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Trust
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The Pew Charitable Trusts is a public charity driven by the power of knowledge to solve today's most challenging problems. Working with partners and donors, Pew conducts fact-based research and rigorous analysis to improve public policy, inform the public, and invigorate civic life.

Pew is the sole beneficiary of seven individual charitable funds established between 1948 and 1979 by two sons and two daughters of Sun Oil Co. founder Joseph N. Pew and his wife, Mary Anderson Pew.

Meeting Challenges With Facts



cast their ballots. We also collaborated with states to reform their fiscal policies, including evaluating the effectiveness of tax incentives and showing how to best use a rainy day fund as a hedge against declining revenue.

Our commitment to science and discovery—a tradition that began with our founders and continues to guide our efforts—paid significant dividends as rigorous research led to major successes in safeguarding the global environment. Several species of sharks and rays gained new protections; ratification of the Port State Measures Agreement advanced the effort to end illegal, unreported, and unregulated fishing; and the world’s largest marine reserve was created in the Antarctic’s Ross Sea.

All of these achievements showcase the return on investment that comes with confronting difficult challenges, not with rhetoric and skepticism, but with data, strong partnerships, and a willingness to speak truth to power.

Pew uses facts and data to help people of diverse views come together, find common ground, and agree to move forward with solutions that are evidence-based and serve the public interest.

Pew also invests in human talent, both as a way of extending a helping hand to the next generation of leaders—which is deeply engrained in our history and values—and as an important spur to new scientific breakthroughs. Over the past three decades, more than 600 early-career researchers of outstanding promise have joined the ranks of the Pew Scholars Program in the Biomedical Sciences. Three have gone on to win Nobel Prizes, and many others have been recognized with prestigious awards for their innovative and high-impact discoveries.

Pew took this same approach of advancing science by investing in people when we created the Pew Fellows Program in Marine Conservation. Over the past 25 years, we have supported more than 150 scientists and conservationists working to uncover facts about the world’s oceans—exploring their ecology and marine life to help inform policy and practice.

No president has faced an ordeal as daunting as the one that confronted Abraham Lincoln in 1864. The nation he loved and governed was literally tearing itself apart. Nevertheless, President Lincoln understood how he must overcome even this most difficult challenge. “I have faith in the people,” he said. “They will not consent to disunion. The danger is that they are misled. Let them know the truth and the country is safe.”

Lincoln’s words have inspired The Pew Charitable Trusts for almost seven decades. In that time, we have evolved from a foundation giving anonymous gifts into a global nonprofit, changing our structure and expanding our agenda. But while the scope and influence of Pew’s work has grown considerably, our commitment to solving difficult challenges with science and data remains what it has always been: the guiding value on which we base everything we do.

In this issue of *Trust*, we explore the many ways Pew uses facts and data to help people of diverse views come together, find common ground, and agree to move forward with solutions that are evidence-based and serve the public interest. This is how we achieved our major accomplishments last year—many completed in collaboration with Pew’s highly valued partners.

The Voting Information Project—a partnership Pew created with state elections officials, Google, and other technology companies—created a tool that was used 123 million times during the 2016 elections, on a wide range of sites and devices, to help citizens obtain reliable information on when, where, and how to register and

The Pew Research Center provides another example of this fact-based strategy, becoming a go-to source for reliable data on demographics and public opinion. For example, for 15 years, the center has produced timely, trusted reports on Hispanics, now the largest minority group in the United States and a major force in politics, culture, and the economy. You will learn more about why the center is the gold standard for fact-based research about Hispanics in this issue’s story titled “It’s a New Day.”

The founders of The Pew Charitable Trusts knew that President Lincoln was right: Meeting challenges with the truth produces the best outcomes. And while the passage of time invariably brings new problems to solve, we will never stray from the wisdom of finding the facts, working with others to bridge our differences, and searching for common cause in fulfilling our mission.

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THE BIG PICTURE

Antibiotics being studied in a lab at Oxford University turn out to be pure art. But outside of the lab's controlled environment, it's less of a pretty picture. Some bacteria are growing increasingly resistant to antibiotics, presenting a significant threat to public health around the globe. So Pew is seeking ways to encourage development of new drugs and supporting policies that ensure antibiotics are prescribed effectively.



Students at Keeth Elementary School in Seminole, Florida, check out what's on the menu in their cafeteria. Studies show that school kids of all ages are eating more fruit. *Tyrone Turner for The Pew Charitable Trusts*

Schools Are Cooking Up Healthier Lunches

BY DEMETRA APOSPOROS

It can be difficult for school cafeterias to prepare healthy meals without the right equipment. But a recent influx of funding from Congress has been helping many schools get their cooking tools up to speed. Last year, case studies on nearly two dozen schools that received U.S. Department of Agriculture equipment grants showed the difference updated kitchens are making for students and school nutrition programs across the country.

Kentucky's Cawood Elementary, for example, had been preparing meals on appliances that were more than 30 years old, which left vegetables mushy and devoid of nutrients and took hours to properly cook meats. The school's new combination oven now allows cafeteria workers to steam, roast, or dehydrate separate food items, producing more nutritious meals in less time and with decreased staff effort.

When California's Murrieta Mesa High was built in 2009, its huge kitchen afforded plenty of storage space for processed foods—but precious little of the equipment necessary for cooking with fresh ingredients. So the school used its USDA kitchen grant to purchase a tilting skillet.

Today students can choose nutritious meals like chili, chicken fajitas, and beef and broccoli—which features the perfectly cooked and crunchy bright green vegetable.

The federal funding is part of seven years of work dedicated to making school meals and snacks more nutritious through the Kids' Safe and Healthful Foods Project, a collaborative effort between Pew and the Robert Wood Johnson Foundation.

The project began after Congress passed the Healthy, Hunger-Free Kids Act of 2010, which reauthorized school meal programs, with a twist: They would have to meet updated nutrition standards reflecting the latest scientific evidence on children's dietary needs and health. At the time, a typical school lunch was high in sodium, saturated fat, and added sugar, and low in whole grains, fruits, and vegetables. With 31 million children getting school lunches on an average day and childhood obesity and diabetes on the rise, making meals healthier was seen as critical to helping improve children's overall well-being.

USDA finalized improved breakfast and lunch nutrition standards in January 2012 that require schools to offer

more fruits, vegetables, and whole grains; serve low-fat or fat-free milk; and limit the total amount of saturated fat and sodium in a week's worth of meals. By September 2016, nearly all school districts had complied with the updated standards.

The department also revamped rules for foods and drinks sold in cafeteria a la carte lines and in vending machines and school stores. Beginning in July 2014, these snack items needed to meet healthier parameters, namely being a fruit, vegetable, protein, or whole grain; less than 200 calories per serving; and low in fat, sodium, and sugar.

Big benefits have resulted from these changes. Several studies show that plate waste—the food kids take but later discard—either decreased or stayed the same as entrees become healthier, and students of all ages are consuming more fruits and larger portions of their vegetables and entrees. In addition, the project's nationally representative survey of school districts found that almost two-thirds of districts that increased the use of salad bars reported that kids ate more produce as a result. And studies in Connecticut, Texas, and Washington show that children's eating habits are improving. In Texas, for

example, less than year after the healthier standards took effect, students were selecting a wider variety of vegetables with their lunches, and kids who chose red or orange vegetables were eating about a quarter cup of each serving, almost twice as much as they did in 2011.

"The Kids' Safe and Healthful Foods Project was a driving force behind the incredibly successful implementation of the updated school nutrition standards," says Jasmine Hall Ratliff, a program officer at the Robert Wood Johnson Foundation. "We are proud of its contributions to building a culture of health in the United States."

Polling conducted by the project revealed that voters with school-age children overwhelmingly support these changes, with 9 in 10 approving of requirements that schools serve fruits or vegetables with every meal, and 7 in 10 favoring nutrition standards for school meals and snacks.

"Schools have recognized the important role health and wellness programs—especially nutritious food and drinks—have to their students' overall success and well-being," says Stephanie Scarino, a project researcher. "And as an added bonus, kids who start eating healthy foods in school end up eating better as adults, too."

Less Incarceration, Less Crime

A Pew analysis in January examined changes to the U.S. incarceration rate over time. Starting in the 1970s, the U.S. prison population skyrocketed, rising more than 700 percent above historic levels due to a get-tough-on-crime ethos that lengthened sentences and took more offenders off the street. The growth peaked at 1 in 100 Americans behind bars in 2008—but that same year the trend began to reverse. Pew's report found that the incarceration rate has fallen 13 percent, to 1 in 115.

This drop coincided with a wave of state reforms, beginning with Texas and spreading to 32 other states. Pew has worked with policymakers in many of those states to improve sentencing and corrections policies, prioritizing prison space for serious offenders, and investing some of the money saved in effective alternatives to incarceration for nonviolent offenders.

The initiative has gained credibility among policymakers in part because as these new laws were put in place, the crime rate continued to drop. Despite a recent uptick in violence in some cities, national rates of reported violent and property crime fell by 14.6 percent from 2010 to 2015. Crime actually dropped faster in states whose prison populations declined by bigger margins, the Pew analysis found.

Cost has been another factor driving reform. States have collectively been spending over \$50 billion a year on corrections. South Carolina's prison population, for

example, had nearly tripled over 25 years to some 25,000 inmates in 2009, costing taxpayers about \$400 million a year. It was on track to grow another 13 percent by 2014, which would have required building more prisons.

Rather than pay such a hefty cost, state lawmakers instead turned to research findings, and in 2010 passed a series of reforms that shifted lower-level drug and property offenders from prison to probation. By 2016, the prison population had shrunk enough to allow the state to close six prisons, avoiding nearly \$500 million in new costs. And as the number of inmates dropped, so did the crime rate: from about 4,500 crimes per 100,000 residents to 3,798.

"We had a history of establishing new criminal offenses and stiff penalties based on reactions to headlines, instead of using what we knew that we should be using now ... evidence-based practices," says state Senator Gerald Malloy (D), who led reform efforts in the South Carolina Legislature.

Adam Gelb, who directs Pew's public safety performance project, stressed that rising costs are not the only factor that's brought South Carolina lawmakers—and those in other states—to the table. Other critical motivators are strong research showing that well-run probation, parole, and other programs can cut rates of reoffending.

"There's been a real change in attitude about crime and punishment," says Gelb. "Policymakers are realizing that building more prisons to incarcerate more people for longer amounts of time is not the best path to public safety. There are alternatives that work better and cost much less."

—Anne Usher



Feral camels are wreaking havoc on the Australian Outback, damaging infrastructure, degrading water sources, and eating up to 80 percent of the available plants. *Robert Sleep*

Feral Camels Threaten Australia's Outback

The Australian Outback is one of the world's last remaining large, natural regions and home to lush and inhospitable landscapes and an abundance of diverse wildlife. But the Outback is facing a threat from within as invasive plants and feral animals strain its ecosystem.

One of the most significant risks to the region's health is the booming population of feral camels, which eat more than 80 percent of the Outback's plant species—more than any other animal. The camels don't just decimate plants; they also harm salt lake ecosystems, pollute waterholes, and trample desert dunes, which can lead to erosion.

Brought to Australia in the 1800s for transport and help with construction projects in the central and western parts of the country, many camels were later

released into the wild. By 2010, scientists estimated that up to 1 million feral camels roamed the Outback and the government introduced a control program to reduce their number. The plan succeeded, dropping the overall population to about 300,000. Still, camels can double their numbers in just eight to 10 years, so they remain an overwhelming presence in some areas.

"It's important for all Australians to work for a naturally and culturally healthy Outback, which includes reducing the number of feral camels," says Barry Traill, who directs Pew's work in Australia to conserve the Outback.

Without an increased commitment from federal and state governments to reduce the camel population and ensure the animals' long-term management, working in coordination with Indigenous and non-Indigenous landholders, feral camels will cause lasting damage to the Australian Outback.

—*Eric Wrona*

Never Married? In Philly, You're Not Alone

More than half of adults in Philadelphia—51.5 percent—have never been married, a percentage that ranks highest among the 10 largest U.S. cities and one that's been trending upward over the past decade.

According to data from the Census Bureau's American Community Survey, Philadelphia's proportion of unmarried people surpasses those of Chicago, Los Angeles, New York, Houston, San Diego, Dallas, Phoenix, San Antonio, and San Jose, California, all of which saw the size of their never-married population increase from 2005 to 2015. During that period, the national unmarried rate rose as well; it's now 33.5 percent.

One factor in explaining the rise is that people are marrying later in life. "Nationwide, the average age for first marriage has increased from 26.2 in 2005 to 28.7 in 2015," says Larry Eichel, who directs Pew's Philadelphia research initiative. And Philadelphia has seen a big increase in its young adult population in recent years.

While Philadelphia's never-married rate is higher than those of the nation's largest cities, it does not stand out among cities with levels of poverty similar to Philadelphia's 26 percent. Among the 10 highest-poverty cities with populations of at least 350,000, Philadelphia's percentage of never-married adults is close to the middle. Those cities, ranked by percentage, include Detroit; Baltimore; Milwaukee; Cleveland; New Orleans; Memphis, Tennessee; Tucson, Arizona; Fresno, California; and Miami.

"It's well established in sociological studies that marriage rates rise with income levels. Lower-income adults are less likely to be married than those with higher incomes," Eichel says. "Since Philadelphia has one of the highest poverty rates in the nation, having a large number of unmarried people here is not surprising."

Nationally, the unmarried trend looks poised to continue. The Pew Research Center estimates that a quarter of today's young adults will remain unmarried when they reach 45 to 54 years of age—an unprecedented number.

—*Kimberly Burge*

Shark Tourism Boosts the Bahamian Economy

Advocates for endangered shark and ray species have long believed that policies promoting healthy shark populations might also confer significant economic benefits—and a new study shows they are right.

Scientists from the Cape Eleuthera Institute in The Bahamas have found that sharks and rays contributed \$114 million to the Bahamian economy in 2014, with 99 percent of that revenue generated by tourism.

Published in the journal *Biological Conservation* in March, the study says 19,000 divers—or 43 percent of all dive tourists visiting The Bahamas that year—came primarily to see sharks. These recreational divers spent \$49 million, which circulated through the national economy and ultimately contributed \$109 million to the Bahamian gross domestic product. The research is the first to estimate the full economic impact of shark-related activities in the Atlantic Ocean archipelago southeast of Florida.

"Although we've long understood sharks are important to The Bahamas' economy, quantifying this was a critical step to assessing the value of the nation's conservation measures," says Edward Brooks, the marine biologist who spearheaded the research, which was supported by Pew.

Luke Warwick, who directs Pew's shark conservation efforts, says the findings demonstrate the value sharks

have beyond their critical role as predators in ocean food webs.

"This research proves that sharks are not only important for ocean health, but can also provide economic stability," Warwick says. "In The Bahamas, home to one of the world's largest shark dive tourism economies, sharks are worth a lot more alive than dead."

The Bahamas has a long history of protecting its shark populations. In the early 1990s, the country banned longline fishing—a primary driver of the unintentional catching and killing of sharks—and in 2011 declared its entire exclusive economic zone a shark sanctuary. That act ended all commercial shark fishing in Bahamian waters and included a ban on the trade, sale, and possession of sharks or their parts.

Actions by The Bahamas ensure that sharks are protected in the nation's waters. But these highly migratory species lose that status as soon as they swim beyond those boundaries, highlighting the importance of coupling local conservation efforts with international trade restrictions.

Warwick says the study's findings could help encourage other governments in the region—and globally—to act to protect vital shark species.

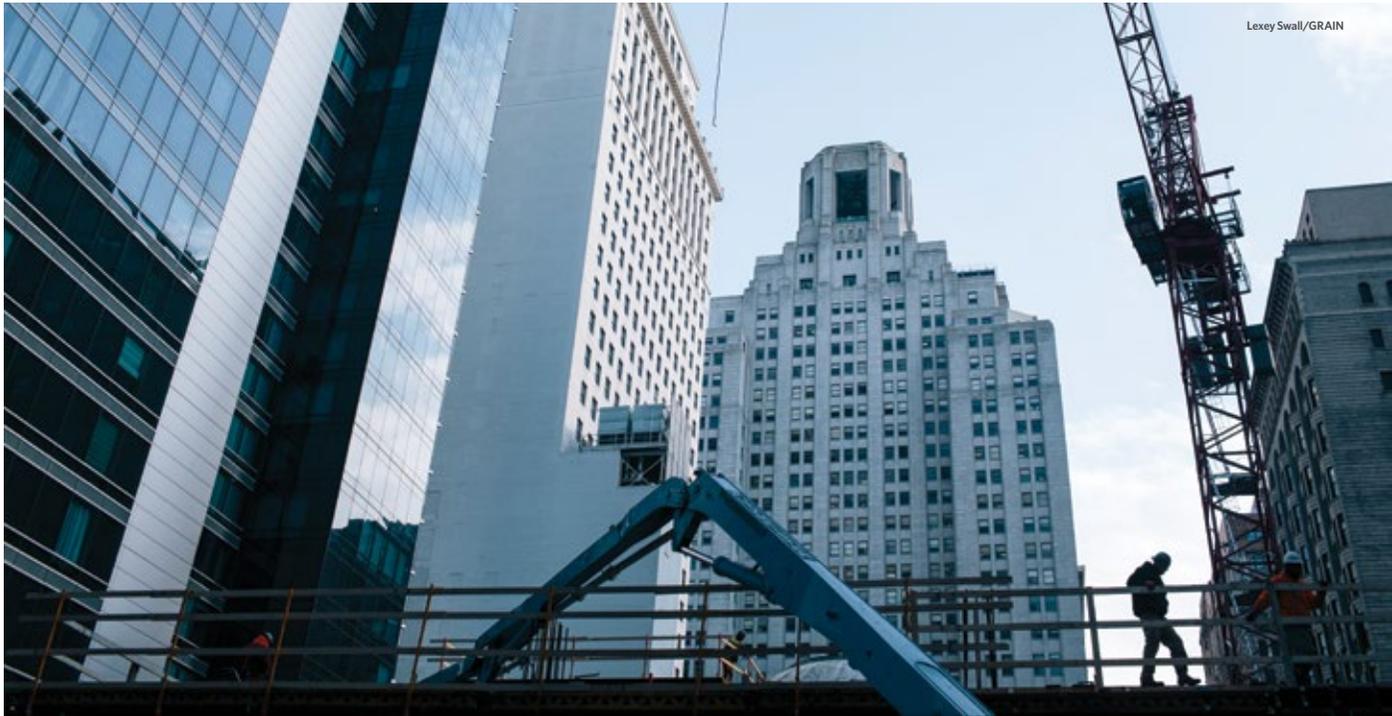
—*Michael Remez*



A tiger shark in The Bahamas. *Shutterstock*

A YEAR of WORKING COLLABORATIVELY

From helping attract tourists to its hometown of Philadelphia to urging voters to get to the polls, Pew has worked with a variety of organizations to improve public policy, inform the public, and invigorate civic life.



Lexey Swall/GRAIN

THE GLOBAL ENVIRONMENT

Three species of thresher sharks, silky sharks, and nine species of mobula rays gained new protection last year from the Convention on International Trade in Endangered Species of Wild Fauna and Flora. Building on previous success in adding other shark and manta ray species to the convention's list, Pew and its partners organized workshops around the world for representatives from more than 80 countries to build support for the new protections. CITES is one of the largest and oldest agreements on sustainable use among most of the world's countries, and last year's designation means that all of the global trade in rays and up to 20 percent of the global shark fin trade is now regulated.

Adding to these safeguards for marine life was another significant milestone in 2016: The first international accord targeted directly at illegal fishing—the Port State Measures Agreement—took effect. Long a priority in Pew's work to end illegal, unreported, and unregulated fishing, the agreement requires ship captains to provide advance notice of arrival in a port, allows officials to turn away catch suspected of being illegally caught, and permits port authorities to inspect and deny services to vessels suspected of illegal fishing. Approvals by Dominica, Guinea, Sudan, Thailand, Tonga, and Vanuatu announced in May pushed the total well over the 25 nations required for the treaty to take effect. By April 2017, the number had grown to 46.

An August report from Pew's Philadelphia research initiative found that the city has at least 21 tax incentives and exemptions—more than any other large comparable city—but that officials don't evaluate the tax breaks to see if their benefits

outweigh their costs. The report prompted City Council legislation to require regular reviews to assess the effectiveness of some of the programs which cost Philadelphia more than \$200 million annually in forgone revenue.

PHILADELPHIA GOVERNANCE



Mark Makela/Corbis/Getty Images

Last year, tourists looking to visit such attractions as the Barnes Foundation's art collection booked 1 million hotel nights in Philadelphia. That was a 294 percent increase over 1997, when leisure travel accounted for 254,000 room nights. Over the past 20 years, the city has become a destination for history buffs and art lovers, thanks to innovative marketing by Visit Philadelphia, which has highlighted

the region's cultural and historical treasures. Pew, the commonwealth of Pennsylvania, and the city pooled resources to establish what is now Visit Philadelphia in 1996. And since then, Pew has supported renovations of Independence Mall and the Benjamin Franklin Parkway and creation of the Independence Visitor Center, which draws 2 million a year, as well as the new Barnes museum.

TOURISM

IN PARTNERSHIP WITH

- The Paul G. Allen Family Foundation
- The Lyda Hill Foundation
- The Lenfest Foundation
- The John D. and Catherine T. MacArthur Foundation



Steve De Neef/VW Pics/UiG via Getty Images

CONSERVING U.S. PUBLIC LANDS



White House photo

In southeast Utah, a pair of mesas that resemble a bear rising from the horizon are part of a spectacular landscape of buttes and arches, sandstone canyons, natural bridges, and juniper forests. They also provide the name to one of America's newest national monuments—Bears Ears. The monument's rugged 1.3 million acres were protected in the final days of 2016, capping a year that also saw a host of new designations and protections for the public's lands in the western United States.

Early in the year, three national monuments were created in the California desert. The trio—Mojave Trails, Sand to Snow, and Castle Mountains—safeguard nearly 1.8 million acres. The largest, Mojave Trails (left), stitches together some of the most varied terrain in the United States, from ancient lava flows to rugged mountain ranges to shifting sand dunes. The smallest—Castle Mountains—protects water resources and wildlife that includes bighorn sheep and bobcats.

In August, 87,500 acres of the north Maine woods became the Katahdin Woods and Waters National Monument. Home to moose, bear, lynx, and other wildlife, the monument is part of the largest undeveloped area in the U.S. east of the Rocky Mountains.

And joining the Bears Ears designation in December was the creation of the Gold Butte National Monument in Nevada where Native Americans have left part of their history: petroglyphs and shelters dating back more than 12,000 years.

Pew's efforts on behalf of these designations stretched over time—working with the landowners in Maine to help them determine how to convert the acreage to public property more than six years ago, and with local residents in the Gold Butte region for more than a decade. Those designations and the others involved Pew working with policymakers, local advocates, business groups, and partners.

In addition to the national monuments, Pew was involved with two other significant land protections in the west: the July announcement by the Bureau of Land Management of a plan to guide oversight of 6.5 million acres of some of Alaska's most remote and pristine public land and the bureau's September unveiling of the Desert Renewable Energy Conservation Plan, which will permanently protect significant areas of public lands in the California desert—including the Silurian Valley, Mayan Peak, and Chuckwalla Bench.

STATE FISCAL HEALTH

IN PARTNERSHIP WITH
Laura and John Arnold Foundation

By studying the fiscal health of states and localities, Pew helps policymakers develop disciplined budgets and determine the effectiveness of programs and whether they are delivering a strong return on investment. In 2016, Pew experts worked in six states—Alabama, Colorado, Hawaii, Ohio, Utah, and Virginia—that now require regular and rigorous evaluations of their economic tax incentives. Four other states where Pew

lent assistance—Kansas, Louisiana, Oklahoma, and Wyoming—reformed how they use their reserves to help smooth fluctuations in revenues and better weather future recessions. These states build on the efforts in other places Pew has worked to help American voters determine whether their federal, state, and local tax dollars are being spent efficiently and wisely.

CORRECTIONS

Alaska, Maryland, and Kansas joined a growing national effort to adopt research-based, fiscally sound reforms to their criminal justice systems. Policymakers in the three states worked with Pew to analyze their data and tailor policies specific to their needs and concerns.

The results: Alaska adopted one of the most comprehensive and far-reaching legislative packages yet in this national effort, eliminating cash bail for certain pretrial defendants, reducing numerous felony sentence ranges, and reclassifying drug possession offenses as misdemeanors. The policies are expected to avert a 27 percent increase in the prison population and instead reduce the number of inmates by 13 percent by 2024, saving \$380 million and creating funds to bolster

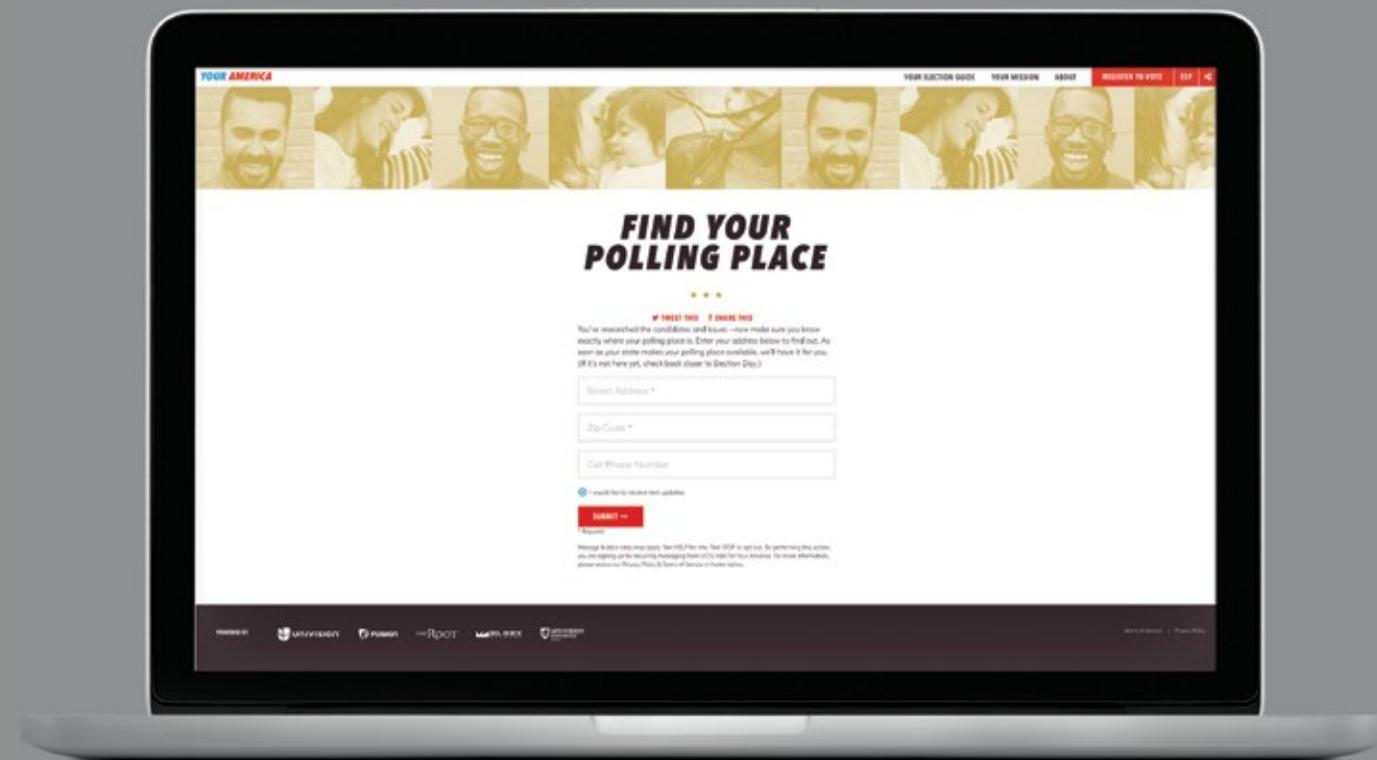
public safety programs and victim services. Maryland's new law is expected to reduce the number of inmates by 1,200 over the next decade, freeing up \$80 million to invest in programs that reduce recidivism rates by enhancing community supervision and substance abuse treatment.

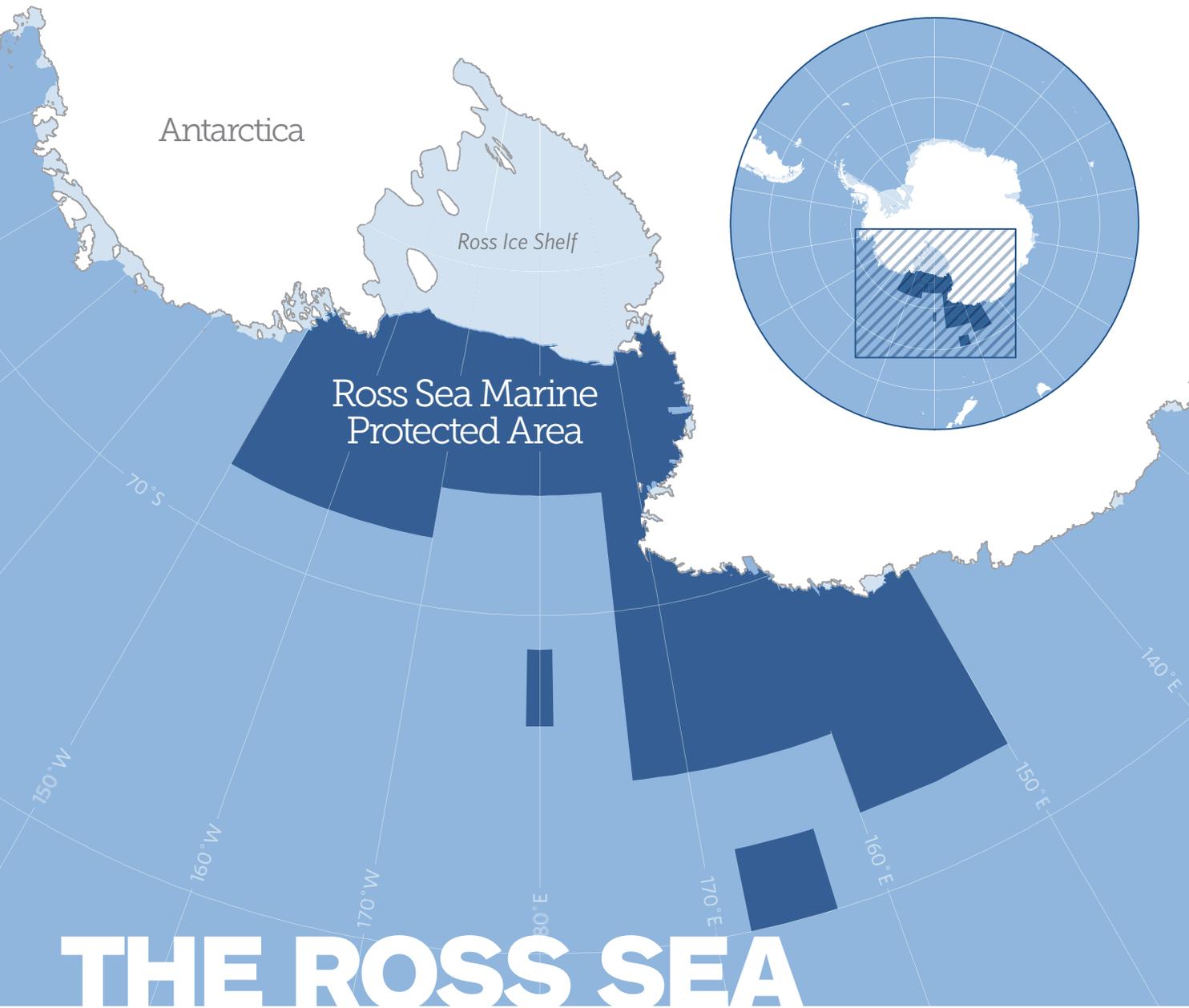
And Kansas adopted a new law for its juvenile justice system that restricts out-of-home placement for youth committing lower-level offenses, focuses more intensively on high-risk youths, and shifts resources toward proven alternatives that allow more youths to be supervised at home. The changes are projected to cut residential placements by more than half and save \$72 million over the next five years. (See Page 7.)

ELECTIONS

Websites such as Facebook, LinkedIn, Etsy, and Instagram offered 2016 presidential election information to more people than ever before. With little effort, millions of Americans found voting information, details on their ballots, and their polling place location by visiting online sites and by receiving texts on their smartphones. Getting the information in front of as many eyeballs as possible was the goal of the Voting Information Project. VIP—a partnership Pew created with state election officials, Google, and other tech experts—collected state election data, confirmed its accuracy, and made it available online. The project was born in 2008 when Pew and Google realized that no central place for reliable election information existed. Eight years later, social media sites, nonprofits, and state election websites all used the assembled data—free of charge—and during the 2016 presidential election season, the VIP tool was used more than 123 million times.

IN PARTNERSHIP WITH
Rita Allen Foundation
Democracy Fund
Ford Foundation
The William and Flora Hewlett Foundation
The Joyce Foundation
The John D. and Catherine T. MacArthur Foundation
State Infrastructure Fund at NEO Philanthropy
Open Society Foundations





THE ROSS SEA

More than 600,000 square miles at the bottom of the planet are now the world's largest marine protected area. After five years of negotiations, 24 nations and the European Union made the designation in October. Pew has long sought protections for the Ross Sea, which is home to more penguins than anywhere else on Earth.

IN PARTNERSHIP WITH

Carmen Lee, APOC Fund at National Philanthropic Trust

PUBLIC HEALTH

IN PARTNERSHIP WITH

The Lyda Hill Foundation

Approval of the bipartisan 21st Century Cures Act in December provides new help against the devastating epidemic of prescription drug overdoses that takes the lives of dozens of Americans each day. It also makes new strides to address the global threat of antibiotic resistance, and shines a spotlight on patient safety with a new focus on improved health information technology—all longstanding priorities for Pew. In addition, Pew continued its partnership with the Centers for Disease Control to identify and reduce unnecessary and inappropriate antibiotic prescribing in the United States to help slow the emergence of antibiotic-resistant “superbugs.”

States don't have the resources to provide treatment for the millions of people struggling with opioid use disorders. The Cures legislation authorizes \$1 billion in federal funding to give more people access

to the care they need and to help states address the epidemic.

The law also creates a new approval pathway to develop new antibiotics. With antibiotic resistance increasing, the new approval process would allow new drugs for resistant infections to come to market through streamlined trials and would ensure that these antibiotics aren't used inappropriately with patients who can be treated with existing medicines.

And the new law addresses a widespread problem with electronic patient health records: doctors' inability to easily access patient records no matter where they are treated. The Cures Act requires a study of ways to standardize electronic records and other methods to make it easier to match the right records with the right patients.



Some 23 million Americans depend on prepaid cards instead of checking accounts. New federal protections, partly based on Pew's recommendations, restrict overdraft fees and require disclosures and conditions so that consumers can accurately and easily compare the costs of the cards.

CONSUMER PROTECTION

Don Bayley/Getty Images

WORLD DEMOGRAPHICS

More than 60 million people in the world are now displaced from their homes, the greatest number since World War II, according to a highly cited report by the Pew Research Center. The conflict in Syria is the main reason for the sharp rise.
Bulent Kilic/AFP/Getty Images

PUBLIC ATTITUDES ON MEDICAL ADVANCES

Advancements in developing biomedical technologies could very well give us stronger bodies and smarter brains. Gene editing has the potential to reduce the disease risk in newborn babies. Brain chips could improve our ability to think. Synthetic blood could rev up our strength and boost our stamina. But roughly half the public thinks that this could be meddling with Mother Nature. Majorities of U.S. adults say they would be “very” or “somewhat” worried about gene editing, brain chip implants, and synthetic blood, the Pew Research Center found. And no more than half indicated they would be “enthusiastic” about the developments. Some do say that they would be both enthusiastic and worried, but, overall concern outpaces excitement. Americans who are most skeptical of the enhancements are highly religious.

AN INVESTMENT IN TALENT

Pew's support for scholars, scientists, and artists to study and create is paying dividends that benefit the world.

BY CAROL KAUFMANN

Marine fellow Kerry Sink stands on the bow of the *Angra Pequena* during a research expedition off the South African coast. On a recent month-long trip in the Atlantic and Indian oceans, the marine biologist and her team documented deep-water coral habitats in the region for the first time. *Tamsyn Livingstone*





Over the past three decades, The Pew Charitable Trusts has encouraged—and supported—promising young biomedical scholars, marine scientists, and Philadelphia artists to come up with thoughtful solutions to global problems and to create new ways of seeing the world.

While most of Pew’s work directly focuses on improving public policy, informing the public, and invigorating civic life, the institution also recognizes that often the best approach to meeting societal challenges is to invest in talented individuals and give them the resources to experiment and succeed in their fields.

The first foray into nurturing talent began more than 30 years ago with the creation of the Pew Scholars Program in the Biomedical Sciences. The program awards grants to early-career scientists, encouraging them to take on research that they wouldn’t have the time, financial support, or perhaps even the courage to attempt otherwise. More than 600 young researchers dedicated to improving public health have been named Pew biomedical scholars—and three have gone on to win the Nobel Prize.

Some 25 years ago, Pew turned its attention to the seas and, recognizing the central role the oceans play in the health of the planet, established the Pew Fellows Program in Marine Conservation. Since then, 156 marine fellows have been named from 37 countries—a sign not only of the breadth of talent but also that the oceans know no boundaries and that their care belongs to all nations. These scientists have made new discoveries, and their work has helped conserve the planet—as seen most recently with their contributions that helped establish the world’s largest marine protected area in Antarctica’s Ross Sea last year.

Also more than two decades ago, Pew turned to the creative community in its hometown of Philadelphia and saw the need to nurture emerging artists. Since the creation of the Pew Fellowship in the Arts, nearly 325 artists, musicians, poets, writers, filmmakers, and other creators have been able to focus on their craft and professional development, allowing them new opportunities to create life-transforming works of art. And many fellows have gone on to receive accolades around the globe, including two Pulitzer Prizes for music.

More than just financial support, these programs are an invitation to become part of a community of like-minded souls. The networks of scientists, marine experts, and artists have produced unexpected collaborations and lasting relationships that continue to foster new talent, discover new solutions, and help the world to be a better place.

Taking Scholarly Risks

The Pew Scholars Program in the Biomedical Sciences

Perhaps what makes the biomedical scholars program different than other fellowships is that it gives talented young scientists confidence to pursue ideas at the right time in their careers.

“When you’re a scientist just starting, it’s really tempting to just do the next logical experiment,” says class of 2012 biomedical scholar Nels Elde of the University of Utah. “And yet with the support and space Pew provides, you can really go to the next step and explore projects that you’re interested in but might not be daring enough to go after.”

Elde used his “support and space” to look at how certain viruses put selective pressure on cellular pathways and what the outcomes are. Elde worked with the model of vaccinia, the virus that wiped out smallpox, and experimented to see how it could affect the evolution of the human immune system and cellular pathways. These observations, he hopes, could lead to the design of better vaccines.

Carol Greider of Johns Hopkins University, Pew biomedical class of 1990, wanted to understand how chromosomes work. “We knew that working on something really fundamental would have implications later on,” she says. “That’s one of the really exciting things about science. You answer a particular question, and then it opens up many more questions and you have a choice about which avenue to go down.”

The networks of scientists, marine experts, and artists have produced unexpected collaborations and lasting relationships that continue to foster new talent, discover new solutions, and help the world to be a better place.

Following different paths of scientific inquiry served Greider well. Following her curiosity about chromosomes, she and two other American scientists discovered telomerase, an enzyme that helps chromosomes in the cells stay young, which has great implications for the science of cancer and aging. In 2009, she and those two colleagues won the Nobel Prize in physiology or medicine.



Carol Greider, who was selected a Pew scholar in 1990, won the 2009 Nobel Prize in physiology or medicine for her work on telomeres. Johns Hopkins Medicine

“The Pew scholars award really had a major role in my career because I received it fairly early on,” says Greider. “Having the funding and the freedom ... allowed me to follow those different directions and learn entirely new things.”

Receiving the unrestricted grant can also offer an entree into new territory. Biomedical scholar Aimee Shen of Tufts University, in the 2012 class, wanted to investigate ways to disable the bacterium *Clostridium difficile*, which contributes to 14,000 deaths in hospitals each year. Shen believed there was an urgent need to develop new therapeutics to target this bacterium.

“Pew has really helped and inspired me to basically enter a field I wasn’t established in,” Shen says. “Developing new therapeutics could help alleviate health care costs as well as prevent death.”

Determining which scientists get to take such chances in the biomedical program is a very selective process. More than 180 academic institutions are invited to submit a single nominee for consideration; program alumni are also welcome to nominate candidates. A national advisory committee led by Craig Mello, another

Pew scholar who has won a Nobel Prize and who now heads a laboratory at the University of Massachusetts in Worcester, selects 22 scholars, each of whom receives \$240,000 over four years.

Over the four years, the scholars work on individual projects and also interact with an extensive network of former scholars, their own class, and the advisory committee. Each year, current scholars and advisers travel to a Pew-sponsored gathering to meet and share ideas with other scientists who have a variety of specialties and interests. It “brings together,” says Greider, “a cohort of people who interact with and learn from each other along the way.”

At the 2014 meeting, Manu Prakash, class of 2013, showed a room of more than 100 Pew scholars his Foldscope, an origami-inspired microscope that can be assembled from a single sheet of paper and a glass bead, which was developed by his lab at Stanford University. The scope weighs less than two nickels, costs less than a dollar, and can magnify samples 2,000 times. Prakash hopes to bring diagnostic science to remote areas plagued with dengue fever



“The Pew biomedical programs provide new scholars with a wealth of practical advice and encouragement from other scientists—which we all need to be successful,” says Craig Mello, himself a former Pew scholar who leads a national advisory committee that selects the scholars each year. Mello, a Nobel laureate, also heads a lab at the University of Massachusetts in Worcester. Frank Curran

and malaria, and he ultimately aims to create cellphone applications that citizen scientists can use to map the spread of disease.

Says Prakash, “The researchers at the meeting had a sense of openness and respect for the various ways of thinking that make science what it is.”

The annual meetings can also produce new collaborations. At one of the gatherings, a national advisory committee member, Ruth Lehmann of the New York University School of Medicine, and one of the scholars, Aaron Gitler of Stanford University’s School of Medicine, decided to join forces. The result was an editorial published in *Science* making the case that personalized genomics is a foreseeable reality.

In 1990, Pew launched the Latin American Fellows Program in the Biomedical Sciences. Each year, 10 researchers from Latin America receive support for postdoctoral research in the United States in the

lab of an established scientist, along with additional funding to establish a laboratory when they return to their home countries. The program is guided by Nobel laureate Torsten Wiesel, who also served as chairman of the scholars’ national advisory committee for more than a decade. The program—developed to combat the “brain drain” of scientists from Latin America and increase scientific discourse across borders—has been successful, with 69 percent of fellows returning to work in their home countries after their fellowship.

The biomedical scholars program has also led to new collaborations for Pew. The late philanthropist Kathryn W. Davis also believed in the promise of young scientists, and her Peace by Pieces Fund supports the program today. Since 2014, the Pew-Stewart Scholars Program for Cancer Research has also funded early-career scientists whose research is leading toward a cure for cancer. Pew administers the program funded by

the Alexander and Margaret Stewart Trust, which has long been committed to cancer research and prevention. (See Page 42.)

“Pew scholars have harnessed the potential of this program for three decades, coming together to inspire and engage each other while advancing the biomedical research landscape,” says Mello. “Scientific breakthroughs often come from seemingly unlikely origins, which is why it’s so important to give young scientists the freedom and the support they need to pursue their most creative ideas.”

Saving the Seas

Pew Fellows Program in Marine Conservation

The ocean can always surprise you. Kerry Sink, 2016 Pew marine fellow from Cape Town’s South African National Biodiversity Institute, knows that firsthand.

During her fellowship, Sink is helping design 21 new marine protected areas (MPAs) around the coast of her home country. The Atlantic, Indian, and Southern oceans swirl together at the bottom of the African continent, providing a home to a rich array of sea life often found nowhere else on Earth. The South African government has vowed to protect 5 percent of the waters by 2019, so Sink’s work aims to help policymakers understand this life so they can appropriately manage fishing and other activities.

While on a monthlong research cruise last October to investigate the potential locations, Sink and her colleagues discovered a coral reef previously undocumented in science—and undiscovered by commercial fishers. Because no one knew it was there, the cold-water reef more than 1,000 feet below the surface—composed of fragile corals, delicate lace corals, soft corals, and spiraling black corals—wasn’t included in the proposed areas of protection, says Sink.

They also discovered that almost all corals in one of South Africa’s existing MPAs were damaged; they found coral growing on a 40-kilometer-long rocky ridge; they discovered that some fish species are using deep reefs as nurseries; and they found hake swimming in a sea of pink anemones. “We learned,” she says, “that there is still so much to learn!”

Devoting time to discovery is what scientists and other experts in the Pew Fellows Program in Marine Conservation have been doing since the program began 27 years ago. The 156 scientists and conservationists named fellows over the years have been probing and pondering what threatens the world’s oceans and all that lives there, advancing both expert and lay understanding of the perils that sea life and its habitats face, and what is needed to protect them. Coming from 37 different countries, the fellows have worked on every continent

and in every climate, from the ice-covered Arctic to frozen Antarctica, with a healthy dose concentrated in the humid tropics in between. The program is supported by the Margaret A. Cargill Philanthropies, the Herbert W. Hoover Foundation, and the David and Lucille Packard Foundation. An international committee of external marine specialists uses a rigorous nomination and review process to select fellows based on their projects’ potential to protect ocean environments. Each fellow is given enough support to focus on his or her work for three years—an opportunity that often changes careers.

The annual meeting that Pew convenes for the fellows each year also offers a chance to exchange ideas and information, expand their networks, and discuss how to communicate what they are learning about the sea.

The fellows have earned accolades the world over. Collectively, they have received 30 Guggenheims, three MacArthur fellows, two Pulitzers, two Rome Prizes, two Grammys, and three Philadelphia Poet Laureate appointments.

Like Sink, Jane Lubchenco was doing research when she became a fellow—one of the first—in 1992. She was on the faculty at Oregon State University and “was interested in the discovery—that’s really cool—but also in connecting that to the real world. The fellowship said, yes, you’re on the right track.”

During her fellowship, Lubchenco established the Leopold Leadership Program to train midcareer scientists to be stronger leaders and communicators, and to connect knowledge to action. Lubchenco then created Compass, a nonprofit organization that helps academic scientists engage with the public, media, and policymakers by teaching them to be “bilingual—to speak the language of laypeople,” she says. She then went on to put knowledge into action herself when, in 2009, she became the head of the National Oceanic and Atmospheric Administration. In her four-year tenure at the agency, she oversaw fisheries reforms, ecosystem-based management of the seas, and created the first-ever national ocean policy—all of which, she says, used work contributed by Pew fellows.

John Weller (class of 2009), a photographer, filmmaker, and writer, also wanted to share a complicated science story with a global audience, particularly with decision-makers. Weller had photographed and filmed rare images of Antarctica's Ross Sea and was convinced that once people saw and read about the web of life in the Ross Sea ecosystem—including the penguins, whales, and seals that make the sea their home—it stood a better chance of receiving protections from countries with commercial interests in the area. But he wasn't sure how to attract a global audience.

The work has had the most tangible effect in Pew's hometown of Philadelphia, earning the city a spot on the cultural map.

"Being a fellow was an icebreaker," he says. "It opened up so many doors to talk to important people who helped move the project forward."

The result was the book *The Last Ocean: Antarctica's Ross Sea Project—Saving the Most Pristine Ecosystem on Earth*, which Weller co-authored with Carl Safina, a Pew marine fellow and the founding president of the Blue Ocean Institute at Stony Brook University. Weller also helped convene a conference of specialists at the first International Marine Conservation Congress in 2010, which led to significant scientific papers on the Ross Sea that helped jump-start the conversation about creating the marine protected area for the sea. Ultimately, he published and displayed his images thousands of times in the countries belonging to the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR)—all free of charge.

"Having that support from Pew was critical," Weller says. "It freed me from the financial model of wildlife photography."

The photographs told a powerful visual story, and the CCAMLR countries made history last October by declaring the largest marine protected area on the planet in the Ross Sea. (See Page 18.)

And once a Pew fellow, always a Pew fellow. "Every annual meeting is a great opportunity to interact with colleagues working on similar marine conservation issues from all over the planet, discuss topics, and learn about the latest trends in this arena," says Pablo Garcia Borboroglu (2009 fellow), now the president of the Global Penguin Society, a nonprofit organization he began through his Pew fellowship project.

Lubchenco says the meetings "are without a doubt the most informative and best meetings of their kind—

attended by new people who are doing innovative, exciting, cool science and projects that are making a difference."

Expressing Their Art *Pew Fellowships in the Arts*

Receiving a Pew fellowship in the arts affords working artists freedom—the space and time to write, create, perform, and perfect their craft. Over the 25 years since the program at the Pew Center for Arts & Heritage began, 323 fellows who live in the five-county Philadelphia region have received a no-strings-attached gift that is currently \$75,000.

"My work's not super expensive to produce, so it bought me a lot of time, which is what I needed," says Sarah McEaney, a visual artist who paints in rich, jeweled tones with egg tempera, which she makes from egg yolks and powdered pigment. Her work depicts autobiographical scenes of her life—cityscapes, self-portraits, her studio with animals lying about, yoga poses—and is in the collection of several American museums, including the Philadelphia Museum of Art and the Pennsylvania Academy of the Fine Arts, in addition to being routinely included in other exhibitions and gallery shows nationwide.

Each year, artists are nominated for a Pew fellowship by an anonymous group of advisers from the artistic community who are attuned to Philadelphia's cultural scene. The group changes every year to ensure new perspectives and to broaden the potential pool of nominees. Each nominator can designate up to two artists from an array of disciplines, such as poetry, theater, music, dance, design, folk art, and visual art. Artists are then invited to apply to the program, and the fellows are selected by an interdisciplinary panel of experts in their respected fields, all from outside the Philadelphia region.

The selected artists use the opportunity in a variety of ways. The grant enabled Liberia-born singer and dancer Fatu Gayflor, a 2014 Pew fellow, to "go back to the studio to do more recording, which I hadn't been able to do for so many years." It allowed documentary filmmaker Louis Massiah, selected in 1994, "to complete a major documentary that I'd been in the midst of at the time"; the film "W.E.B. Du Bois, A Biography in Four Voices" was the result. Jamaaladeen Tacuma, a musician known for stretching the limits of the electric bass, was in the middle of composing when he was selected in 2011, and he says the funding allowed him to "put everything in motion—because I could finally pay for it."

Too often, artists have few opportunities to concentrate on their work in a focused, long-term way. "The fellowship provides significant resources and time to artists, fostering creativity and contributing to a vibrant cultural ecology," says Paula Marincola, the



Composer and Pew arts fellow Jennifer Higdon, pianist Wolfram Rieger, and baritone singer Thomas Hampson take a bow at Carnegie Hall in 2015 after Hampson and Rieger performed the world premiere of Higdon's "Civil Words," a song cycle with texts from the U.S. Civil War. Hiroyuki Ito/Getty Images

Pew Center for Arts & Heritage's executive director.

Such support is often a giant boost of confidence for an artist working in a field characterized by uncertainty and vastly different opinions. "For me, [it] was a validation that I was doing something right in my art," says award-winning composer Jennifer Higdon. "Usually in this country, you spend a lot of time trying to make a living, then make your art. Pew gave me the time to focus. My life changed overnight."

Higdon's career took off in 2002, when she received the grant, and hasn't slowed. The flutist and composer received a Grammy Award in 2009 for Best Classical Contemporary Composition for her "Percussion Concerto." Then she won the 2010 Pulitzer Prize for music for her "Violin Concerto." She turned Charles Frazier's best-selling novel *Cold Mountain* into an opera and has been commissioned by orchestras in Chicago, Baltimore, and Philadelphia to write original works—a dream for a classical composer, and a rarity on the modern symphonic stage. Her work is some of the most performed newly commissioned music in the country.

Higdon says she doesn't know if any of these things "would have happened if I hadn't had Pew."

Some fellows go in new directions—or reclaim old ones. "I had been quite successful as a director and choreographer," says Hellmut Gottschild, who was part of the first class of Pew fellows in 1992. "It gave me a chance to take a year off and spend some time just reflecting. I love to perform, but it gave me a chance to rediscover that again."

The fellows have earned accolades the world over. Collectively, they have received 30 Guggenheim fellowships, three MacArthur fellowships, two Pulitzer Prizes, two Rome Prizes, two Grammy awards, and three Philadelphia Poet Laureate appointments. Their work has reached nearly all corners of the world, with performances, presentations, and exhibitions in 49 states and more than 60 countries.

But the work has had the most tangible effect in Pew's hometown of Philadelphia, earning the city a spot on the cultural map. "Today, when fellow artists and designers speak about Philadelphia, they say, 'Wow, I hear amazing things are going on there,'" says architect Brian Phillips (2011 fellow). "The region has become, in my view, one of the great creative laboratories in the country."

Carol Kaufmann is a Trust staff writer.

As the sun shades a wall in downtown Los Angeles, a man and a child take refuge from the cold as they wait for a mass honoring the Virgen de Guadalupe to end. Guadalupe Day, named for the patron saint of Mexico and the Americas, is celebrated among Latino immigrants in southern California. Hector Mata/AFP/Getty Images



ES UN NUEVO DIA

BY LEE HOCKSTADER



AS THE NUMBER OF HISPANICS HAS GROWN IN THE UNITED STATES, THE PEW RESEARCH CENTER HAS BEEN DOCUMENTING THEIR INFLUENCE ON NATIONAL LIFE.



or anyone who cared to look, signs of the staggering growth in the U.S. Hispanic population, fueled mainly by immigration, were plain to see in the 1990s. With increasing certainty as the decade wore on, demographers forecast that Hispanics would

overtake blacks as the country's largest minority group. In the 10 years leading up to the turn of the century, more than half the nation's overall population growth consisted of immigrants and U.S.-born children with roots in Mexico, Cuba, the Dominican Republic, Puerto Rico, and Latin America. During the 2000 presidential election, George W. Bush and Al Gore aggressively courted Hispanic voters, launching volleys of Spanish-language political ads and making direct appeals, sometimes in Spanish, on the campaign trail. "Es un nuevo día," Bush assured Spanish speakers in one TV spot. *It's a new day.*

As the Hispanic population of the United States leapt to 35 million in 2000 from 22 million in 1990, it struck the leadership of The Pew Charitable Trusts that too little was understood about a transformation that was reshaping the country's demographic and cultural landscape. "There was obviously a lot of academic research, but it tended to be narrowly focused and slow in gestation. Other research centers tended to have an advocacy tilt," recalls Donald Kimelman, then director of Pew's Venture Fund. "We embraced the notion that you could study the Hispanic population without having a point of view other than that this growing population needed to be understood."

That thinking led to the launch of the Pew Hispanic Center and began a prodigious output of newsmaking reports that have been embraced by all sides in the national debate over immigration as well as studies on Hispanics and demographic change. Founded in 2001, the project is now part of the Washington-based Pew Research Center, a self-described "fact tank" where the work is guided by eschewing advocacy in favor of a steady diet of meaty, relevant research on such topics as science and technology, political and global attitudes, religion and public life, and the state of American journalism.

Today it is taken nearly for granted that Hispanics are a major social, cultural, and political force in the United States. A smallish minority through the 1970s and '80s, Hispanics now account for 1 in 6 Americans; by midcentury, more than a quarter of Americans will have Hispanic roots. For Pew, those burgeoning numbers have provided a rich subject for inquiry—a diverse, complex set of communities whose views, behaviors, and future prospects (political, economic, and otherwise) were in many respects uncharted territory for research. "We had the big advantage of being first to explore this important demographic," says Roberto Suro, who directed the project from 2001 to 2007 after a journalism career that included positions at *The New York Times* and *The Washington Post*. "There was a kind of Paul Revere effect—we were able to be the voice that said, 'This is happening!'"

Still the demand for thoughtful, fastidious, cogently presented Hispanic research also brought some challenges. Distinguishing the mission of the center's Hispanic research—dispassionate, often hard-hitting studies—from the work of Hispanic advocacy groups has been key to the Pew Research Center's credibility. "Advocacy groups are often motivated, understandably, by wanting to put Hispanics in the best light possible. But that's not our job—we're here to offer neutral research and simple facts," says Mark Hugo Lopez, an economist who has been the Pew Research Center's director of Hispanic research since 2013 after five years



A worker carries radicchio to a conveyor belt in Merced, California. Many farm workers in the state's fertile Central Valley are unauthorized, and a common misconception is that the number from Mexico is on the rise. In fact, the number of unauthorized immigrants from Mexico living in the United States has decreased by more than a million since 2007.

Max Whittaker/The New York Times

as its associate director. Adds Paul Taylor, a former *Washington Post* journalist who became the research center's first executive vice president and who also led the Hispanic research from 2007 to 2013, "U.S. politics and information systems are becoming more polarized, and societies are well-served by forces seen as neutral, constructive referees. Without that, it's harder to construct solutions and identify problems."

By hewing to that vision of down-the-middle impartiality, while delivering high-quality information, the center provides the basic, agreed-upon facts that

allow constructive debate on policy. Its reports are referenced by Democrats, Republicans, and partisans of every stripe. Last year, a pair of prominent Republicans—Representative Dave Brat of Virginia and then-Senator Jeff Sessions of Alabama—referred to the center's research in a Jan. 12 letter urging their GOP colleagues in Congress to enact restrictive immigration policies. And in March, during the Democratic presidential primary season, Bernie Sanders cited the center's research while campaigning at the U.S.-Mexico border in Arizona, and Hillary Clinton referenced themes from the research



Teenagers on a cruise ship off the coast of Miami attend la quinceañera, a celebration of a girl's fifteenth birthday, taking place on board. Claudine Doury/Agence VU/Redux

during an interview with an Arizona radio station, saying, "There has not been net migration over our border from Mexico in the last several years."

Indeed, the Pew Research Center's Hispanic data, cited in 1,800 clippings in 2016 alone, are a regular touchstone for articles, editorials, and opinion columns across the ideological spectrum.

Among advocates for Latino issues, the view of the Pew Research Center's Hispanic research tends more toward grudging respect, tempered by past battles over data interpretation and presentation. In 2010, for instance, its National Survey of Latinos found that a large majority of Latinos favored allowing unauthorized immigrants to remain in the country, including 53 percent who said they should stay and pay a fine and another 28 percent who said they should face no penalty; just 13 percent of respondents said unauthorized immigrants should be deported. The Pew Research Center's headline over a chart displaying those findings—"Latinos Are Divided over What to Do about Unauthorized Immigrants"—was

questioned by some advocates, who found it misleading. Around the same time, some advocates expressed concern about a report showing that immigrants were gaining jobs faster in the economic recovery following the Great Recession, and another showing that the share of all U.S. births to unauthorized immigrants was 8 percent, an eightfold increase in 30 years.

The numbers themselves were uncontested, but the prominence the Pew Research Center gave them was seen as throwing fuel on the fire of rising anti-immigrant sentiment in 2010. "We're activists, so we want it all to be positive," says Frank Sharry, executive director of America's Voice and a leading advocate for policy changes that would guarantee labor, civil, and political rights to immigrants. "But generally they do really solid work. They have more resources than anyone else, a bigger name than anyone else, they produce more work than anyone else, and by and large it's considered very serious and in-depth."

The center's Hispanic research is prolific—roughly one major report every other month in addition to timely shorter analyses published through the center's FactTank blog. Among the most prominent reports in recent years are the Pew Research Center's periodic estimates of the number of unauthorized immigrants in the U.S. (The most recent figure, from 2014, is 11.1 million, down from a peak of 12.2 million in 2007.) The estimates, the product of painstaking analysis known as the residual method, subtract the estimated legal immigrant population from the U.S. Census Bureau's total of foreign-born residents. What's left is subjected to a variety of adjustments, to correct for undercounting and other statistical anomalies, to produce an estimate of the unauthorized immigrant population, which is heavily Hispanic. The residual method was developed in the 1980s by number-crunchers at the U.S. Census Bureau, including Jeffrey Passel, one of the world's most prominent demographers even before he joined the Pew Research Center in 2005. His methodology is widely regarded as rigorous, and the center's estimate is accepted by most policymakers and groups involved in immigration issues.

The project's data on unauthorized immigrants often captures the most attention. But its studies are so varied, authoritative, and nuanced that, taken as a whole, they are a virtual taxonomy of the nation's Hispanic communities and concerns. In the project's early years, the reports, drawing on the synergy of survey and demographic research, focused on what was then the new concentration of Hispanic communities in the Southeast; on the impact of \$20 billion in annual remittances sent home by Hispanic immigrants in the U.S.; on the relatively low level of college completion by Hispanic students; and on the fact that at least 40 percent of unauthorized immigrants were visa overstayers, not illegal border-crossers.

Some of the center's reports were provocative, intentionally or not, including one, in 2010, headlined, "National Latino Leader? The Job Is Open." (It found that when asked to name the nation's most important Latino leader, nearly two-thirds of Hispanic

respondents said they didn't know, and another 10 percent answered, "No one.")

Other studies include a 2011 report detailing that the number of Hispanic children living in poverty had surpassed that of white children living in poverty. Still another, in 2012, drew especially significant media coverage because it found that decades of migration to the United States from Mexico had slowed substantially, with as many Mexicans entering the U.S. as were leaving; a subsequent report, in 2014, also received front-page attention when it showed that more Mexicans were leaving the U.S. than coming in.

A 2013 study documented the declining importance of Spanish-language media for second- and third-generation Hispanics in the U.S., who are more likely to get their news and entertainment in English. And in 2015, a kaleidoscopic survey of overall U.S. immigration looked back over a 50-year period in which Hispanics accounted for half the 59 million newcomers since 1965, as well as forward to 2065, when the Pew Research Center projected that the foreign-born percentage of the U.S. population would rise to 18 percent, the highest share since records have been kept. (It's just under 14 percent today.) A 2016 report demonstrated that millennials, ages 18-35, represented 44 percent of the Hispanic electorate—twice the white electorate's share—triggering widespread commentary and a focus by political parties and candidates on how to reach those voters in a presidential election year.

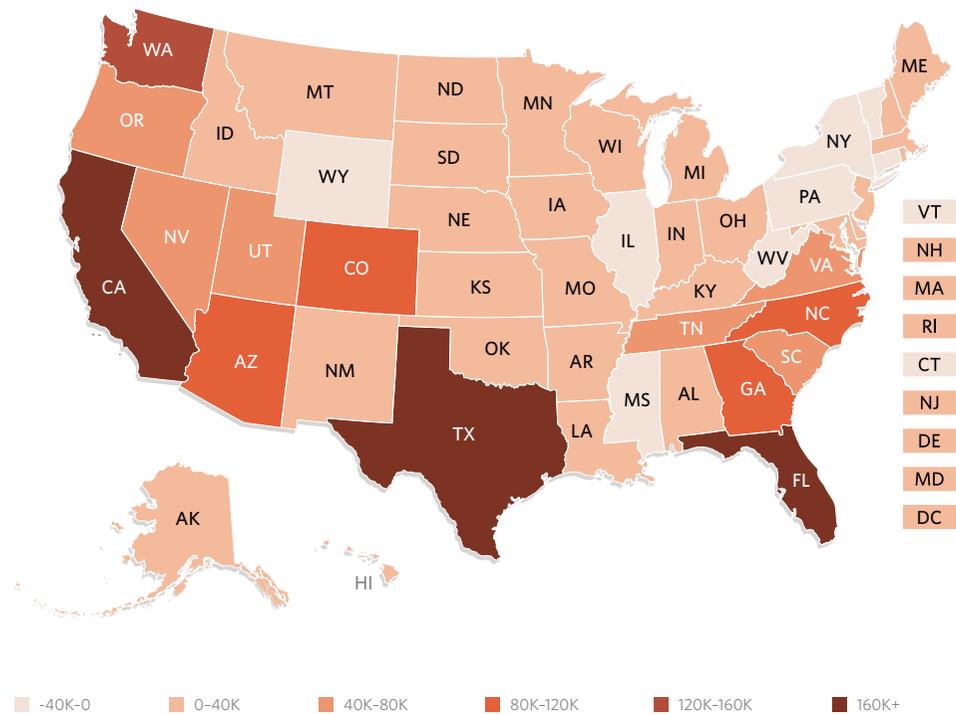
As the nation's Hispanic population has come of age—most of the growth in this decade has been from births, not immigration—so has the Pew Research Center's institutional focus. "A generation of U.S.-born Hispanics is entering adulthood, and those youngsters are reshaping the consumption of news, the use of language and technology, and the shape of labor markets," says Lopez, who is planning new surveys and reports delving into those subjects. "It's a story that's not ending, but evolving."

Lee Hockstader, a former foreign correspondent for The Washington Post, is now on the paper's editorial board.

"A GENERATION OF U.S.-BORN HISPANICS IS ENTERING ADULTHOOD, AND THOSE YOUNGSTERS ARE RESHAPING THE CONSUMPTION OF NEWS, THE USE OF LANGUAGE AND TECHNOLOGY, AND THE SHAPE OF LABOR MARKETS. IT'S A STORY THAT'S NOT ENDING, BUT EVOLVING."

-MARK HUGO LOPEZ

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.



Eight states lost population between 2015 and 2016, the highest number recorded since 1987. The Pew Charitable Trusts

What's Driving Population Declines in More States?

BY TIM HENDERSON

Eight states lost population between 2015 and 2016, and 12 others recorded their lowest population increase of the decade, as economic woes and lower birth rates hit some states harder than others.

Connecticut, Illinois, Mississippi, New York, Pennsylvania, Vermont, West Virginia, and Wyoming lost population. The last time so many states registered a drop in population was from 1986 to 1987, when oil prices collapsed. Twelve Western and Southern states, along with the District of Columbia, lost population then.

Meanwhile, Alabama, California, Hawaii, Kansas, Louisiana, Maryland, Massachusetts, New Jersey, North Dakota, Oklahoma, and Virginia saw anemic growth of between 0.02 and 0.66 percent in the number of people living inside their borders. That's less than the nation's increase in population of 0.7 percent and the lowest growth those states had experienced since 2010.

The reasons behind the declines vary. Some reflect national mortality and birth trends, as more deaths occur as the population ages and the millennial

generation has fewer babies. That has led to the slowest population growth in the U.S. in 70 years, as Brookings Institution demographer William Frey points out.

Pennsylvania, for instance, had 7,677 fewer people in 2016 than it did in 2015, after having experienced growth every year since 1996. The major reasons: an increase in deaths, a decrease in births, and fewer foreign immigrants than other states have.

"There are more and more of us at ages where deaths are more numerous," says Herbert Smith, director of the Population Studies Center at the University of Pennsylvania.

A state's economy also plays a part. Like in 1986, the economies of energy-producing states such as Kansas, North Dakota, Oklahoma, West Virginia, and Wyoming have suffered from low oil, natural gas, and coal prices. People flee a state when jobs evaporate to find work elsewhere if they can.

West Virginia and Wyoming are the two largest coal

Connecticut, Illinois, Mississippi, New York, Pennsylvania, Vermont, West Virginia, and Wyoming lost population between 2015 and 2016.

producers in the country. As coal production declined, West Virginia lost 9,951 people from 2015 to 2016, its fourth straight year of population loss. Wyoming lost 1,054 after having steadily gained population since 1999.

Americans are moving again in more rapid numbers after hunkering down during the recession. And people's ability to move, as their personal finances or job outlooks have improved, "is now critical to whether a state gains or loses population," says Kenneth Johnson, a demographer at the University of New Hampshire's Carsey School of Public Policy.

Aging baby boomers are moving to the Sun Belt or other lower-cost states to retire. Florida's population, for instance, is among the nation's fastest-growing. Workers who are able to move and get a job elsewhere will escape high cost-of-living states. And when businesses find high taxes, high labor costs, or a shortage of workers and can move, they will and take the jobs with them.

Idaho, Nevada, and Washington state are experiencing some of the fastest economic and job growth in the nation. And their populations are growing along with that, rising at more than twice the national growth rate from 2015 to 2016.

High state and local tax burdens may not force people to pick up and move. Most often it's for jobs, higher pay, or a desire to retire elsewhere. But taxes contribute to the cost of living and factor into people's thinking about moving, some research indicates.

Isaac Martin, a University of California at San Diego sociology professor who wrote about the effect taxes had

on moving last year, found that the burden of property taxes will prompt some homeowners to move. But that most often happens when they have suffered a drop in income, caused by a job loss or retirement. "These are not people whose property taxes went up, but rather people whose incomes fell," he says.

The nonpartisan Tax Foundation, which advocates low rates, said in a new assessment of migration between the states last year, "Taxes are not the sole factor why individuals migrate ... but a relationship does exist."

Some people in Illinois, which lost 37,508 people, the most of any state, think so. When asked in October whether they would like to leave the state, about half the people polled by the Paul Simon Public Policy Institute at Southern Illinois University said yes. The most cited reasons: taxes and weather.

Illinois and three other states that lost population—Connecticut, New York, and Vermont—had among the highest median property taxes in 2015. That's something

that Illinois Governor Bruce Rauner would like to change.

Rauner, a Republican, asked legislators to freeze property taxes in his Jan. 25 State of the State address, calling for "property tax relief to reduce the immense burden felt by our families and businesses—and to give them reason to stay here."

Property taxes also are on the mind of Democratic Governor Andrew Cuomo in New York.

"Property taxes are what is killing this state," Cuomo said in a Jan. 10 State of the State address in suburban Westchester County. New York City suburbs like Westchester dominate the list of highest property tax bills in the country, according to a 2015 study by Zillow.

If businesses and the jobs they provide leave, so do people. So some states are seeking to hang on to the businesses they have and attract new ones by improving their business tax climate.

Fast-growing Florida, Nevada, and Utah rank high on the Tax Foundation's "State Business Tax Climate Index" for this year. Connecticut, which lost 8,278 people, and New York, which lost 1,894, rank near the bottom.

In an effort to "improve the business climate" and keep the insurance industry and the 58,000 jobs it creates in Connecticut, Democratic Governor Dannel Malloy proposed lowering a tax on insurance premiums. "We must ensure that we maintain our competitive edge so that (insurance companies) continue to thrive and grow in our state," he says.

Tim Henderson is a staff writer for Stateline.

Increasingly Warm Feelings for Religious Groups

A Pew Research Center survey finds Americans are more positive about major religions than just three years ago.

BY DAVID O'REILLY

For more than a decade, the Pew Research Center has queried Americans about their religious identification and practices. "Do you believe in God?" its surveys ask. "Do you pray daily? Identify with a denomination? Attend services at least monthly? Believe religion is important?"

Now a new center survey finds that despite the declines in affiliation and observance revealed in those large religious landscape surveys, Americans are feeling more warmly toward nearly all religious groups than they did just a few years ago.

Asked to rate a variety of groups on a "feeling thermometer" ranging from 0 to 100 "degrees," respondents gave nearly all groups a more positive assessment than they did in a nearly identical June 2014 Pew Research Center survey, with no group in decline.

Jews and Catholics, who were among the groups most positively rated in 2014, earned even "warmer" evaluations in the January 2017 survey. And while Muslims and atheists again received the "coolest" overall ratings, their numbers rose significantly: up from a "chilly" 40 and 41, respectively, three years ago to what the survey report calls "more neutral" ratings of 48 and 50.

This warming of attitudes was broad-based, researchers found, with men and women, Republicans and Democrats, and all age groups trending toward more positive views. Mormons and Hindus moved from what had been neutral ratings to "somewhat warmer" scores of 54 and 58 degrees, and Buddhists rose from 53 to 60.

The only group whose rating did not change during the past three years was evangelical Christians, whose rating stayed at a relatively warm 61.

The survey was conducted between Jan. 9 and Jan. 23 using the Pew Research Center's American Trends Panel. Created in 2014, the panel is a nationally representative group of randomly selected U.S. adults who participate via monthly, self-administered, online

surveys. Data in the report was drawn from 4,248 respondents.

Gregory Smith, the Pew Research Center's associate director of religion research, says that the first "religious temperature" survey in 2014 came about because "our team that focuses on religion and public life had always been interested in how people from various religious backgrounds reacted with each other." But the questions that the religious landscape pollsters queried 35,000 people with in phone interviews never seemed subtle enough to measure respondents' complex feelings toward religious groups, Smith says.

Creation of the American Trends Panel three years ago helped researchers go deeper, because its participants answer questions online using a sliding scale of zero to 100, "from cold and negative to warm and positive, in a way that lends itself more to a self-administered format than do telephone polls. So we saw this as a new and interesting way to gauge religious groups' views of one another," says Smith.

"It's a useful survey," John Green, distinguished professor of political science at the University of Akron says of the religious temperature poll. "One of the things we try to do with polling is give evidence for the attitudes that people talk about. You often hear people say things like 'Nobody can stand Catholics' or 'Anti-Semitism is on the rise.' So the extent to which one can systematize and measure those beliefs is very helpful" in showing how accurate those kinds of comments really are.

The American public's warmer attitudes toward religious groups might be explained, Green surmises, "by a relative decline in the kind of faith-based conflicts" that can sour some Americans toward institutional religion. While many people "admire religious institutions for the guidance and comfort and support they give, and for the ways they create community" and serve the poor, says Green, "there is another view that sees religion as a source of conflict, or judgment, or too focused on rules and not enough on other values."

The positive attitude tends to enjoy ascendancy as long as religion is not heavily engaged in controversy, he says. But when religious groups are tainted by scandal, or take sides in politics or contentious public policy issues, "the overall value of religion tends to decline" in public esteem.

Conservative white evangelicals, who in recent decades have loomed large in American politics, kept a low profile in last year's presidential primaries and general election, says Green. "Religion just kind of faded into the background along with everybody else."

Despite the overall warming trend, Pew's Smith detects some noteworthy patterns within the survey's four age groups. The older the respondents, says Smith, the greater on average was the range of their likes and dislikes.

For example, the over-65 age group gave its highest ratings to mainline Protestants and Jews, at 75 and 74 respectively, while rating Muslims and atheists at a chilly 44 degrees. The range between their highs and lows was 31 points.

The 50-to-64 age group gave its warmest ratings to Jews, at 69, followed by Catholics and mainline Protestants at 68 and 67, with atheists and Muslims rated lowest, at 45—a spread of 24 points.

Respondents aged 30 to 49 also gave their warmest ratings to Jews, Catholics and mainline Protestants, and their "coolest" to Muslims, for a range of 17 degrees, but the 18-to-29 cohort gave responses that veered sharply from those of their elders.

Millennials' highest rating, a 66, went to Buddhists, with Catholics and Hindus next, at 64, followed closely by Jews. Yet atheists—who received the chilliest ratings from the two oldest cohorts—are rated by millennials with the same fairly warm 59 degrees they gave to evangelical and mainline Protestants. Since Buddhism does not posit the existence of God, it is notable that these young adults assign their warmest rating to a group that embraces atheism—a worldview their parents and grandparents rank lowest.

"Young people are very distinctive in the ways they approach religion," says Smith. The conspicuously narrow bandwidth of their attitudes—just 12 points—raises a question, he says, of whether religious identity is simply a lesser concern for this cohort than it is for older generations.

Smith notes that respondents typically gave higher ratings to a faith group when they personally knew members of that group, and that members of a particular religious group tend to feel most warmly toward their co-religionists. White evangelicals gave their brethren a toasty 81 degrees, for example, and Catholics rated fellow Catholics at a near-feverish 83.

As in 2014, the latest religious temperature survey did not query respondents as to why they feel positively or negatively toward the different religious groups,

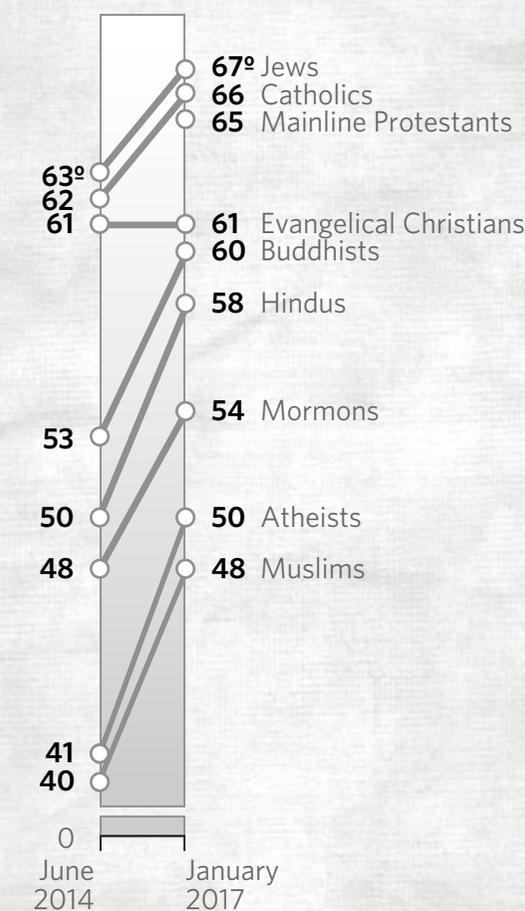
although Smith says it is a line of inquiry that future Pew Research Center surveys might explore.

"It's definitely fair to say we will continue to track and monitor how religious groups perceive one another," says Smith, "and it would be worth getting to the bottom of it."

David O'Reilly writes about religion for The Philadelphia Inquirer.

Virtually all religious groups receive warmer ratings

Mean thermometer ratings



Source: Pew Research Center
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Inside 40 Years of Natural Disaster Preparation in South Carolina

In a conversation with Trust, Charleston's former mayor Joseph Riley Jr. discusses flood readiness and response. During his 10 terms, Riley helped implement flood management changes like smart urban design, improvements to stormwater systems, and a comprehensive strategy for addressing the city's sea level rise. Riley, who also oversaw the city's \$10 billion recovery after Hurricane Hugo in 1989, is now a Pew distinguished fellow.



Charleston is a charming city renowned for its history, architecture, and culture—but it's also low-lying and bordered by two rivers and the Atlantic Ocean, making it vulnerable to hurricanes, king tides, and sea level

rise. What have you done to make the city better able to withstand floods and extreme weather?

Charleston has embarked on a number of initiatives to make the city more sustainable and durable and to adapt to the changes already arriving with sea level rise. We initiated measures involving many disciplines in city government—from public safety to public service to emergency management—to ensure critical response and preparedness.

Necessary reinvestment has been ongoing since 1984, when the city adopted its Master Drainage and Flood Plain Management Plan. This plan led to the creation of revenue streams to help finance major drainage projects that have provided relief in many areas of the city, including the historic and low-lying peninsula and the large suburban areas that confront different flooding challenges.

Several projects have been completed and others are in design phases. The city has spent or set aside more than \$235 million to complete ongoing projects.

Just before you retired as mayor in January 2016, you released a Sea Level Rise Strategy for Charleston calling for infrastructure improvements and processes to prepare for higher tides. What were some of the major recommendations?

Our Sea Level Rise Strategy was organized around a threefold approach: reinvestment, response, and readiness.

Planning is critical to a successful sea level rise strategy, as is a built-in mechanism to adapt

early to unexpected changes in forecasts. Major recommendations include planning for the next 50 years, using federal estimates. Fifty years is in line with today's best scientific projections about rising seas.

Continuing the stormwater drainage program is key for Charleston. The work done so far has allowed us to absorb the increased flooding caused by sea level rise and weather microbursts.

Regularly updating this plan will be critical to broadly understanding where a community's greatest risk lies, and it also allows time to study sewer or stormwater drains in and around the city. With that information, officials can devise solutions to flooding problems and ensure that new development can occur in accordance with site-specific engineering of drainage plans that use green infrastructure where appropriate.

What did last fall's Hurricane Matthew reveal about the work already done in Charleston, and challenges still facing the city?

Hurricane Matthew was a stark reminder of the relentless increase the brutal effects of more frequent flooding events have on our infrastructure and the quality of life in the city. The measures undertaken in Charleston, especially the planning and drainage improvements made over the last several years, helped mitigate the damage from Matthew. And our well-organized emergency operations system worked superbly to protect the community, keep residents informed, and prevent loss of life or serious injury.

But reactive measures alone are not enough. We know this problem will increase, so only by working collaboratively across the national, state, and local levels will we be able to get ahead of it and manage its effects.

How can this strategy be applied to cities around the U.S.? What is the federal government's role?

Sea level rise strategies exist in several cities. New York and Newport News, Virginia, are two examples.



Flood waters stop a Charleston resident short as he attempts to leave a house on Broad Street after Hurricane Matthew struck the South Carolina city on October 8, 2016. Brian Blanco/Getty Images

Studying these plans, and developing clear steps for a process, would be helpful to communities across the United States and allow them to understand their own particular risks and create their own strategy. Also needed are tools to help with the prioritization and cost-estimation processes.

Only an effort led by the federal government will be optimally useful in helping cities develop and then execute sea level rise strategies. Many departments of the federal government are now involved in one aspect or another of sea level rise. The Federal Emergency Management Agency and the National Flood Insurance Program are critical, but a sea level rise strategy must include many other agencies, such as the National Weather Service, Department of Transportation, and the Department of Housing and Urban Development, to name a few.

One of our main goals has been to maintain a relationship with the scientific community, federal and state agencies, and local governments for the free and timely exchange of information on the impacts of sea-level rise to the city and region.

As the number of federal disaster declarations increases, how can we better prepare and protect communities?

In the face of natural disasters, communities need to do the best job possible to communicate risks and appropriate actions to our citizens. We need to provide them with the tools to protect themselves and their property. Once the disaster arrives, communities need to be well-prepared to mobilize and bring in any aid needed.

After a disaster, how can communities reduce future risk and rebuild infrastructure to better withstand the next extreme weather event?

When disaster strikes, an opportunity arises to learn and rebuild in a way that makes our communities stronger. Adopting and enforcing the most up-to-date building codes, evaluating our interface between the shore and the water's edge, and having comprehensive emergency plans to retreat and evacuate when necessary are essential to protecting our cities and states.

Recognition is growing that natural solutions can play a role in making communities more resilient. Do you believe nature should be part of a city's mitigation, adaptation, and risk management plan?

Absolutely! In our own community, we see places that are absorbing more tidal and flood water, whether it's at the natural edge of a sloping waterfront park or land that slowly, over time, is becoming marsh as its number of days with tidal influence increases. In this planning, it is essential that the managers of these properties understand the multiple purposes of these public properties.

What's your advice to community leaders, mayors, and other elected officials who want to make their areas better able to withstand future weather events and the changing climate?

Plan, communicate the plan, and then adjust the plan as needed during its implementation. Encourage collaboration across departments within the city and across the region and state for innovative solutions that help the greatest number of people.

A Collaboration in Cutting-Edge Science

Pew's partnership with the Alexander and Margaret Stewart Trust empowers early career scientists to creatively pursue new medical breakthroughs in cancer research.

BY DEMETRA AOSPOROS

Alexander Stewart was an industrious Midwestern lumber baron who went on to represent Wisconsin in Congress for three terms in the late 1800s. Later, he and his wife, Margaret Gray Stewart, built a Beaux Arts-style home in Washington, D.C., faced in limestone and harboring parquet floors and decorative plaster work. Today it serves as the Embassy of Luxembourg. Decades later, the couple's two daughters established a trust—named to honor their parents—to further cancer research and treatment of childhood illnesses.

Initially, the Alexander and Margaret Stewart Trust supported cancer research through competitions for pilot research projects that lasted about six months, at some of the country's top medical institutions. A later program review resulted in Stewart initiating a different approach—one that supported individual researchers at top institutions over longer periods of time. The trustees then concluded that the new program would be further enhanced if they could bring the Stewart fellows together to share ideas and results, and began exploring what other foundations were doing in this area.

"In 2012, our former trustee Terry Williams, who has since passed away, reached out to Antony Rosen of Johns Hopkins University for suggestions of foundations that have organized productive gatherings on scientific research," says Stewart's executive manager, Lori Jackson. Rosen, an alumnus of The Pew Charitable Trusts' biomedical scholars program, suggested that Stewart contact Pew. Soon after, representatives from the two organizations met and discovered that they shared a similar philosophy.

"In our first meeting, Pew and Stewart agreed that the biggest impact would be to fund top post-doctorate researchers when they're just starting their own labs," says Stewart's executive trustee, William Bierbower. "That's when these scientists are brimming with ideas to research, and totally energized—but also when they are most in need of funding."

That's because financial support can be difficult for early career scientists to find. "High-risk science isn't

funded by many traditional grant mechanisms. Couple that with the pressure to publish and get tenure, and it's understandable that scientists don't have funding for their most creative ideas until later in their career," says Kara Coleman, director of the Pew Scholars Program in the Biomedical Sciences. (See Page 22.) "Only after they've proved themselves do they get the opportunity to take more risk."

At the time of the initial meeting between the Stewart trustees and Pew, the Pew biomedical scholars program had already been operating for more than two decades. The well-known and respected program included an annual gathering that brought all of its scholars together to share expertise and cross-pollinate ideas. In addition, Pew had a rigorous, independent selection process led by an advisory committee of experienced, outstanding scientists. Both aspects resonated with the Stewart trustees. With so many stars aligned, Pew and Stewart agreed to join the Stewart scholars program with the Pew program starting in 2014, adding five scholars dedicated to cancer research to the already diverse mix of research undertaken by the biomedical scholars each year.

This collaborative program, dubbed the Pew-Stewart Scholars Program for Cancer Research, currently provides each scholar \$240,000 over a four-year time frame, with no strings attached. This flexibility affords scholars tremendous leeway in what they investigate in the laboratory—allowing them to change course, test new avenues, and push boundaries. The approach empowers researchers and promotes scientific innovation at its finest, a goal important to both organizations.

The selection process is rigorous. "Pew-Stewart scholars are nominated by designated cancer centers or by institutions that have a major effort in cancer research—some 75 institutions," says Peter Howley of Harvard Medical School, chair of the Pew-Stewart advisory committee. Candidates must have a doctorate in a field related to biomedical sciences or medicine and must also demonstrate outstanding promise as contributors relevant to the field of cancer. Competition is steep: Last year, some 60 researchers

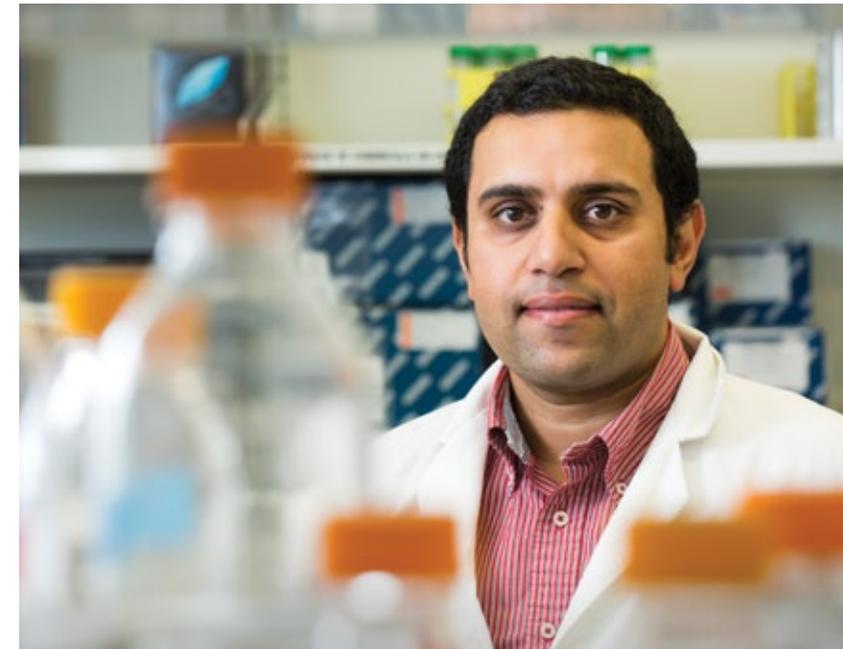
were invited to apply for the five slots, with final selections made by Howley and the advisory committee.

Philanthropy has proved to be particularly relevant to scientific research. "The Stewart Trust is a strong believer in the value of unrestricted seed capital in the early stages," says trustee George Hamilton. "It's a risky thing to invest in young people—but investing in them, connecting them, and giving them flexibility to experiment and learn brings possibilities for breakthrough results." When it comes to supporting early career scientists, the risks bring opportunities for rewards that could one day eradicate devastating diseases.

The research being undertaken by Pew-Stewart scholars is innovative. At Stanford University, Adam de la Zerda uses chemically altered particles of gold to seek out and attach to cancer cells, a technique that may someday help surgeons ensure that they have removed every trace of disease. Min Yu's work at the University of Southern California aims to identify molecular adaptations that allow breast cancer cells to break away from primary tumors and metastasize elsewhere, which could facilitate strategies to block the spread of the disease in individual patients. And at Harvard University, Stephanie Dougan seeks to activate a body's own immune response to fight pancreatic cancer, using antibodies derived from alpacas.

From a scholar's perspective, the program's benefits can't be overstated. "Being a Pew-Stewart scholar has introduced me to a wonderful community of young scientists from disparate fields of biology, which really broadens my thinking about cancer research," says Dougan. Other scholars cite the flexibility of funds as key. "It allows you to open your mind and try crazy things that have never been tried before. It's incredibly empowering," says de la Zerda.

Everyone agrees that the annual meeting is one of the program's greatest strengths. The gathering provides scholars an opportunity to present their work and engage formally and in casual conversations with their peers and the program's advisers, who have been honored with every major science award. Newly selected scholars are often surprised by the informality of the meeting, which can find them rubbing elbows with Craig Mello—a former Pew scholar who directs the program's national advisory committee, and one of three program alumni to win the Nobel Prize—and gleaning his insights on stumbling blocks to their research. "The meeting is such a landmark component of the program," Coleman says. "It affords



A member of the inaugural class of the Pew-Stewart Scholars Program for Cancer Research, Arvin Dar is an assistant professor at the Icahn School of Medicine at Mount Sinai—where he studies chemical biology.

Katye Martens/The Pew Charitable Trusts

so many opportunities for mentorship and cross-collaborative thinking."

The Pew-Stewart partnership has proved so successful that the Stewart trustees have renewed their commitment for another five years.

"The Stewart Trust appreciates the great benefit of joining forces with Pew, from strong program administration and scholar selection processes to the unique annual meeting of the cancer and biomedical scholars that encourages research collaborations and sharing of ideas for best results," Bierbower says. "The Trust is the generous legacy of the Stewart family, and the Pew-Stewart Scholars Program for Cancer Research is a highly effective means to achieve the Stewarts' goal of supporting innovative cancer research."

Pew is also grateful for the joint effort. "We are so fortunate in our partnership with the Stewart Trust," says Pew Senior Vice President Sally O'Brien, who leads Pew's partnership efforts. "We have found much in common around our shared values and desire to contribute to the front lines of science, by enabling researchers to explore cutting-edge ideas and follow their hunches wherever they may lead them."

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For more information about philanthropic partnerships at Pew, please contact Senior Vice President Sally O'Brien at 202-540-6226 or sobrien@pewtrusts.org.

Demetra Aposporos is a Trust staff writer.

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



Sunrise breaks across the Teton Range, the mountains that led to the creation of the Grand Teton National Park in 1929.

Christian Science Monitor/Getty Images

National Park Service Centennial Act Becomes Law

The National Park Service Centennial Act was signed into law on Dec. 16 and provides \$35 million in new revenue for park programs; \$25 million of it is prioritized for deferred maintenance needs. A public-private matching provision has the potential to generate \$50 million annually to address the backlog

of the maintenance needs as well. Since 2016, Pew's campaign to restore America's parks has worked to conserve the national parks' natural and cultural assets by raising awareness, increasing maintenance funding, and obtaining policy reforms.

U.S. and Canada grant Arctic waters new protections

President Barack Obama signed an executive order on Dec. 9 safeguarding 113,000 square miles of the northern Bering Sea and the Bering Strait adjacent to the Chukchi Sea, an area Pew has worked to protect. The narrow body of water provides the only maritime route between the Pacific and Arctic oceans and serves as one of the world's major marine migration corridors for bowhead whales, Pacific walrus, ringed and bearded seals, and millions of seabirds. On Dec. 20, President Obama and Canadian Prime Minister Justin Trudeau announced unprecedented safeguards from a potential oil spill in the Arctic. The U.S. designated the vast majority of its waters in the Chukchi and Beaufort seas as off limits to oil and gas leasing, and Canada placed a moratorium on new Arctic leases in federal waters, which will be reviewed every five years.

New marine protected area created in Canada's Arctic

On Nov. 16, Canada announced creation of the Anguniaqvia Niqiqyuam protected area, a 926-square-mile region of the Arctic's Darnley Bay in the Northwest Territories' Beaufort Sea. The designation came after more than three years of collaboration with community members and federal officials to protect the area against any activity that disturbs, damages, or destroys living marine organisms or habitat. Pew research on beluga whales and other marine mammals there helped make the case for the protected status.

NOAA announces protections for deep-sea canyons in mid-Atlantic U.S.

In December, the National Oceanic and Atmospheric Administration created the largest protected area in the U.S. waters of the Atlantic Ocean. More than 41,000 square miles of habitat for deep-water corals are now off limits to bottom trawling, dredging, and other destructive fishing methods. The area, which is 12 times the size of Yellowstone National Park, is located about 70 miles off of the mid-Atlantic coast. Pew helped secure the final decision by informing decision-makers with scientific analyses and expert testimony; assisting in defining the area's boundaries through geographic information system mapping; and generating more than 100,000 public comments in favor of the conservation proposal. With this new measure in place, deep-sea corals are now protected along the eastern seaboard, from Florida to New York.

Army Corps policy advances living shorelines

In a major step toward better protecting coastlines, estuaries, and lakeshores, the U.S. Army Corps of Engineers approved a new policy in January that streamlines procedures for using nature-based solutions to protect property and guard against habitat loss and coastal erosion. Typically consisting of native elements such as vegetation, oyster reefs, or rock sills, these "living shoreline" projects have proved effective in providing protections compared with hard infrastructure, which covers 14 percent of the nation's tidal shoreline. The Corps' new procedure will encourage property owners to embrace living shorelines, the environmentally preferred method for erosion control. Pew's research and advocacy efforts, along with bipartisan support from Congress and local representatives from across the U.S., helped ensure the Corps finalized the permit.

Catch data in Gulf will be reported electronically

In February, the Gulf of Mexico Fishery Management Council approved a new rule mandating that charter-for-hire fleets report their catch data via electronic logbooks, rather than paper or phone surveys. The South Atlantic Fishery Management Council voted in favor of a similar requirement in December. Together, these actions are a critical step toward both modernizing fisheries data collection across 430,000 square miles of ocean in the southeast United States, and completing the U.S. fisheries and marine ecosystem project's work to improve accountability in the recreational fishing community. This data will also support work to reduce bycatch—when fishermen reel in species they weren't actively seeking. Pew submitted detailed recommendations on the plans' design and conducted outreach to fishing captains to demonstrate broad support for these amendments.

No more mineral leasing and development on the Klamath Mountains' public land

The Bureau of Land Management signed a public land order in January that prevents mineral leasing and development on 101,000 acres in the Klamath Mountains near the Kalmiopsis Wilderness in southwest Oregon. Pew has worked with legislators for nearly five years on several bills aimed at conserving lands within the Kalmiopsis region, which has one of the highest concentrations of rare and endemic plants in North America and one of the last wild salmon strongholds in the continental United States.

INFORMING THE PUBLIC

Survey explores police officers' views of their profession

In January, the Pew Research Center published a report that examined the attitudes and experiences of U.S. police officers, finding that 86 percent of police officers say their work is harder today as a result of recent high-profile fatal encounters between black

citizens and police. Major newspapers and at least 450 websites cited the report. Senator Orrin Hatch (R-UT) cited data from the report during the Senate Judiciary Committee's confirmation hearing for attorney general.

Chicago police secure the area around a residence believed to be the home of a suspected murderer. *Scott Olson/Getty Images*



Report analyzes congressional rhetoric

In February, the Pew Research Center published the first report from its Data Labs team, which uses computational tools and methods to complement and expand the center's research agenda. The report, which analyzed the rhetoric of more than 200,000 press releases and Facebook posts by members of the 114th Congress, found that the most aggressive forms of disagreement were relatively rare. Academics, data scientists, and other key stakeholders widely praised the research.

Study finds differing media habits of 2016 voters

Building on previous work about media polarization, the Pew Research Center released a report in January about the public's main sources of news during the 2016 presidential campaign. The report found that those who say they voted for President Donald Trump in the general election relied heavily on Fox News as their main source of election information, whereas Hillary Clinton voters named an array of different sources, with no single one named by more than 1 in 5 of her supporters. Additionally, some sources, including NBC, CBS, and Facebook, were about equally likely to be named by voters on both sides. Similar percentages of Trump (7 percent) and Clinton (8 percent) voters said Facebook was their main source of news about the campaign.

Report focuses on childhood inoculations and trust in vaccine science

The Pew Research Center published a report in February examining Americans' views of childhood vaccines and their trust in biomedical scientists. An overwhelming majority of Americans (82 percent) support requiring all healthy schoolchildren to be vaccinated for measles, mumps, and rubella. Seventy-three percent of U.S. adults believe that scientists should have a major role in policy decisions related to childhood vaccines, and 55 percent say they trust information from biomedical scientists to give a full and accurate picture of the health effects of vaccines.



Jean Claude Moschetti/REA/Redux

INVIGORATING CIVIC LIFE

Four Philly institutions receive \$1.8 million in awards

Nearly \$2 million has been given to support Philadelphia-area organizations working to inform the public about the historical heritage of the region and nation. Distributed over two to three years, the grants will enhance the visitor experience at the Independence Visitor Center; support the creation of an exhibit about the Civil War and Reconstruction period's impact on the U.S. Constitution at the National Constitution Center; advance public knowledge of American enterprise and innovation at the Hagley Museum and Library; and fund programming by the Consortium for History of Science, Technology, and Medicine that will inform scholars and the public about groundbreaking scientific developments.

Grants support Philadelphia's vulnerable adults

In March, the Pew Fund for Health and Human Services announced it will provide \$6.98 million over the next three years to 41 Philadelphia-area nonprofits that help people struggling with homelessness, mental health issues, and extended unemployment. Agencies that are receiving the grants will help an estimated 35,000 people on an annual basis, including low-skilled individuals to secure competitive employment, and domestic abuse survivors and those with serious mental health issues transition to independence and stability.

A Robust Vision for Using Data in Government

BY SUSAN K. URAHN

State and local governments collect data in vast amounts—from health outcomes and marriage records to crime statistics and Head Start enrollments. Much of this data collection is required by federal or state law, and some is compiled at the initiative of individual agencies.

But collecting data is not the same as *harnessing* data, a fact that is gaining acceptance among state and local decision-makers as they move toward a more robust vision for what data can accomplish: that data is a strategic asset that can help policymakers and officials manage programs more effectively and inexpensively.

Many states and localities are finding innovative approaches to sharing, matching, and using data to drive policy decisions, budgeting, and operational decision-making. The Pew Charitable Trusts has begun a project to help identify success stories that other governments can study, duplicate, and even improve upon.

One way that states can harness information for a larger strategic purpose is to take a deep dive into data that have been collected for years in order to uncover systemic failures and craft new solutions, which is what Delaware's Department of Education did in 2012.

After analyzing data measuring the performance of Delaware high school students, with the assistance of Harvard University's Strategic Data Project, the state determined that a large number of students whose SAT scores indicated they were capable of obtaining a college education nonetheless were not enrolled in college. From 2008 to 2011, for example, 18 percent of Delaware students who scored at least 1550 out of 2400 on the SAT did not enroll.

So the state began its "Getting to Zero" campaign, designed to take that 18 percent down to zero by having every college-ready student in Delaware apply for and enroll in post-secondary education. The campaign includes better training for school counselors on how to complete the Free Application for Federal Student Aid; the designation of October and November as college application months, during which students receive help with applications; and a texting system that families can use to access real-time information on financial aid and other concerns.

It's showing success: Ninety-eight percent of college-ready applicants from the high school classes of 2014 and 2015, the first two years of Getting to Zero, enrolled in an institution of higher learning.

New Mexico had a different problem to solve: the improper payment of unemployment insurance claims. With support from the federal government, the New Mexico Department of Workforce Solutions, along with several other state workforce agencies, modernized and integrated its unemployment insurance tax and claims system, significantly decreasing fraudulent payments.

But the state wanted to do more to predict and prevent overpayments. Working with a private sector partner, state officials analyzed years of data on employment by industry, prior claims, work history, and other variables to uncover trends and patterns in the behavior of unemployment insurance applicants. The data helped state officials predict where in the application process claimants were likely to provide inaccurate responses that could lead to improper payments. With this information, state officials created and tested personalized messages designed to prompt claimants to provide accurate information. They found, for example, that claimants did not change their behavior when the message described the relevant law and penalties for breaking it. However, when told that 9 out of 10 people in their home counties reported their earnings accurately, a quarter of claimants were more likely to report their incomes correctly. The department expects to see a 35 percent reduction in overpayments, for a savings of \$1.9 million annually.

As states and localities face common challenges, the strategic use of data—which too often sit underutilized on computer servers and in paper files—provides an opportunity to not only improve program management but also share innovations that other governments can use to better serve their constituents.

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Kiera Duffy as Bess, the heroine in the opera *Breaking the Waves* at Opera Philadelphia. Dominic M. Mercier/Courtesy of Opera Philadelphia

Recognition for Pew Arts & Heritage supported projects

- The Barnes Foundation has garnered extensive media coverage for the multifaceted *Person of the Crowd: The Contemporary Art of Flânerie*, which surveys works from over 50 international artists. The Associated Press noted how the exhibition is "taking art to the streets—and bringing the streets into the museum—as part of a major new exhibition that looks at engaging with public space and the urban experience."

- Opera Philadelphia continues to receive widespread recognition for its innovative commission of *Breaking the Waves* by Missy Mazzoli, which has been nominated for a 2017 International Opera Award. David Devan, Opera Philadelphia's general director and president, described the project in the *Philadelphia Inquirer* as "a catalytic moment in the company's history." With plans to tour the new opera nationally and internationally, the company has released a free, on-demand audio stream of *Breaking the Waves*.

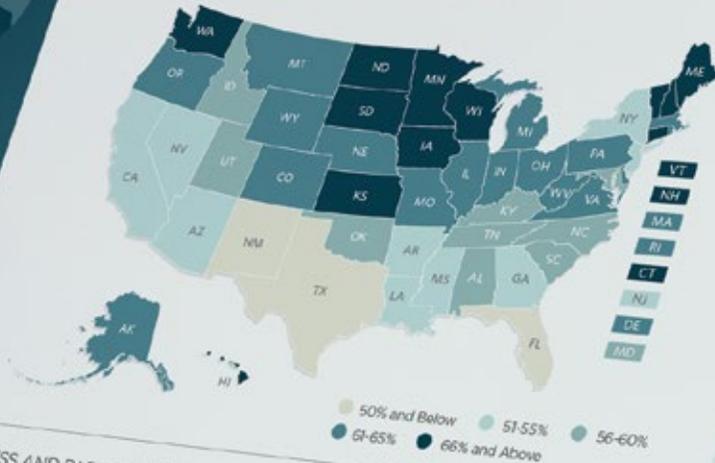
CHECK YOUR RETIREMENT SCORE—IF YOU HAVE ONE

Americans are growing older, fewer workers have traditional pensions, and concerns persist about the future of Social Security. That has left many people worrying about their future: A 2016 Employee Benefit Research Institute survey found that only 18 percent of workers are very confident they will have enough money for a comfortable retirement. Another 39 percent are not too or not confident at all.

Today, whether exploring plans online or on paper, most people save for retirement through employer-sponsored plans like 401(k)s. But a Pew analysis found that 42 percent

of full-time workers don't have access to an employer plan. Of those who do, most join the plan—but many others say it's hard to meet their current financial obligations and still save for retirement. Workers at smaller firms typically have less access than those at companies with 500 employees or more, as do workers in some industries such as leisure and hospitality and construction. Lower paid and less educated workers have less access than more affluent better educated ones, as do some ethnic groups—especially Hispanics, whose access to retirement plans is 25 percentage points below that for white non-Hispanic workers.

How does your retirement plan compare to those in other states?



DID YOU KNOW?
The top two reasons employers don't offer a retirement plan for their workers:

1. Too expensive
2. Administratively cumbersome

POLL
Employees: Why don't you take advantage of your employer's plan?

- Not eligible (Don't work enough hours annually or some other restriction)
- Using my salary for other things

TIP OF THE DAY
Saving a portion of your tax refund can be a big step toward meeting your savings goals.

ACCESS AND PARTICIPATION RATES ACROSS THE STATES



TAKE-UP RANGE ACROSS THE STATES

