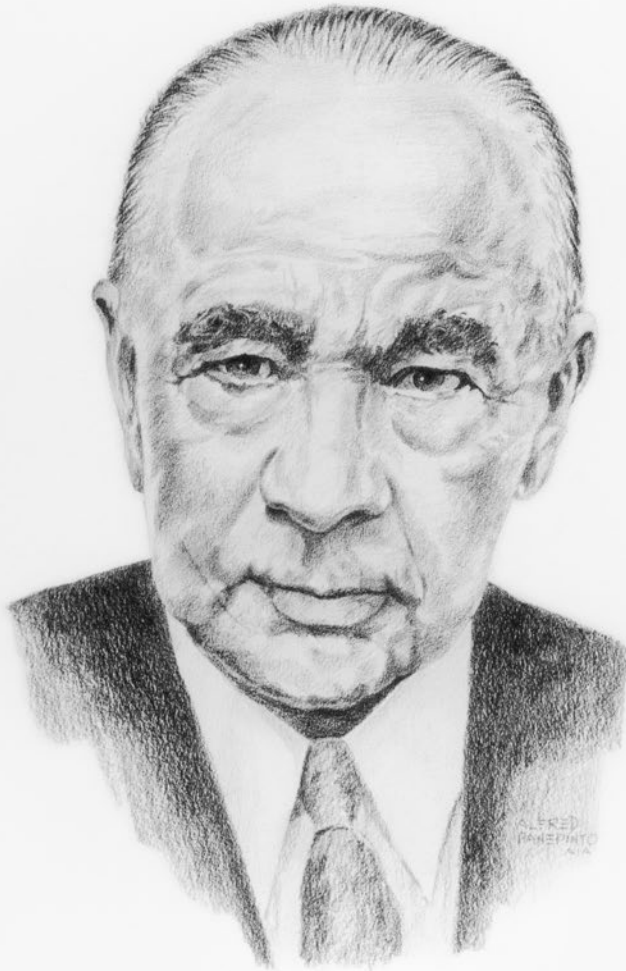
The Pew Charitable Trusts Trust

After the Deluge

As flooding increases around the country,
one city is showing the way to a drier future.

Summer 2017 | Vol. 19, No. 3





TIME CAPSULE

PEW FOUNDERS

J.N. PEW JR.

J.N. Pew Jr. and his brother and two sisters established the seven charitable trusts that today form The Pew Charitable Trusts. A top athlete at Cornell University, he skipped a chance to compete in the 1908 Olympics to join his father and help lead Sun Oil Co. immediately after college. He chose to learn the business from the ground up—drilling oil wells in Illinois, driving ox teams laden with pipe through West Virginia mud, and building roads in South America. He also applied his engineering skills to develop a gyroscope with a high-speed camera to measure the angle and direction of deviation in oil wells—a device patented in 1926, which revolutionized the oil industry by allowing much deeper wells. J.N. also helped create the Sun Shipbuilding and Drydock Co., which produced 40 percent of the tankers used during World War II. Throughout his career, J.N. was committed to an unfettered marketplace of products and ideas and had an interest in education, especially in supporting historically black colleges.

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Cover photograph by Michael B. Thomas/Getty Images

Facts That Frame the Future



Facts have been much in the news lately—whether they can be trusted, if they matter, even if they exist. But for The Pew Charitable Trusts, facts remain what they have always been: the nonpartisan evidence that guides our mission to improve public policy, inform the public, and invigorate civic life.

Reliable and verifiable facts give us the ability to speak truth to power—across the partisan divide—without reservation or rancor. As we mark the 100th anniversary of President John F. Kennedy’s birth, it is worth recalling his first State of the Union address when he told Congress: “To state facts frankly is not to despair the future nor indict the past.” At Pew we do neither. Instead, we celebrate our past—and 70-year history of public service—and use science and data to reimagine and sustain a better future.

Facts can illuminate growing challenges and significant trends in American life and help identify realistic responses. Just consider what Pew’s ongoing research has taught us about American families’ financial stability in the years leading up to and since the Great Recession. That research, which includes a major survey in 2015, has raised the curtain on facts that can help policymakers understand the financial stress that millions of Americans are experiencing—and assist in developing solutions for the future. For example, 2 in 5 households do not have enough savings to cover an unexpected \$2,000 expense. And 1 in 3 families have no savings at all, including 10 percent with incomes over \$100,000. These facts—detailed in the article “Family

Life on the Financial Tightrope”—reflect the everyday financial challenges of millions of American households and can help point the way toward policy choices that give families a better chance to build a more secure financial future.

Flooding—especially in areas prone to repeated and expensive restoration—is another serious challenge that calls for fact-based solutions. From 1980 to 2013, flooding caused more than \$260 billion in damage. But this damage was not spread evenly across America’s 3.5 million miles of shoreline bordering oceans, lakes, and rivers. Data from the Federal Emergency Management Agency reveal that historically 1 percent of the properties covered by the National Flood Insurance Program are inundated repeatedly. But this same small percentage of flood-prone areas is responsible for 25 to 30 percent of flood claims. And that program is now \$25 billion in debt.

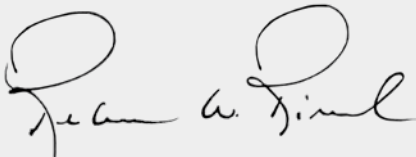
We can begin to address this growing problem by developing evidence-based policies that identify properties that flood frequently and are expensive to repair; set insurance rates that reflect actual risk; focus on hazard planning and mitigation; and encourage communities to improve management of the most flood-prone areas. *Trust* traveled to Norfolk, Virginia, where much of this work is occurring, to learn more about how to break the cycle of loss and rebuilding—and create flood-prepared communities.

Facts can illuminate growing challenges and significant trends in American life and help identify realistic responses.

Facts also provide a basis for understanding changes occurring around the world. One of the biggest global religious evolutions was documented in a report released in April by the Pew Research Center. It projected that there will be almost 3 billion Muslims by 2060—a 70 percent increase since 2015—and that Islam will surpass Christianity as the world’s largest religion by 2075. The center also estimates that 3.3 million Muslims live in the United States today. Islam’s growth at home and abroad is certain to bring new perspectives to culture, politics, art, education, and

much more. So it is critical that we recognize this expanding influence and, with rigorous fact-based research, come to a better understanding of the world's fastest-growing religion.

As President Kennedy advised, we endeavor to state the facts frankly. That has long been a tradition at Pew—and one embodied in the life, character, and public service of J.N. Pew IV, M.D. Joe Pew passed away in June after almost three decades as a tireless member of the Pew board of directors. His contributions to the stewardship of this organization were invaluable. And his commitment to maintaining the culture and traditions of Pew is a lasting legacy.



Rebecca W. Rimel, *President and CEO*

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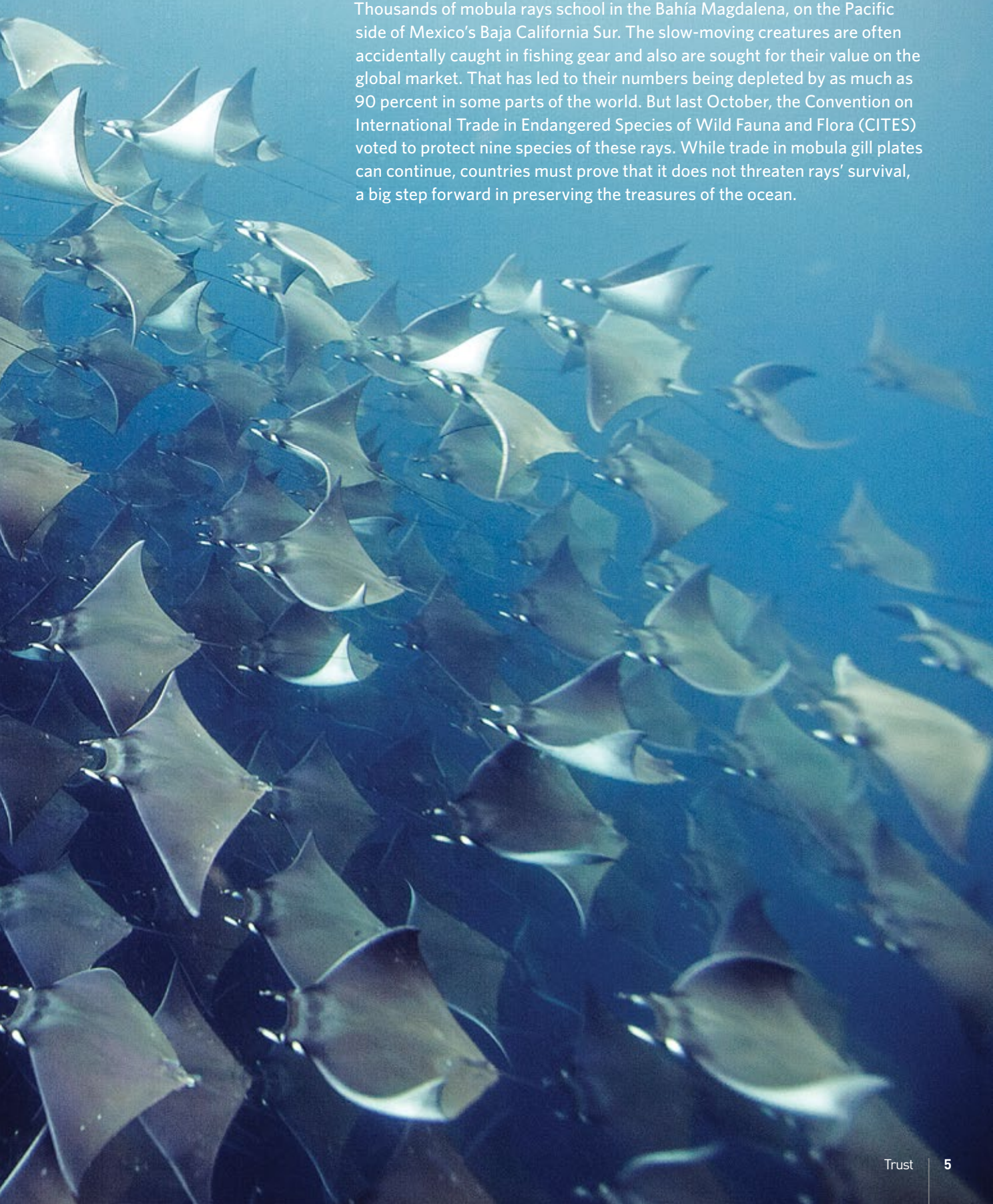
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Eduardo López Negrete

THE BIG PICTURE

Thousands of mobula rays school in the Bahía Magdalena, on the Pacific side of Mexico's Baja California Sur. The slow-moving creatures are often accidentally caught in fishing gear and also are sought for their value on the global market. That has led to their numbers being depleted by as much as 90 percent in some parts of the world. But last October, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) voted to protect nine species of these rays. While trade in mobula gill plates can continue, countries must prove that it does not threaten rays' survival, a big step forward in preserving the treasures of the ocean.





Corals such as this great star coral (*Montastraea cavernosa*) may be better able to resist bleaching when paired with clade D algae, according to new research. *Nature*/UIG/Getty Images

Microscopic Algae May Help Save Ailing Coral Reefs

BY ERICA SANDERSON

In recent years, marine scientists in Florida have wondered why some corals are more resilient to warming waters. Now they may have an answer: a type of microscopic organism that uses sunlight to make food for its hosts.

Andrew Baker, a Pew marine fellow and marine biologist at the University of Miami, and colleagues discovered that corals paired with a specific group of microscopic algae—zooxanthellae, or photosynthetic algae, known as clade D—resist bleaching at temperatures both warmer and colder than usual.

The scientists have come to call the clade D “tenacious D” because of its tolerance to extreme heat and cold, says Baker. “In some cases, [they] might help provide a lifeline for corals to help them survive extreme conditions.” Clade D appears to elevate corals’ bleaching thresholds by 1 to 2 degrees Celsius, depending on the location.

Published in the *Journal of Experimental Biology*, this new research marks the first investigation into these algae’s tolerance to cold temperatures. This unusual

hardiness may explain the findings of previous studies, which observed that clade D tends to become more common in reefs after mass coral bleaching events.

All reef-building corals live in partnership with zooxanthellae—but exposure to overly warm or cool temperatures can trigger corals to expel most of them, creating a condition known as coral bleaching. Without these organisms, corals lose their pigment and appear ghostly white, making it harder to photosynthesize—and often die. Bleaching—an increasing environmental concern—is devastating Australia’s Great Barrier Reef for the second year in a row, mirroring back-to-back episodes of bleaching in Florida in 2014 and 2015.

Baker’s team is working to take its findings to the next step. In the laboratory, the team is able to make corals adopt greater numbers of clade D—a process researchers call stress hardening. They are exploring whether this technique can be used to plant heat-tolerant corals in the ocean and, ultimately, help rebuild reefs in Florida to be more durable. Pew’s marine fellows are selected based on their marine conservation work.

Why Are People Rich or Poor? Republicans and Democrats Disagree

Beyond partisan differences over economic policies, stark divisions exist on a fundamental question: What makes someone rich or poor? Most Republicans link financial standing to a person's own hard work—or lack of it. Most Democrats say being rich or poor is more attributable to circumstances beyond a person's control.

The findings come from a Pew Research Center survey released in May showing that the public is about evenly divided over which has more to do with why a person is rich: Forty-five percent say it is because he or she worked harder than most people, while 43 percent say it is because the person had more advantages in life than others. Opinion has shifted modestly on this question: In 2014 and 2015, more people attributed wealth to greater advantages than to a stronger work ethic.

By a margin of about 3-to-1 (66 percent to 21 percent), Republicans and Republican-leaning independents say hard work, rather than a person's advantages, has more to do with why someone is rich. By nearly as wide a margin, Democrats and those who lean Democratic say the opposite: Sixty percent say a person is rich because he or she had more advantages than others, while just 29 percent say it is because the person has worked harder.

As with many other issues, partisan differences in views of why people are rich and poor have increased in recent years. Since 2014, the share of Republicans who say a person is rich because he or she has worked harder than others has risen 12 percentage points, to 66 percent. Democrats' views have shown less change.

In assessing why some people are poor, 53 percent of the public thinks it's because of circumstances beyond their control, while 34 percent attribute it to a lack of

effort. There has been little change in these opinions in recent years.

Republicans are more likely to say the reason that someone is poor generally has more to do with a person's lack of effort (56 percent) than circumstances beyond his or her control (32 percent). More Democrats say that circumstances beyond one's control are generally more often to blame for why a person is poor—by 71 percent to 19 percent. The share of Democrats who link a person being poor to a lack of effort has declined since 2014 (from 29 percent to 19 percent).

Views of why some people are rich and poor vary by gender, education, and income level as well. For example, men (49 percent) are slightly more likely than women (41 percent) to say that hard work is more often the reason that someone is rich. Men (42 percent) also are more likely than women (26 percent) to say that a lack of effort is more to blame if someone is poor.

Those with postgraduate degrees are more likely to say that having greater advantages in life has more to do with why a person is rich (52 percent) than they are to say that hard work has more to do with it (34 percent). Those with less education are more divided on what has more to do with wealth. When it comes to the reasons that a person is poor, majorities of postgraduates (62 percent) and college graduates (59 percent) say circumstances are generally to blame. Most of those with some college experience (54 percent) also take this view. Among those with no more than a high school diploma, about half (49 percent) point to circumstances as the reason that a person is poor, while 38 percent cite a lack of effort.

People with higher family incomes are more likely than those with lower incomes to say a person is rich because he or she has worked harder rather than because the person had more advantages. Only modest differences exist across income categories in views of why someone is poor.

—Demetra Aposporos

Varying views of why people are rich or poor

Percentage of the public who believe that people are poor due to circumstances beyond their control



71%
Democrats



32%
Republicans

Source: Pew Research Center

Does Cholesterol Influence Cell Growth?

The body's relationship with cholesterol is a fickle one. Too much of the compound can lead to heart disease, yet people need a certain amount of it to function properly.

That's because cholesterol acts as a building block for cell membranes, among other things. In order to maintain the right balance, cells have evolved a system to sense cholesterol levels and adjust the rate at which the body both produces it and absorbs it from the foods we eat. According to a new study by Roberto Zoncu, a Pew-Stewart Scholar for Cancer Research, this system may also control a cell's size and whether or when it divides—a finding that could improve science's understanding of certain diseases and perhaps lead to new treatments.

Zoncu studies lysosomes—cellular structures that specialize in storing, releasing, and processing cholesterol and other nutrients. In the March issue of *Science*, he

and his colleagues describe discovering how lysosomes relay the availability of cholesterol via mTOR—a master nutrient sensor—to control cell growth.

The Pew-Stewart Scholars for Cancer Research are early-career scientists whose work shows promise in advancing progress for a cure for cancer. Each year, five scholars are selected for the program and granted \$240,000 over four years to pursue their work. The program is funded by the Alexander and Margaret Stewart Trust, and administered by Pew.

The team's discovery offers new insights about how cells regulate growth based upon their ability to sense the nutrients people consume, as well as how abnormalities in cholesterol sensing could increase the prevalence of illnesses that are characterized by inappropriate cell growth, such as cancer and metabolic diseases. Eventually, it may also lead to new approaches for treating those illnesses, such as by starving cancer cells of nutrients.

—Demetra Aposporos

Fewer Summer Jobs for Philadelphia Teens

June may mark a break from school for Philadelphia teenagers, but it doesn't mean that most of them are benefiting from another ritual of youth: a summer job.

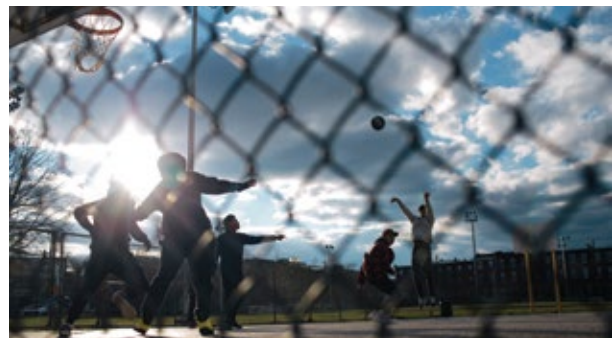
A Pew analysis finds that far fewer summer jobs have been available in recent years for Philadelphia's young people than there once were—and that Philadelphia lags behind many of its peer cities in teen employment. The finding is based on data from the Center for Economic Studies of the U.S. Census Bureau, which looks at how many young people, ages 14 to 18, had a job on July 1 of any given year.

In 2000, 15,562 Philadelphia teens in that age range had summer jobs. In 2015, the last year for which data were available, the figure was 5,288—a drop of nearly 60 percent. The decline was similar for boys and girls, although girls overall had higher summer employment throughout.

Nationally, the 2015 teen summer employment rate—calculated by taking the number of teens employed divided by the full teen population—was 15 percent; in Philadelphia, it was 9 percent.

The data is available only for cities that also are counties or made up of several counties, like New York. "Among those places Philadelphia's rate was the lowest, although it was virtually the same as New York's," says Larry Eichel, who directs Pew's Philadelphia research initiative. "In most of the other cities, the employment rate increased from 2010 to 2015."

For teens, having a summer job can be a valuable



Many teens will have more time to play sports this summer—like these young men in South Philadelphia—because of a dearth of seasonal jobs. Lexey Swall/GRAIN for The Pew Charitable Trusts

experience, a chance to earn money and sample life in the workplace. Research also shows that summer employment has positive long-term effects, including improved academic performance and higher wages as an adult. And there is some evidence to suggest that those who have had summer jobs are less likely to commit crimes in the year after they finish the work.

City officials are aware of the value of these jobs, and Mayor Jim Kenney (D) has called for there to be 16,000 paid summer opportunities through the Philadelphia Youth Network's WorkReady program by 2020; government-subsidized jobs and internships created through the program are not included in the census totals. Kenney himself has noted that he first became a city employee by working a summer job at the city's parks and recreation department in the 1970s.

—Daniel LeDuc

Joseph N. Pew IV, M.D.

1946–2017



For three decades, J.N. Pew IV, M.D. fulfilled a family legacy in his service to The Pew Charitable Trusts. Sitting on the board of the institution that bears his name, he was following a tradition that began with his grandfather J.N. Pew Jr., who, along with his brother and two sisters, established the Trusts to honor their parents, Joseph N. Pew and Mary Anderson Pew.

That tradition was carried on by Dr. Pew's father, Joseph N. Pew III, one of the Trusts' original directors.

On June 10, 2017, Dr. Pew passed away. He left his mark not only in his contributions to the success of Pew and its initiatives, which now span the globe, but also in a long professional life as a medical doctor in Reading, Pennsylvania.

And his generation of the family continues its service to Pew, with four of his siblings currently on the board of directors: J. Howard Pew II; Mary Catharine Pew, M.D.; Doris Pew Scott; and James S. Pew.

Dr. Pew was born in 1946 in Palo Alto, California, where his father was completing studies at Stanford University after service in the U.S. Navy during World War II. Not long afterward, his father and mother, Doris (Myers) Pew, moved the family to the Philadelphia area. His father worked as an engineer for Sun Oil Co., which had been founded by Joseph N. Pew in 1880.

Like his father, J.N. Pew IV graduated from the Haverford School. He earned a degree in chemical engineering from Nova Scotia Technical College and later graduated with a doctorate in internal medicine from the University of Pennsylvania.

He was the owner of Reading Crest Medical Associates, where he practiced medicine for 27 years, retiring in 2009.

An avid sportsman, Dr. Pew loved hunting and fishing, was a member of Blooming Grove Hunting and Fishing Club in the Poconos, and also collected model trains.

He was married to Dianne Renee (Weber) Pew. His family remembers Dr. Pew as keenly intelligent, with a mischievous sense of humor. He was thoughtful, kind,

and unfailingly generous, they recall, always willing to give help or advice to anyone who asked. Above all else, he loved his family. Family members say he was an adoring husband, a loving older brother, an extraordinary father and stepfather, and a doting grandfather who always made sure he had extra time for his grandchildren.

Dr. Pew was chairman of the board of the Glenmede Trust Co., which serves as trustee of the seven Pew trusts, and since 1988 had served on Pew's board of directors. His tenure covered a transformational time for the institution, which would evolve from a traditional foundation providing grants into its current role as a global nonprofit.

"Joe was devoted to this institution," says Rebecca W. Rimel, Pew's president and CEO. "I deeply valued his wisdom, his commitment to stewarding our values, and his willingness to challenge us to do our very best work on behalf of the Trusts and our public service mission."

The Pew staff offers its condolences to Dr. Pew's family and resolves to carry on the essential work of the organization that made him so proud: utilizing the power of knowledge to help solve today's most pressing problems.



AT WATERS' EDGE

Flooded and rebuilt, then flooded and rebuilt again—and again—one American city is seeking new approaches for the future.



BY DON BELT | PHOTOGRAPHY BY BENJAMIN LOWY/GETTY IMAGES REPORTAGE

The flood arrived at dinnertime, just before dessert.

Karen Speights and her mother, who is 89, were in the dining room of their tidy yellow bungalow finishing off a meal of crab legs with a side of “Jeopardy,” waiting out the nor’easter that had brought heavy rain and winds sweeping into Norfolk, Virginia, that afternoon.

As she moved to clear the dishes, Speights heard a splash from under the table, and felt her feet grow wet inside soggy sneakers. Around her, water was bubbling up through the floor vents and flowing under the front door. She looked down and realized she was standing in a pool of saltwater.

“I couldn’t believe my eyes,” she says. “It was one of those moments like, this is not really happening.” She and her mother grabbed everything of value they could carry—the throw rugs, stereo, artwork, floor lamps—and hustled upstairs.

The Speights family had lived in the house for more than five decades, but that storm, in November 2009, was the first time it had ever flooded.

They, like their neighbors, were aware of the potential for flooding—their front porch sits a little over 3 feet above sea level and perhaps 100 yards from a tidal wetlands linked to the nearby Elizabeth River, one of two sprawling rivers, along with hundreds of smaller rivers and creeks, that flow into the Chesapeake Bay around Norfolk and Hampton Roads, as the region’s 17 municipalities are collectively known. But the threat of flooding had always seemed manageable.

A few weeks after the storm, Speights and her mother moved out for several months while repairs were made—all paid for by their flood insurance.

Two years later, during Hurricane Irene, the house flooded again. Again their insurance, provided by the National Flood Insurance Program, paid out tens of thousands of dollars to repair the damage. Then in 2013, another flood. And again their insurance picked up the tab. “That’s three times in eight years, after 55 years of dry,” Speights says. “Things around here are definitely going downhill.”

That much is true, both figuratively and literally: Hampton Roads is actually sinking at the rate of about 7 inches every century, as the underlying geology of the area, fractured by a meteor impact 53 million years ago, continues to settle.

Meanwhile sea levels, up 18 inches in the past century, are projected to rise more than 5 ½ feet by 2100, according to the National Oceanic and Atmospheric Administration (NOAA) and the Virginia Institute of Marine Science.

==

Small wonder, then, that the area around Norfolk has become a focal point in national efforts, including work by The Pew Charitable Trusts, to address the rising waters and develop creative ways to mitigate them—as well as to shore up the National Flood Insurance Program, which is now \$25 billion in debt.

With the rising waters has come an increase in the frequency and intensity of storms and associated tidal surges that push water into vulnerable neighborhoods like the Speightses’. NOAA warns that Hampton Roads is more threatened by sea level rise than any other large metropolitan area in the U.S. except New Orleans. Considering that the area is home to 1.7 million people



Almost half of Norfolk’s official square footage consists of hundreds of rivers, creeks, and tributaries that flow around and through the southern Virginia city to empty into the Chesapeake Bay. Rising sea levels and Norfolk’s particular geography makes the city’s 250,000 residents all too familiar with flooding, the most expensive and frequent natural disaster in the United States.

and the largest naval base in the world, efforts to mitigate and adapt have become a high priority.

The Department of Defense, for example, “must be aware of any potential adverse impacts [climate change] can have on our interests,” Secretary James Mattis wrote in an addendum to his Jan. 12 confirmation hearing before the Senate Armed Services Committee. “The Department should be prepared to mitigate any consequences of a changing climate, including ensuring that our shipyards and installations will continue to function as required.”

Political leaders are debating the issue, however, and there are surely budgetary battles ahead over federal funds to support mitigation and adaptation programs, as well as other programs that aim to reduce risk such as the National Flood Insurance Program.

Shoring up a coastal city’s defenses is massively expensive. A few years ago, Norfolk hired a Dutch consulting firm to design an action plan that included state-of-the-art floodgates, raised roads, and a revamped system of storm drainage. For an investment of \$1 billion—the city’s entire annual budget—the plan would fortify Norfolk against about a foot of sea level rise.

Norfolk is considering elements of those recommendations and is embracing a planning strategy based on resilience, even creating a municipal Office of Resiliency.

“Norfolk subscribes to the rather audacious idea that a city faced with a rising water environment should plan ahead for the future,” says George Homewood, the city’s longtime planning director. Homewood collaborated with a wide range of stakeholders—developers, community activists, environmental nongovernmental organizations, individuals, and a small army of planners and civil engineers—to develop Vision 2100, Norfolk’s long-term strategy to cope with flooding and sea level rise.

“Norfolk is a kind of canary in the coal mine,” says William A. “Skip” Stiles Jr., a high-energy optimist and former Capitol Hill staffer who directs Wetlands Watch, a grassroots organization that promotes wetlands protection in Norfolk and was a key participant in the Vision 2100 planning. “If we do this right, cities all over the country will be able to learn from us.”

Stiles is right to think big. More than 123 million people, about 39 percent of the U.S. population, live in coastal counties bordering oceans, rivers, or lakes.

Elevated homes help residents avoid rising waters and subsequent property damage in Larchmont, a Norfolk neighborhood on a peninsula in the Lafayette River. In between, a neighboring rental property, used by college students, still sits below the flood zone.



These areas, often heavily populated, have always been at risk from weather-related catastrophes such as floods and hurricanes—and now the threat, especially along the coasts, is increasing. From 1980 to 2013, flooding caused more than \$260 billion in damage in the U.S., making it the costliest disaster threat in the nation. For the past decade, federal flood insurance claims have averaged \$1.9 billion a year, up from about \$700 million a year in the 1990s.

To help guide U.S. policy—and to reduce the effect of floods on homes, businesses, communities, infrastructure, natural habitats, and the economy—Pew has created a multifaceted initiative focused on four major areas of concern and potential progress: preserving and improving the federal flood insurance program, increasing funding for disaster preparedness and mitigation, evaluating future flood risks for facilities and infrastructure, and promoting nature-based solutions such as wetlands that can soak up rising waters (a sustainable alternative to hard bulkheads that can be inundated and undermined during storms).

“Many of our federal flood-risk policies are based on past events, but this is a time when we need to be looking toward the future,” says Laura Lightbody, who

directs Pew’s flood-prepared communities initiative. “At Pew we’re looking to places like Norfolk, which have embraced resiliency and taken a proactive approach to reducing flood risk. People there are developing best practices that could help the federal government make better policy.”

On the ground, that means highlighting organizations such as Wetlands Watch. Cities struggling with flood management need role models, Stiles says, and the moxie shown by his adopted city, including its embrace of nature-based solutions, makes it a good candidate. “If Norfolk can do it, so can you,” he says, to anyone who’s listening.

An urban walkabout with Stiles is a master class in flood detection and management. He has a keen eye for the telling details of sea level rise: the standing water on side streets and parking lots, the salt-resistant vegetation such as spartina and iva sprouting in yellowing, flood-drowned lawns, the subtle differences in elevation that reveal Norfolk as a paved flood plain latticed with filled-in river and creek beds.

“A few inches can be the difference between flooding and dry ground,” he says, gesturing to the barely discernible contours of elevation that a nonresident might never notice.

A home on Richmond Crescent, a street with many waterfront views, has been raised to nearly double its height to mitigate sea-level rise—and lower flood insurance premiums.



These homes under construction will be elevated, one way to mitigate rising waters in a flood plain. Other building adaptations include using cisterns, upgrading storm drains and pipes, and building natural bioretention ponds. Reintroducing vegetation along the wetlands to replace manmade structures is also under consideration in some Norfolk neighborhoods.



The Speightses' lot on Filer Street, for example, is a few feet lower than the yards across the street, which means that water tends to pool in the street and in their driveway. "I have to put on my rain boots to take the trash out, even when it's a sunny day," says Speights, with a shake of her head.

In Norfolk's Vision 2100 map of at-risk areas, the Speightses' neighborhood, Chesterfield Heights, is shown in high-alert yellow, the color used to identify established neighborhoods that experience frequent flooding where "the City should explore new and innovative technologies to help reduce flood risk and [extend] the resilience of key infrastructure."



One day in 2014, more than 40 students from local universities—architecture students from Hampton and civil engineering undergraduates from Old Dominion—began canvassing Chesterfield Heights' stately riverfront homes, many of them dating to the early 20th century, as well as the peripheral neighborhoods of low-income homeowners and renters. With their cameras and drawing pads, the students were doing just what Vision 2100 called for: searching for solutions to the flooding and sea level rise that have plagued the neighborhood for the past decade, especially the trouble spots where the water table is high and elevation is perilously low.

Guided by Stiles and their professors, and with an award from the NOAA-supported Virginia Sea Grant program, the students collaborated with local residents on a major study of Chesterfield Heights, and by 2015 they had generated a number of design concepts

consistent with the goals of Vision 2100 and the kinds of flood-mitigation efforts that Pew is advocating.

The result was long on innovation and included structural solutions (home improvements such as regrading, cisterns, bioretention ponds, upgraded storm drains and pipes) and the creation of a "living shoreline" along the riverfront to reintroduce tidal, vegetated wetlands in place of rock sills and other man-made fortifications.

Norfolk officials recognized the student project with the city's 2015 Environmental Resilience Award and encouraged the students to enter the Department of Housing and Urban Development National Disaster Resilience Competition. In January 2016, Virginia was awarded a \$120 million grant from the department to explore the student designs for Chesterfield Heights.

"The key was working closely with the community," says Zack Robinson, one of the Hampton University students. He now is an architect for a firm that is assessing the student designs and studying ways to put them into practice.

"In Chesterfield Heights, people really love their community. There's also a very strong culture of helping your neighbor out, like in the old days. We tapped into that spirit during our many meetings with local residents, and they stepped up to help us help the people who are struggling with these new realities."



One of those people is Karen Speights. She knows it's only a matter of time before water again comes splashing under her front door and up through the

heating vents in her living room floor. In the interim, her flood insurance has surged to \$4,200 a year, with further increases of 5 to 18 percent already announced. She notes that her next-door neighbor, whose house is newer and was built a few more feet off the ground, pays only \$600 annually for flood insurance.

Along with her neighbors, she worries that Congress may take an ax to the National Flood Insurance Program, which provides federally backed coverage for homeowners and small businesses in more than 22,000 communities across the country. With its deep debt, the program may be unsustainable. Pew is urging continuation of the program and encouraging communities to improve management of the most flood-prone areas.

Speights also worries about what will become of the lovely little house she grew up in, where she and her mother still live. In its current state, in the flood zone, it would be nearly impossible to sell, even if she wanted to. She loves living in Chesterfield Heights, where people still rock on the front porch in the evenings and greet the neighbors passing by.

"I'm an optimist," Speights says. Maybe Zack Robinson and his architect friends will figure out a way to keep Filer Street above water, she says, or will need a homeowner volunteer to try out some innovative new technology to keep the floods at bay.

"They are going to be experimenting and coming up with solutions, and I'd like to be part of that success story. I own the property, and maybe I can find the resources to tear the house down and rebuild one of these days. That's pretty exciting to think about."

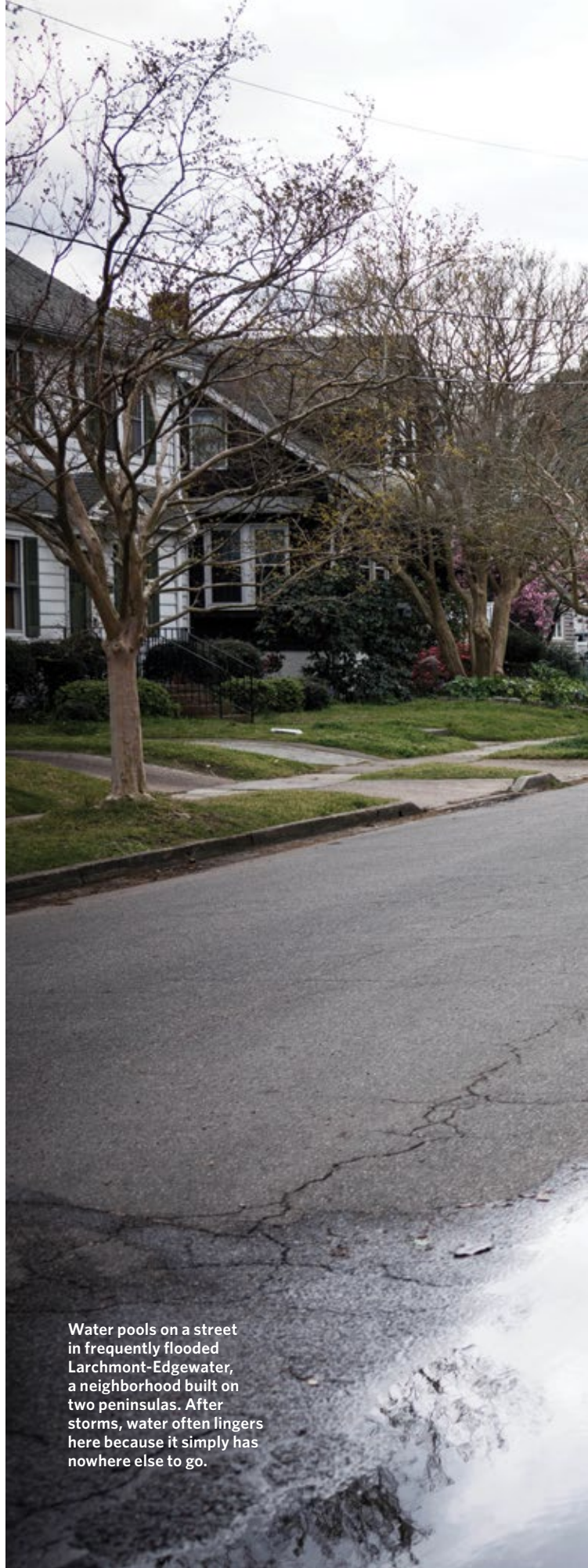
That day is at least two years away, she figures. In the meantime, she's just trying keep her perspective, like her mother—who keeps one eye on the moon and the other on the Weather Channel.

"We used to sit in our houses, watching TV, and cry for those poor people in other countries sitting on their rooftops surrounded by a flood," Speights says. "Now that's the local news—it's happening right here in Norfolk, and we're all in it together."

It's time to get creative, she says. And for her, only one option is off the table.

"You can't just pretend it's not happening."

Don Belt, a Virginia-based journalist, last wrote for Trust about Pew's work to call attention to deferred maintenance in the national parks.



Water pools on a street in frequently flooded Larchmont-Edgewater, a neighborhood built on two peninsulas. After storms, water often lingers here because it simply has nowhere else to go.



Pew's research finds that most Americans are more interested in financial stability than in trying to get ahead.

BY CHARLES BABINGTON

FAMILY LIFE ON THE FINANCIAL

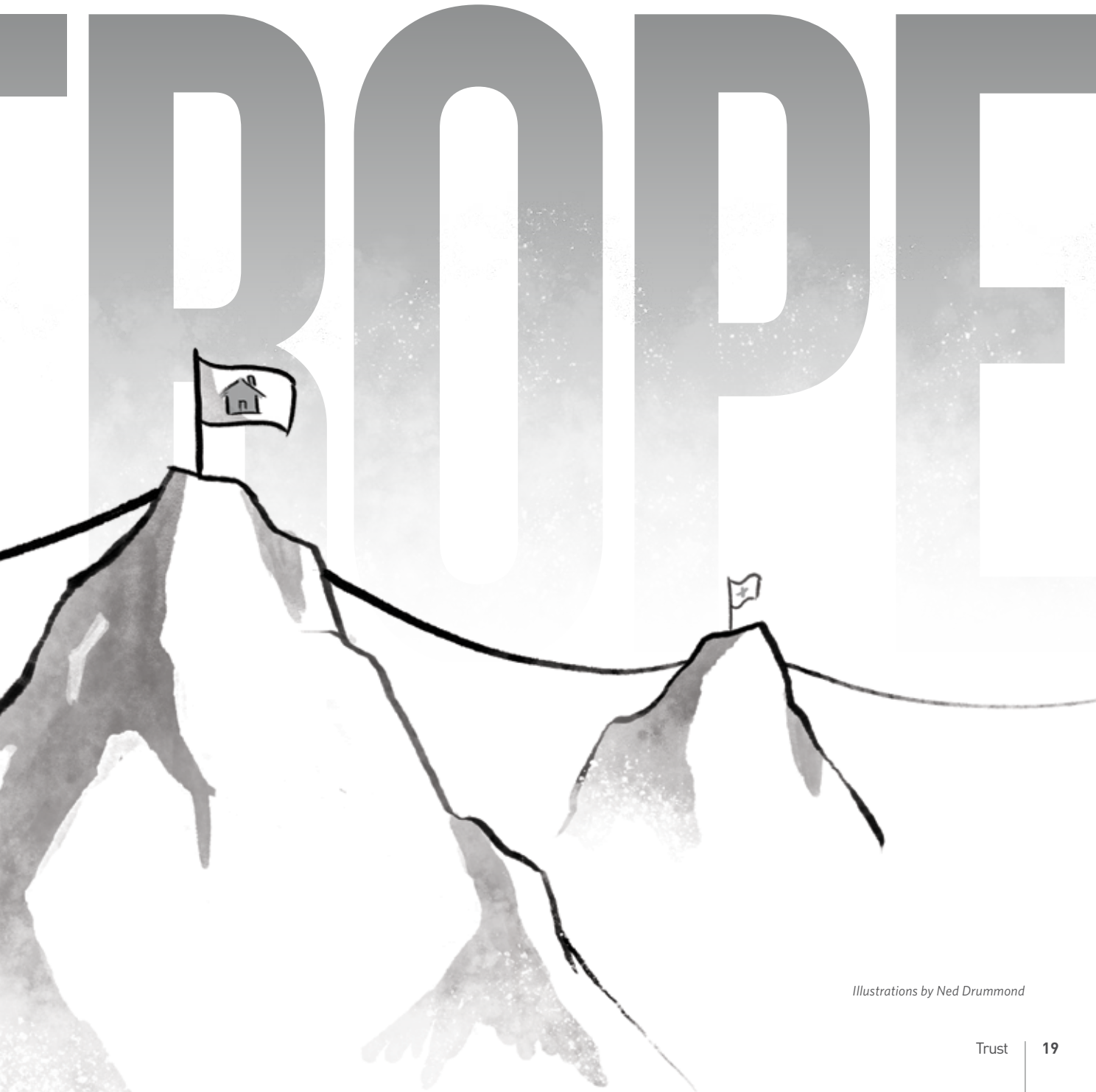


Despite signs of an improving U.S. economy, large numbers of families feel deeply uneasy about their financial situation and are ill-prepared to handle expenses that take them by surprise. These realities disturb the sleep of countless people who don't benefit from a booming stock market or rising home prices.

When asked whether it's more important to have financial stability or to move up the income ladder, 92 percent of Americans choose security. In short, they simply want to avoid losing ground.

These are among the most recent findings of The Pew Charitable Trusts' ongoing research into the household financial security and mobility of U.S. families. This project works to understand the financial lives of Americans, identifying the most vulnerable households and the reasons for that vulnerability. Its findings can help inform the public and policymakers on ways to improve Americans' financial well-being.

The findings underscore the degree to which families that appear secure—those with, say, a steady job, a good car, and a house—can live so close to a financial



Illustrations by Ned Drummond

precipice that one bit of bad luck might send them toppling. The factors contributing to this insecurity include people's expenditures outpacing income, not the least of which is higher housing costs; difficulty saving for retirement and other needs; and struggles in making financial plans when incomes vary unpredictably from one year to the next, as they often do.

"We cannot expect families to be upwardly mobile if they're not first economically secure," says Erin Currier, who directs Pew's project on family financial security and mobility. This raises questions, she says, about the American ethos that "you can get ahead if you play by the rules."

"Families are really struggling in their day-to-day finances across the board," Currier says. "If we can work with policy and programs to shore up their financial security, then we'll go a long way toward enhancing their ability to move up the economic ladder."

Ray Boshara, who often consults with Pew and directs the Federal Reserve Bank of St. Louis' Center for Household Financial Stability, says the two organizations "have done a good job of documenting declining upward mobility in the United States. Now the hope is that more policymakers will turn their attention to it." Among the Fed's findings is that about 44 percent of Americans can't meet a \$400 expense without borrowing, selling something, or paying the amount in installments over time.

Pew first began research on the state of the American Dream nearly a decade ago. More recently, to better understand family finances, Pew developed a nationally representative survey of 7,845 adults, interviewing them in 2014 and, with the support of the W.K. Kellogg Foundation, re-interviewing 5,661 of them a year later. The project also conducted focus groups and individual interviews in several U.S. cities to better understand Americans' perceptions of their financial lives and the strategies they use to get by. Pew's reports on the subject also incorporate important data from other major research groups and the federal government.

People in the focus groups gave voice to the way financial unease undercuts a family's happiness and can even threaten its stability.

"I think that financial stress is the most important of any stresses in a household," a Buffalo-area resident told the researchers. "It creates relationship problems."

A participant at an Orlando focus group spoke wistfully of financial security. "I notice that people who have money are a lot more stress-free, more happy, more outgoing, because they don't have to worry," this participant said, adding: "We work full time, take care of kids, bills. And we are stressed."

Great Recession still reverberates

The Great Recession hit nearly a decade ago, but many Americans still struggle to recover from its effects. By 2014, median household income had fallen 13 percent from 2004 levels, but family expenditures had increased by nearly 14 percent.

Only 46 percent of the respondents to Pew's 2015 survey reported making more money than they spend. About the same percentage said they had consistent and predictable household bills and income month to month.

All of this makes it harder to save money, an issue of deep concern for millions. In fact, 1 in 3 families report having no savings at all. That includes 10 percent of those with annual incomes above \$100,000—an important reminder that income alone doesn't determine wealth or financial security. Two in 5 households don't have enough liquid savings to cover a sudden \$2,000 expense.

A large majority of U.S. households acknowledge that they don't save as much money as they believe they should. Minority families are especially hard-pressed: One-quarter of black households would have only \$5 left over if they liquidated all their financial assets.

More than half of U.S. households (56 percent) say they worried about their finances over the past year.



The most frequently reported financial worries include lack of savings (83 percent), not having enough money to cover expenses (71 percent), and not having enough money to retire (69 percent).

All these factors make it hard for many Americans to plan for—or even have hopes for—the future, says Bob Friedman, founder of the Corporation for Enterprise Development, a Washington-based organization that works for policies to create economic opportunity and end poverty.

“People need an economic place to stand,” says Friedman, who has studied Pew’s research. “They need some savings to absorb shocks, to have a reason to believe they have a future.” But it’s difficult, he says, especially for lower-income families. Those in the bottom 20 percent of income, he says, pay an average of \$2,400 in annual interest, fees, and fines for bank services.

Several key factors determine Americans’ financial security and mobility, or lack thereof.

Income

Overall, U.S. income and earnings have grown substantially over the past four decades. But during the 10 years ending in the Great Recession of 2008-09, they slowed dramatically. The typical worker had wage growth of 22 percent between 1979 and 1999, but just 2 percent from 1999 to 2009.

More recently, wage growth has improved. The Census Bureau found that the median household income increased by 5.2 percent from 2014 to 2015, with gains across all income levels.

But this good news about income growth is tempered by not-so-good news about household spending.

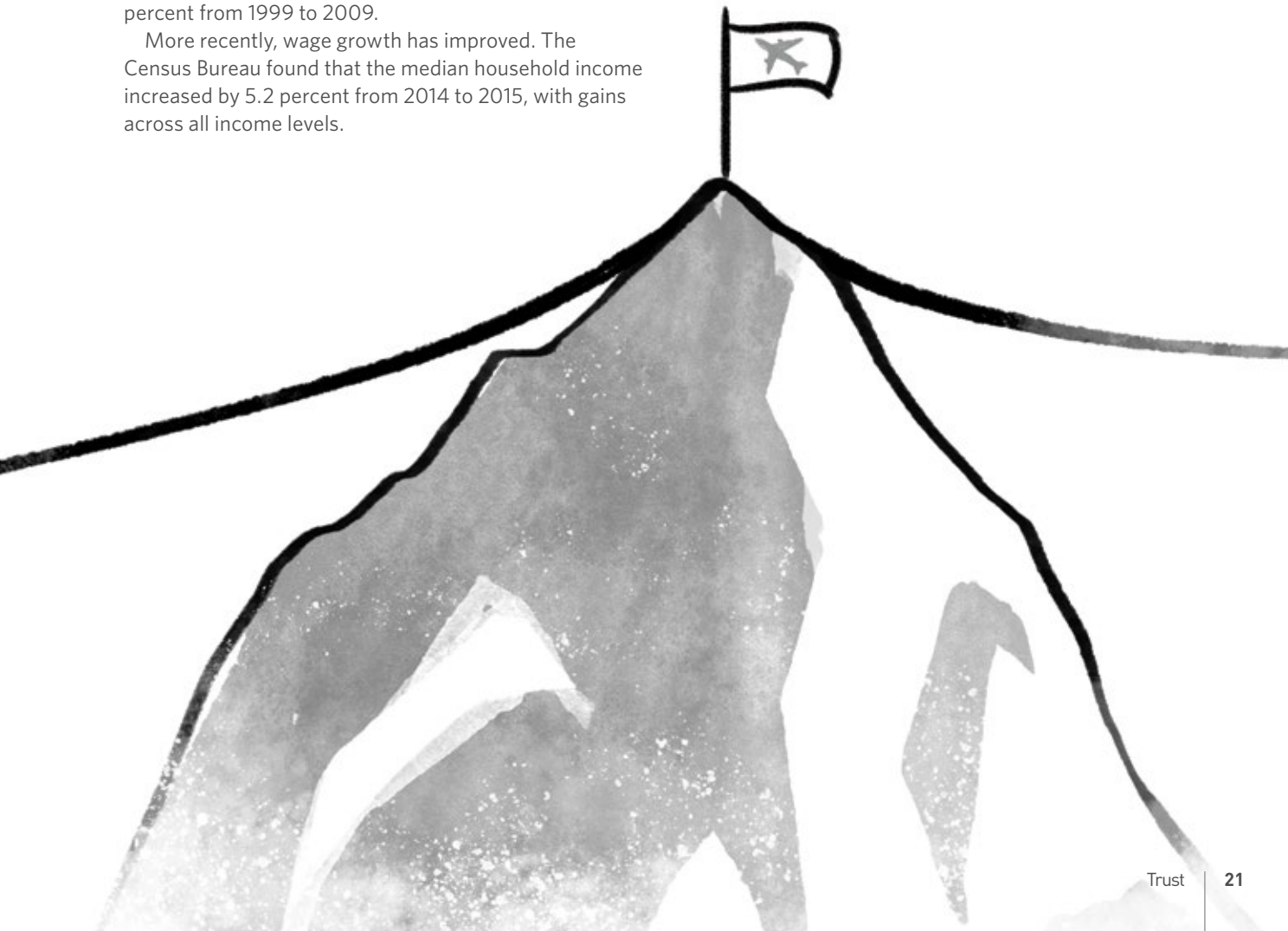
Spending

Americans ramped down their spending during the Great Recession and a bit after, but they’ve loosened their purse strings in recent years. Overall median household expenditures grew by about 25 percent between 1996 and 2014, returning to pre-recession levels.

While robust spending is generally good for an economy, the problem is that income growth has not kept pace for many families.

Many families spend large portions of their income on basic necessities, especially housing. This is particularly true for low-income families: Households in the lower third of the income bracket spent 40 percent of their income on housing. Renters in that third spent nearly half of their income in 2014 on housing.

Because basic necessities absorbed so much of their income, households in this lower-income tier spent considerably less than their middle- and upper-income counterparts on discretionary items, such as dining out and entertainment.



While all households had less slack in their budgets in 2014 than in 2004, lower-income households went into the red. In 2004, typical households at the bottom had \$1,500 of income left over after expenses annually. By 2014, this figure had decreased by \$3,800, putting them \$2,300 in the hole.

The lack of financial flexibility, Pew's research finds, threatens low-income households' financial security in the short term, and it hurts their economic mobility in the long term.

Income volatility

Pew's research has found that many families face significant changes in income from one year to the next. More than a third of U.S. households experience year-over-year income swings of more than 25 percent.

Only 47 percent of respondents to the 2015 survey said they had consistent and predictable household bills and income month to month—a level of volatility that makes it difficult for families to plan, pay regular expenses, save, or pay down debt.

Pew researchers, delving into this relatively unexplored issue, found that families experiencing income volatility—whether a gain or a loss—report worse financial well-being and less savings than those with stable income.

"This finding shows that volatility alone makes it harder to plan, to budget, and that reduces financial security," says Pew's Currier.

And income volatility occurs in all demographic groups. At least 1 in 4 households across all income, educational attainment, race, and other groups experienced substantive income shifts in the one-year period between 2014 and 2015.

This volatility is often dramatic. At the median, the incomes of households with losses declined by 49 percent. Families with gains boosted their incomes by 56

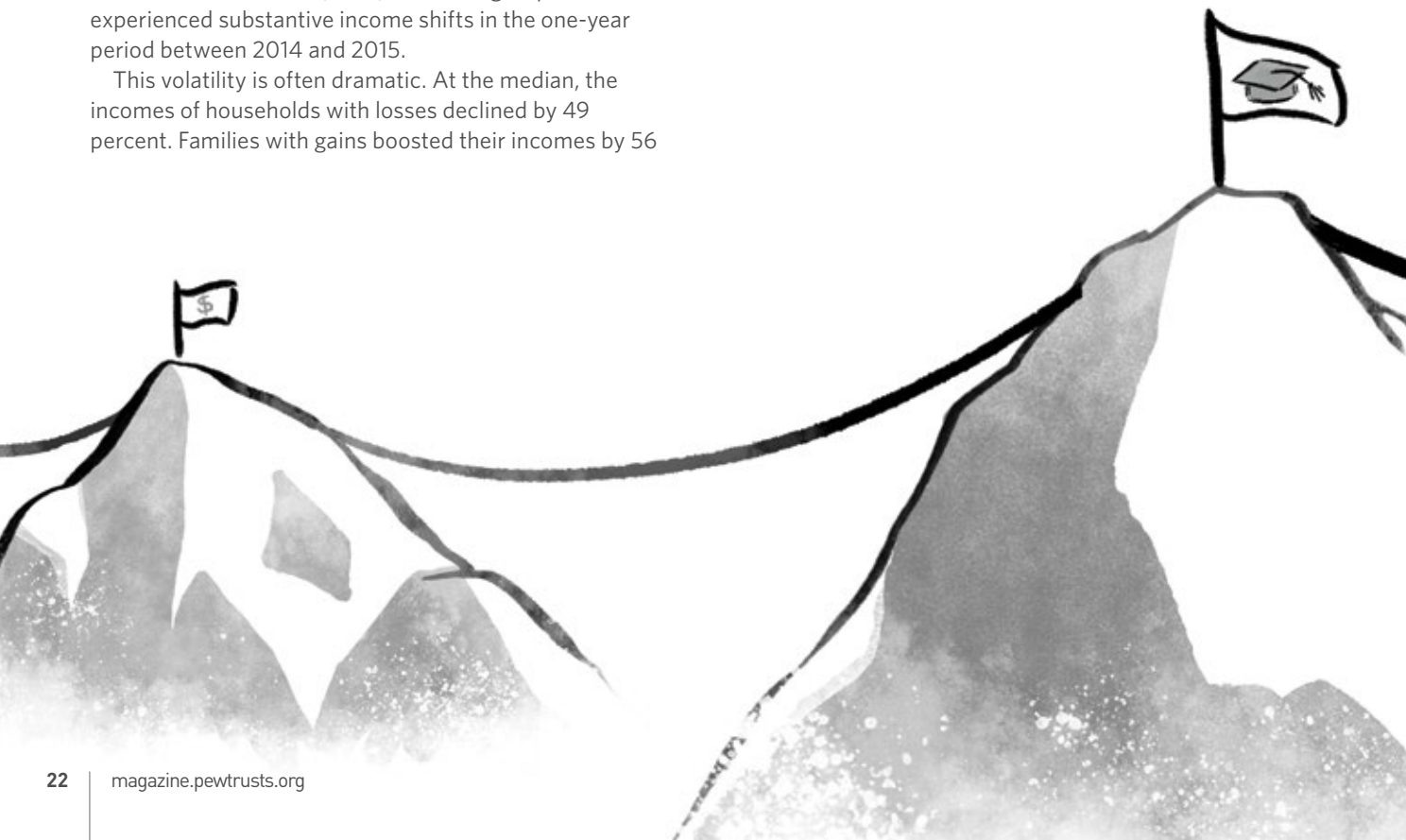
percent. Among households that saw gains, the median amount was \$20,500. Among those with losses, the median amount was \$25,000.

Financial shocks

Many American households share an ominous vulnerability. Even those with higher incomes can be disrupted by just one financial setback, or shock, such as a pay cut, hospitalization, or car or home repair that can't be postponed.

Six in 10 households reported experiencing a financial shock in the year before Pew's Survey of American Family Finances was conducted, and more than half of those struggled to make ends meet as a result. The typical household spent \$2,000, or about half a month's income, on its most expensive shock. At the median, just one such event can wipe out most or all of a household's savings, which can take months or longer to rebuild. Households without liquid savings sometimes incur debt or turn to friends and relatives for help, but these approaches can cause financial difficulty in the future and strain relationships.

As a participant at a focus group in Columbia, South Carolina, said: "Any one thing can happen to anybody at any given point, and you just never know where you will end up being. Like, you think you are the most prepared person until something happens, and then you realize just how unprepared you really were."



After suffering a financial shock, households had lower savings and higher credit card debt than those that did not have one. The median household that experienced a shock had almost \$4,000 less in liquid savings, could replace only about half as much income using liquid savings, and was more likely to carry a monthly balance on credit cards than was an unaffected household. These deficits did not necessarily result directly from the shock, but the findings demonstrate how a single event might damage households in unexpected and long-lasting ways.

Savings

Pew's research shows that income alone, no matter how consistent, does not guarantee that households can accumulate a sufficient financial cushion to protect themselves from the unexpected. They need some savings, and that's one of the toughest goals for Americans to achieve.

Overall, the typical household cannot replace even one month of income with liquid savings, and even pooling all of its financial resources could replace only about four months of income. This lack of savings tops the list of financial worries in many homes.

A San Francisco Bay Area resident commented on the inability to save this way: "I think because I just have so much to pay off in terms of debt that I can't save. Every time I think about saving, I'm like, 'Oh, I really should pay this off or get this instead.'"

Low-income households are particularly unprepared for emergencies. The typical family at the bottom of the income ladder has the equivalent of less than two weeks' worth of income in checking accounts, savings accounts, and cash on hand.

Debt

One of the biggest shifts in American families' balance sheets over the past 30 years has been the growing use of credit and the resulting indebtedness.

In the years leading up to the Great Recession, the average household at the middle of the wealth ladder more than doubled its mortgage debt. Although Americans' overall debt has decreased since then, it remains higher than it was in the 1990s. Student loan debts are part of this growth.

Perhaps not surprisingly, debt hits low-income households especially hard. Their liabilities grew far faster than their income in the aftermath of the Great Recession. Their debt was equal to just one-fifth of their income in 2007, but that proportion grew to one-half by 2013. Even middle-wealth households held \$7,000 more in debt, on average, in 2013 than in 2001 and previous years.

"Pew has long cared about the health and status of the American Dream, and our work clearly shows that for many Americans, the root of achieving that dream is being financially secure," says Currier. Pew's research finds that typical Americans don't have grandiose visions of financial security. Many say they just want to be able to pay their bills, set something aside for savings, and sleep peacefully at night.

"It would be nice not to worry," said a Pittsburgh-area resident. "Everybody's dream is just to breathe."

Charles Babington is a Washington-based writer. He wrote about widening demographic gaps between Republicans and Democrats in the fall 2016 issue of Trust.





A CHANGING RELIGIOUS WORLD

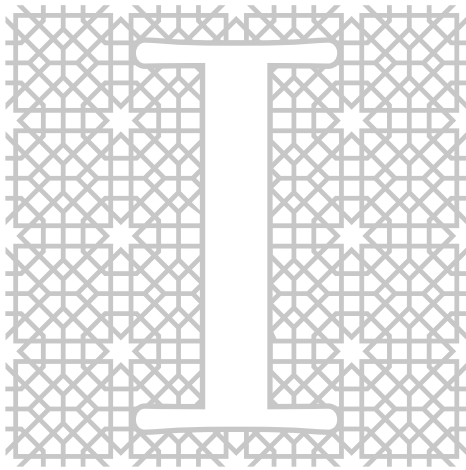
MUSLIMS ARE POISED TO BECOME THE LARGEST
FAITH GROUP ON EARTH BY 2075.



By David O'Reilly



Muslims attend a religious ceremony commemorating the birth of Muhammad, the prophet and founder of Islam, at Zaytuna Mosque in Tunis, Tunisia. Muslims around the world celebrate Muhammad's birthday—known in Arabic as Mawlid al-Nabi—every year on the 12th of Rabi-ul-Awwal, the third month on the Islamic calendar. *Yassine Gaidi/Anadolu Agency/Getty Images*



It was not so long ago that the best attempts to convey the size and distribution of the world's religions relied more on conjecture and rhetoric than scientific research. "Islam is today the religion of about 150 million of our fellow creatures," the Rev. W. St. Clair Tisdall reported to the Church of England's Missionary Society in 1892. Tisdall never said how he arrived at so very round a number. His far-flung colleagues in Africa, where British missionaries were

active, might have observed more mosques than churches north of the Sahara Desert. The ratio of crescents to crosses around Africa would have been little help, though, in calculating the number of followers of each faith, let alone in projecting their growth.

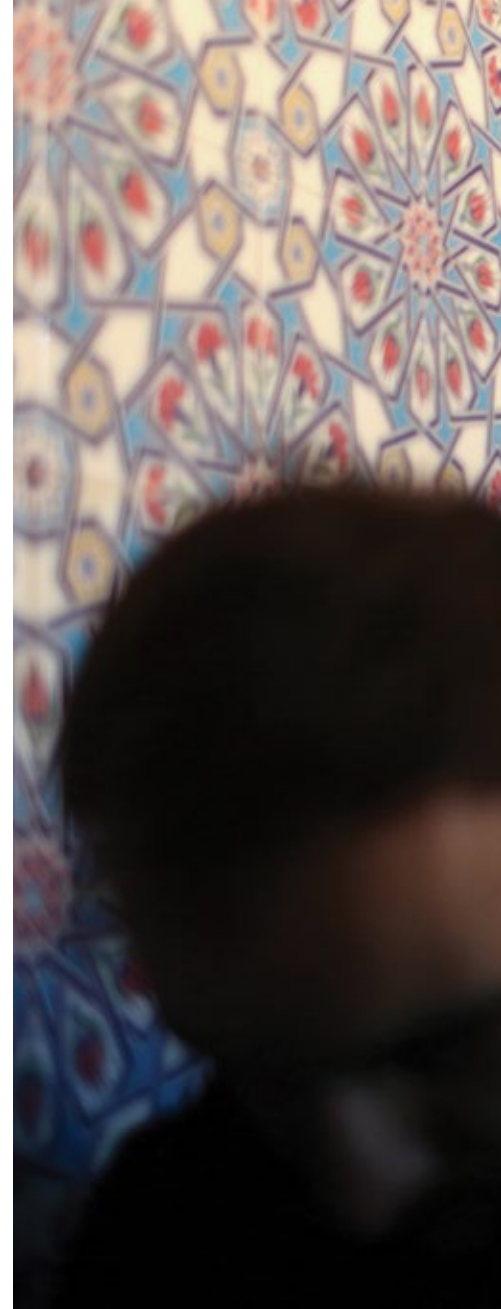
Now, however, modern survey research and demographic methods can take the once murky business of calculating the size, distribution, attitudes, behavior, and likely spread of the world's largest faiths to a degree of scientific accuracy inconceivable in the Victorian age. Two years ago, the Pew Research Center, with support from the John Templeton Foundation, not only estimated that there were 1.59 billion Muslims on the globe as of 2010, but also made front-page headlines on every continent when it projected that Islam would surpass Christianity to become the world's largest religion by about 2075.

More recently, an April report from the center updates the estimate of the global Muslim population to 1.75 billion (as of 2015) and projects that, if current demographic trends continue, it will reach 2.99 billion by 2060. In addition to providing new data on birth and death rates in the world's major faiths, the *Changing Global Religious Landscape* report reaffirms prior forecasts by the center that much of Islam's and Christianity's growth is "expected to take place in sub-Saharan Africa." Among the new findings are these:

- Sub-Saharan Africa now contains 26 percent of the world's Christian population but will be home to 42 percent by 2060.
- Between 2015 and 2060, the world's population is expected to increase by 32 percent, to 9.6 billion, during which time the number of Muslims—the major religious group with the youngest population and highest birth rate—is projected to increase by 70 percent.
- In Europe today, Christians are dying in greater numbers than they are producing offspring, while the European Muslim birth rate is significantly higher than its death rate and exceeds the birth rate of any other major faith group on the continent.

The Changing Global Religious Landscape is only the latest in a series of reports produced by the Pew-Templeton Global Religious Futures project, an undertaking that in less than a decade has helped to transform public and professional knowledge of attitudes and demographic trends within the world's major faith groups: Christianity, Islam, the religiously unaffiliated, Hinduism, Buddhism, Judaism, folk religions (including African traditional religions and Chinese folk religions), and other religions (a residual category that includes Baha'ism, Jainism, Sikhism, Taoism, and many smaller faiths).

The project began in 2010 when the foundation, based in suburban Philadelphia, partnered with the Pew Research Center on what Alan Cooperman,



Worshippers offer Tarawih, prayers performed only during the Islamic holy month of Ramadan, at the Eyup Sultan Mosque in Brooklyn, New York. Mohammed Elshamy/Anadolu Agency/Getty Images



the center's director of religion research, calls "an initiative to apply demographic methods and tools to the study of religion."

There was much to be done, recalls Conrad Hackett, who joined the center as its lead demographer in 2010. "Despite all the census and survey data that was out there in all the various countries," he says, "nobody had added up the information."

What's more, population data on Islam was still notoriously fuzzy even a century after Tisdall. In 1993, an American encyclopedia asserted that Islam's worldwide population was "700 million or more"—the same year that a British almanac posited 952 million. Estimates of Canada's Muslim population in 2001 ranged between 1 million and 6 million, with one source even proposing 12 million. Until Pew published its country-by-country

estimates, many books and newspaper articles gave a ballpark figure of 1 billion Muslims worldwide.

One of the project's first reports, *Tolerance and Tension*, was a landmark study of public attitudes and demographic trends in sub-Saharan Africa whose findings would have left Tisdall and his fellow 19th-century missionaries speechless. "The number of Muslims living between the Sahara Desert and the Cape of Good Hope has increased more than 20-fold" in the past century, it reported, "rising from an estimated 11 million in 1900 to approximately 234 million in 2010." The number of Christians has "grown even faster, soaring almost 70-fold from about 7 million to 470 million."

In addition to its hundreds of reports and carefully researched "FactTank" blog posts on all aspects of



Jalda, a Muslim from Afghanistan, sits with her friends Doreen, Liliana and Marlene at an ice cream parlor in Hamburg, Germany. *fotogloria/LUZ/Redux*

religion, the Pew-Templeton Global Religious Futures project and other Pew Research Center initiatives have published more than 120 reports focused directly on Islam, or in which data on Muslims figure prominently. These have ranged from the narrowly focused to the massively comprehensive, such as the April 2013 report *The World's Muslims: Religion, Politics and Society*, based on more than 38,000 face-to-face interviews with Muslims in 39 countries and 80 languages.

For the *Future of World Religions* report in 2015, “we used 2010 as our baseline and went to the best available sources for each country to come up with religious population estimates,” explains Hackett, whose demography team spent over four years reviewing nearly 3,000 censuses, large-scale surveys, population registers, and other data sources from more than 190 nations.

April’s *Changing Global Religious Landscape* report

represents an exhaustive reanalysis of that data, says Hackett, further emphasizing Islam’s growing numbers in the decades to come. Its opening paragraph notes that worldwide, “more babies were born to Christian mothers than to members of any other religion in recent years, reflecting Christianity’s continued status as the world’s largest religious group. But this is unlikely to be the case for much longer: Less than 20 years from now, the number of babies born to Muslims is expected to modestly exceed births to Christians.” Muslims’ high birth rates and relatively young population led the researchers to project that between 2030 and 2035, there will be 225 million children born to Muslim mothers, compared with 224 million to Christians.

Among the report’s other population forecasts is that the number of Christians will rise by 34 percent by 2060, slightly faster than the overall global growth rate but just half that of Muslims. And that, except for Muslims and Christians, followers of all major world religions—including Hindus, Buddhists, Jews, and

adherents of folk religions—are projected to make up a smaller percentage of the global population in 2060 than they did in 2015.

Still another key finding is that the proportion of people who don't claim any religion—the “nones”—is expected to decline from 16 percent of the world's population to 13 percent (even though their numbers are rising in the United States). By about 2060, just 9 percent of all babies will be born to religiously unaffiliated women, while more than 70 percent will be born to either Muslims (36 percent) or Christians (35 percent), according to the projections.



“The number of American Muslims is a very emotionally driven issue.”

—AMANEY JAMAL, PRINCETON UNIVERSITY

The center's rich data and detailed analyses, along with the thorough explanations of methodology that accompany its major reports, have created a transparent body of religion research that has become a valuable source to government leaders, scholars, and policymakers. CIA spokesman Jonathan Liu says the Pew Research Center “has contributed a great deal to recent scholarship on the estimated and projected size and distribution of the world's major religions.” Center studies are among the sources the agency uses to compile its *World Factbook* of statistical data on all the world's countries, which is a standard reference for many in foreign policy fields. And “for some countries,” says Liu, the *World Factbook* “uses Pew estimates as the sole source.”

Scholars say the center's work avoids bias or political agenda. “It is quite excellent that the Pew surveys ... have resisted pressure from [religious] activists” to accept their sometimes inflated figures, says Khalid Y. Blankinship, an authority on Islamic demographics at Temple University. Still, there are religious advocates who believe their numbers are larger than the center's estimates. Many recent Muslim immigrants “are not accessible to traditional head counting,” contends Ibrahim Hooper, spokesman for the Council on American-Islamic Relations (CAIR), based in Washington, D.C. Contrary to Pew's 2015 estimate of 3.3 million Muslims in the United States, he says, “our best guess is 6.7 million.”

That figure comes from the research of Ihsan Bagby, associate professor of Islamic studies at the University of Kentucky, whose 2001 and 2011 U.S. Mosque Surveys were funded by the Hartford Institute for Religion Research and several Muslim organizations, including

CAIR. Still, Bagby himself says, “I think Muslim scholars respect what Pew has done, and respect its integrity.”

Pew's estimate of 3.3 million Muslims in the United States is based on a combination of immigration data and national polling, including a 2011 Pew survey of Muslim Americans, conducted on cellphones and landlines in Arabic, Farsi, and Urdu as well as in English. Pew is now conducting another major survey of U.S. Muslims, which will yield an updated population estimate later this year.

“Because the U.S. census does not count the size of religious groups, we try to fill the information void with well-grounded estimates,” says Besheer Mohamed, who wrote his doctoral dissertation at the University of Chicago on Pew's first survey of Muslim Americans, conducted in 2007. He is now a senior researcher at the Pew Research Center, managing the new survey. “There may be some people who will never be happy, no matter what number we come up with. But we explain our methodology, document the extensive efforts we take to reach Muslims in our polls, and make the data public. And that's really all we can do.”

The number of American Muslims “is a very emotionally driven issue,” notes Amaney Jamal, Edwards Sanford Professor of Politics at Princeton University and principal co-investigator of the Arab Barometer Project, which since 2005 has surveyed the politically relevant attitudes of citizens in the Arab world. “But Pew is seen as being very committed to getting its numbers right—that it doesn't ‘have a dog in the fight,’ as they say.”

The Sept. 11 attacks were a turning point in modern relations between Islam and the West, says Jamal, and did much to propel today's high level of interest in the attitudes and demography of the world's Muslims. “Until then, we [in the West] tended to treat Muslims and the Arab world as this big, monolithic lump with very little detailed, contextually based knowledge that distinguished Iran from Saudi Arabia, or Morocco from Indonesia.”

Detailed, agenda-free, methodologically sound demographic and attitude surveys of Islam not only help governments “design better policies to address radicalism or extremism or anti-westernism,” she says, but also help break down stereotypes and mutual suspicions and reveal cross-cultural commonalities. A 2011 Pew survey found, for example, that 69 percent of U.S. Muslims say religion is very important in their lives, virtually the same as 70 percent of U.S. Christians.

“Pew has really become a state-of-the-art research hub,” says Jamal. “When it conducts meaningful research on the Muslim and Arab worlds, people pay a lot of attention.”

David O'Reilly covered religion for The Philadelphia Inquirer for more than two decades.

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SHE'S A HEALTH CARE PROVIDER WHO TRAVELS, an educator who listens, and a comfort to children who've never seen a dentist. She's also a pain reliever, a problem solver, and even, it can seem, a miracle worker.

TO FILL

STORY BY
CAROL KAUFMANN

PHOTOGRAPHY BY
ACKERMAN+GRUBER FOR THE PEW CHARITABLE TRUSTS





Hauling dental equipment in the early morning hours is just the beginning of Jodi Becker's 10-hour, or longer, day. Becker, an advanced dental therapist, must assemble a proper dental office before her first appointment, this time in a high school in Richfield, Minnesota, a suburb south of the Twin Cities. The room where she is to work is much smaller than she expected. But Becker and her dental assistant adjust. They have to—it's 8 a.m. and the first patient is due in half an hour.

The many roles Jodi Becker plays are all part of her job as an advanced dental therapist. Most weeks, she can be found packing her portable equipment and hitting the road to treat the many people in rural and suburban Minnesota who either can't find a dentist to treat them or can't travel to an office to receive care.

Dental therapists are filling a gaping hole in American dental care, and Pew is working to increase their numbers

around the country. States such as Minnesota have authorized the midlevel providers—akin to physician assistants—to provide routine prevention and treatment services, such as filling cavities and placing temporary crowns. Dental therapists can work in a range of

settings—public clinics, community health centers, private practices, nursing homes, and schools. In addition to Minnesota, dental therapists have been authorized in Vermont, Maine, and in Native tribal communities in Alaska, Washington, and Oregon. But more than 53 million people in the United States still live in areas with dentist shortages. Access to care is also limited for the more than 50 million children and adults who rely on Medicaid. And only about one-third of U.S. dentists accept public insurance.

That's why dental therapists like Jodi Becker are key. "I can see firsthand the difference we're making for a lot of kids in Minnesota just by being able to provide care," she says. No two working days are the same, and her schedule is ever-changing, but Becker says it's all worth it.



Becker and dental assistant Noel Jester set up their self-contained dental unit, which includes hoses and their own water in case a room has no taps. Each place they go, they assemble a full-scale dental operation, complete with a compressor that runs their air and water hand pieces and hoses, a reclining dentist's chair, face masks, syringes, lights, sterilizer, bags of tools, and an X-ray machine. Today, the X-ray machine has to go across the hall in another room. After 30 minutes, they're open for business.



Each dental exam includes Becker explaining to both parent and patient what the problem is and how she intends to fix it. Becker says that a description of treatment can be tricky because children, especially those who have never before been to a dentist, are often scared.

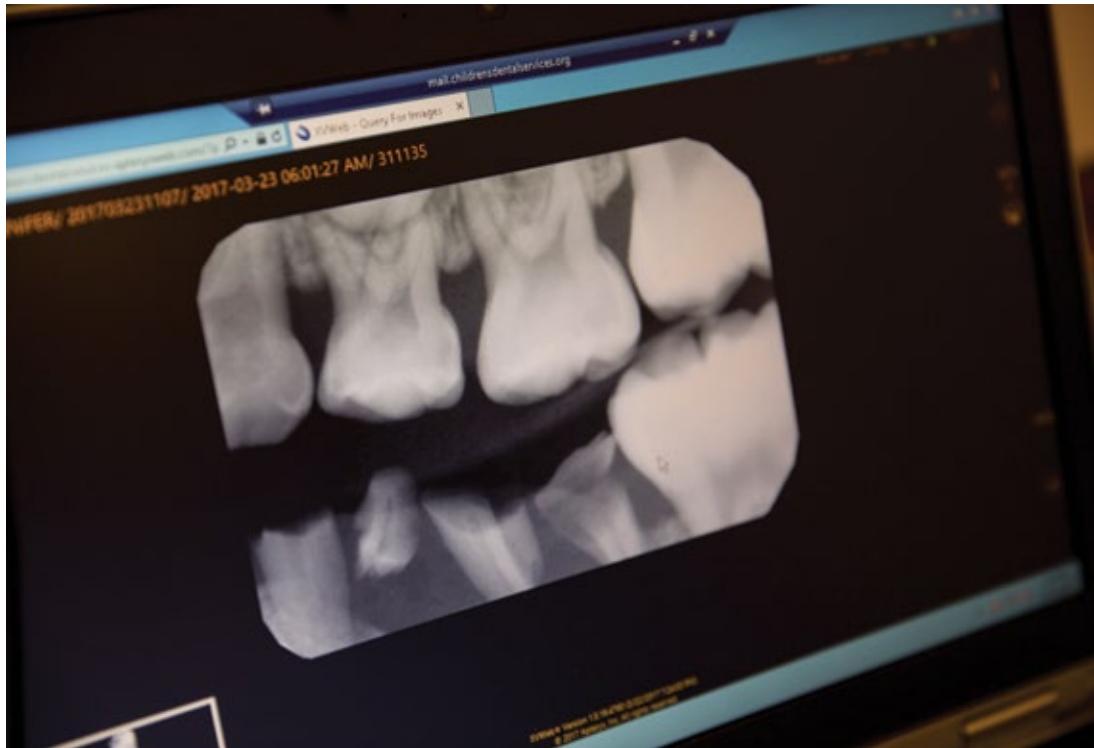
"You have to speak in language that they understand, not dental speak. You can't tell a child that they have an abscess and need an extraction," she says. "Instead, I say, 'Your tooth is very sick. I'm going to put on some sleepy juice to make it fall asleep.'"

A young patient doesn't speak English, so Becker finds other ways to communicate, mainly through body language and lots of smiles. She knows the child has a terrible toothache, and the exam reveals teeth that need to be pulled. "When a child has a toothache, she may miss school and find it hard to concentrate. If the tooth is not treated, it can cause serious side effects," says Becker, who saw 11 children ages 5 to 18 during one day at the high school. "I have the ability to treat those kids and keep them healthy so they can focus on school and just be a kid." Though some children are scared of the bright lights, masks, and drills, this girl was calm throughout the visit.



Opening wide reveals decay; a tooth will have to go. Many of the people Becker sees each year—including a large number from Minnesota's Hispanic and Somali immigrant communities—can't afford basic dental hygiene. Each appointment ends with

a lesson on proper care and brushing—and a chance to pick out a toothbrush. "The best part of being an advanced dental therapist is the ability to treat kids who might not otherwise receive care," Becker says.



An X-ray shows baby teeth have deteriorated and will need to be pulled; the gray surrounding the broken teeth indicates severe infection. Becker will have to remove the teeth in pieces from the patient, a 6-year-old girl who had never been to a dentist. Becker says that many parents feel guilty once they realize that tooth decay can be caused by common kid foods, including fruit juice, fruit snacks, and crackers. "You have to explain these kinds of things without blaming," Becker says.

Peering closely, Becker focuses on the work of restoring smiles. She spent 25 years as a dental hygienist before receiving a master's degree in dental therapy from Metropolitan State University in St. Paul—then spent another year and a half adding “advanced” to her title by working with a dentist in a clinic and going through a credentialing process. As an advanced dental therapist, Becker not only administers the care, but can also make a diagnosis, which enables her to travel

to various sites. She is supervised by a dentist, and the two keep in touch through telehealth technology. While some people maintain that only dentists should perform the services Becker can, the parents who saw her in Richfield disagree. “I feel that they are trained very well,” says one parent. “They make my daughter comfortable and help her feel better,” says another. “My kids and I feel safe.”





Stateline, an initiative of The Pew Charitable Trusts, is a team of veteran journalists who report and analyze trends in state policy with a focus on fiscal and economic issues, health care, demographics, and the business of government. More stories are available at pewtrusts.org/stateline.



Fire Deputy Chief Terry Walsh responds to a possible drug overdose by an 18-year-old in Portland, Maine.

Linda Davidson/The Washington Post via Getty Images

As Fentanyl Spreads, States Step Up Responses

BY CHRISTINE VESTAL

A billboard along a main highway in Frederick, Maryland, tallies the number of residents in this mostly rural county who have overdosed on prescription painkillers, heroin, and other illicit opioids this year: 96 overdoses, 15 of them fatal.

What the sign doesn't say is that a large and

growing number of those deaths are the result of fentanyl, a fast-acting drug that is 50 times stronger than heroin and can kill users within seconds. Cheap and easy to produce, it is used by drug dealers to intensify the effects of heroin and other illicit drugs, often without the users' knowledge.

The presence of fentanyl in the illicit drug supply has put law enforcement officials and the medical community on high alert in more than a dozen states, accelerating the battle against opioids on all fronts.

States, counties, and cities are responding to this latest crisis by doing more of what they already were doing: stockpiling the overdose reversal drug naloxone, funding more drug treatment, and ramping up police surveillance of drug trafficking. In addition, a handful of states are stiffening penalties for selling the lethal drug.

But even in hard hit states that have been battling fentanyl for more than three years, the death toll continues to spike. Connecticut, Illinois, Maine, Massachusetts, New Hampshire, New York, Ohio, Tennessee, West Virginia, and Rhode Island were among the states hit hard by fentanyl as early as 2013.

In 2014, the powerful drug killed more than 5,000 Americans, according to the Centers for Disease Control and Prevention. The next year, nearly 10,000 Americans died of fentanyl-related overdoses. All opioids, including heroin and prescription painkillers, killed more than 33,000 people in 2015, the most recent year for which numbers are available.

Early death reports from states indicate that national data, to be released in January, will show an even steeper rise in deaths in 2016, says Matthew Gladden, an opioid investigator at the CDC.

This year and last, the deadly drug began spreading to more states. "We no longer have a situation of



In East Liverpool, Ohio, a police evidence bag is filled with heroin. "We can't even touch these things anymore," an officer said.

Benjamin Lowy/Getty Images Reportage

And standardized approaches to detecting the presence of the deadly drug and communicating its dangers—to drug users, people in treatment or recently released from prison or jail, and their friends, family members, and advocates—also are beginning to emerge.

In Maryland, the state health department in April issued an alert about carfentanyl, a related drug that is even more potent than fentanyl and is used as a tranquilizer for elephants and other large animals. The warning to community advocates across the state came after one person in Frederick County and two in Anne Arundel County died of overdoses involving the drug.

Maryland and other states also are developing policies for detecting the deadly drug as quickly as

In 2014, the powerful drug killed more than 5,000 Americans, according to the Centers for Disease Control and Prevention. The next year, nearly 10,000 Americans died of fentanyl-related overdoses.

isolated outbreaks, but a major sustained public health challenge with the supply of fentanyl," he says.

The sharpest spike is in Maryland, according to Gladden. "The trends there are extremely disturbing," he says, with other emerging hotspots including Florida, New York City, and Virginia.

Sounding Alarms

Public health messages like the billboard in Frederick, as well as radio and TV alerts, are increasingly common.

possible and targeting public health messages to affected communities.

In Massachusetts, for example, the health department in January asked all hospitals and treatment centers to routinely screen for fentanyl in patients who have overdosed or are seeking treatment for addiction.

Medical examiners there and in Maryland are also attempting to shorten the weeklong process of reporting the results of toxicology tests performed

on people who have died of drug overdoses. And in Maryland, Massachusetts, New York, and Rhode Island, law enforcement and public health officials are sharing their data to keep better track of which drugs are killing people and where.

“What’s so concerning is that in Massachusetts, where, probably more than any other state, we’ve implemented all of the recommended strategies to address the opioid epidemic, overdose deaths are still surging, largely driven by fentanyl,” says Dr. Alex Walley, director of an addiction medicine fellowship at Boston Medical Center.

In general, the U.S. Department of Health and Human Services has recommended that states take three major steps to stem opioid overdose deaths: reduce unsafe prescribing of prescription painkillers, widely distribute the overdose rescue drug naloxone, and provide greater access to opioid addiction treatment using medications approved by the U.S. Food and Drug Administration.

Fast-Acting

With the advent of fentanyl and other highly potent synthetic drugs, many states are amplifying those policies and adding new programs to protect drug users from deadly contaminants in heroin, cocaine, and other illicit drugs.

and bystanders need to have at least two doses of the rescue drug on hand and call 911 immediately, even if the victim appears to be revived.

In Frederick, Clarke says, his department had just started talking about equipping officers with multiple doses of naloxone, although it’s expensive and hard to buy in bulk because of its short shelf life.

So far, however, he said rescuers have been able to use multiple doses when needed because two officers are assigned to each overdose call and each officer carries one dose. In addition, emergency medical service professionals usually arrive on the scene with one or more doses of the overdose antidote, and, in many cases, a bystander has already administered the lifesaving drug by the time officers arrive.

Extraordinary Measures

As the number of overdose victims who visit hospital emergency departments skyrockets and overdose deaths mount, addiction experts are suggesting unusual initiatives to protect the lives of drug users.

In May, the Massachusetts Medical Society recommended that the state create a first-in-the-nation “safe injection” clinic where people can use drugs and be observed by medical professionals who can rescue them if they overdose. A similar proposal was introduced in the Maryland Legislature this year.

Because fentanyl works so much faster than heroin, the window of time to save a person who has overdosed on the drug is only a few minutes, compared to an hour or more with heroin.

Most important, Walley says, is to make sure that people don’t use these drugs while they’re alone.

Because fentanyl works much faster than heroin, the window of time to save a person who has overdosed on the drug is only a few minutes, compared to an hour or more with heroin. In most cases, unless a person with the rescue drug naloxone is in the same room as the drug user, rescue is not possible, he says.

In Maryland, Maj. Tim Clarke of the Frederick County Sheriff’s Office says officers routinely find fentanyl overdose victims who still have the syringe in their arm because they passed out before they had time to remove it.

Another difference between heroin and fentanyl and related drugs such as carfentanil is that overdose victims usually require multiple doses of naloxone to be revived. That means rescue workers

Such sites have proven successful at reducing overdose deaths in other countries. But they run counter to federal drug laws, and are not expected to be widely used in the U.S. any time soon, although safe drug consumption sites are under discussion in Seattle and in several cities in New York, including Albany, Ithaca, New York City, and Syracuse.

In March, Maryland Governor Larry Hogan declared the opioid crisis a state of emergency with the goal of promoting communication among state agencies and between state and local officials. The state also dedicated another \$50 million to fighting the epidemic.

Clay Stamp, the head of the state’s new Opioid Operational Command Center, says the battle against fentanyl and other opioids is challenging because overdose deaths are increasing at lightning speed while the coordination process takes time.

“We’re just now starting to mobilize,” he says.

In Maryland, there were fewer than 200 deaths related to fentanyl in the first nine months of 2015. But in the same period of 2016, fentanyl-related deaths had nearly quadrupled, to 738, accounting for more than half of overdose fatalities in the state, 1,468, according to the Maryland Department of Health and Mental Hygiene.

In Frederick County, only two overdose deaths were attributed to fentanyl in the first nine months of 2015. A year later, 28 people had died of a fentanyl overdose in the same time period.

For Stamp, the goal is simple: reduce the number of fatalities. To do that, he says, his team will start by expediting an opioid prevention, treatment, and law enforcement plan released by Hogan in January.

Stamp says his team also will work to spread innovative programs across the state. One program, Safe Stations, is in Anne Arundel County, home to Maryland’s state Capitol. Started in April, it allows

anyone with an addiction to walk into a local fire station and get a medical assessment and help finding treatment. Any drug-related legal issues they may have will be suspended while they seek treatment.

In Frederick County, a successful but underfunded program connects health care professionals who are recovering from an addiction—“peers”—with people who have overdosed. “The dream is to expand that program with more funding so that a peer can meet every person face-to-face in that moment right after an overdose,” says Andrea Walker, county director of behavioral health services.

“If death were a deterrent to drug use, we wouldn’t be in this situation,” she says. But that’s not the way addiction works. The disease reprograms the brain to seek more drugs, even in the face of death, she says.

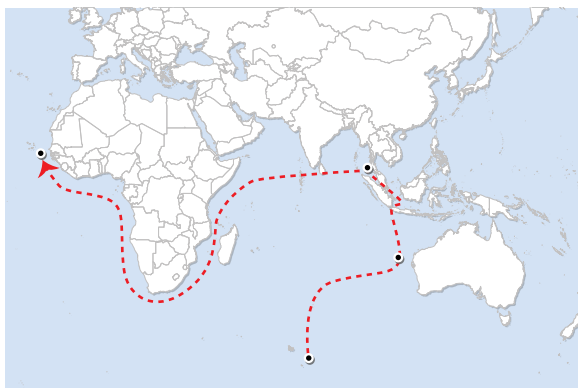
Christine Vestal is a Stateline staff writer.

The vial on the left contains about 30 milligrams of heroin, a lethal dose. The other holds a three-milligram dose of fentanyl, enough to kill an average-sized adult male. Bruce A. Taylor/New Hampshire State Police Forensic Laboratory



How the Voyage of the Kunlun Came to an End

Pew helped Interpol create a network for sharing information among nations fighting illegal fishing—and halted a ship's infamous career.



BY ANNE USHER

For more than a year, a rusting, hulking 157-foot fishing boat has sat at anchor amid the buzz of activity in Dakar, Senegal's main harbor. Known under various names but mostly as the Kunlun, the vessel is to many a symbol of the size and secretiveness of illicit fishing—and of the innovations by law enforcement and environmentalists to dent the global trade.

The Kunlun is one of six fishing ships known as the “Bandit 6,” which Interpol and officials in New Zealand and Australia say took advantage of loose fisheries laws and uncoordinated enforcement efforts to ply the Antarctic's Southern Ocean for nearly two decades in search of toothfish, operating at a near-industrial scale with nets stretching 40 miles. Found on restaurant menus as Chilean sea bass, the mottled gray bottom feeder fetches as much as \$15 a pound, making it one of the most lucrative products of the illegal, unreported, and unregulated fishing market, with an estimated annual value of \$23 billion.

The ships were the most notorious of the hundreds of vessels that Interpol says were operating illegally in Southern Ocean waters, catching—according to the Commission for the Conservation of Antarctic Marine Living Resources—as much as 2,000 tons of toothfish a year. Starting around 2006, Australia and

New Zealand began aggressively cracking down on the ships operating within their 200-mile exclusive economic zones (EEZs). That forced the vessels into international waters, where treaties allow authorities to board ships only to verify their identity and confirm that the country whose flag they are flying had given them permission to fish where they were.

Authorities, including Gary Orr, a compliance manager with New Zealand's Ministry for Primary Industries, say they knew that the Bandit 6 vessels frequently changed their names and the countries where they claimed to be registered, making them especially elusive. Several years ago, both New Zealand and Australia began launching patrols on the high seas. “We were all operating in isolation,” says Orr. “And none of us were having success at all.”

That began to change, though, when Project Scale was launched four years ago. The Interpol initiative, developed and funded by the international police organization, the government of Norway, and The Pew Charitable Trusts, is combating illegal fishing by helping countries analyze and exchange crucial information to fight this transnational crime. The project includes regional training in intelligence techniques and assistance with identifying the biggest criminal networks involved in the illegal fishing trade.

“Countries had been looking at this as an issue of national sovereignty,” says Deon Burger, an environmental security coordinator for Interpol. Now “we're linking all of them, analyzing all of the information they collect, and bringing it back to the country to help move cases forward.”

Pew helped launch Project Scale as part of its global campaign to end illegal fishing, which accounts for 1 of every 5 fish taken from the sea each year. “The coordinated effort is able to provide round-the-clock assistance in criminal investigations and is changing the game for illegal fishers,” says Tony Long, who directs Pew's campaign from London.

One sign of that game change? In April 2015, one of the Bandit 6, a Norwegian-built trawler called

The Kunlun plied the waters off Antarctica,
pursuing toothfish on a near-industrial scale.
Sea Shepherd





The Kunlun was spotted fishing in waters off Antarctica after an alert from Interpol helped locate the ship.
CCAMLR

hailed the Kunlun, and that the crew responded that the vessel was operating under the flag of Equatorial Guinea. “We reached out to [that country’s maritime authority] on the spot,” says Orr, “and it confirmed it had no registered vessels in the region and authorized us to board.”

But, he adds, high waves and floating ice prevented the New Zealand authorities from boarding—and the Kunlun sailed away.

At New Zealand’s request, Interpol quickly issued an alert for the ship. A Sea Shepherd vessel, the Sam Simon, was in the region and located the Kunlun on Jan. 13. The Sam Simon’s captain, Siddharth Chakravarty, says his ship pursued the fishing boat for

five days, traveling 900 miles and broadcasting its route, with the transmissions monitored by Project Scale’s team in Lyon, France.

An Australian patrol vessel, the Triton, soon joined the chase. John Davis, a senior compliance manager for the Australian Fisheries Management Authority, says that on Feb. 27, near Australia’s Coco Islands, officers on the Triton boarded the Kunlun, took photos, and questioned the crew members but could not arrest them because the vessel was in international waters.

“Right from the outset, we closely monitored the situation. New Zealand is a strong ally, and we collectively don’t like it when boats are able to avoid us, so we band together,” says Davis.

As the Kunlun continued to sail, the Project Scale team was making projections on where it would head next. Based on its previous activity, the team estimated that Thailand was the likeliest destination.

That was right: A week later, the ship—now flying Indonesia’s flag with the name Taishan, one of at least 15 names Interpol determined it has used over the years—entered the port of Phuket. Thai port authorities say the crew declared that the ship carried grouper and unloaded it into containers that were to be moved to another port. Thai authorities—alerted by Australian officials to expect the Kunlun’s arrival—intercepted the containers and found that the 181 tons of frozen seafood was not grouper but toothfish. They seized the catch and confiscated the officers’ passports.

When Interpol heard the news, the Project Scale team assembled a strategy meeting at its offices in Singapore.

the Thunder, was off the West African island nation of São Tomé and Príncipe being observed by a ship operated by the Sea Shepherd Conservation Society, which has spent decades fighting illegal activities in the oceans. The Sea Shepherd ship had been tracking the Thunder after Interpol issued an alert known as a purple notice to its 190 member countries seeking information on the fishing vessel’s whereabouts. Those on board the monitoring vessel say that as they watched, the Thunder began to take on water and its crew climbed into lifeboats. The ship sank, and the country’s authorities said at the time they believed the crew deliberately sabotaged it to hide evidence of illegal fishing. The Thunder’s captain and crew were rescued by the Sea Shepherd ship; the captain and two crewmen were later convicted by São Tomé and Príncipe of crimes related to the ship’s sinking and using fraudulent documents, for which they received sentences ranging from two years and nine months to three years and were collectively fined more than \$15 million. They have not paid the fine but are serving their sentences.

Even as the Thunder slipped beneath the waves, authorities had leads on the other five ships—and were actively pursuing the Kunlun.

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On Jan. 7, 2015, a New Zealand patrol boat, the Wellington, was patrolling near Mawson station in Antarctica when its crew spotted the Kunlun. Compliance manager Gary Orr says the patrol boat

Spain's Guardia Civil, the country's national police force, had determined that a Spanish conglomerate controlled by a single family owned the ship and others among the Bandit 6, and said it had tried to go after the company without significant success. The Project Scale team sifted through evidence—including photos and communications records—and provided it to Spanish investigators.

But as the Kunlun/Taishan languished in Phuket, Thai authorities, citing the high cost of refrigerating the 181 tons of toothfish, allowed the catch to be reloaded on the ship, and also allowed the ship to be partially refueled to power the onboard refrigeration equipment. During the night of Sept. 7, Thai officials reported that the ship vanished from port.

The chase was on—again. Based on the ship's past movements and estimates of how much fuel the ship had left, Interpol alerted officials in Senegal and a handful of other West African countries. Sure enough, Interpol says that two months later, in the middle of the night on Nov. 28, the ship—now called the Asian Warrior and flying the flag of St. Vincent and the Grenadines—pulled into the harbor in Dakar.

But seizing the catch wouldn't be easy: Because Senegal has a shortage of inspectors and conducts port inspections only during the day, the crew managed to load the fish onto another small vessel and flee before local authorities could intervene, says Cheikh Fall, head of the inspection and control division of the country's National Agency for Maritime Affairs.

Senegalese officials suspected that the Asian Warrior, still in port but without its cargo, was the Kunlun, but they had to be sure—and Project Scale's cooperative network again came into play. The African authorities studied photos of the Kunlun taken by Australian officials on the Triton when they had boarded the fishing vessel nine months earlier. Two details from the photos matched the ship in the Dakar port: a missing light on the ship's tower and a strip of rust down one side of its hull.

Fall contacted Interpol, which dispatched two officers, joined by Spanish authorities, who also traveled to Dakar. That team gathered even more evidence: a bell carried the name Dorita, another of the names the Kunlun was known to have used, and documents on the ship appeared to indicate that its registry certificate had been falsified.

"It was the kind of assistance that Senegal has been looking for," says Fall, whose country's legitimate fishermen have seen stocks depleted by illegal fishing. "We don't all have the means to monitor our EEZ, and our fishers have become more impoverished because of this."

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The evidence was enough for civil authorities in Spain to move against members of the Vidal family,

which government prosecutors say founded the company that operated the Kunlun and several other vessels in the Bandit 6. In March 2016, Spain's Ministry of Agriculture and Fish, Food, and Environment fined family members and a total of seven companies linked to the family €17.8 million, the largest such fine ever imposed in the European Union, and banned the Vidals from fishing with the ships. The Vidal family has denied any involvement in illegal fishing and has appealed the ruling to a special administrative court.

The ruling was a success for Interpol and its allies in a year in which authorities also captured the remaining Bandit ships in an enforcement effort that included 15 nations cooperating through Project Scale.

Meanwhile, Interpol officials helped track down the small ship that they believed had spirited away the Kunlun's fish from Dakar. It was eventually found in Vietnam, where DNA tests confirmed that the catch was the missing toothfish. That evidence helped Spanish criminal authorities charge the Vidal family with environmental crimes, money laundering, falsification of documents, and criminal conspiracy—charges that Spain's Supreme Court ruled in December 2016 didn't apply because the fishing was conducted in international waters by a vessel not flying a Spanish flag. Oceana and Greenpeace have appealed that decision.

Although the criminal charges were dropped, the fine remains in effect, as does the ban on the company using the remaining ships. The Project Scale team considers the mission a success, with the Kunlun and the rest of the Bandit 6 now out of business.

"The Vidals' holdings are broken," says Miguel Ángel Pacheco, a Guardia Civil officer who specializes in environmental crimes. He says only one family member is still operating a vessel on the high seas—with a legal fishing license—off Mauritania. The rest are fishing in Spanish and European waters. Orr, the New Zealand fishing official, says the high-seas chase and the evidence-sharing that accompanied it are perfect examples of the project's effectiveness—and the cooperation and communication it has created among the many nations fighting illegal fishing.

"Now I can pick up the phone and ring" authorities in other nations easily, Orr says. "Before, illegal fishermen had little risk of being caught—or if they [were], could bribe someone. The illegal fishing fleet is getting smaller and smaller as we do this work."

That shows that Project Scale is paying off, says Pew's Tony Long. "It provides a way for countries to tackle fisheries crimes that cross national boundaries," he says. "And it's always at work."

Anne Usher is a Trust staff writer.

Pew Helps Donors Amplify Their Philanthropy

Pew works with philanthropists who seek to have a long-lasting, positive impact on today's most pressing challenges. In an interview with Trust, Sally O'Brien, Pew's senior vice president of philanthropic partnerships, discusses how visionary donors who want to use quantifiable data and achieve tangible goals can make transformative change in the world.



How is philanthropy changing?

The past decade or so has seen a real evolution in philanthropy, both in the approaches used for making investments and also in the philanthropic community itself. Today

many philanthropists are entrepreneurs and approach investments in a different way. They're risk takers who want to see measurable results. Pew is a terrific partner for donors like this because we know how to get things done and have a track record of quantifiable outcomes. We also have a lot of experience with investment approaches that leverage "big bets" or seek to make "systems change."

What do you mean by big bets and systems change?

Many of today's donors express a desire to help effect powerful social change—for example, Jeff Bezos, who recently tweeted his desire to help people "at the intersection of urgent need and lasting impact."

Making a big bet investment—a single, substantial donation—to an organization with a proven track record can amplify results. It allows the organization to leverage out-of-the-box thinking to tackle a problem in a new and sustained way and solve it—not for the short term but in perpetuity. Big bets can be very smart bets.

A systems-change approach to fixing problems recognizes that often the laws, administrative rules, and official practices governing those issues will need to change, too. It requires the partnership of many organizations, groups, and individuals who are already tackling a specific issue to work together to achieve a common goal. Pew has considerable experience in collaborating with others to develop a multifaceted

approach and build effective coalitions to drive change. As Helen Keller said, "Alone we can do so little; together we can do so much."

Can you give an example?

Using a traditional approach, a funder might have donated to a local conservancy to help buy a piece of land to protect its cultural value and biodiversity from exploitation. Pew's systems-change approach takes a different tack. In the case of land conservation, Pew has formed alliances with local leaders, businesses, and other conservation groups, supported by our philanthropic partners, with the goal of creating policy changes that convert vast swaths of federal land into protected areas. By determining what policy mechanisms would best safeguard these lands and then working to encourage their adoption, this approach has resulted in the preservation of more than 150 million acres of U.S. public land since 1990.

What sets Pew apart for donors?

We're large enough and experienced enough to readily oversee significant investments, yet small enough to be nimble and quick in managing them. Our history as a longtime funder before becoming a public charity in 2002 puts us in a unique position to understand the issues involved in achieving desired outcomes, particularly around vetting projects, evaluating them, measuring effectiveness and planning a path to success. And we are mindful of stewarding a donor's investment in the best and most responsible way possible.

Can donors bring their own ideas to Pew?

Absolutely, and a great example of this is our project to address the \$11.3 billion maintenance backlog in the national parks, a big bet inspired by philanthropist Lyda Hill. Like many Americans, Lyda is a big fan of the national parks and has been dismayed

The Hoh River runs through Washington's Olympic National Park, where roads, bridges, trails, water systems, and visitors centers require repairs totaling more than \$50 million. With support from the Lyda Hill Foundation, Pew is seeking increased federal funding to meet the needs at Olympic and other sites throughout the National Park System. *National Park Service*

by the crumbling roads, bridges, and historic buildings in the parks. This neglect strikes at the very heart of how much we value our national identity, the landscapes and historical landmarks that define America.

The care of our parks is a national responsibility that rests largely with our federal government—no single person or nonprofit can solve it alone. Knowing this, Lyda came to Pew to ask us to take on the challenge of seeking a lasting, pragmatic solution that could be agreed upon by Congress. In 2016, we worked with coalition partners to help enact the bipartisan National Park Service Centennial Act, which resulted in a federal program that has the potential to direct up to \$50 million annually to deferred maintenance projects.

This year, Pew is working with Republican and Democratic members of Congress on several legislative initiatives that would provide dedicated annual federal funding to address the National Park Service maintenance backlog. We also worked to ensure that fiscal year 2017 appropriations included an increase in NPS deferred maintenance funding, for a total of over \$380 million.

This is a time of great political division in the U.S., with people coming at subjects from different perspectives. How can Pew's work help bring people together?

We're living in challenging times, what some call the "post-truth era." But Pew has always relied on the facts. Our work is grounded in rigorous research and data. We are also scrupulously nonpartisan, facilitating collaboration among partners with diverse points of view. We've found that sharing solid data often enables us to bring together business leaders, elected officials, and advocacy groups that no one imagined could work alongside each other. We believe that facts—thoroughly researched and delivered without any spin—can unite us. Donors can be confident that Pew will bring all of these assets to bear on issues that are important to them.

What are some different ways donors can work with Pew?

There are many. Donors can make individual gifts towards one of Pew's wide range of projects either to support the overall project goals or to a specific aspect of the work that directly appeals to them. These gifts range in size from \$50,000 to \$5 million.

Pew's donor-advised funds offer a unique platform for philanthropic giving, in which donors can recommend



grants to qualified nonprofit groups which are then shepherded by Pew. Our staff can research potential funding areas, develop grant application processes, and create learning opportunities for donors with experts and fellow philanthropists for a highly customized philanthropic experience. A donor-advised fund at Pew could be a donor's primary giving vehicle or used to complement his or her existing philanthropy.

In addition, Pew can work in partnership on a project, as we do with the Pew Bertarelli Ocean Legacy Project, which is creating large areas of marine reserves around the world, or the Pew-MacArthur Results First Initiative, which helps U.S. states create new ways to evaluate the effects of their policy initiatives. Of course, we're also sensitive to the fact that some donors prefer to remain anonymous, and are happy to accommodate them. I should also mention that a number of donors have let us know that Pew will be remembered in their estate plans.

However a donor chooses to engage with us, our primary objective is to work with philanthropists to build a mutually beneficial partnership based on shared goals.

How can donors learn more?

We participate in various philanthropic events and organizations, like the Town & Country Philanthropy Summit, The Philanthropy Workshop, and the National Center for Family Philanthropy. Interested parties may also request our "Amplify Your Philanthropy" brochure by emailing invest@pewtrusts.org, or contact me directly at 202-540-6525 or sobrien@pewtrusts.org.

RETURN ON INVESTMENT

*The Pew Charitable Trusts applies a rigorous, analytical approach to **improve public policy, inform the public, and invigorate civic life**, as these recent accomplishments illustrate.*

IMPROVING PUBLIC POLICY



The Rio Grande River flows through the Rio Grande del Norte National Monument in Taos County, New Mexico.

Michael Melford/National Geographic/Getty Images

Land conservation legislation moves forward

The U.S. Senate Committee on Energy and Natural Resources passed two bipartisan bills in March that would permanently protect nearly 125,000 acres in Oregon and New Mexico. One proposal, sponsored by Senators Ron Wyden (D-OR) and Jeff Merkley (D-OR), would conserve 104,000 acres in southwestern Oregon. The other, by Senators Martin Heinrich (D-NM) and Mark Udall (D-NM), would designate 20,500 acres of wilderness in the Rio Grande del

Norte National Monument in New Mexico. Senator Lisa Murkowski (R-AK), who chairs the committee, expressed interest in developing a package to move the legislation to the full Senate. Pew's U.S. public lands team helped build support for the bills with local stakeholders and Senate staff as part of its goal to preserve ecologically and culturally diverse places through congressionally designated wilderness areas, national monuments, and administrative protections.

New legislation to support national parks

In March, Senators Mark Warner (D-VA) and Rob Portman (R-OH) introduced the National Park Service Legacy Act of 2017, which would establish a 30-year restoration fund, initially allocating \$50 million annually for three years for national park maintenance and eventually increasing the amount to \$500 million annually. In May, Representatives Will Hurd (R-TX), Derek Kilmer (D-WA), Colleen Hanabusa (D-HI), and Dave Reichert (R-WA) introduced companion legislation in the House of Representatives. At a hearing of the Senate Committee on Energy and Natural Resources, staff from Pew's initiative to restore America's parks offered testimony on improving infrastructure in national parks. Since its launch in September 2015, the project has worked to address deferred maintenance in national parks by raising public awareness of the issue, promoting dedicated federal funding, encouraging public-private collaboration, and implementing innovative policy solutions.

South Carolina signs pension reform bill

South Carolina Governor Henry McMaster (R) signed legislation in April that will boost funding and strengthen governance of the state's retirement system. The bill paves the way toward stabilizing the state's pension fund with an increase in state contributions of \$1.8 billion over the next five years. As a result, the state projects it will begin reducing its pension debt by 2023. Over 500,000 workers and retirees, including city, school, university, and hospital employees, are directly affected by this law. The Pew pensions team provided technical assistance to the joint committee that developed the bill last fall.

Utah passes juvenile justice bill

The Utah Legislature passed comprehensive juvenile justice reform in March. The legislation is projected to reduce the population of young people placed in state custody by 47 percent, freeing up more than \$70 million in state funds. Savings from averted operating costs and out-of-home placements will fund evidence-based programs in local communities. The legislation is based on recommendations from the Utah Juvenile Justice Working Group appointed to evaluate the state's juvenile justice system and issue data-driven, consensus-based recommendations for consideration by the state Legislature. At the request of leaders from all three branches of Utah's government, Pew's public safety performance project provided technical assistance to the working group.

North Dakota shifts direction on drug sentencing

North Dakota Governor Doug Burgum (R) in April signed a package of bills that change the way the state approaches substance abuse and crime. The legislation reduces penalties for people convicted for the first time of using drugs or possessing drug paraphernalia, eases mandatory minimum penalties for drug dealing, and allows people convicted of felony drug offenses access to Temporary Assistance for Needy Families benefits for a period of time upon release. The drug sentencing reforms were part of a comprehensive justice reinvestment plan that prioritizes prison space for serious and violent offenders. The state appropriated \$7.5 million in prison savings to bolster evidence-based behavioral health programs in the community. The legislation was crafted with technical assistance from Pew's partner, the Council of State Governments Justice Center, at the request of state leaders.

Virginia will create system to signal fiscal distress

Virginia Governor Terry McAuliffe (D) in April signed into law a state budget provision that will create an early warning system alerting local governments when signs of fiscal distress appear. This step puts Virginia on a path to join 22 other states that have procedures in place to monitor the fiscal health of their local governments. Identifying fiscal distress early gives state and local officials more time and flexibility to respond and helps states protect their credit ratings. Pew provided state-specific research and technical assistance to Virginia legislators, members of the executive branch, the office of the auditor of public accounts, and local government representatives.

Supermoms Against Superbugs advocate for antibiotic safety

Advocates from around the country traveled to Washington in April to seek sustained federal funding for combating antibiotic resistance. Called Supermoms Against Superbugs, the group includes mothers, fathers, farmers, chefs, and doctors. They met with representatives from approximately 30 congressional offices and officials from the U.S. Food and Drug Administration, Centers for Disease Control and Prevention, U.S. Department of Defense, Agency for Healthcare Research and Quality, and Biomedical Advanced Research and Development Authority. This was the fifth annual Supermoms fly-in event, organized by Pew's antibiotic resistance project.

What low response rates mean for telephone surveys

U.S. telephone survey response rates have plateaued in the past four years, after decades of consistent decline, according to a methodology report released in March by the Pew Research Center. The data also show that the bias introduced into survey data by current levels of participation is limited in scope. Even at low response rates, the report found, telephone surveys that include

interviews via landlines and cellphones, and that are adjusted to match the demographic profile of the U.S., can produce accurate estimates for political attitudes. The center sought to test the accuracy and reliability of telephone polling by examining the impact of telephone surveys' declining response rates, including whether nonresponse bias has changed since 2012.

Though response rates have plateaued after years of decline, telephone surveys can provide accurate indications of political attitudes. *Amanda Tipton/Getty Images*





Participants walk in a Palm Sunday procession carrying hand-woven palms made from a variety of flowers and plants—part of the 2017 Holy Week celebration in Krakow, Poland.

Beata Zawrzel/NurPhoto/Getty Images

Religious belief in Central and Eastern Europe part of national identity

Religion has reasserted itself as an important part of individual and national identity in many of the Central and Eastern European countries where communist regimes once repressed religious worship and promoted atheism, according to a report published by the Pew Research Center in May. On the day of the report's release, the center's director of religion research, Alan Cooperman, and associate director of research, Neha Sahgal, presented the findings at an event in Moscow.

Report compares trends in U.S. and European middle classes

The middle-class share of the adult population fell in seven Western European countries, mirroring the long-term shrinking of the middle class in the United States, according to a Pew Research Center report released in April, which compared middle-class trends in the U.S. with those in 11 Western European countries. The middle classes expanded in France, the Netherlands, and the United Kingdom between 1991 and 2010 but shrank in Germany, Italy, and Spain. In part, the shift out of the middle class is a sign of economic progress, as more people move into the upper-income tier in countries with a shrinking middle class.

Public trust in government remains near historic low; partisan attitudes shift

More Republicans express trust in government today than they did prior to the election, while views among Democrats have moved in the opposite direction, according to a May report by the Pew Research Center on Americans' trust in government and confidence in the future of the country. For the first time since George W. Bush's presidency, Republicans are more likely than Democrats (28 percent to 15 percent) to say they can trust the federal government to do the right thing "just about always" or "most of the time." Additionally, the share of Democrats expressing trust in government is among the lowest for members of the party in nearly six decades. Similar percentages of Trump (7 percent) and Clinton (8 percent) voters said Facebook was their main source of news about the campaign.

Philadelphia reaches highest job total in 25 years

The city of Philadelphia added 15,000 jobs in 2016, outperforming the nation as a whole and bringing the total number of jobs in the city to its highest level since 1991, according to the Philadelphia research initiative's annual "State of the City" report, released in April. The

report also showed that the city's unemployment and poverty rates remained high, at 6.8 percent and 25.8 percent, respectively. And Philadelphia's population grew for the 10th straight year, though the increase was the smallest of the past decade.

An employee preps a Philadelphia take-out restaurant for the day's business. *Lexey Swall/GRAIN for The Pew Charitable Trusts*



Just the Facts

Truth is nonnegotiable and it just might save us.

BY REBECCA W. RIMEL AND R. ANDERSON PEW

This essay appeared in the June/July issue of Town & Country.

We are living in what some have declared a “post-truth” era, in which facts are considered negotiable, irrelevant, or simply another name for opinion. That makes it an interesting time to lead an institution that is built on the power of facts.

A quarter-century ago, we were profiled in the pages of this magazine, in a piece about the Pew Charitable Trusts called “Foundation for the Future.” At that time, we could not have predicted that by 2017, Pew’s own research would show that only 19 percent of Americans trust the government to do the right thing all or most of the time—quite a decline from 77 percent in 1964. Nor could we have anticipated what our surveys now show about increasing partisanship and more polarized communications channels: that liberals and conservatives have vastly different media diets; that Americans get more and more of their news via social media, with 14 percent saying they had shared a news story they knew was untrue; and that the vast majority of U.S. adults say fake news has left Americans confused about basic facts.

And yet, as a global nonprofit, dedicated to making long-lasting, positive change based on high-quality research, we continue to believe—as we emphasized in that *Town & Country* story 26 years ago—that “if we are committed, innovative, and thoughtful, there’s nothing we as a country can’t solve.”

Of course, the current climate creates a high hurdle for convincing the public that evidence and science can and should educate and inform, guide policy, and be used to speak truth to power. But take heart! We at Pew consistently see our colleagues, along with our many philanthropic partners, clearing that hurdle by being nonpartisan, data-driven, and dedicated to using the power of solid facts and strong science to solve some of today’s most difficult problems.

For example, for the past 10 years, we have conducted analyses of the effects of various sentencing and corrections policies and trends throughout the U.S., and used those analyses to issue groundbreaking reports, provide technical assistance to state policymakers, and sponsor forums designed to share best practices.

As a result, 33 states have enacted policies projected to save taxpayers more than \$4.6 billion, while America’s incarceration rate has fallen in tandem with crime rates in states across the country.

Science also demonstrates the fragility of our oceans, which provide sustenance for billions of people and myriad species of animals, produce more than half of the world’s oxygen, and store much of its carbon dioxide. In partnership with a group of visionary philanthropists, and armed with science, we set out a decade ago to establish the first generation of “parks in the sea.” After a sustained global effort, the United States and five other countries have created nine large marine reserves protecting more than 2.4 million square miles of ocean—an area roughly equivalent to two-thirds of the continental United States.

“If we are committed, innovative, and thoughtful, there’s nothing we as a country can’t solve.”

The 1991 profile characterized Pew as “the prototype for a wave of aggressive and innovative major foundations on the cutting edge of new thinking.” Since then, we have evolved our structure and expanded our agenda, but at our core we remain unflinchingly dedicated to high-quality research that can be deployed to guide positive and measurable change. And we still live by the optimistic expectation that animated our founders: that progress springs from data, science, and facts.

Rebecca W. Rimel is president and CEO, and R. Anderson Pew is a member of the board of directors, of The Pew Charitable Trusts.

THEY COME FROM SOMEWHERE ELSE

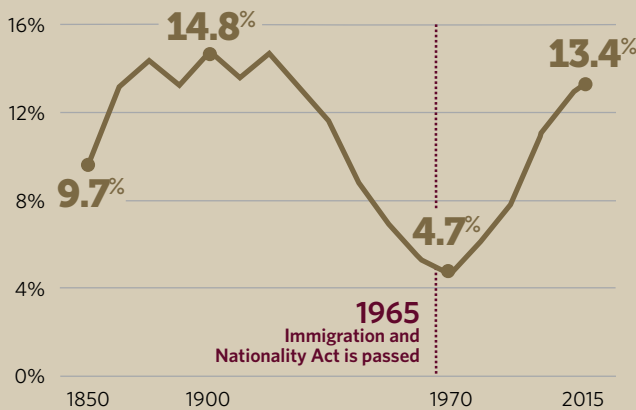
The Pew Research Center paints a portrait of immigrants living in the United States.

The United States is home to more immigrants than any other country in the world, with more than 40 million people living in the U.S. born somewhere else. A Pew Research Center analysis found public attitudes about immigrants have nearly flipped over the past two decades, with two-thirds of Americans saying they strengthen the country through hard work and talent—the exact opposite from 1994 when the same percentage said immigrants burden the country, taking jobs, housing, and health care.



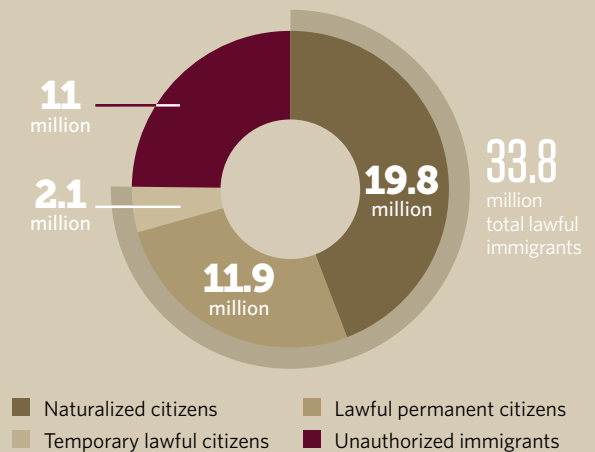
Immigrant share of U.S. population nears historic high

Percent of U.S. population that is foreign-born



About 1 in 4 U.S. immigrants are unauthorized

Total U.S. foreign-born population reaches an estimated 44.7 million in 2015



Kodi Seaton/The Pew Charitable Trusts



Mexico, China, and India are top birthplaces for immigrants in the U.S.

Top five countries of birth for immigrants in the U.S. in 2015, in millions



Mexico



China



India



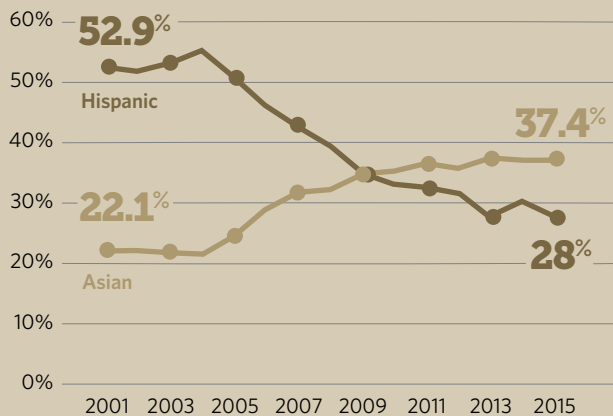
Philippines



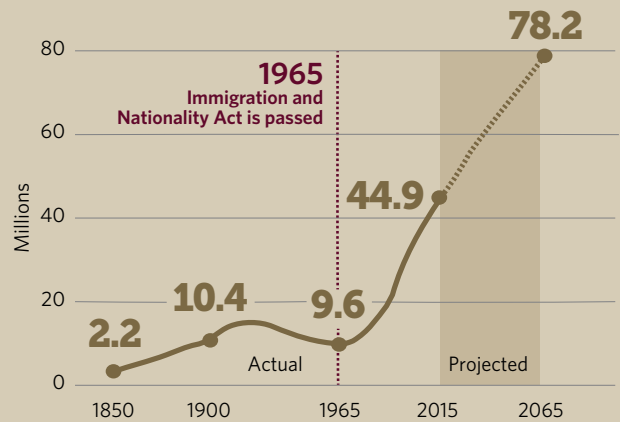
El Salvador

Among new immigrant arrivals, Asians outnumber Hispanics

Percent of immigrants arriving in the U.S. in each year who are...

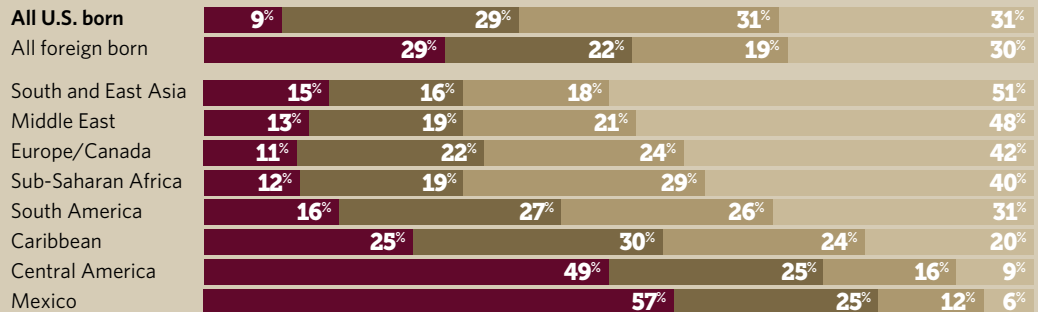


U.S. foreign-born population reached 45 million in 2015, projected to reach 78 million by 2065



Educational attainment among U.S. immigrants in 2015

Percentage among those age 25 and older



■ Less than high school
 ■ High school graduate
 ■ Some college
 ■ Bachelor's or more



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A new type of professional
is treating those who need
dental care the most.

Dental therapists Jenna Gauger, left, and
Brandi Tweeter practice at Main Street Dental
in Montevideo, Minnesota, pop. 5,400.

A Gap to Fill, Page 30