THE MAGAZINE OF
THE HEINZ ENDOWMENTS

Issue 3 2015

THE AIR WE BREATHE: FOUR PHOTOGRAPHERS PROVIDE AN INTIMATE LOOK AT THE IMPACT OF AIR POLLUTION ON FAMILIES AND INDIVIDUALS IN THE PITTSBURGH REGION — AND THE SCENES ARE TROUBLING.

ISSUE 3 2015

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Domestic violence should not happen to anyone—anytime, anywhere. Organizations across the Pittsburgh region are uniting around efforts to support safe havens for victims of abuse and to promote initiatives to prevent the violence from happening.

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The Heinz Endowments was formed from the Howard Heinz Endowment, established in 1941, and the Vira I. Heinz Endowment, established in 1986. It is the product of a deep family commitment to community and the common good that began with H.J. Heinz, and that continues to this day.

The Endowments is based in Pittsburgh, where we use our region as a laboratory for the development of solutions to challenges that are national in scope. Although the majority of our giving is concentrated within southwestern Pennsylvania, we work wherever necessary, including statewide and nationally, to fulfill our mission.

That mission is to help our region thrive as a whole community—economically, ecologically, educationally and culturally—while advancing the state of knowledge and practice in the fields in which we work. Our fields of emphasis include philanthropy in general and the disciplines represented by our five grantmaking programs: Arts & Culture; Children, Youth & Families; Community & Economic Development; Education; and Environment.

In life, Howard Heinz and Vira I. Heinz set high expectations for their philanthropy. Today, the Endowments is committed to doing the same. Our charge is to be diligent, thoughtful and creative in continually working to set new standards of philanthropic excellence. Recognizing that none of our work would be possible without a sound financial base, we also are committed to preserving and enhancing the Endowments' assets through prudent investment management.

Next stage This edition of h magazine features significant enhancements that strengthen our story-telling focus while refining the vibrancy and engagement of the publication's overall content and design.

These changes represent the first major refresh for The Heinz Endowments' flagship publication since it was launched 14 years ago. The magazine's dimensions have increased slightly, and it will consistently feature an increased number of stories, mostly of a shorter length, combined with more creative use of graphic materials, including larger and bolder photographs and illustrations.

We've updated the design of h to enhance its appeal to its diverse audiences while remaining faithful to showcasing engaging and compelling stories about the Endowments' initiatives, grantmaking support and focus on critical issues in our community.

Our magazine's appearance is changing, but our commitment to quality storytelling is not.

h magazine is a publication of The Heinz Endowments. At the Endowments, we are committed to promoting learning in philanthropy and in the specific fields represented by our grantmaking programs. As an expression of that commitment, this publication is intended to share information about significant lessons and insights we are deriving from our work.

Editorial team Linda Braund, John Ellis, Donna Evans Sebastian, Carmen Lee, Grant Oliphant, Megha Satyanarayana, Courtney Tolmer. Design: Landesberg Design

About the cover In too many western Pennsylvania communities, scenes that should portray the carefree joys of childhood are marred by pollution from nearby industry. The cover photo by photographer Lynn Johnson of children in Cheswick is part of "In the Air: Visualizing what we breathe," a photography project funded by The Heinz Endowments and on display at the Pittsburgh Filmmakers' gallery. It's one of the many images that reveal how the air we breathe in this region is often not good for us.

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FIXING OUR HEROES' WELCOME

NO ONE SAID THAT COMING HOME WOULD BE EASY FOR VETERANS, BUT TOO OFTEN ORGANIZATIONS THAT TRY TO HELP END UP MAKING THE TRANSITION MORE COMPLICATED. A NEW PUBLIC–PRIVATE NETWORK IS PROVIDING VETERANS WITH STREAMLINED ACCESS TO NEEDED SERVICES AND BETTER SUPPORT OF THEIR READJUSTMENT TO CIVILIAN LIFE. BY JEFFERY FRASER

Lynn Strezeski's job in the U.S. Army was to analyze intelligence. She is proficient in multiple languages, including Russian. She spent most of her active duty in Texas, attached to a National Security Agency branch investigating transnational crime and narcotics.

It took her nine months to find a job when she returned to the Pittsburgh region as a civilian.

Even then, Ms. Strezeski settled for an entry-level position doing basic office work for wages less than what she would receive had she collected unemployment benefits. In the military, she knew where to turn for advice and support for any issue she confronted. Once home in Natrona Heights, northeast of Pittsburgh, she was on her own. And her search for a job was a struggle.

She found a maze of employment and veteran services websites, but little of the guidance and job leads she sought. She applied for more than 100 public- and private-sector positions, by her estimate, but managed to get only 10 interviews. The employment programs she approached arranged none of them.

"I was looking for anything, just to get a paycheck. I didn't want to take unemployment," said Ms. Strezeski. "I went from having people trust me enough to put life and death decisions in my hands to people not even trusting me to type up a document."

Jeff Fraser is a Pittsburgh-based freelance writer and frequent contributor to h. In this year's Issue 2, he produced a special, four-part report for the magazine on p4 Pittsburgh, an urban revitalization initiative that was launched at an international summit co-hosted by The Heinz Endowments in April.

Returning military service members, other veterans and their families can use PAServes to connect to the resources of local nonprofits. So far, more than 25 organizations are part of the single-point-of-entry support network, including service providers, universities and the U.S. Department of Veterans Affairs.

PAServes can be accessed in person, by phone and online. Veterans enrolled in the network are paired with trained staff who guide them to resources and follow their progress.

She is not alone. Perhaps the steepest challenge faced by returning service members, veterans and their families nationwide is navigating the complex, fragmented systems of care and resources they find back home. In western Pennsylvania, it's an issue that a new public–private support network, PAServes, was created to address.

Launched in October, PAServes is a coordinated, single-point-of-entry support network for returning service members, other veterans and their families that connects them to the resources of more than 25 local nonprofits, including service providers, universities in the Pittsburgh region, and the U.S. Department of Veterans Affairs. The Heinz Endowments awarded the Institute for Veterans and Military Families at Syracuse University a grant of $300,000 to help establish the network, which is based on a model recently implemented in New York City and North Carolina. With support from other funders, PAServes has received a total of $800,000 to cover its costs for two years.

In western Pennsylvania, Pittsburgh Mercy Health System administers the program, which has started an initial service area consisting of Allegheny, Westmoreland and Butler counties. Veterans are able to access PAServes in person, by phone and online. Once enrolled, they are paired with staff specifically trained in working with veterans who guide them to the resources they need and follow their progress.

The network is coordinated through a technology platform linking participating nonprofits that, collectively, offer services ranging from health care to housing, legal and employment assistance. Shared data includes background information on veterans seeking assistance, such as skills and military experience, as well as profiles of the network nonprofits. It's anticipated that access to such data will improve the process of matching resources to the needs of veterans, many of whom tend to ask for help with resolving multiple issues.

The system also documents actions taken to support the veterans and the outcomes. At the same time, the privacy of each individual participating in the program is protected, which includes compliance with the Health Insurance Portability and Accountability Act (HIPAA).

"We believe it will fundamentally change the way we serve veterans in the community," said Megan Andros, an Endowments Community & Economic

"THERE HAS BEEN A SYSTEMIC PROBLEM

AND THE RESOURCES—ALTHOUGH MANY—HAVEN'T BEEN REACHING THE PEOPLE OR HAVEN'T BEEN MEETING THEIR NEEDS."

Megan Andros, Community & Economic Development program officer, The Heinz Endowments

Development program officer and Iraq War veteran whose focus is addressing issues faced by veterans in the region. "There has been a systemic problem, and the resources—although many—haven't been reaching the people or haven't been meeting their needs. This is a new way of doing business."

The veteran population in the 10 western Pennsylvania counties is an estimated 235,000 men and women, according to a recent study by the Center for a New American Security. About 50,000 of them are veterans of the conflicts in Iraq and Afghanistan. And each year, 5,800 more leave military service and return to western Pennsylvania to face the challenging transition to life as a civilian.

"You're housed by the military, paid by the military, and all of your benefits are provided by the military. You're surrounded with a support system to take care of you and your family. That's the nature of the all-volunteer force today," explained retired Army Col. James McDonough, Jr., managing director of community engagement and innovation for the Institute for Veterans and Military Families. "Losing that when you transition from military service is a very stark reality going forward—and you're not an educated consumer in terms of what the next system looks like in your community. It's a new world."

The most common issues found among veterans who've sought help from the new networks in New York and North Carolina relate to the basic necessities of civilian life. The most common request is for help with getting a job, followed by housing and access to benefits.

In addition to smoothing their transition, the data gathered through the PAServes network are expected to shed light on veterans' experiences and needs and how they are being served—knowledge that remains incomplete and mostly anecdotal.

"I have housing providers coming to me and saying they are struggling with female veterans with children needing emergency housing," Ms. Andros said. "Is that once a week? Once a month? What does that problem look like? With this system, we are going to start to see what is happening in our communities."

Another characteristic of the PAServes model is an emphasis on building a continuum of quality care among providers who've developed the cultural competencies required to effectively serve returning service members and their families. This means, for example, that network providers complete an online training program to become certified in such skills and knowledge. It also means that the organizations are committed to collaborating with other service providers to ensure the best results for veterans in the Pittsburgh region.

Ms. Strezeski, who said she was desperate for guidance in finding a job, found little help with getting one that would be a good match, even among the employment programs she contacted. "It's not that they weren't trying," she explained. "It just seemed they didn't know how to help."

It was her own persistence in improving her job status that eventually took her from an entry-level position at the VA to a property manager position at the General Services Administration in Pittsburgh that was a better fit for her abilities.

Sustaining the new support network designed to help other veterans returning from the military avoid such bumps in the road will depend on raising public-sector dollars after two years. In New York, for example, discussions with city officials over funding NYCServes in the future are already underway.

"Our philosophy is to raise the capital to seed innovation," Mr. McDonough said. "We believe the private sector's capital will demonstrate a sufficient value proposition for the public sector to pick up the responsibility of running these networks ad infinitum." h

REMEMBERING Elsie

When Elsie Hillman died on Aug. 4 at the age of 89, numerous people from around the country recounted examples of her generosity, joy and sincere concern for others. Anecdotes about the Pittsburgh philanthropist and political activist were touching, amusing and inspiring.

Along with her husband, industrialist Henry Hillman, Mrs. Hillman supported causes ranging from cancer research to the arts, education, and community improvement initiatives large and small. A former chairwoman of the Pennsylvania GOP and a member of the Republican National Committee, Mrs. Hillman energetically participated in the campaigns of many of her party's local, state and national candidates, including the late Sen. John Heinz. A number of local Democratic leaders also were among her friends.

It seemed fitting that most of the published tributes to Mrs. Hillman were accompanied by photographs showing her with people of different ages and backgrounds, often laughing and always fully engaged with those around her. But some portraits, like this one, revealed less-familiar aspects of the woman known by so many.

Elsie Hillman once described her younger self as "high-spirited." That never changed, and Pittsburgh loved her for it.

In a tribute, Endowments President Grant Oliphant said: "Pittsburgh has lost one of its true giants. Elsie Hillman defined the very essence of what it means to be a great civic leader in Pittsburgh. Generous, caring and unfailingly kind, she specialized and delighted in helping people find common ground on issues that really mattered.

"She gave so much of herself in everything she did—and with such personal warmth and joy—that it is difficult to imagine Pittsburgh without her. We are deeply saddened by her passing, but so very grateful for the life she lived, for the impact she has made on this community, and for the model of engaged leadership that was her greatest gift of all." **h**

"Generous, caring and unfailingly kind, [Elsie] specialized and delighted in helping people find common ground on issues that really mattered."

Grant Oliphant, president, The Heinz Endowments

WE SAY NO MORE

INNOVATIVE CAMPAIGNS AND TECHNOLOGIES ARE INFUSING NEW URGENCY INTO DOMESTIC VIOLENCE PREVENTION IN THE PITTSBURGH REGION. AS PARTNER ABUSE CONTINUES TO BE A PROBLEM ACROSS THE COUNTRY, LOCAL PHILANTHROPIES ARE CALLING ON MORE COMMUNITY LEADERS — AND MORE MEN — TO PUSH FOR AN END TO THE BRUTALITY.
BY CHRISTINE H. O'TOOLE

The 19-year-old East Hills mother knew her former boyfriend wanted her dead…

He was already awaiting trial for assaulting her last year…

She had sought and received a protection from abuse order…

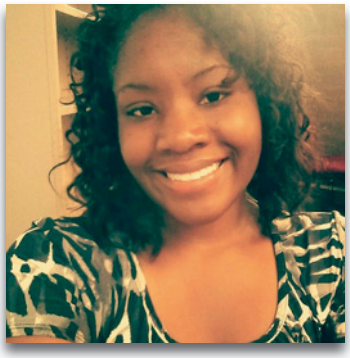
Her infant was safe in foster care…

But on May 7, he broke into the home where she was visiting her grandmother…

He fatally stabbed Tionna…

Then he beat her 72-year-old grandmother to death.

TIONNA BANKS DID THE RIGHT THINGS TO PROTECT HER LIFE. BUT THEY JUST WEREN'T ENOUGH.



Tionna Banks in 2013

Perhaps the saddest aspect of this family tragedy is how commonplace it is. Every day across the country, three or more women are killed by their partner. More than one in three have experienced rape, physical violence or stalking by an intimate partner. Last year, 47,000 individuals in Allegheny County alone were victimized by their partners.

Now, southwestern Pennsylvania is saying no more.

The past year has marked an inflection point for domestic violence prevention efforts in the Pittsburgh region. Local foundations — including The Heinz Endowments, which has a long history of supporting such programs — have stepped up funding for promising initiatives and urgently needed facilities. New mobile technologies are helping individuals evaluate their personal safety and connect to emergency help. And awareness campaigns are targeting and enlisting men to point out their responsibility to get involved.

"For years we have been asking people to think about how the stigma has been attached to the victim," said Shirl Regan, president and CEO of the Women's Center & Shelter of Greater Pittsburgh. "The question needs to be, 'Why do we allow him to get away with it?' "

Including men in the conversation is a tactical shift in the battle. Last year, the FISA Foundation and the Endowments joined 20 service agencies to create Southwestern Pennsylvania Says No More. Endowments President Grant Oliphant has been a vocal leader of the campaign, which created a Father's Day pledge initiative that urged men to end gender violence. In an op-ed published last year on the day celebrating fathers, Mr. Oliphant explained his commitment to the cause.

"Men's behavior toward women is not a women's issue, it's a men's issue," he wrote in the Pittsburgh Post-Gazette. "Who teaches (or fails to teach) young men what it means to be a man? As fathers, most of us would do anything to protect our families. It is time that we stood together as allies to protect not only our daughters but all women against gender violence."

"Since our founding in 1996, we've always had a focus on domestic abuse. What's new is the shift to prevention," said Kristy Trautmann, executive director of the FISA Foundation. "We decided our focus would be to use men as allies, talking more to boys about prevention, and [promoting] offender accountability."

The Pittsburgh-based philanthropy supports local causes for women, girls and individuals with disabilities. As government funding for violence prevention efforts dwindled over the past decade, FISA increased its investment. Since 2012, it has committed $1.3 million and technical assistance to the cause, bolstering three decades of support from the Endowments and other local philanthropies.

Among the other violence prevention initiatives in which the Endowments has invested is Standing Firm, a corporate effort that focuses on the impact of domestic abuse in the workplace. The program addresses partner violence on multiple fronts, including employee education and appropriate workplace polices and training. Nearly 300 local firms, from the Pittsburgh Pirates to FedEx Ground, are member employers, accessing resources for both victims and abusers.

Christine O'Toole is a Pittsburgh-based freelance writer and frequent h contributor. Her last story for the magazine, published in Issue 2, looked at the pay gap between women and men who work for nonprofit organizations.

Annie O'Neill

Pittsburgh's Women's Center & Shelter cannot substitute for a real home, but it's the small touches that help clients to feel more comfortable as well as secure. Children's art projects, like the paper cutouts above, help to decorate sparse bedrooms, below right. Toys, such as a tricycle, below left, and outdoor play space also are available.

"The Endowments' commitment to preventing domestic abuse really began with Vira Heinz," explained Marge Petruska, senior program director of the foundation's Children, Youth & Families Program. "Among the interests expressed in her will were that her endowment should fund 'research into the causes of ignorance, poverty, crime and violence, the prevention of these evils, and the amelioration of conditions resulting therefrom.' "

Ms. Petruska added that the Endowments' most recent grant of $1 million to the Women's Center & Shelter honors that legacy.

Founded in 1974 as one of the country's first refuges for battered women, the center's current facility is overextended, exceeding its 32-bed capacity each day. The Endowments grant will support an expansion to 47 beds, more communal space, indoor and outdoor play areas for children in the shelter, and a therapeutic garden. Even a refuge for beloved pets is part of the renovation. So are increased security measures because the center is unable to maintain its confidential location now that anyone with Internet access can pinpoint where it is in seconds.

The Women's Center also has received ongoing Endowments support for prevention efforts that target abusers as well as victims.

"We can never have enough shelters or programs. The need is too great," said Carmen Anderson, the Endowments' senior program officer for Children, Youth & Families. "We can't place all responsibility on women for their own safety — they're not hurting themselves. So, we must change focus, take advantage of this window of opportunity and engage the broader community."

This has meant creating programs that reach beyond adults to teenagers.

COACHING ABUSE PREVENTION

The idea of involving sports coaches in abuse prevention seems obvious. Teaching respect and self-control, they can powerfully influence young lives. They also might prevent abuse among teens. In a national 2014 survey by the University of Chicago, more than 60 percent of teen respondents said they had experienced physical, sexual or psychological abuse in their dating relationships.

Elizabeth Miller helped create a program for youth coaches to discuss respect for women with their players. Now chief of the Division of Adolescent and Young Adult Medicine at Children's Hospital of Pittsburgh of UPMC and professor of pediatrics at the University of Pittsburgh School of Medicine, she received funding from the Centers for Disease Control and tracked the resulting changes in behaviors and attitudes among 2,000 male athletes at 16 California high schools.

"One year later, we found both a reduction in perpetration of abusive acts and in negative bystander behavior," said Dr. Miller, adding that the most striking result was a significant increase in positive bystander behavior as boys intervened to correct their peers' behavior or talk. "Among the boys in comparison schools who didn't get the program, abuse increased. That indicates that the program is doing primary prevention. Even with a really light touch, we are making a difference."

When the FISA Foundation's Trautmann heard Dr. Miller present her findings at a 2012 conference, she recognized a strategy with real promise for southwestern Pennsylvania's sports-loving culture.

"It was stunning to hear that something worked in this field. Now we are supporting implementation in this region," Ms. Trautmann said. Eighteen regional high schools now participate in the program, and the Pirates recently invited dozens of youth coaches to learn about the program at a luncheon at PNC Park. Fifty registered to pursue the training. Middle schools, colleges and YMCAs across the region are joining the effort.

"Men are eager to do something," Ms. Trautmann added. "They helped us start to think differently about strategies. And then Ray Rice happened."

> "WE CAN NEVER HAVE ENOUGH SHELTERS OR PROGRAMS. THE NEED IS TOO GREAT."
>
> **Carmen Anderson**
> Children, Youth & Families senior program officer, The Heinz Endowments

VOICES:

"IT'S EVERYONE'S RESPONSIBILITY. I DON'T THINK WE SHOULD POINT FINGERS. THE MESSAGE OF AWARENESS SHOULD BE OUT THERE, AND THE REACTION SHOULD BE CONCERN AND CARE… WE OUGHT TO BE UNITED AS A COMMUNITY, AS A WHOLE."

Amber
domestic abuse survivor

"MEN ARE EAGER TO DO SOMETHING. THEY HELPED US START TO THINK DIFFERENTLY ABOUT STRATEGIES. AND THEN RAY RICE HAPPENED."

Kristy Trautmann
executive director, FISA Foundation

Annie O'Neill

"FOR YEARS WE HAVE BEEN ASKING PEOPLE TO THINK ABOUT HOW THE STIGMA HAS BEEN ATTACHED TO THE VICTIM. THE QUESTION NEEDS TO BE, 'WHY DO WE ALLOW HIM TO GET AWAY WITH IT?'"

Shirl Regan
president and CEO, Women's Center & Shelter of Greater Pittsburgh

An elevator security camera captured footage of Mr. Rice, a Baltimore Ravens running back, as he assaulted his then-fiancée and dragged her unconscious body into a parking garage. When the video went viral in the spring of 2014, it ignited a firestorm of outrage.

"It was stunning how many men joined women in condemning [Rice's actions]," Ms. Trautmann said. "It felt like a huge opportunity for us to capitalize on the fact that so many more people are talking about this."

WHEN MAKING THE RIGHT MOVES WORKS

One former victim welcomes the public conversation.

Amber was a young mother of three when her abusive husband, then a Pittsburgh police officer, held a gun to her head as she cradled her infant son. "He was very mean," she said simply. She fled with her children to the Women's Center & Shelter, living there and enrolling in programs that helped her recover her safety and sense of self-worth.

"It helped me tremendously," she recalled. "I thought abuse was normal. In various communities, it's the norm. People don't think anything is wrong. They grew up with it. They think, 'This is what I have to go through to be loved.' "

Through the center's programs, she learned about the warning signs of abuse. Legal advocates accompanied her to numerous court appearances. Eventually, she completed her education, earning undergraduate and master's degrees.

"I feel safe now," Amber said. "It's been some years and it's been quiet. He's moved on, I've moved on." She also has created public service announcements about abuse, and volunteers with the Women's Center on its awareness efforts.

"It's everyone's responsibility," she insisted. "I don't think we should point fingers. The message of awareness should be out there, and the reaction should be concern and care. That reaction is not out there — we haven't gotten there yet. We ought to be united as a community, as a whole."

She added that same-sex relationships can encounter the same power struggles. "The least dominant person gives the most, and will tolerate more abuse."

And Amber still believes that people can change. She said she is proof.

"I'm living, loving and enjoying life. I'm okay. My tears are not tears of sadness. They're tears of joy. I survived. My children survived. So many people who are abused do not." **h**

MOBILE WARNINGS

Gus Philippas, courtesy of the Joyful Heart Foundation

Pittsburgh Steeler William Gay lost his mother to domestic violence when he was seven years old. Since 2009, he has been a spokesman and advocate for the work of the Women's Center & Shelter of Greater Pittsburgh, including one of its newest endeavors: a mobile app that allows those in danger of abuse to determine their level of danger and immediately call the local domestic violence hotline.

Newton Consulting, a Pittsburgh technology firm, developed the free app based on research done at Johns Hopkins University. The app compiles resources from across the country, and since its debut last December, it has demonstrated its potential to save lives.

Answers to 10 yes/no questions, beginning with "Has your partner physically abused you and has the violence increased in severity in the past year?" allow the app to determine the user's level of danger. The app also can call 911 directly. As of early September, the app had been downloaded to 1,100 devices nationwide. In two cases, it has been used to call 911, and it has connected 54 users to local women's shelters.

Another mobile tool, RUSafe, extends the center's work with a lethality assessment program designed to help Pittsburgh police when answering domestic abuse calls. Also delivered on mobile devices, its algorithm allows officers to determine whether victims are in immediate danger, and allows a victim to use the officer's phone to call a local hotline.

Both the police force and the Women's Center log information on incidents into databases. The Pennsylvania Coalition Against Domestic Violence has commended the program.

William Gay, a cornerback with the Pittsburgh Steelers who lost his mother to partner violence, is active in anti-domestic violence initiatives such as the Joyful Heart Foundation's "No More" campaign and various programs of the Women's Center & Shelter.

VOLUME
TONE
TONE

IN SIGHT AND SOUND

SYMPHONY ORCHESTRAS ARE STRUGGLING AS CONCERT ATTENDANCE ACROSS THE NATION DECLINES — BUT THEY AREN'T GIVING UP. THE PITTSBURGH SYMPHONY ORCHESTRA IS REACHING OUT TO NEW AUDIENCES BY OFFERING CONCERTS WITH MORE CONTEMPORARY FLAVOR, IN MORE UNCONVENTIONAL VENUES. BY JEFFERY FRASER

Melia Peters Tourangeau left Utah for Heinz Hall this summer to become the Pittsburgh Symphony Orchestra's new president and CEO. She inherited an orchestra that's considered one of the world's finest but, like others across America, has a shrinking audience at a time of demographic upheaval and fierce competition for the attention of a public inundated with entertainment choices.

The share of the nation's population that attends classical music concerts has been slipping for decades. The Pittsburgh Post-Gazette reported in March that only 57 percent of the seats for the city symphony's signature classical music series were filled by paying customers last year. As such sobering numbers suggest, an industry that cherishes tradition now faces an urgent need to change and adapt.

The good news is that nontraditional approaches to capturing a broader audience are showing promise in experiments across the country, including in Pittsburgh. And then, there's the product itself.

"Hearing the powerful, visceral sound of the Pittsburgh Symphony is an experience that every resident of the city and region should have," Ms. Tourangeau said.

The symphony's music is becoming more available through new creative opportunities for people to listen outside of its Heinz Hall home.

On a warm September afternoon, five musicians from the symphony's brass section serenaded visitors to Downtown's Market Square. The selections ranged from Giovanni Gabrieli's Canzon per sonare No. 2 to the "Pink Panther Theme" by American pop composer and West Aliquippa native Henry Mancini. Some in the lunch-hour crowd examined the kale, corn and tomatoes on sale at the weekly farmer's market. Others gathered around the small ensemble.

James Nova took the microphone to describe his journey to the Pittsburgh Symphony, where he has been a trombonist for eight years. It began with a crime, of all things. As a young freelance musician, he had finished a winter concert with the New Haven Symphony in his home state of Connecticut and discovered that his car — which he claimed was worth less than his horn — had been broken into. On the drive home, shivering against the cold blowing through the shattered window, he discovered "this amazing orchestra performance" on the radio.

"I had to pull over to focus all of my attention on this concert," he recalled. "When it got to the final chords, I was blown away."

It was the Pittsburgh Symphony performing Prokofiev's Romeo and Juliet. Mr. Nova said he told himself, "I want to be in that orchestra." Years later, while with the Utah Symphony Orchestra, he heard of an opening in the Pittsburgh Symphony.

"I went after it like a military operation. And here I am," he told the Market Square audience to hearty applause.

The outdoor "Music Squared" concert was part of the symphony's Neighborhood Week, which dispatched musicians to nearby communities to share their stories and art in one of several summertime experiments to explore new ways to reach new audiences — a trend that's increasingly being embraced by orchestras nationwide.

A National Endowment for the Arts study reports that the classical music audience contracted by 13 percent from 2002 to 2008, attendance among college-educated adults dropped 39 percent, and nearly two-thirds of those who attend live performances are baby boomers or

Jeff Fraser is a Pittsburgh-based freelance writer and frequent contributor to h. His other story in this issue is about the PAServes support network for veterans.

older. Although a healthy 18 percent of Americans listen to classical music, most listen to recorded performances, particularly those found online, which are quickly becoming their top choice.

Local studies suggest that Pittsburgh is not an exception to such trends and that many in the region feel that classical music performances, with all of their rituals, are not for them.

The research also points to opportunities, such as offering concerts in non-traditional locations and in different formats, that provide more varied programming to pique the interest of those unfamiliar with the classics, and loosening the formalities of a performance, including ways for the audience to interact with the musicians.

In Pittsburgh, the symphony finds itself having to address the shifting landscape at a time of major transition within the company. Its new president and CEO arrived in August. Devin B. McGranahan, a director of the international consulting firm McKinsey & Co., became chairman of the symphony's board of trustees in September. And the finishing touches are being applied to a new strategic plan due within six months. All have their work cut out for them.

Michael Sahaida

Melia Peters Tourangeau left her position as head of the Utah Symphony | Utah Opera to become president and CEO of the Pittsburgh Symphony Orchestra in August.

"Orchestras are challenged to retain and continue to be responsive to their core audience on one hand and to cultivate a new one. That often involves rethinking what the nature of the concert experience is," said Jesse Rosen, president and CEO of the League of American Orchestras.

Few other performing arts bear the weight of tradition more than orchestras.

"No one is saying the orchestra needs to leave its traditional repertoire," said Janet Sarbaugh, senior director of the Endowments' Arts & Culture Program. "PSO's new leadership is offering inspiring and encouraging visions of how the orchestra will combine its artistic excellence with increasing community relevance going forward."

Nationally, experiments have included orchestras offering more affordable tickets and membership plans more flexible than conventional subscriptions. Even traditional concert hall design is being challenged. At Miami's New World Center, glass walls expose symphony rehearsals to the outside, and select live concerts inside are projected onto an outside wall for audiences who gather on the lawn.

At Heinz Hall, the Pittsburgh Symphony is trying out different programming based on the strategic plan. With catchy monikers like Fuse@PSO, the popular events have exceeded financial expectations, earning revenues 20 percent greater than projected.

"Seeing a performance live is what's meaningful," says Ms. Tourangeau. "Introducing that value proposition and getting people's attention in this age of media is probably the biggest challenge for us. But if we can get them into the hall, make them feel welcome and engaged, we will continue to see audiences who enjoy what we do. I wouldn't be in this business if I didn't believe that." **h**

MUSIC N'AT

The Neighborhood Week series that brought the symphony brass ensemble's "Music Squared" concert to Market Square in Downtown Pittsburgh sent an ensemble to perform at Wigle Whiskey Barrelhouse & Whiskey Garden, below, on the city's North Side. The latter was part of "Play N'at," a series of happy hour chamber music concerts that took place in different neighborhoods and paid homage to the region's unique dialect.

Among the other performances with creative themes was "Brass N'at," an outdoor concert in the Oakland neighborhood's Schenley Plaza that featured members of the symphony's brass and percussion sections along with community brass musicians. The "Classical Standards" concert at the Manchester Craftmen's Guild, a popular North Side venue for jazz performances, included MCG jazz artists as well as string and woodwind symphony musicians. In the Hill District, the "Sounds of Summer" concert provided an opportunity for student poets from the Life Stages in Pages creative writing program to present their work.

Photos courtesy of the Pittsburgh Symphony Orchestra

FUSE@PSO

Another new approach to Pittsburgh Symphony performances this year has included blending classical music with pop culture. Steve Hackman, right, a conductor, composer and producer, was named creative director this year of Fuse@PSO, a series he developed that offers mash-ups of classical masterpieces and popular music. The concerts integrate such disparate works as Brahms' First Symphony and the music of British rock band Radiohead as well as Beethoven's "Eroica" Symphony and songs from Coldplay.

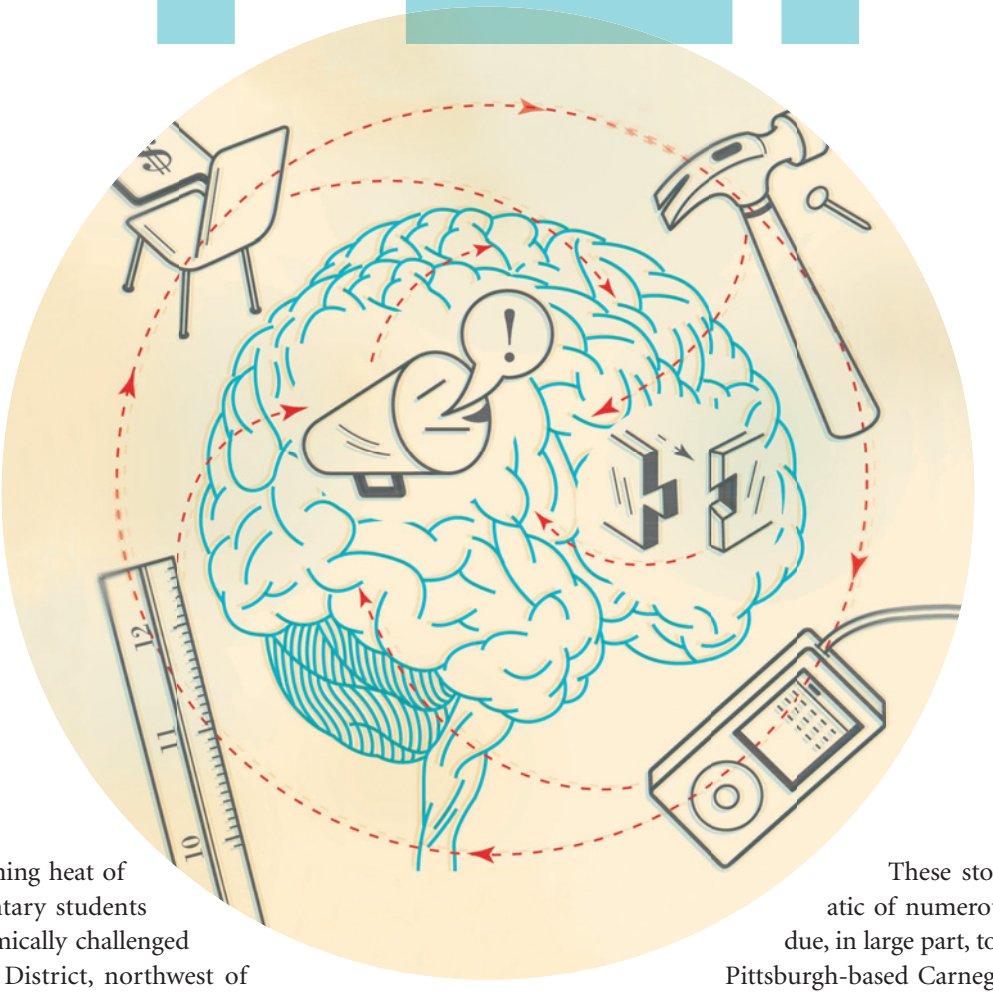
Live performances with popular artists such as Diana Krall and Smokey Robinson drew large audiences to the symphony's Icon Series. Grammy Award–winner Arnie Roth was guest conductor for the symphony's "Final Fantasy" performance, which featured music from the popular video game and opportunities to meet Japanese video game composer Nobuo Uematsu.

CLASSICAL BBQ

To further capture the mood of summer, the symphony introduced Classical BBQ to Heinz Hall. For each of the two barbeque events, a $35 ticket covered a pre-concert courtyard reception with hors d'oeuvres such as beef and corn cake sliders, watermelon salad and mini apple strudel. An 80-minute concert inside the hall followed, and wrapping up the evening was a post-concert jazz performance that included symphony members. Concert-goers also had the chance to meet, greet and take selfies with symphony musicians, such as bassist Micah Howard, left center.

ASSESSING

CARNEGIE SCIENCE CENTER'S NEW EVALUATION TOOLS AND EDUCATION MATERIALS ARE HELPING SCHOOLS DETERMINE HOW WELL THEY ARE TEACHING STEM SUBJECTS TO STUDENTS AND HOW BEST TO COLLABORATE WITH EACH OTHER TO IMPROVE THE PROGRAMS. BY TOM IMERITO



In the early morning heat of summer, elementary students from the economically challenged Sto-Rox School District, northwest of Pittsburgh, rode a bus about 15 miles south to a week-long science, technology, engineering and math (STEM) education camp in affluent Upper St. Clair. Kids from both communities learned the value of hands-on, inquiry-based learning, without regard for district boundaries or demographic differences.

In other parts of southwestern Pennsylvania, South Fayette schools are partnering with those in Pittsburgh and Fort Cherry for teacher training sessions and collaborative grant programs so that all three districts can enhance their STEM offerings. And middle school students in the Blackhawk School District will learn about clean water, public sanitation and world affairs this school year by forging links with a village in a developing country, chosen by the students themselves.

These stories are emblematic of numerous others that are due, in large part, to a program of the Pittsburgh-based Carnegie Science Center called the Carnegie STEM Excellence Pathway. Funded entirely by grants from The Heinz Endowments, the program seeks to improve STEM education by setting benchmarks, providing educational materials, and sharing STEM resources between schools and districts, with special attention to under-resourced schools.

Since its launch last fall, the initiative has touched the lives of more than two million students in 12 states, from as far away as Florida and Oklahoma. The program's positive momentum was further evidenced in March of this year when Pathway representatives were asked to testify in Washington, D.C., before a bi-partisan congressional committee about its achievements.

The idea for the Carnegie STEM Excellence Pathway evolved several years ago when faculty and administrators from schools that

Tom Imerito is a Pittsburgh-based freelance writer. This is his first story for h.

regularly use the Carnegie Science Center's resources began to inquire about the effectiveness of their own STEM programs. Alana Kulesa, the center's director of Strategic Education Initiatives, remembers questions ranging from, "Just what is STEM?" to "How can we know if our STEM program is up to par?" As a result of those discussions, the Endowments awarded the center a $150,000 planning grant in 2013 to assemble a STEM education advisory committee.

"The initial grant funded the development of a road map that defined what high-quality STEM education looked like and how to achieve it," Ms. Kulesa explained. The advisory committee also determined that its answer to STEM education should be easily available to the entire world—without cost.

> "IN ADDITION TO FINANCIAL BENEFITS, STEM COLLABORATIONS RESULT IN POSITIVE PEER RELATIONSHIPS BETWEEN STEM EDUCATORS AS WELL AS IMPROVED STUDENT PERFORMANCE AND SOCIAL INCLUSIVENESS ACROSS SCHOOL DISTRICT BOUNDARIES."
>
> **Bille Rondinelli**
> superintendent, South Fayette School District

The result of this initial effort was a web-based self-assessment instrument called the Carnegie STEM Excellence Pathway Rubric, which examines six areas of STEM competency: teacher qualifications, curriculum, instructional practices, demonstration of skills, family engagement and real-world connections. The assessment ranks competency on a five-step scale ranging from "pre-emerging," where no STEM activities are taking place, to "leading," where STEM principles are integrated into the curriculum through all grades, K–12.

"If a district finds that it ranks as pre-emerging, that's fine," Ms. Kulesa said. "Once a school has gone through an annual cycle, they go through the rubric again, evaluate their progress and set new goals. It's not about rank; it's all about making a commitment to improvement and improving continually."

In an effort to ensure equity among schools, the STEM Excellence Pathway strongly encourages inter-school and inter-district collaboration. Endowments Education Program Director Stanley Thompson said he was intrigued when the Carnegie Science Center approached the foundation with the idea for this type of STEM program because the Pittsburgh region has a number of outstanding school systems as well as a number of under-resourced districts.

"I wondered what would happen if we invited interested STEM educators from the under-resourced districts to work in collaboration with their peers from better-resourced districts to develop a regional STEM education program that we could eventually expand beyond Pittsburgh, conceivably to the entire country," he said.

Blackhawk Superintendent Melanie Kerber has worked in both financially challenged and well-funded school districts. "When you're doing everything you can to just pay the bills, a program like the Carnegie STEM Excellence Pathway may look great, but still be beyond the reach of a system's financial resources," she explained.

The collaboration among districts serves the interests of each participant, she said. "Well-served schools improve their success in obtaining grant monies by sharing their physical resources with an underserved district, while underserved districts improve their STEM offerings by expressing a willingness to partner with a more advanced STEM program."

Although the Pathway program tends to level economic disparities between districts, its effects reach far beyond money. "In addition to financial benefits, STEM collaborations result in positive peer relationships between STEM educators as well as improved student performance and social inclusiveness across school district boundaries," said South Fayette Superintendent Bille Rondinelli.

These interactions allow creative ideas to emerge, such as the Blackhawk School District's international STEM project. After middle school students vote to choose a sister village somewhere in the developing world, they will read the book "Long Walk to Water," an account of the struggles of two children in search of food and water in conflict-ridden South Sudan. During the year, teachers across the curriculum, from math to music, will choose water-related projects and lessons from a website called "H_2O for Life." Students will set a goal for funding a drinking water improvement project for their sister village.

The yearlong fundraising campaign will be capped off by a "water walk," in which students will carry water in jugs in emulation of their third-world peers. Parents, relatives, friends and neighbors will be asked to pledge money for the walk, thereby raising community awareness of the global drinking water problem as well as their community's role in answering it. The yearlong project is exemplary of inquiry-based learning across the curriculum.

As a result of the Carnegie STEM Excellence Pathway's achievements so far, the Carnegie Science Center is pursuing opportunities to train other science centers throughout the nation to become advocates for STEM education and facilitators in their communities. The Endowments has increased funding for the program's next stage by providing an implementation grant of almost $614,000.

And now that it's up and running, the Carnegie STEM Excellence Pathway appears to be on the fast track to success. **h**

Carter Redwood, a native of Pittsburgh's Hill District, feels exhilarated, buoyed by an acting career that was nurtured on the stages of his hometown and now has taken off, seemingly headed for high altitudes.

After receiving a bachelor of fine arts degree from Carnegie Mellon University last year — along with the School of Drama's John Arthur Kennedy Award for Acting — Mr. Redwood moved to New York City to launch his chosen profession in a reprise of the "Gertrude Stein SAINTS!" musical production that won him and cast members two awards at the New York International Fringe Festival in 2013. His artistic accomplishments this year include speaking roles on CBS television shows "The Good Wife" and "Madam Secretary."

But if the August Wilson Center for African American Culture calls with work, he said, he'll accept without hesitation. As a founding member of the center's Theatre Ensemble, he fondly remembers honing his acting skills there while a performing arts student at Pittsburgh CAPA high school just a few blocks away.

"The center played a major part for me [in] my arts education prior to entering training at Carnegie Mellon," said Mr. Redwood, 23, who also has done a voiceover for a national television commercial, starred in an independent feature film, and had a role in a recent North Carolina production about the legendary Tuskegee Airmen. "It's vital that the center be healthy and Downtown in the Cultural District."

His prospects for performing there may be better than ever, thanks to a new lease on life for the facility named in honor of the late Pulitzer Prize–winning playwright, who also was a Hill District native. Since a foundation-led coalition prevented its dissolution last year as a regional arts institution, the August Wilson Center has been encircled by supporters from across the community who are working diligently to build the leadership, programming approach and development strategy that they hope will lay the groundwork for a successful future.

"In some ways, the center never really had a chance to deliver on its original vision, which was that it would be a dynamic center of cultural life celebrating African American culture in Pittsburgh and nationally," explained Grant Oliphant, president of The Heinz Endowments, one of the foundation coalition members. "And because the center was saddled with really a high level of debt, then suffered some management issues and operated in one of the worst recessions on record, it never really had a chance to step up and deliver on that vision."

The $48 million center opened to great fanfare in spring 2009, but soon began to struggle. It went through bankruptcy, mortgage default, foreclosure by Dollar Bank, near redevelopment as a hotel, and sheriff's sale, where the bank bought it back in November 2014. Days later, the Endowments and the Pittsburgh and Richard King Mellon foundations — which together had bid earlier on the property — gained ownership of it for $8.49 million in a court-approved settlement with help from the city, the county and other supporters.

Mark Southers

"The center played a major part for me [in] my arts education prior to entering training at Carnegie Mellon. It's vital that the center be healthy and Downtown in the Cultural District."

Carter Redwood, New York-based actor and Pittsburgh native

LaMont Jones is a Pittsburgh-based freelance writer. This is his first story for h.

The August Wilson Center for African American Culture has been steadily regaining its organizational footing since philanthropic, civic and community leaders prevented financial crises from reducing it to a shadow of its original vision. Now, optimism is building that the center will flourish as a regional cultural institution. By LaMont Jones

Curtain rising

ABOVE, LEFT
As a college student, Carter Redwood had a leading role on the August Wilson Center stage in the 2011 production "UPRISE: Raising Black Men Project." He played the younger version of another Pittsburgh native, Bill Strickland, a MacArthur "Genius Grant" winner and head of a renowned arts and training center.

Kipp Madison

Lois Greenfield for PHILADANCO!

encore performance

As work began over the past year on the August Wilson Center's reorganization, several arts programs were scheduled to build enthusiasm and momentum for the center's comeback. They included, from left, a performance of Philadelphia's PHILADANCO! dance company; Jacob Rajan's one-man show "The Elephant Wrestler" that looked at the tensions between modern and ancient practices in present-day India; and the "Humanae / I AM AUGUST" outdoor photo exhibition, designed to promote the oneness of humanity by portraying individuals' "true colors."

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The Pittsburgh Cultural Trust currently operates the facility, which is once again moving toward fulfilling its mission to become a fully functioning, financially viable arts center that attracts visitors and audiences from near and far. In August, the transitional governing board's original three members — Mr. Oliphant, Maxwell King of The Pittsburgh Foundation and Scott Izzo of the Richard King Mellon Foundation — appointed businessmen Michael Polite and Richard Taylor to the board. The foundation leaders plan to name three more board members to replace themselves as they move off the board by the end of the year, and an executive or artistic director will be hired once the permanent board is in place.

"The symbolism of the August Wilson Center is extraordinarily important to this community," said Mr. Oliphant. "We believe in what it represents. And that idea is to celebrate not only the heritage we have in terms of African American culture, but also the very vibrant African American community we still have. I'm really excited for what the future holds."

Mr. King, The Pittsburgh Foundation's president and CEO, said efforts are aimed at building momentum as measured by center visitors. "If over the next 18 months we are able to see enough programming at the center with a lot of people coming to events, and there is a sense of excitement and energy about the art that is being presented, we will feel as if we have the right momentum," he explained. "Of course, long-term success and momentum will also mean that the center generates enough revenue to help pay the bills."

For now, the sleek 65,000-square-foot center is open only for scheduled events. The Trust is working to grow programming and has scheduled at least 30 events with another 60 proposals in various stages of consideration, according to Trust President and CEO J. Kevin McMahon. Programs have included the "Humanae / I AM AUGUST" photo exhibition on display through August 2016, an October performance of Philadelphia's PHILADANCO! dance company, and a Pittsburgh Playwrights Theatre Company co-presentation with the Trust of Mr. Wilson's play "The Piano Lesson" in November.

"I think it's great that the center was saved," said Pittsburgh Playwrights founder Mark Southers, who directed the play and once served as the August Wilson Center's artistic director of theater initiatives. But while he supports the aims of the revitalized center, he wants to see more homage to its award-winning namesake with a statue of Mr. Wilson in the lobby, a production of one the playwright's works every weekend, and a museum displaying Mr. Wilson's artifacts and memorabilia.

"Someone passionate about Wilson and the arts and from Pittsburgh needs to be there," Mr. Southers added, referring to the center director's office.

Mr. King noted, however, that achieving the right balance can be a tough proposition, given that "it is both the August Wilson Center and it is the African American Cultural Center.

"It is named for August Wilson, one of the greatest Pittsburgh artists, but it also serves as the center for the celebration of all African American culture. So, it must capture the spirit of Mr. Wilson and celebrate his legacy, but it also needs to have the breadth to capture the spirit of African American art here, both in historic legacy terms and in current terms."

Prospects are good for the vision to grow, said Janet Sarbaugh, senior director of the Endowments' Arts & Culture Program. She also believes that letting the center's new plans evolve slowly and organically will benefit everyone, and will "allow us to hear more community voices in designing what the new August Wilson Center will be."

Joshua Franzos

Programming for the center is being promoted on several fronts. In addition to Trust efforts, The Pittsburgh Foundation created a $300,000 pool to which 60 regional organizations can submit proposals for Afrocentric arts programs at the center in 2016.

Programming for the center is being promoted on several fronts. In addition to Trust efforts, The Pittsburgh Foundation created a $300,000 pool to which 60 regional organizations can submit proposals for Afrocentric arts programs at the center in 2016. Programming recommendations also will come from the fledgling AWC Renewal, Inc., led by Allegheny County Common Pleas Judge Joseph K. Williams III. That entity grew out of the August Wilson Center Recovery Committee, a group that came together under the leadership of Janera Solomon, executive director of the Kelly Strayhorn Theater in Pittsburgh's East Liberty neighborhood, to help preserve the center during its debt crisis.

"I'm optimistic," said Ms. Solomon. "Last year, we had no idea what was going to happen. There were so many anxious moments. There were many moments when I questioned whether there would be a successful outcome, but that didn't stop me from working toward it. We have so many resources available to us in Pittsburgh, and there were many people committed to seeing it through."

Like the foundation leaders, Ms. Solomon envisions the center becoming both a local jewel and a national treasure. She said she is committed to helping the center identify programming that not only attracts national artists, but that also develops local talent in their early career stages — the kind of artists she supports as head of the Kelly Strayhorn Theater.

The kind like Carter Redwood, who as a protégé of Mr. Southers came to love visiting and performing at the Downtown center.

"When things started going downhill, I was affected greatly because that's when I was involved in it," Mr. Redwood recalled. "I was disappointed that something so great could have such a hard time, and I fully support its comeback. Pittsburgh needs the August Wilson Center." **h**

"The air gets weird and stinky in the summer. You hear about how asthma rates are through the roof around here."

Judy McAuley, owner of Happy Baby Company, Bellevue

Judy McAuley sells Speck Sensors in her Happy Baby Company store and uses one in the shop as well. Happy Baby is near a coke works plant, so Ms. McAuley had no hesitation in having her store become the first brick-and-mortar business in the Pittsburgh region to sell the air quality monitors.

Kipp Madison

AIR measures

A portable air quality monitor developed at Carnegie Mellon University is growing in popularity locally. But the Speck Sensor also is attracting national and international attention, pushing demand higher. By Megha Satyanarayana

As Judy McAuley chats with customers at her baby supply store, a small white box on the counter flashes numbers on its digital display: 20, 19, 21. The customers at Happy Baby Company stop to look before paying for natural teething necklaces, cloth diapers and BPA-free baby bottles.

The box is an air quality monitor called the Speck Sensor, and it's telling Ms. McAuley that the air inside the store is relatively low in a specific and dangerous type of pollution. This is important to her because, like many businesses along Lincoln Avenue in Bellevue, a borough northwest of Pittsburgh, Happy Baby is next to the Shenango coke works.

"The air gets weird and stinky in the summer," said Ms. McAuley, who lives nearby. "You hear about how asthma rates are through the roof around here."

Southwestern Pennsylvania's air quality ranks among the worst in the nation, and 60 percent of Allegheny County's fine particle pollution comes from industrial sources. So, it was a no-brainer that Happy Baby should become the first brick-and-mortar business in the Pittsburgh area to sell Specks, Ms. McAuley said.

"Air quality is important to me," she explained. "Especially living where we do."

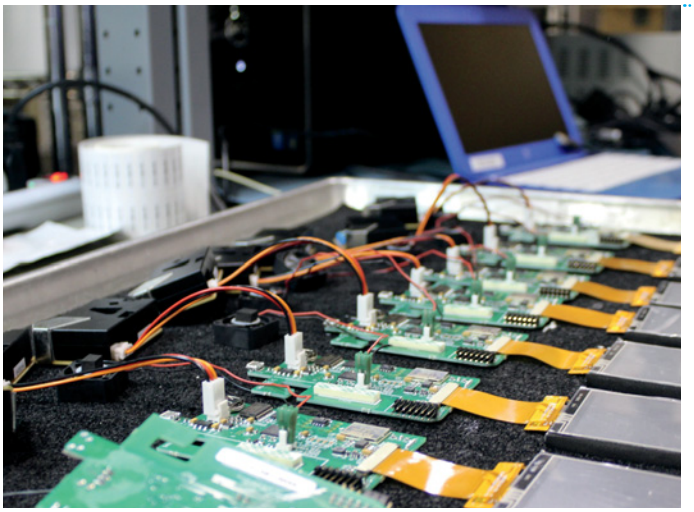
Speck Sensors are the work of Carnegie Mellon University robotics professor Illah Nourbakhsh and his team at CMU's CREATE Lab. After he talked with The Heinz Endowments in 2011 about using technology to empower people, the foundation granted Nourbakhsh about $200,000 to prototype and test the portable indoor air quality meter.

The goal was to help people visualize the invisible, said Dr. Nourbakhsh. "What surprised me was the degree to which people feel unempowered about air."

Interest in Speck Sensors has increased so rapidly that, since the prototype was created late last year, orders have come in not only from across the Pittsburgh region, but also from places as far away as Singapore. To meet current demand, 3,000 of the monitors are expected to be produced by year end.

The Specks measure fine particulate matter that is 2.5 microns or less ($PM_{2.5}$). These small particles, whether metallic, organic or a non-metal inorganic, enter the nose and get lodged in the lungs, making them hard to cough or sneeze out. From the lungs, $PM_{2.5}$ enters the bloodstream, where it has been linked to everything from autism to asthma, obesity, reproductive issues and even premature death.

Megha Satyanarayana is a Heinz Endowments communications officer.



Megha Satyanarayana

In the Speck Sensors' early development, two members of Carnegie Mellon University's CREATE Lab built them by hand. Today, the monitors are mass produced at EPD Electronics, left, a company northeast of Pittsburgh.

The monitor consists of a circuit board, fan and infrared sensor, among other parts. The fan creates a vacuum, drawing air past the infrared sensor. As particles pass the sensor and disrupt the beam, the chip captures each disruption, and converts those disruptions into readings that correspond roughly to the U.S. Environmental Protection Agency index for air quality. For many users, the Speck is their first glimpse at indoor air quality.

Users can sync their Specks with their computers to gather data throughout the day. The data is private, said CREATE Lab Project Director Beatrice Dias, and from it, people can start to see what in their environment may be impacting their air quality. For example, someone may be cooking without adequate ventilation when the meter spikes, she explained. Cars may be idling outside. Or, for Happy Baby, the coke works might be active.

Mobile apps also are available for Speck Sensors. In addition to helping track and visualize data, the app allows users to compare air quality across several different cities simultaneously.

But Specks have limitations. They measure $PM_{2.5}$, but not the entire range, so values are approximate. The sensors can't tell us what's causing high readings—maybe it's diesel exhaust from cars or increased black carbon in the air from nearby industry. And Specks only measure one kind of air pollution—indoor air could be rife with other contaminants.

For this reason, Specks are a snapshot of air quality; the data isn't enough to fight regulatory battles with polluters. At Happy Baby, Ms. McAuley said, the numbers stay pretty low when she has the shop door closed, meaning her indoor air quality is low in fine particulates, but the numbers jump up when the door stays open.

From prototype to mass production took a lot of teamwork. At first, two lab members built Specks by hand, one assembling circuit boards and another installing fans and the sensors, taking about a day to make a single monitor. When the CREATE Lab team had a prototype ready last year, about 70 were used in pilot testing. Word spread, said Dr. Dias, and soon, the lab was overwhelmed.

"We couldn't produce enough to meet the demand and the needs in the community," Dr. Dias noted.

Last spring, as demand for Specks outpaced the team's ability to put them together, Dr. Nourbakhsh spun the technology into a company called Airviz and contracted with a local firm, EPD Electronics, to manufacture the machines. Soon after, at the South By Southwest music, film and technology festival in Austin, Dr. Nourbakhsh introduced Airviz and the Speck to the masses.

Immediately, Infosys, a well-known Indian information technology company, announced a $2 million investment in Airviz. As orders stream in, the CREATE Lab team hopes to find other brick-and-mortar businesses to stock them. And in a nod to increasing interest in air quality, other labs at CMU are also developing sensors.

In the meantime, users can check out Specks at 14 Carnegie Library of Pittsburgh locations, Dr. Dias said. The monitors also are being used at the Propel Hazelwood charter school as a teaching tool and in shale gas areas to help residents monitor their air.

"People really care about the air," Dr. Nourbakhsh said. "We are not designing a tool that people don't need." **h**

out there

Specks are primarily for indoor use, but they also can measure outdoor air quality. Our magazine staff took one monitor to (or held it across from) various well-known local landmarks: The Doughboy World War I memorial; Roberto Clemente Bridge; PNC Park; Phipps Conservatory and Botanical Gardens; Phantom's Revenge steel roller coaster at Kennywood amusement park; and North Park Lake, a popular location in Pittsburgh's northern suburbs. The Speck recorded levels ranging from a moderate 25 to an elevated 81, with some readings affected by changes in vehicle traffic—or kayak paddling.

Photos by Megha Satyanarayana

Doughboy statue
Lawrenceville

Phantom's Revenge
West Mifflin
(from Kennywood Boulevard)

Clemente Bridge
Downtown/North Shore
(from Allegheny riverbank)

North Park Lake
Pittsburgh

PNC Park
North Shore
(from Clemente Bridge)

Phipps Conservatory
Oakland

BRIAN COHEN

The U.S. Environmental Protection Agency sued the Homer City Generating Station in 2011 because of its pollution emissions. The next year, the Pennsylvania Department of Environmental Protection approved plans to install a $750 million pollution-control system at the plant.

WHAT WE BREATHE

"In the Air: Visualizing what we breathe" is a photography exhibition that conveys a sense of foreboding. Each image tells a sobering story of the environmental, physical, social or economic impact of air pollution on people and places in western Pennsylvania. For this project, photographers Brian Cohen, Scott Goldsmith, Annie O'Neill and Lynn Johnson, who took this issue's cover photo, spent the past year talking to individuals and families and getting snapshots of their lives. A book designed by Brett Yasko, with essays by Reid Frazier, expands on and provides context for the visual work. "In the Air" was funded by The Heinz Endowments' Breathe Project, an initiative that brings together different groups to develop ways to clean up the region's air to improve the health of local families and the economy. The exhibition runs through Feb. 26 at the Pittsburgh Filmmakers gallery, and photographs are posted online at air.thedocumentaryworks.org.

SCOTT GOLDSMITH

At a trail derailment earlier this year in Uniontown, Pa., sand that had been used in the hydraulic fracturing process poured from a damaged railcar that was six feet from a nearby house. According to the environmental group Earthworks, "frac sand" has been linked to lung disease among workers at frac sand mining sites.

When people live with poor air quality, here's what their days can look like. From top left, clockwise: (a) Last year, about 300 supporters of the Environmental Protection Agency's regulations curbing power plant carbon emissions rallied in front of the August Wilson Center in Downtown Pittsburgh to counter a march organized by the United Mine Workers, who opposed the rules. (b) For residents living near the Shenango coke works, northwest of Pittsburgh, the combination of fog, smoke and air inversions contributes to bad air quality. (c) While it's difficult to pinpoint the cause of Linda Dever's chronic obstructive pulmonary disease (COPD), her respiratory symptoms increase on high ozone days. (d) Plumes of smoke from the Homer City coal-fired plant veil the sky near this home in Blairsville, Pa.

ANNIE O'NEILL

Theodore "Ted" Popovich's meditative pose belies his fierce concern about the air he breathes. The Ben Avon resident is co-founder of Allegheny County Clean Air Now (ACCAN), and one of his missions is to close the nearby Shenango coke works.

In the first photograph below, Rose Lanzo, left, a research coordinator at Children's Hospital of Pittsburgh of UPMC, travels in the Ronald McDonald Care Mobile to take medical care to patients like Alivia Thomas, who is receiving a refresher on how to use her inhaler and spacer. The next scene shows Malaya Kirkland also taking advantage of the Care Mobile to get a checkup for her asthma. Allegheny County has some of the highest asthma rates in Pennsylvania.

SOCIAL servant

FOR MORE THAN THREE DECADES, MARGE PETRUSKA GUIDED THE HEINZ ENDOWMENTS' HUMAN SERVICES EFFORTS, ALWAYS KEEPING CHILDREN AND FAMILIES AT THE FOREFRONT AND SUPPORTING PROGRAMS THAT IMPROVED LIVES LOCALLY AND ACROSS PENNSYLVANIA. SHE RETIRES AT THE END OF THIS YEAR, BUT THE IMPACT OF HER WORK THROUGH THE FOUNDATION WILL CONTINUE. BY CHRISTINE H. O'TOOLE

Margaret Petruska specializes in collaboration.

When the senior director of Children, Youth & Families for The Heinz Endowments retires at the end of December, local leaders will laud her steadfast commitment to programs that have transformed the Allegheny County Department of Human Services. National leaders will cite her role in creating strong public support for early childhood education. All of them agree: Her unique talent is starting conversations that result in programs that protect and nurture young children and their families.

"Marge is looking to learn all the time," said Marc Cherna, the county director of human services. "She's in her glory at [county-run] family support centers, speaking to consumers. That's pretty rare. A lot of folks in her position tend to think they have answers. Marge is not like that. She talks to people."

Over the past 32 years at the Endowments, Ms. Petruska has been a driver of huge community accomplishments. She helped drag Pennsylvania from the bottom to the top tier of states providing high-quality early childhood education. She focused attention on reducing infant mortality and led the Early Childhood Initiative, a bold 1994 effort to provide a $16 million quality early learning program in the region's poorest communities that spurred a $50 million national effort. She also backed family support centers that now operate in 26 neighborhoods and give families one-stop access to the county's social services programs.

When Ms. Petruska — known universally as "Marge" — joined the Endowments in 1984, foundation program officers rarely had experience within specific disciplines. She was in the vanguard of a new era: As the foundation's first director of what was initially called its Human Services Program, she had been on the field's front lines. Early in her career, she was a child therapist and a program director for autistic children. She also served in policy positions in state and county government.

Ms. Petruska's experiences helped her to realize the importance of working with parents in order to see improvements among children and to understand the role that government can play in creating change. The "neutrality" of foundation work later appealed to her as a way to convene effective action.

"Many of the Endowments' programs have served as models of how collaborative approaches can improve public policy goals," she said. "Our role all along the way has been supporting prevention programs, building the role that fathers play, understanding grandparents and their role in caring for their children and grandchildren. Many human service programs now encompass such views."

For example, her vision for "A Better Start," a preventive program to support mothers to deliver healthy babies, became a national model. She was an early adopter of applying landmark discoveries on brain development to grantmaking in early childhood learning. Michael Levine, director of the Joan Ganz Cooney Center at Sesame Workshop, an independent education research and innovation lab that evolved from the creation of "Sesame Street," calls Ms. Petruska "a giant" in the field, with a knack for finding strategies that could inspire a wide range of partners.

Christine O'Toole is a Pittsburgh-based freelance writer. Her other story in this issue is on stepped-up efforts in the Pittsburgh region to end domestic violence.

As Marge Petruska prepares to retire as head of The Heinz Endowments' Children, Youth & Families Program, retrospectives of her work have uncovered reminders of the breadth of her connections. One of her role models and partners in good deeds for children and families was the late Fred Rogers, acclaimed children's media personality and author of numerous books for children and parents.

A 20-year ideological partnership between local funders and the Department of Human Services that placed millions of dollars in resources in the hands of another visionary is part of her legacy. Through an innovative proposal to incubate Marc Cherna's county-run family support centers for the first two years, she stabilized a program with groundbreaking results. A two-year study of the centers by researchers at Chapin Hall, the University of Chicago's child welfare think tank, has just concluded. Preliminary results suggest positive outcomes for children in the neighborhoods where centers are located.

"We can now say, where there are family support centers, they prevent child abuse," Ms. Petruska noted. "That is an incredible outcome that we've never been able to prove before."

With a pool of $10 million from a dozen local foundations, including the Endowments, the county human services department also built a 21st-century architecture for information systems. Today, its data warehouse maintains nearly 530 million records for more than 950,000 clients in 28 program areas. The system is now acknowledged as one of the best in the country.

Several state and regional advocacy groups owe their genesis to Ms. Petruska. Pennsylvania Partnerships for Children, founded with Endowments and Pew grants in 1990, yielded a wealth of initiatives, such as the Child Health Insurance Program (CHIP), high-quality early learning centers, and protections from child abuse and neglect.

Pennsylvania's first state-funded pre-kindergarten program, approved by the legislature in 2004, drew on the Early Childhood Initiative that Ms. Petruska championed a decade earlier. Keystone STARS — standards, training and professional development, assistance, resources and supports — set quality operation requirements for early childhood providers while PA Pre-K Counts expanded eligibility. The percentage of 4-year-olds with proficient academic and social skills more than tripled, from 22 percent to 82 percent, in Pre-K Counts programs.

"Not only do you do the work of heroes, but you fit to a 'T' what the concept of a hero is," board member André Heinz told Ms. Petruska, speaking on behalf of the Heinz family during an October "inspirement" party in her honor. "You did this work with no expectation of recompense, recognition or accolades, and you did it in a way that delivered benefits on multiple levels. It's not only the community that has been touched — through all the agencies that you have been working with and the programs that you have helped to develop — but everyone in this room who has had a chance to learn from you has received this gift."

Ms. Petruska described her time at the Endowments as one of tremendous challenge and satisfaction.

"It's been an honor and privilege to work for the Heinz family," she said. "I love the fact that you can look at one small community and leave it a better place than you found it. That's very compelling to me. Sen. John Heinz's love for Pittsburgh — which continues with Mrs. [Teresa] Heinz — has allowed us to stay focused on a geography where we could really make a difference." h

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STUDIES AND PRESENTATIONS

Weighty Concerns

A University of Pittsburgh study has found that babies born to women who live near high-density shale gas drilling and fracking in the Pittsburgh region are more likely to have lower birth weights than babies whose mothers live farther away. Researchers looked at 15,451 births in Butler, Washington and Westmoreland counties. While the results of the peer-reviewed study do not prove a causal link between low birth weights and drilling sites, they do raise concerns and build on findings from earlier studies done by other researchers. Part of a $70,000 Heinz Endowments grant to Pitt for multiple research projects funded the birth-weight study.

Railroad Hazards

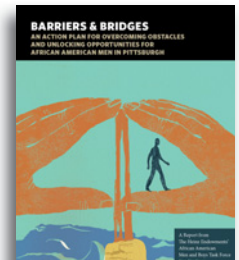
About 200 government and elected officials, civic and community leaders, and representatives of nonprofit and interested organizations attended "Oil Train Response 2015: Community Risks & Solutions Conference," a one-day event hosted by The Heinz Endowments in November that examined the high risks posed by rail cars with oil cargo speeding through local communities. Experts from across the country also offered possible solutions to prevent disasters.

In the United States and Canada, concerns about "oil trains," as they are frequently called, have quickly risen among local leaders, safety experts, researchers and citizens. Oil train traffic on U.S. rail lines surged more than eight-fold from 2011 to 2014.

One of the worst North American disasters in recent years occurred in Lac-Megantic, Quebec, in 2013 when a freight train carrying crude oil derailed and several tank cars exploded, resulting in the deaths of nearly 50 people. Currently, up to 25 convoys move weekly through Pittsburgh's Downtown and communities in Allegheny County, each carrying one million gallons or more of crude oil.

Bridges to Opportunity

"Barriers & Bridges: An Action Plan for Overcoming Obstacles and Unlocking Opportunities for African American Men in Pittsburgh," an Endowments-funded study by the Washington, D.C.–based Urban Institute, was released to the public during a November community forum, sponsored by the Endowments' African American Men and Boys Task Force. Researchers analyzed structural barriers, such as restrictive hiring and lending practices and closed social networks, that make it difficult for many African American men in Pittsburgh to access employment opportunities or obtain business development support. The report, which can be found at www.heinz.org, offers recommendations to government, business and philanthropic sectors on ways to open up economic opportunities and connections to black men in the region.



Bigger and Better

The Pittsburgh region's steadily expanding Latino population has meant that the Latino Family Center has outgrown two city neighborhood sites in six years, requiring a move this summer to a 6,400-square-foot space in Hazelwood. The center, which opened in Squirrel Hill in 2009, now has a headquarters that is triple the size of the location it left on the city's South Side. Among the center's services are classes on nutrition, pre-natal and post-partum care, literacy, health care and school preparation. The center staff also connects families to social services, helps with navigating local school systems, provides assistance with legal issues, and sponsors social events. Funding for the Latino Family Center comes from the Allegheny County Department of Human Services and The Heinz Endowments.

Field of Dreams

Thousands of people attended the grand opening of Aspinwall Riverfront Park in September. Most of the 10 acres between the Allegheny River and Freeport Road in Aspinwall Borough, northeast of Pittsburgh, had been either an unkempt field or a large gravel parking lot. But in just five years, the park grew from a community dream to a stretch of attractively landscaped land that contains a hillside amphitheater; a playground with a bronze playground sculpture by artist Tom Otterness; and trails for walking, running and cycling. Plans are underway to connect the Aspinwall trails to the regional Three Rivers Heritage Trails system. Much of the credit for bringing the park to fruition has been given to community perseverance and fundraising efforts. Other contributors included businesses; Allegheny County government; The Heinz Endowments; and the Colcom, Hillman, Richard King Mellon, Grable and Benedum foundations.

Joshua Franzos

(BIG) PLANS

Among the indicators of the p4 Pittsburgh initiative's influence on the city is the decision by the Penguins hockey team and developer McCormack Baron Salazar to hire the Copenhagen architectural firm Bjarke Ingels Group (BIG) to design housing and public spaces that will be built at the 28-acre site of the former Civic Arena. Kai-Uwe Bergmann, a partner in BIG (which has offices in Copenhagen and New York), participated in the p4 Pittsburgh conference — Planet, People, Place and Performance — which was co-hosted by the City of Pittsburgh, Mayor William Peduto and The Heinz Endowments, and that launched the initiative focused on innovative and sustainable urban revitalization. BIG is internationally known for cutting-edge design that emphasizes sustainable development. Examples include honeycomb-shaped apartment buildings in the Bahamas, a Copenhagen complex formed in the shape of an "8," and a project near the Danish city that places a 1,500-meter ski slope on the roof of a waste-to-energy plant.

Board Chairman Honored

Heinz Endowments Chairman Teresa Heinz was among seven individuals recognized during the United Way of Allegheny County's Toasting the Titans celebration in October. Mrs. Heinz, Richard and Virginia Simmons, Ambassador Daniel and Patricia Rooney, and Henry and the late Elsie Hillman were honored for their support and dedication to human services issues that led to quality-of-life improvements for residents in the Pittsburgh region. Highlighted among Mrs. Heinz's accomplishments were her efforts in assembling acclaimed experts to examine critical issues, such as healthy brain development in infants, and early learning and language development. She also was commended for her partnership with the United Way to create and spread quality early childhood education to all children, which included convening leaders of the National Academy of Science and award-winning economists.

Top Vet Visits

U.S. Secretary of Veterans Affairs Robert McDonald, top left below, toured Pittsburgh on Nov. 17 to learn first-hand about issues faced by the region's 235,000 veterans. At The Heinz Endowments, he met with local business and civic leaders, and with graduates of Leadership Pittsburgh's Community Leadership Course for Veterans. Joining the secretary at roundtable discussions were, clockwise: (a) from left to right, Elizabeth Powers of ATI Metals, Laurel Rutledge of Bayer-Covestro and John Meyers of Comcast-Keystone Region; (b) Mayor William Peduto, left, and Allegheny County Executive Richard Fitzgerald, right; and (c) from left to right, Army veterans Andy Loeb, Matt Landis and Sean Wray. On Nov. 18, the Center for a New American Security released an Endowments-commissioned report that found that after leaving military service, Pittsburgh-area veterans struggle with education, access to benefits and economic security issues.

Annie O'Neill

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