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LETTER
FROM THE EDITOR

Having the task of editing an entire magazine my last semester of college sounded a little daunting at first.

But when Dr. Dillon presented me with the idea, I ran with it.

After endless email exchanges due to Dr. Dillon being in Rome during this task and dozens of missing photos, I made this project work.

Though I cut it extremely close to graduation, I'm so thankful I had this opportunity as I learned more about InDesign and pestering writers and photographers for photos.

I loved reading and editing the environmental themed stories and designing the pages as well.

The writers in this edition showed the true colors of Pittsburgh pat and present and did a wonderful job doing so.

This semester long task taught me patience and time management as I'd come to edit after second rowing practices of my day or even after an 8:40pm night class just to make sure I had more pages done.

Though I was a writer for the last Off The Bluff magazine, I loved seeing the other side and being able to help with other journalists' work.

I'm so glad I took on this task and look forward to what this Magazine looks like in print!

LETTER
FROM THE PUBLISHER

Terms like "climate change" and "global warming" are so vast and abstract it's hard to know what they mean, day to day, in our own lives. Especially when information about them comes wrapped in narratives of fear and panic.

It's hard to cope with something that evokes a sense of primal fear but is so all-pervasive one can find no purchase to dig in and push back.

The 2024 edition of Off the Bluff, Planet Pittsburgh, brings environmental issues to a local level. Sure, climate change is a global phenomenon, but its effects are not uniform everywhere on Earth. Citizens of the world can start to understand their environment and formulate strategies to slow or adapt to climate change and other threatening forces right where they live. On Planet Pittsburgh, that includes stories about sustainable urban farming, the transformation of old industrial sites to new parks, and efforts to educate young people in a way that does not destroy the possibility of hope and optimism.

Students in my Fall 2023 Magazine Journalism class fanned out to find those stories, and more. I hope you'll learn from and enjoy your visit to Planet Pittsburgh.

Dr. Mike Dillon, Publisher

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off the bluff

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Environmental challenges are everywhere – and so are the activists, scientists and community leaders who are on the ground meeting them and working to establish a more verdant and ecologically healthy region.

PROFILES

Photo by Jason Mignanelli

Improving the Community, One Bike Lane at a Time

Eliyahu Gasson

The Mueller Center ballroom on the fifth floor of the Heinz History Center is filling up quickly on what is otherwise a rainy Tuesday night in Pittsburgh's Strip District. These people aren't here to party. These are interested citizens, city officials and policy wonks gathering to discuss public infrastructure projects proposed by Pittsburgh's Department of Mobility and Infrastructure (DOMI).

Among them is Eric Boerer, the advocacy director of Bike Pittsburgh (BikePGH), a nonprofit organization that works with local communities in the city to build and improve bike and pedestrian infrastructure.

Tonight, Boerer is doing his best to blend in. He is not here to present, nor is here he to take credit for his work. His project is now in the hands of DOMI. Boerer is attending tonight's presentation to be informed on other projects that are being presented by DOMI.

Boerer moved to Pittsburgh in 1995 to attend the University of Pittsburgh. It was around this time that he bought his first bike from a Goodwill in the Southside Flats. He needed a way to move himself through the city. Being an adventurous college student meant that a bike was his best bet for transit.

"I was in college, and I was a cheapskate," Boerer says. "I didn't want to depend on the bus to get around. Walking was too slow, and I couldn't afford a car. I just enjoyed the freedom and autonomy that the bike provided me."

Aside from the practicality of cycling, Boerer found that his bike introduced him to parts of the city that he

would have never visited otherwise. A city that originally served to simply host his education became one that he could thoroughly explore.

"I just started riding around Oakland and then just started going further and further," Boerer says.

Tragedy would strike roughly a decade later, in 2004, when Boerer was struck by a car while riding his bicycle.

The crash left him with a broken leg. He was riding in the bus lane on Fifth Avenue in Oakland which was then one of the places he felt safest on his bike.

Boerer took about a year to heal and was able to get back on his bike in 2005.

With his ability to cycle restored, and a newfound motivation for activism, Boerer began spending more time with fledgling BikePGH, which at the time was entirely volunteer-based.

Getting close to BikePGH served to foster his passion for bike advocacy. Many of the people he was becoming friends with had shared his experience of getting hit while cycling.

"I just got really sick of people I knew and loved [getting] hit by cars and by drivers who were just trying to get to work," Boerer says.

Boerer's passion finally paid off when, in 2005, he was one of the first people to be added to the BikePGH payroll.

As the advocacy director of BikePGH, Boerer has spent the last two decades working in communities around Pittsburgh. One of the projects he is most proud of is the Penn Avenue bike lanes in Downtown Pittsburgh. The project saw the then two-lane Downtown section of Penn Avenue transformed into a symbol of the future of cycling in the city. The outbound lane was turned into a two-way protected bike lane.

"It's in the heart of Downtown and it's really popular. There are bike counters on it, you can see in real-time how many people are using it." Boerer says.

"I didn't want to depend on the bus to get around"

Boerer's focus as BikePGH's advocacy director is on a collaboration with communities and governments.

Back at the Heinz History Center, while Boerer is listening intently to another project's presentation, Kevin Brown is informing attendees about the project Boerer has been working on.

Brown is the principal planner for DOMI. He has been Boerer's primary support from the city with the East Liberty bike lane project.

According to Brown, Boerer and BikePGH serve as a good soundboard for cycling infrastructure projects. When DOMI has a cycling-related project, they will share the idea with BikePGH. The non-profit will then provide feedback to the city based on its expertise. DOMI will also look to BikePGH to help build interest and support within city neighborhoods.

The East Liberty bike lanes project is the first that Kevin Brown has worked on with Boerer. Brown's experience working with Boerer so far has been good.

"He does a good job advocating for the interests of cyclists throughout the city without alienating anyone," Brown says.

Boerer appears to have a collaborative disposition — and his peers at BikePGH seem to agree.

Seth Bush, the advocacy manager at BikePGH, has been with the non-profit since March of 2023. Boerer is Bush's supervisor, above him in the chain of command, but the two see themselves as equals.

As in his relationship with Brown, Boerer serves as a sounding board for ideas that Bush may have. Bush similarly provides Boerer with feedback on ideas.

"He's wicked smart," Bush says. "I almost wish there was some way to download his brain and all the knowledge he has about the history of pedestrian organizing, not just in the city, but in the whole county." •


Courtesy of Albert Presto

CMU Prof Helps Residents Yearning to Breathe Free

Travis Barkefelt

Take a breath of fresh air. Now do it again: In Homewood or Mount Washington or McKees Rocks.

Despite the efforts to improve air quality citywide, you won't be breathing exactly the same air.

Unfortunately, this disparity often exists along racial or economic lines. Poorer neighborhoods are often unhealthy neighborhoods, lacking tree cover or green spaces.

CAPS, a snappy acronym for CMU's Center for Atmospheric Particle Studies, is investigating this disparity. Using a data-driven approach, researchers like Albert Presto examine health impacts of varying levels of pollutant exposure in local neighborhoods.

Data collection, Presto says, is a multifaceted process, with several available methods. "One thing we've done a lot of, is use a mobile laboratory... it's basically like one of those same vans that Amazon uses but ours isn't painted blue, ours says CMU all over it."

The paint job isn't the only

difference from Amazon. The van is not loaded with packages, but expensive lab equipment.

Not only is data collection through this method inefficient, driving around with "a million dollar's worth of equipment" is "harrowing," Presto says.

The solution: a network of 50 relatively low-cost sensors, which, at the cost of slightly less precise measurements than the mobile lab, more than make up by providing a constant stream of useful data.

The impressive scale of this network is made even more obvious in comparison to similar sensor networks run by the EPA. "They have seven sites," Presto says. "You know, so we're seven times bigger than that."

Outside of his lab work, Presto has also embarked on creative endeavors such as his "Shared Air" podcast. Starting with the simple goal of [reaching] "anyone who was interested," the podcast produced a number of episodes on various environmental topics ranging from industrial pollution to environmental justice.

It was the environmental justice episode that served as a turning point in the conversation. In the episode, the guest discussed the issue of scientists and academics coming into minority areas, collecting their data and leaving, while patting themselves on the backs about the good work they've done.

Ultimately, the episode contended, this whole process plays into a "white savior complex."

Presto openly acknowledged the risk of coming across this way and does his best to ensure his work is "bilateral" and "not an extractive exercise."

Presto said he understands the delicate balance the work requires.

"Because I'm a white dude, right? I don't live in that neighborhood ... I don't have the same lived experience as everyone that I'm going to interact with on these sorts of projects ... I don't know if I'm successful in that or not," Presto says.

Ultimately, he's concluded that it's best to take a learn-as-you-go approach, and to embrace both positive and negative feedback.

Neil Donahue, Presto's colleague and former professor, added that in terms of environmental justice, the disparity between communities "is very real."

From poorer communities being in areas more susceptible to floods, less able to afford air condition or simply exposure to pollutants, "there's an inequity in exposure. There's also an inequity in vulnerability."

Presto pauses when asked, "Do you have a favorite project that you worked on?"

Citing the distinctiveness of some projects and length of others, Presto finally settles on CASES, a large-scale collaborative project.

CASES, or Center for Air, Climate and Energy Solutions, features the work of several universities that were instrumental in Presto's work.

"A lot of the work we did both with the mobile sampling and with the low-cost sensors sort of sprung out of CASES," he says. "A highlight of the event was the ability to directly discuss findings with those involved in Epidemiology and had the ability to work with the data in a very real way.

Colleague Hamish Gordon agrees that collaboration is an important facet of work in this field.

"All of these research enterprises are highly collaborative," he says. Emphasizing that climate models themselves were the collective work of hundreds of dedicated researchers, he concluded that "the number of people active in the research area...is relatively small compared to the importance of the research."

In the end, despite the breadth and complexity of his research, Presto says the objective is relatively simple: "Air quality is important because it does impact people's health getting it a little bit cleaner actually can have a big benefit because it impacts everybody." •

The Butterfly Effect: Gabrielle Marsden's Push to Reclaim the Pawpaw Plant

Ember Duke


Photo by Ember Duke

The pawpaw plant, with its buttery caramel flavored fruit and peppery smelling leaves, disappeared from the Pittsburgh area more than 100 years ago.

Conservationist and environmental activist Gabrielle Marsden is working to bring it back by engaging the community in repopulating the plant.

Marsden holds workshops at Garden Dreams Urban Farm & Nursery in Wilkinsburg called pawpaw parties where people can taste and learn about the fruit. To her, the pawpaw is a small symbol of a widespread ecological dilemma.

"I think of them as being more of a canary in the mine," she says. "Because pawpaws are just one part of the biosphere, or whatever you want to call it."

In 2018, Marsden launched her conservation initiative, Pittsburgh Pawpaw Pathways for Zebra Swallowtail Trails, to raise awareness about restoration. In the early 20th Century, she says, industrialization in Pittsburgh damaged areas where pawpaws grow. The zebra swallowtail butterfly, which is dependent on the plant to feed its offspring, disappeared with it.

"In some areas the industry happened before people were paying attention," she says.

Crouched in the pawpaw patch where she experiments with grafting, a method of combining tissues of two plants so they grow together, Marsden preaches the significance of small scale restoration.

"They used to be here and they should be restored," she says. "They were here so they should be brought back, it's only fair. They are a potential food source. Besides the zebra swallowtails they support other animals. It's just one step in restoring or repairing areas."

On a routine hike along the Great Allegheny Passage, which connects Pittsburgh to Cumberland, Md., and Washington, D.C., Marsden noticed a shocking lack of pawpaws.

"Having pawpaws and other native plants growing on our shores will improve our water quality and actually reduce global warming," she says. "I mean, it's just a win-win, it's like one rung in

the ladder, but it's an important rung."

At first, she scoured the river beds for good land to plant pawpaws guerilla-style, until she realized how widespread the issue was. While mapping out the East Coast, she was concerned by major gaps in the plant's growth.

"The more research I did I realized it was a much bigger thing that needed to happen, that many more pawpaws needed to be planted and that more people needed to be involved," Marsden says.

Marsden still gets in the dirt to harvest and to show people the plants during her workshops.

On a misty September Tuesday, she bounced through the overflow of the garden to teach visitors, her energy growing in tandem with the depth of her presentation.

"The issue of Pittsburgh is that with all the industry here on our rivers, where these [pawpaws] love to grow, the rivers were bare and over time the trees and plants returned, but only those trees and plants that had efficient ways of dispersing their seeds. This one does not, so there are pockets of this one, but they don't spread very far," she tells an engaged crowd.

She believes people should be informed about the environment and welcomes all in accompanying her in harvesting.

"That is one thing I decided I have to do is I have to get people to go out on the rivers in Pittsburgh on canoes and kayaks to experience them because they are beautiful," she says.

Whether it's through conversation or voyaging the rivers, Hannah Cosca, manager at Garden Dreams, feels Marsden has an inviting energy that engages people in learning.

"She brings so much excitement and passion," Cosca says. "It's really easy to feel like you want to get on board and be a part of that. I think she makes it accessible for people to be a part of it in lots of different ways."

Because the pawpaw is uncommon, it has caught the community's interest and Cosca is grateful to provide a space for Marsden to advocate.

"I think there is growing interest, I think the kind of novelty of the fruit is exciting," Cosca says. "I really love butterflies and think that it's really important that we understand ecosystems better and how plants interact."

Marsden also partners with groups like Tree Pittsburgh, Grow Pittsburgh and Wild Ones.

As a child Marsden moved often, but made Pittsburgh her home base in 1973, though she continued traveling across the country for her archeology career.

Working in field archeology she realized urban areas were often as beautiful as rural areas, which inspired her to start a conservation program in the city.

"I would have to say that if I didn't have the background in archeology, I wouldn't have an awareness of wildlife. You know, because I was like 'out there,'" Marsden says.

Her husband and assistant, Todd Kaufman, helps manage her workshops and professional relationships. He has seen her attitude towards her work from the start.

"She is very passionate about this cause and wants to try to make a difference here and let others know about it, but also realizing that it's not a single thing but it kind of represents the tip of the iceberg," Kaufman says.

As guests trickled out and the sun shaded to orange over Garden Dreams, Marsden bantered with a customer interested in buying a plant. She takes donations and sells seedlings, but works for the cause, not financial gain.

"Twenty dollars each or, if you want to be generous, thirty, 'cause no one is paying me to do this," she says.

If the pawpaw issue is one small shoot, Marsden wants to investigate the whole garden of ecological problems. Her favorite part of her job is continued research and exploring nature to learn more, she says.

"Every time I learn something, I learn something else," she says. •

Climate Doom is the New Climate Denial

Amanda Riisen

Just outside a modern building lined with rows of solar panels, Ellen Conrad walks along the trails and picks leaves off of trees. As one of the naturalist educators at the Frick Environmental Center, she is collecting different leaves to show her students to help them identify the various kinds of trees in Frick Park.

The Frick Environmental Center is an LEED-platinum building located just at the front of Frick Park. It is a "living" classroom that offers environmental education to K-12 students who are looking to gain hands-on experience with conservation. In addition, it provides the community with a serene environment to escape the hustle and bustle of the city.

Ellen helps run several of the educational programs at the center, where she shares with her students her love and passion for caring for the environment. Her role as a naturalist educator is immensely important to her.

"It's exciting to know that we're sending agents of change out into the world," she says.

The rows of panels that line the building's grounds provide solar energy to several of the houses within the surrounding neighborhood. The building itself has been constructed using eco-friendly materials. Considering how expensive solar panels are, they are not practical for the average household. Having a center that provides this energy for the community is revolutionary.

"The point of this building is to be a demonstration of what is possible," Ellen says. "There are resources within solar panels that are not easy to find. A building like this is a great solution for that, one that I would personally advocate for."

For most of Ellen's career, she viewed herself as a climate advocate. She never considered that she might become an educator.

"It was probably the last thing that I wanted to do,"

Courtesy of Ellen Conrad

Ellen says.

After earning her environmental science degree from Goshen College in Indiana, she joined the PULSE fellowship and began to work with Green Building Alliance's Green and Healthy Schools Academy. Her experience there introduced her to work involving "living buildings," which in turn led her to her current position at the Frick Environmental Center. She was hesitant at first to take on the role of educator, but soon enough discovered she had a passion for teaching and inspiring young people.

"Working with youth is really fun because even though we only work with them for a short amount of time, knowing that they're going out and taking the things that they're learning with them to their next walk of life is really rewarding," she says.

For the first time ever, the center is providing a program that is specifically going to address the topic of climate change, a development Ellen finds exciting.

"Educators here have always talked about climate change, since conservation and climate are so linked, but this is the first time we will be covering it head on," she says.

This development comes about as this topic is becoming increasingly prevalent. As the state of our climate worsens, disagreement on what should be done to address this issue increases. Many have taken different stances on the reality of climate change and the plausibility of proposed solutions. As excited as she is to teach about this, she is mindful of the difficulties that come with discussing a topic that is so complicated and sometimes controversial.

"I have encountered people with some serious misconceptions," Ellen says, "It's confusing. There's so much information it's hard to know what is real and what is fake."

In addition to this, Ellen is aware of the anxieties that this topic brings for many students. News coverage often comes with messages of "gloom" and "doom," aimed to frighten people. She has witnessed how this messaging can overwhelm many of her students, draining them of hope.

"Climate doom is the new climate denial," she says.

Part of the reason Ellen is so eager to discuss this topic with her students is so she can work to change this perspective. Although the dangers that come with climate change are an inevitable part of the conversation, she chooses to emphasize the tangible work that we can all do to make a difference.

"When you approach the topic from a solution-oriented and action-oriented perspective, it gives people hope," she says.

Ellen worked with some of her students in writing a letter to Ed Gainey, the mayor of Pittsburgh, to encourage him to take more action on the Pittsburgh Climate Plan. This plan lays out numerous strategies through which Pittsburgh can reduce its overall greenhouse gas emissions. This letter was hand delivered to the mayor at a meeting.

"I hope that he took it to heart," Ellen says. "The students worked really hard on writing it and I think it was excellent."

"Being able to participate in making a better and healthier planet is empowering. Opportunities like these are what provide our youth with hope for their future and outlets for their idealism," says James A. Brown, the director of education and the Frick Environmental Center.

"We have a battery recycling program and we need volunteers to help sort them," Brown says. "As mundane as it seems, this is something students can do to get involved."

Although Ellen has only worked at Frick for a few years, she has already seen many of the people she has taught go off to college to start their careers. She's written recommendation letters for them, advocating for their future. Being an educator on environmental issues has not only given her students hope, but it has also helped her find it for herself, she says. •

Museum conservator Gretchen Anderson protects Pittsburgh's natural history from pollution and climate change

Andrew Cummings

Blue, pink and yellow sticky notes fill the exhibit. Egyptian artifacts, including various jewelry and tools, line the walls. A sarcophagus lies at rest. This is the setting for Gretchen Anderson's workday as a museum conservator.

As a conservator, Gretchen works to maintain the collections and exhibits at the Carnegie Museum of Natural History. There are many agents of deterioration that she has to consider when working with the exhibits.

"I try to make sure that everything that is on exhibition, and in storage, is stored well in the safest way possible," Gretchen says. "Anything from physical damage, concerns over theft and vandalism, concerns over the incorrect temperature, incorrect light, pests, relative humidity. I try to strategize and figure out how to reduce these risks."

According to Gretchen, preserving the natural history in the museum exhibits is important to understanding the present world, including changes to the environment over time. The past is prelude to the present and the future.

"Natural history collections help us understand history," Gretchen says. "Natural history research specimens teach us more about our world. They show us population change. We can do analysis on the specimens that will tell us where they're from. We can see how the climate has changed, where the climate has changed, how fast it has changed."

For Gretchen, climate change is a serious issue that threatens the natural history she works to preserve.

"Climate change is environmental change. We live in a living world, there's always

going to be change. But the speed of that change is disastrous. And that's what we're seeing now," she says.

The average rate of increase of land and ocean temperatures has more than doubled since 1981, according to a 2022 climate report by the National Oceanic and Atmospheric Administration. Previously, the temperature increased by an average of 0.14 degrees Fahrenheit per decade from 1880-1980. The rate of change has increased to an average of 0.32 degrees Fahrenheit per decade since 1981.

Working in an industrial city like Pittsburgh doesn't make Gretchen's job any easier. The air pollution from the city constantly finds its way into the museum and threatens to damage the collections she works meticulously to preserve.

"What we know of the level of pollution in this city is huge," she says. "And it causes serious health problems. It also causes health problems to our collections and to the living animals that are out there.

"You can walk around the city, you see buildings that have black stripes, or are basically black. That's accretions that are destroying, or that are depositing on the buildings. It's the black air pollution from cars, from steel mills, some of it's very, very old. When it deposits on a building, on a stone structure, it causes deterioration."

Gretchen showcased a towering steel sculpture by the entrance to the museum. There are vertical brown stripes on the exhibit caused by air pollution.

A 2023 report by the American Lung Association found that Pittsburgh ranks among the 25 worst metro areas in the United States for air quality.

Gretchen says climate issues from other regions, like wildfire smoke form Canada and California, also impact her work.

Gretchen attributes her career interests to her upbringing in an artistic household. Both of her parents were artists. Her father worked with a variety of mediums including animation, painting and sculpting. Her mother was a poet. Gretchen enjoys the tactile nature of art, always curious about the quality and purpose of materials such as metals and woods and how they are crafted into artistic works.

"Because I was so interested in art, in history and in the natural sciences, I kind of fell into this," Gretchen says.

"Conservators are our material scientists. So, in the scientific realm, we study how materials interact, how they interact with the environment, how they interact with each other. And we apply it to what it does to either art or natural history or historic objects. The natural history collections show us the diversity of life and the interaction of that diversity."

Gretchen works closely with all of the departments at the museum to preserve the exhibits and is generous in sharing her breadth of experience with others.

"She's always very happy to share her knowledge," says Linsly Church, one of Gretchen's former interns who currently works as a curatorial assistant at the museum.

Walking around the natural history museum with Gretchen reveals the scope of her and her team's work. In addition to maintaining prominent exhibits like dinosaur skeletons and mastodon skulls, dusting and cleaning every individual leaf on display, Gretchen is responsible for maintaining the more than 22 million item collection that the museum houses between public exhibits and storage.

Jenna Anderson (no relation), a conservation intern at the museum, described Gretchen's penchant for gratitude.

"She always emphasizes the need to take time out of your day and be grateful for the people that are helping her. Because she said there's so much going on, she couldn't do it without a lot of the people she works with," Anderson says.

With every item in the Carnegie's collections telling some facet of Earth's natural history, Gretchen and her team have their work cut out for them in the wake of increased climate and environmental challenges.

"My belief is that we should be sharing our world, not destroying it," Gretchen says. "And we're destroying it." •

Harvest of Kindness

Josh Delia

Rev. John Creasy, the executive director of the Garfield Community Farm, has been working on the project for almost as long as he has been a pastor at The Open Door Presbyterian Church – nearly 20 years.

He says nothing is more important than the well-being of the people, plants and animals that make up his community.

Creasy, 46, saw an opportunity to improve the livelihood of all three with the creation of the Garfield Farm back in 2008.

"We started a little garden. It went well," he says. "Next year, we got a little bit bigger."

The now nearly three-acre farm, which sits on top of 25 deserted city lots, was brought to life after Creasy recognized Garfield was suffering from a lack of essential resources, such as grocery stores and sufficient bus access.

"Sadly, it's a way that cities kind of take people who are struggling the most and set them aside," he says. "We realized what we were really addressing was the issue of abandonment."

He credits the people of Garfield with helping make the farm a success.

"It's a true community endeavor, not just a church that comes up and tries to do something good," he says. "But really, can we kind of be a catalyst to help the neighborhood do this as the neighborhood?"

Alyson McAtee, a board member and seasonal employee at the farm, has known John for around four years and speaks highly of his relationship with the community.

"The neighborhood loves him. Especially our youth," she says. "They call him Farmer John."

She recalled a time when John invited her to attend a spiritual ecology class he was leading for the Pittsburgh Seminary. People had come from all over the country to join in on the conversation.

"The conversation led all of these young people to reflect on the type of work that they wanted to do in their lives," she says. "That was really rich."

Creasy majored in Christian and elementary education while attending Westminster College, and then got a job doing youth ministry.

While he never formally taught in a classroom setting, some of his fondest memories have been passing on knowledge to children who visit the farm.

"I think that may be the biggest impact that we've been able to have with our immediate neighbors is through our work with children, because we do a lot of education," he says.

"There's a lot of kids over the years who've spent a lot of time at the farm, and these are kids that otherwise probably wouldn't be outside experiencing nature in any significant way."

One topic Creasy and his

team emphasize is "permaculture," the concept the farm is based around, which involves keeping the space sustainable and self-supporting.

At the farm, a wide variety of fruits, vegetables and herbs are grown, among other usable plant life. There are also chickens.

The farm's harvest reaches the community by means of a mobile farmers' market stand that typically stops in three spots each trip.

While growing produce is important, so are the passions of community members.

Creasy gave Stephanie Bell, an Open Door Church member and volunteer, the greenlight to design the farm's Sensory Peace Labyrinth, a flower and herb garden that can be walked through and viewed from narrow paths.

Stephanie, who has known Creasy close to 20 years, describes him as a "very permission-giving person. When other people have ideas, he's really open to letting people explore those ideas and go forward," she says. "I didn't get any pushback on my ideas. He's just, like, go for it."

While Creasy puts a lot of time and effort into running the farm and helping it grow, he makes it very clear that he would be nowhere without his staff, consisting of five to seven part-time employees during the season, and a constant stream of year-round volunteers.

The volunteers help with much of the labor-intensive land maintenance that goes on at the farm, which is essential and abundant.

"The story really always comes back to the people. Yeah, it's the right location because it has always been the right people that we want to serve and that we want to work with and create something of beauty with," Creasy says. "Volunteers really do a lot of the work."

Looking towards the future, Creasy hopes to acquire a grant to rehabilitate a bio shelter that sits near the middle of the farm. A bio shelter, he explained, is a type of greenhouse that is designed to be self-sufficient, as to support permaculture.

"I've always had a love of nature and felt a deep personal connection to the natural world," he says. "This has allowed me to kind of pursue that personal thing. I want to be doing this for myself, you know, as much as I do it for anyone else."

"I think that's really important that we find vocations that are really fulfilling, even if they're vocations of trying to better the lives of other people." •

A Crop Grows In Pittsburgh

Camille Agie

In the St. Clair neighborhood of Pittsburgh, a large metal gate blocks the entrance to a long stretch of gravel road. But what is behind that gate might surprise you: beautiful flowers, fresh vegetables and a luscious landscape.

John Bixler, executive director of Hilltop Urban Farm is honored to be working at this organization.

"We have a youth farm and a community garden," John says. "Everything we grow is donated to Hilltop foodbanks. It's an honor to be here and to be the director. We feel a real responsibility to do right by the community especially with so many people being displaced."

In the 1950s many people in the Hill District were getting kicked out of their homes and were looking for a new place to reside due to "urban renewal." Many displaced Hill residents found housing at St. Clair Village, near Pittsburgh's Arlington neighborhood. Fast forward 60 years: people were yet again getting kicked out of their homes, and this time their homes were being demolished because the public housing project had fallen into disrepair.

"When they bulldozed the buildings, they left the concrete and everything," Bixler says. "So, we had to clear all that out, we are still working on it. But we removed 700,000 lbs. of rock and rubble." And in 2017, an urban farm arose on the site.

Lower-income neighborhoods across the Pittsburgh area lack access to fresh vegetables and fruit; they have become what are known as food deserts. Hilltop Urban Farm works to rectify that.

"So, we are putting a dent but it's modest," John says. "There's a lot of need and a lot of people who can't make it to the food bank, it's been slow. I guess one of the things that holds us back is we have to keep that gate locked."

Because the farm was built on the ruins of old housing the Housing Authority still owns the property and Hilltop has an annual lease with them.

Bixler, an Iowa native, is familiar with agriculture and farming – the business of feeding people. So, what is urban farming? And is it any different than farming in states like Iowa or Texas?

To Bixler, it's not.

"At its basic form, it's try-

Photo by Paige Dzwonchyk

ing to get the land in some kind of shape to start farming," he says. "It's in an unconventional place but it's still a place to grow crops and sometimes house animals. This is actually really large-scale for an urban farm."

Hilltop Urban Farm is on track to become the largest urban farm in the United States, with 107 acres of land and 23 acres of that land dedicated to farming. The farm has many partners, including the Allegheny Land Trust. Tom Dougherty, is the vice president of Developmental External Affairs at ALT.

"It is a very dynamic organization," Tom says. "John and his team are really focused on their mission. I believe it is one of the best examples of urban farming."

Bixler's desire to give back to this community shows in his work and programs created on the farm. The Youth Farm program is one of them.

"I think it is really important and I don't think a lot of kids plan to be farmers, but it sparks their interest in nature, and they get a whole different perspective," Bixler says.

The closest supermarket for the Hilltop neighborhood residents is nearly two miles away. So, it is refreshing for students at different local schools to see fresh and healthy produce grown right in their neighborhood.

The farm mostly runs on sunlight captured by the farm's own construction. "One of the other rules of the housing authority is we can't tap into the electricity, so all electricity is provided through solar panels that we installed," John says. "We also couldn't tap into the waterline, so we had to run our own waterlines as well."

"We feel a real responsibility to do right by the community especially with so many people being displaced."

Because the Housing Authority owns the farm, Hilltop is prohibited from building permanent structures on it. But John and his team found a creative way to solve this issue – shipping containers.

"We call this the solar power walk-in cooler," he says. On the outside, it looks just like a normal shipping container with solar panels placed on the top. But as you open the heavy doors a cold blast of air hits you. Boxes of tomatoes and other vegetables sit on the metal shelves ready to make their journey to a local food pantry.

The farm also provides a Farmer Incubation Program. It is a three-year development program for small farm enterprises. Randall Hall is a local beekeeper and HUF farmer.

"He's a great guy and he loves bees," Bixler says.

"He's a great support system and he's always sending me different business connections," Randall says. "John has talked me up to people a lot through the years, but he's been doing an awesome job improving the infrastructure; he's got a lot of good grants."

Across from Hall's bee farm is the community farm. Rows and rows of pastel-colored flowers and fresh produce welcome you as you enter this area. But without the gate being open many people still don't have access to the goods the farm produces.

"It will be pivotal when we open the gates in a good and challenging way because we will have to start thinking about traffic, and vandalism," John says.

The Allegheny Land Trust will eventually purchase Hilltop Urban Farm, and Bixler and his team will be able to open up the gate under new ownership.

So where does John Bixler want to see the farm in one, 10, or 15 years?

"I want the people of the Hilltop, who live here to feel like it's theirs, so they have real ownership and pride in it, the potential up here is amazing," he says. "They are the ones that came up with this whole idea. For a lot of people this was their home, and we feel a real responsibility to that." •

Dr. John Stolz's Teaching and Activism are Rooted in his Research

Brooke Massaro

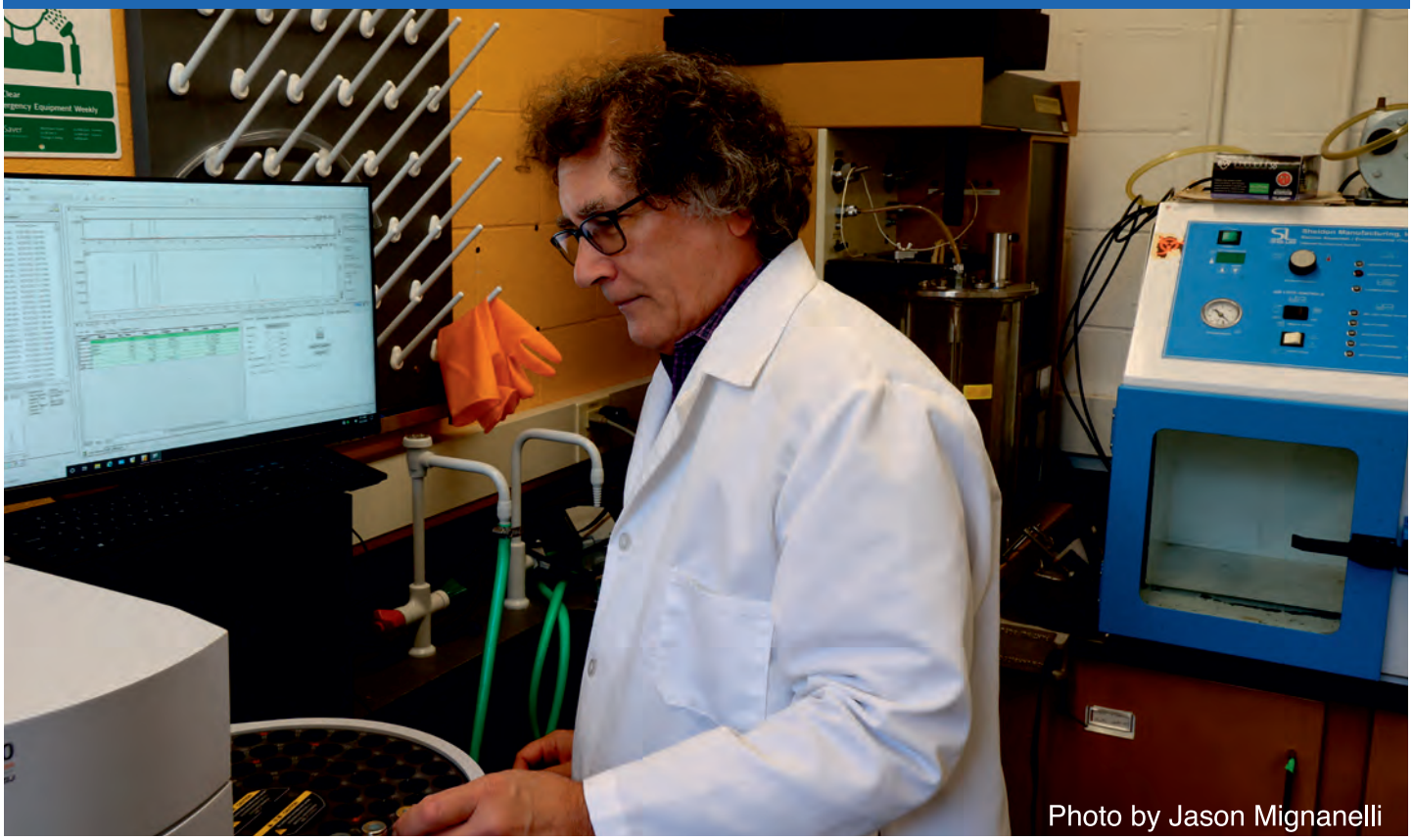

Photo by Jason Mignanelli

Stacks of thick textbooks nearly break the shelves they sit on. Piles of research litter the room, some collecting dust. A Dewey Award for clean water activism sits next to a book entitled *Socialism*. Darwin-esque and science-related toys take up an entire bookshelf.

Dr. John Stolz's office sheds insight into who he is as a scientist, educator, activist and researcher. The cluttered space makes sense to him and only him, and that is just the way he likes it.

Stolz is a biology professor and the Director of Environmental Research and Education at Duquesne University. His passion for teaching is matched by his passion for the environment. In 2017, Stolz ran for the 12th District House of Representatives seat, with his focus on implementing green energy.

Stolz says that his main focus, in addition to directing the Environmental Science and Management program, is his research.

"I love teaching and [sharing] what wisdom I have, of course, but my research continues to drive me as a scientist and an educator."

Although aspects of his research have diverged over his career, much of what Stolz studies has stayed the same.

Through his research, Stolz has traveled across the world and studied different environments - what makes them the same and what differentiates them.

"In some ways, I've continued

to work on research that I started in grad school," he says. "I'm still going to places like the Bahamas, and I may not be able to go back to Shark Bay, Australia, but it was still an amazing experience."

Stolz's research did not become environmentally focused until he took the faculty position as a microbial ecologist at Duquesne University. Since joining the faculty in 1990, his research has focused on the environmental impacts of microbiology and the community structure and biogenesis of modern marine stromatolites in various areas around the world.

Moving to the Steel City was not originally in Stolz's plans. But after seeing the city for the first time, he knew it was a perfect place for him and his wife, a cell biologist.

The city of Pittsburgh and Western Pennsylvania are rich with the history of the steel mills and coalfields that greatly affected the atmosphere of the city.

When he moved to Pittsburgh, Stolz's research focus shifted from the effects of marine life and the environment in saltwater systems to freshwater systems. This change in location offered new opportunities he would not find on the West Coast, where he had previously studied, he says.

"You've got all these wonderful mine drainage systems here!" he says. "Those don't exist out west, and therefore we can't study the effects of them like we can here."

His interest in science and the environment started very early. Stolz grew up on the north shore of Long Island, which allowed him to study different kinds of marine life, as well farmlands. His first lessons in sustainability came right at home.

"My father was very passionate about organic farming and gardening," Stolz says. "He didn't use pesticides, and we had a compost bin. The environment was always very important to us."

When Stolz first arrived at Duquesne, there was not much to work with in terms of an environmental science program.

"There were not very many environmental programs in the country," he says. "So, we created this master's program in Environmental Science and Management, which was one of the first in the country."

The Environmental Science and Management program that Stolz created aims to train students in communications, law and regulations as well as science. This led to the creation of the undergraduate program of the same name. This includes an Environmental Science major as well as Environmental Studies, which places a large focus on policy as well as science.

Former director of the Environmental Science and Policy program Philip Reeder backed Stolz's decision to place a focus on the management aspects and opportunities in the environmental science field.

"He's built a really amazing program and opportunities for future students' education, as well as future opportunities for their research and careers," Reeder says.

Stolz hopes to inspire environmental activism in his students, whatever their strengths and interests may be.

"There are a lot of good people out there who want to be good environmental advocates, but they don't want to take organic chemistry or calculus," he says. "They could go into environmental law or sustainability instead."

Stolz also teaches an essential questions class at Duquesne entitled, "Are We Our Planet's Keeper?" In this seminar, students explore the question of whether the human race is responsible for protecting the planet, and if so, what we can do to protect it from ruin.

Former student Teresa Aspinall says Stolz's essential questions class opened her eyes in terms of sustainability. She found Stolz's passion for the environment and his activism inspiring.

A large part of the environmental science program Stolz wants to develop further is community engagement.

"We've been providing free water testing for communities that have had problems with fracking," he says. "We've also tackled a lot of issues involving the disaster at East Palestine and injection well facilities, most recently. We focus a lot on research, and hopefully that research will affect policy and policy changes."

The city of Pittsburgh offers many opportunities for Stolz's students to learn and help the environment, he says.

"Everything you could want is here in Pittsburgh. That's why we need to preserve it, protect it and not abuse it." ●

Man vs. Mountain:

Jared Belsky Works to Tame Hays Woods

Giona Ciacco

Photo by Megan Trotter

For many people, a full-time job involves sitting at a desk doing paperwork. Pittsburgh Parks Conservancy Ecological Restoration coordinator Jared Belsky spends his workdays in Hays Woods, Pittsburgh's largest urban forest, cutting vines, clearing paths, exploring and managing its invasive species to encourage the growth of native plants.

"Doing this work just opens up a whole new world for you," says Jared. "You can never prepare for something like this."

The project of taming this wild 626 acres of land situated between Baldwin, South Side, and Hays, towering over the Monongahela River, was given to the Pittsburgh Parks Conservancy in early 2023. Jared's goal is to lessen the impact of invasive species and establish more hiking trails for visitors.

Hayes Woods has a long history of coal mining and natural gas exploration; it was once the site of an LTV Steel plant. His work will help heal the land from centuries of human destruction, including the dumping of chemicals and other toxins.

Jared spends his three days every week in the field doing invasive species management and two days working on project management, planning and community engagement.

"I get to kind of apply my love for ecology and native plants every day," Jared says.

A non-profit organization, PPC was awarded a $233,000 grant

from the Richard King Mellon Foundation in early 2023. The grant includes a partnership with Allegheny GoatScape whose goats occupy a seven-acre plot in Hays Woods where they eat invasive bush honeysuckle. Once the goats move on, Jared will replant the area with native seeds and native transplants.

"I like to say [the goats] have a good work-life balance," he says. "Pretty much every other time I've seen them they've been munching away doing good work."

The Hays Woods project, like the park itself, is huge. The goal is to reduce the levels of invasive plant species in specific areas of the land allowing it to be more manageable.

"It's a mountain of work," says Jared's boss, Brandon McCracken. "He's done a great job of starting to make a dent. He's out there every week battling the sea of invasive plants."

Growing in the absence of trees, Japanese knotweed is the park's biggest problem. Jared explains that the dense weed degrades surrounding wildlife, decreasing biodiversity and repelling beneficial pollinator birds.

"Knotweed is really hard to control, so the main work I'm doing is trying to prevent further areas like this from opening up," Jared says.

His plan is to focus on areas shaded by tree canopies to maintain those habitats. Though not much can be done in the areas already affected without more grant money.

Funding is one of the Parks Conservancy's biggest issues. This means Jared works alone although he recently hired a seasonal employee to assist in fieldwork.

Photo by Megan Trotter

"In an ideal world, we get funding to continue a lot of what we've started," Jared says of his future plans once the current Hayes Woods project ends in the summer of 2024.

A recent hour-and-a-half hike of the land's twisting trails allowed the exploration of only a small part of the densely packed 626-acre tract.

Navigating this terrain means swatting away branches and tripping over uneven ground. One can easily get lost, as Jared did multiple times early in this project.

"Combination Google Maps, bushwhacking and calling for help… no, just kidding," Jared says.

Accessibility is one of Jared's largest challenges with Hayes Woods, due to its few access lots and rough trails. He hopes to work on the park's accessibility by opening more access points and leveling trails. Though he doesn't mind his long walk to the daily work site.

Jared, who was born in Massachusetts, loved nature from an early age, exploring the woods and hiking mountains with his family.

"My dad has always been just kind of a nature nerd pointing things out, and I think I've adopted a lot of that," Jared says.

Mackenzie Nelson, Jared's girlfriend, describes him as understanding, passionate and an "ecology nerd."

"You walk outside with Jared and he's telling you scientific names of weeds," Nelson says.

Jared says he's sure he annoys her with this habit, but he's proud to have lost what McCracken calls "plant blindness," a problem he had in the beginning of his career. He described this term as seeing a plant and not knowing what it is. Overcoming that opened a whole new world for him where each plant tells a story.

Jared is excited to be a part of the Parks Conservancy and is optimistic about what he will be able to accomplish at Hayes Woods.

"It's really awesome to work with a lot of people that are driven, you know, not necessarily by money and power, but by a desire to make a positive change in the world," he says. ●

Photo by Megan Trotter

Get a 40,000-foot view of the trends and issues shaping the environment of Planet Pittsburgh. Some are manifestly physical, like the lung-clogging smog that casts a pall over the region. But some inhabit the realm of psychology.

CHALLENGES

Canadian Wildfire Smoke Evoked Worst Days of Steel Plant Smog

Josh Delia

Editor's Note: *According to Canadian Government figures, Canada's 2023 wildfire season was the most destructive ever recorded. By September 5, more than 6,132 fires had torched a staggering 16.5 million hectares (nearly 40 million acres) of land, an area larger than Greece. Smoke from the fires caused numerous worst-case "code orange" air-quality alerts in Pennsylvania and other U.S. states.*

On some days throughout the summer of 2023, a Pittsburgh resident might have felt as if they stepped into a time machine.

However, it wasn't the smoky skies of the 1930s or the 1940s caused by the steel mills. Instead, the city was shrouded in Canadian wildfires, which started in March.

Joe Goldstein, a Plum resident who suffers from asthma, remembers the smoke-filled days well.

"Day-to-day you could definitely tell the difference that there was, you know, the smog from Canada," Goldstein says. "It didn't affect my life too much, but when I went outside, it would be a little harder to breathe. I had to stay on top of using my inhaler and having it on me at all times.

"I did notice it was a little harder to run outside."

At the time, Goldstein and a few of his friends were training for a race and found it more difficult to control their breathing.

He was also surprised to see smoke from somewhere as far as Canada affecting the city so directly.

"I couldn't believe it made it all the way," he says.

Kate Masterson, smoke management coordinator for the Washington State Department of Natural Resources based out of Olympia, explains how smoke gets from one place to another.

Digital maps are used to keep track of air movement, and air moves clockwise in areas with higher pressure, which are warmer, and counterclockwise in areas with lower pressure, which are colder, Masterson says. Winds toward the top of the atmosphere are the ones most responsible for transport.

"These are the big transport winds that will transport big masses of smoke from a Canadian wildfire and drive them around," she says.

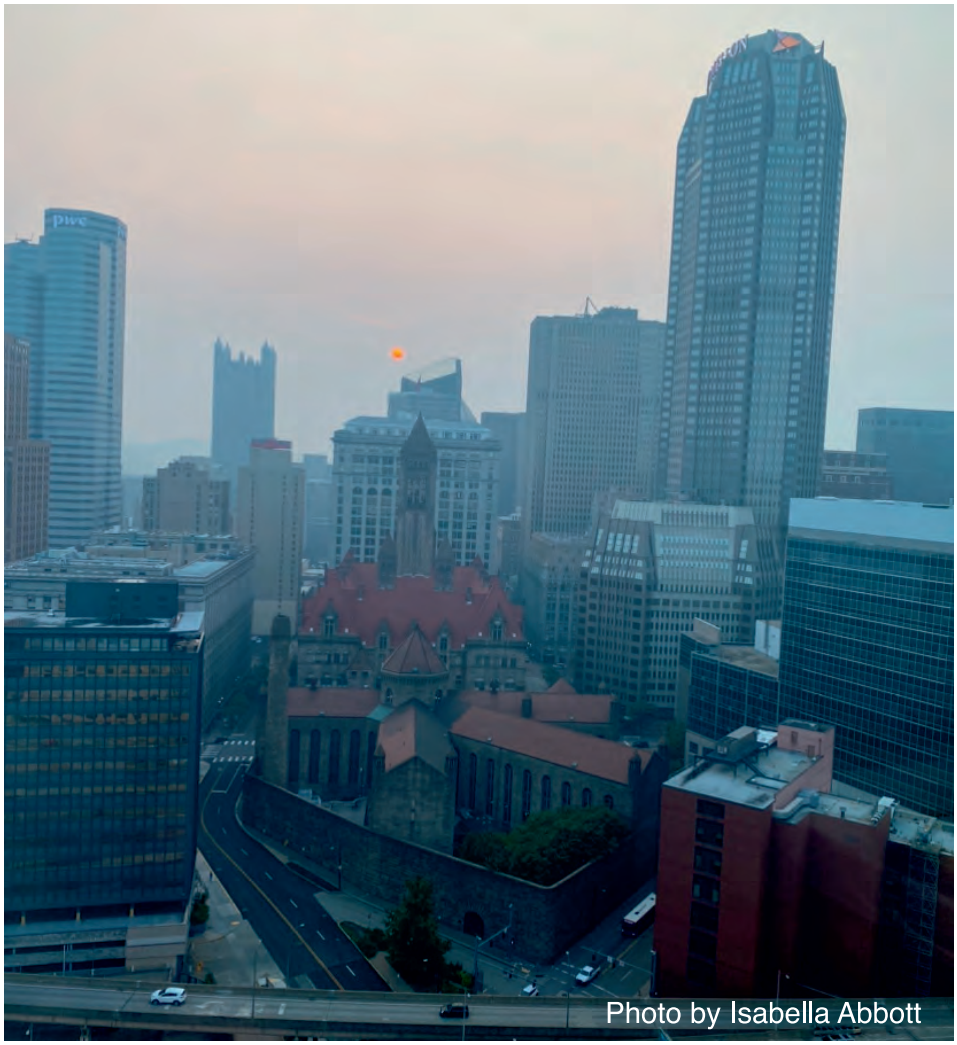

Photo by Isabella Abbott

"That's how the smoke from very far away can move to a different place or how something that's burning not that far away might not affect you at all."

Dr. Albert Presto, a professor in mechanical engineering at Carnegie Mellon University and an air quality expert, explained why the air in the city was impacted by the Canadian wildfires, but not the East Palestine train derailment, which released particulate matter, often the cause of visibility issues, into the air.

The contrasting scales of the disasters is a central part of the explanation.

Ten rail cars dumping and burning hazardous materials might seem like a lot if it is right in your backyard, but expansive wildfires affecting an entire country are a completely different story, he says.

"This tells you something about the scale of these fires, right? They were really big and lasted a long time," he says. "I think it's hard to conceptualize sometimes how big the fires can be because they'll talk about it at the end of the season."

Presto expects the city of Pittsburgh to be impacted by the smoke from distant fires as time goes on, citing a trend in the west of bigger fires at a greater frequency.

"My understanding is that, yes, this will also happen further east," he says.

This would line up with existing predictions about climate change, which includes seeing fires beginning earlier and lasting longer during noticeably hotter and drier summers, he says.

Masterson says people from East Coast states had been contacting the Department of Natural Resources' weather staff looking for information and guidance due to Washington having more experience with relative smoke.

Another Pittsburgh resident, Kevin Scott, suffers from severe asthma, and had to limit his time outside on the bad smoke days.

Scott mostly stayed indoors, leaving his home only to travel to the office he works in a few times and having to hold his breath between entering or exiting buildings and his car.

"Fortunately, I didn't have any negative physical side effects, but I knew that I couldn't really leave, or I couldn't be outside at all at that time," he says.

"I just remember my mom had called me and said, 'Hey, don't go outside, close up your windows and everything,' just you know, it'd be dangerous with my asthma to be outside."

The Canadian wildfire smoke was not something that he had expected and was a big talking point for his family.

A key part of Masterson's job as a smoke management coordinator is approving or denying the deployment of proscribed burns which are intentionally set to clear land or even prevent bigger fires later on based on factors such as the amount of particulate matter that will be put in the air and the number of acres a fire will cover, she says.

According to her, these proscribed burns, while it might sound counterintuitive, may be able to help in lessening the impact of future wildfires.

"Doing proscribed burning can really help mitigate the impact of big wildfires by either slowing it down, stopping it, creating fuel breaks to make it easier for firefighters to catch it," she says.

"Something cool about proscribed fire is that when you use it at a low intensity rate, it actually happens more cleanly, so less particulate matter goes into the air."

She also explains that a bad fire season for Canada can often be predicted from its drought conditions, and that it has been a lot drier than it usually is there.

What makes the Canadian wildfires so unique is the size, she says.

"They are huge. Like, hectares and hectares of material burning at the same time," she says.

"And they're really, really hard to contain because you can't really send people in to directly deal with it because it's too dangerous or it just is ineffective." •

Pittsburgh's New Plastic Bag Ban Promotes Sustainability

Ember Duke

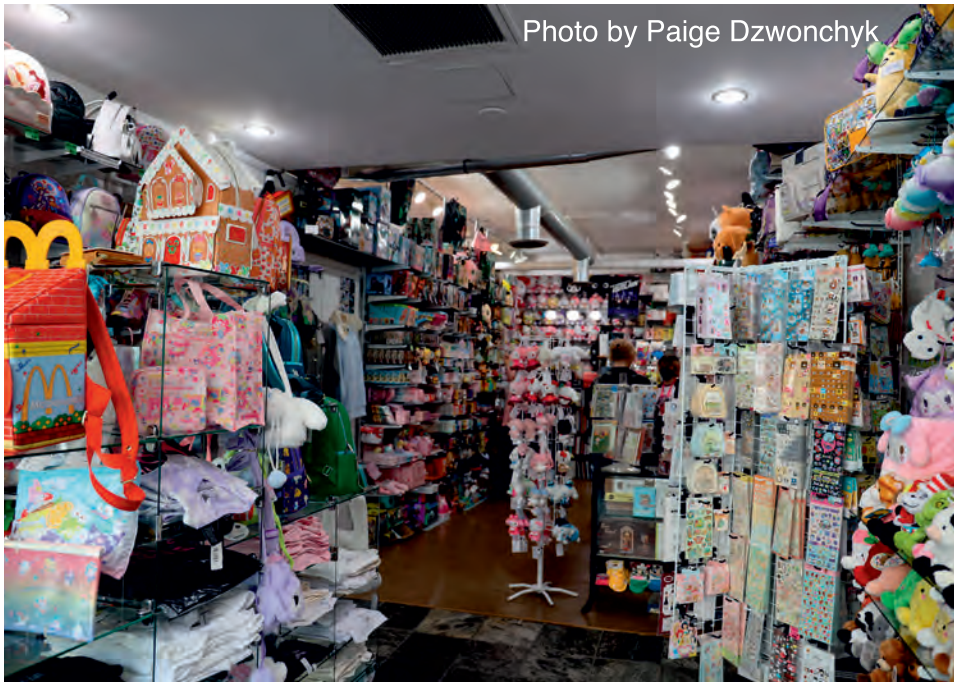
Photo by Paige Dzwonchyk

Plastic bags dance along city roads like tumbleweeds and swim through the three rivers like schools of fish.

They also have a nasty tendency to clog recycling plant gear. Their manufacturing contributes to climate emissions and they erode into microplastics that affect the health of people and animals. For these reasons, Pittsburgh's ban on plastic bags took effect on Oct. 14, 2023.

The ban requires all Pittsburgh businesses, with the exception of pharmacies and dry cleaners, to stop providing plastic bags. Merchants can offer paper bags for 10 cents to offset costs. The ban's intention is to stimulate consumer sustainability and promote reusable options.

Councilperson Erika Strassburger proposed the ban in 2021 after conducting extensive research. Her team hosted roundtable discussions with local businesses, conducted research with activist groups and studied how bag bans were implemented in other cities.

"Understanding that whether it was states across the country or cities across the commonwealth, that a ban on single use plastic bags at the point of checkout combined with a fee on paper was the biggest and sort of most effective policy to be able to encourage behavior shift towards just not taking a bag and bringing your own bag," Strassburger says.

Relying on citizen responsibility was not an effective solution because too few people would make the switch to reusable bags on their own. By mandating retailers to change, she felt the sustainable sentiment would trickle down to consumers.

"I think it [sustainability] absolutely should come first at the corporate level, I think the very last level should have to be individual behavior shift," she says.

The ban's dependence on retailer change means a shift in business for many small shops. Zaida Brooks, manager of Kawaii Gifts, a specialty shop in Shadyside, said the store used to provide plastic bags, but in April made the switch to paper in anticipation of the ban.

"My boss was more prepared than a lot of businesses," Brooks says. "We have paper bags now, but unfortunately we didn't end up working through all of our plastic bags ever."

Though many customers have begun to bring reusable bags, Brooks believes the issue extends beyond customer responsibility.

"I think that a lot of issues go farther than just consumers and it might be something to take up more with sustainability in factories and farther out, not as connected to people, but I don't think it's a bad idea," Brooks says.

For some local businesses, the ban was already a familiar practice. Kelly Sanders, co-owner of Love, Pittsburgh, a collection of shops that showcase local artists, says her business has always attempt-

ed sustainable practices.

"It wasn't really a negative impact on us because we never had plastic," Sanders says. "Sustainability has always been very important to us really the only way we are affected by it is still just having to charge for a paper bag."

Sanders believes the new law will help people be more conscious of the environment and hopes to see more sustainable change in the future. Supporting local businesses and being a mindful consumer are tantamount to the bag ban for her.

"I would hope each person would want to make the change themselves, but maybe not everybody is thinking that way or thinking about how what they do will impact the environment and those around so I think it's good to have a balance," she says. "Where there are some people who just do it and believe it and care about it and some people just need the nudge, so I think it's okay to have legislation."

To generate a new mindset, education is crucial. That's why proper messaging is the backbone of Strassburger's sustainable efforts. The bag ban was a way for her to present a seamless standard of habit change for the average person and hopefully inspire conscious choices.

"Unfortunately we are all paying the price for that now with a proliferation of waste because of unconscious consumerism," Strassburger says.

She worked closely with environmental nonprofits like Humane Action Pittsburgh, who created a statistical guide of plastic waste in PA. It stated that most rivers have been littered with plastic, that the state pays over $6.3 million annually to address litter and included surveys of other demographically similar cities to Pittsburgh that are benefiting from plastic bans.

In his new position as program manager for Humane Action Pittsburgh's plastics collaborative, Darrell Payne, is excited at the sustainable prospects for the city. The non-profit has intentions of expanding the bag ban outside the city, creating educational workshops for the community and potentially introducing a styrofoam ban as well.

"We definitely need the legislators because they're going to help us with the laws and the corporate will help us with the funding and consumers will help with the usability," Payne says. "So, I think by combining all three together we can really move the needle on this reduction and eliminating plastic use within the environment."

The bag ban is meant as a first step in promoting consumer sustainability to preserve a clean environment for the future.

"I think it'll benefit the community in the next generation, I don't know if we are going to see an immediate benefit other than helping the community kind of adapt with this change," Payne says. "I'm hoping to have the consumer awareness education as a short-term goal and the change to the environment as a long-term goal, I think that's what realistically we're looking at."

It took two years of research and presenting to finally get the ban passed in January 2022. Some of the pushback was due to a lack of education on the effects of waste.

"We can get in front of those wrinkles by ensuring that the public is more aware of why we are doing this," Payne says. "I think if we take it from a standpoint where plastic is impacting everything from the water, to the food, to the environment, and once we educate consumers on that I think they'll buy into it, at least I'm hoping they will."

In time, when communities see less waste littering their streets and they adjust to the change, Strassburger also feels people will be grateful for the bag ban. The long-term well-being of city residents is her main focus, which is why she advocates for integrated sustainability and environmental education through small lifestyle changes like the bag ban.

"I know that even though there are people that may dislike this now, future generations will benefit from this having gone into effect and that's who I'm most concerned about," she says. •

Teaching Climate Change

Camille Agie


Photo by Paige Dzwonchyk

Melissa Diaz is one of only a few environmental science teachers in the Pittsburgh Public School District.

"I declared myself an indoor environmental scientist, which I thought was kind of cute," Diaz says. "I'm like, you can be cute and study these things."

Climate change can be a dicey topic to explore with students. Climate change falls under Earth Science Standards, which are written by the state. In January 2022, the state board of education was given new standards for technology, science and environmental literacy and sustainability. It was the first time since 2002 that science standards were updated in Pennsylvania.

According to the Pennsylvania Department of Education, these new science standards are aligned with current research and practices in science education.

In teaching within those standards, teachers like Diaz have to balance teaching about climate change without scaring their students half to death.

"I want to say this almost falls under the concepts of critical race theory, where it's states entirely denying the facts and truth," Diaz says. "So especially in Pennsylvania, it has very powerful cultural connections with things that are anti-environmental science. It's one of those things that have been politicized in our country."

Pittsburgh has a long history of not being environmentally friendly. It was once named, "The City of Smoke" due to the smog from steel mills that filled its neighborhoods. The rivers were also used as a disposal for sewage and trash and became severely contaminated.

But when Diaz talks about troubling topics like smog and global warming, she only needs one piece of material – and that is data.

"God, it's tough data," she says. "So, it's like you break it down and I think once you have data you can't necessarily argue with it. So, my goal for students is because many of them might have grown up being told 'oh, global warming, well it's snowing.' I try to get them to draw their own conclusions. Knowing that data is data, and it will show you what is clearly going on."

Data: A small word that holds a lot of weight. Data is important in observing climate systems and detecting climate change.

Abigail Carroll is an assistant teaching professor at Pitt in the geology and Environmental Science department. Although she is teaching older students, like Diaz she presents her students with data when teaching her class.

"Everything I share with my students is based on evidence," Carroll says. "Instead of giving them my opinion on how we should do things, my method is to give them case studies of how we've solved environmental issues in the past. The students can draw their own conclusions on whether that was a successful method."

Brodie Bard, a junior at Pittsburgh Science and Technology Academy and a student in Diaz's class, started learning about environmental issues in high school. "Sophomore year, in E&E, was the first class dedicated to discussion and constant recognition and lessons," Bard says.

Now that he is a student in Diaz's class and discussing climate change and similar issues on a more frequent basis, does he ever feel scared? Just the opposite: He says he feels a sense of empowerment.

"Personally, I do not find myself fearful or scared discussing climate change or negative aspects of the environment," Bard says. "I believe it is empowering to recognize both the good but also the bad. Recognizing what we, as humans, are doing wrong may inspire one to take action in their own life to address their impact."

"However, as the media usually does, I do not think it is as powerful to solely focus on the negatives that skew our perspectives and blind us to the good that is actually occurring. In our society, it is very easy to ignore the positives because of our culture and how the world runs."

Curtis Moore, also a junior at Pittsburgh Science and Technology and a student in Diaz's environmental science class, agrees that climate change is a topic to be understood not feared. Especially since it's full effects won't be felt for some time.

"I probably won't be alive by the time it's taken its full effect," Moore says.

Both Moore and Bard say it's important that class discussions about climate change focus on facts and solutions rather than fear.

"With older students, like us in high school, education on why certain events are happening rather than just explaining what it is, like what may be done in lower grades, is important," Bard says. "Younger kids may not be able to fully understand concepts like capitalism, corporate greed, environmental justice, etc. whereas high schoolers are able to grasp the concepts. Learning the root problems opens the door for solutions."

Diaz feels a huge moral responsibility when teaching climate change and environmental issues to her students. "I think normalizing the conversation is helpful," she says. "I think being honest, defaulting to data and letting them draw conclusions. Letting the students know what they can do to feel empowered."

Topics like climate change and global warming have been more prevalent in the media than in the past five, 10 or even 20 years.

So, where do both of these teachers see the future of environmental science as it pertains to education? Carroll predicts that more people will be teaching and talking about environmental issues.

"Based on my experience here in the Department of Geology and Environmental Science at Pitt, I've only been here for two years at this point, and in just the short amount of time I've been here, the environmental side of our department has expanded," Carroll says. "And it's only growing. I feel like, there is a growing interest in environmental science as it pertains to climate change and the trickle-down issues."

Carroll and a colleague just introduced a new climate change course that non-science majors can take. "We are going to talk about climate change, the science of climate change. I guarantee you there's going to be a waitlist. We eventually will probably have this course every semester," Carroll says.

Similar to Carroll, Diaz is hopeful for the future of climate change, "I feel hopeful. No generation of human beings ever talked about mental health and look at the changes that are happening," Diaz says. "I feel hopeful if we can get the youth passionate about these changes, that it'll be a fast and somewhat effortless thing."

Discussing mental health was once taboo, similar to the discussion of climate change, but today mental health is a normal topic and integrated into our everyday life.

"I think trying to create a class as an environment where my students respect my opinions on things, respect what I have to say. Focus on their learning versus busy work so that these things kind of settle in," Diaz says. "And I do have hope that you know, down the road, I won't have to teach what climate change is. I'll instead be teaching like, here's what we can keep doing, here's innovations, here's what are your new ideas. Kind of almost treating it more like a problem-solving course." ●

THE PHIPPS: Educating a new generation

Giona Ciacco

Photo by Megan Trotter

Phipps Conservatory, a beautiful botanical garden located in Pittsburgh's Schenley Park, was built as an oasis for late 19th Century steel workers. Now, 130 years later, Phipps is educating a new generation of environmental leaders.

Phipps' mission is, "to inspire and educate all with the beauty and importance of plants; to advance sustainability and promote human and educational well-being through action and research; and to celebrate its historic glasshouse."

More than a half-million visitors experience this mission each year.

Duquesne University alum Maria Wheeler-Dubas serves as Phipps' Science Education Outreach manager and believes appreciation of nature is the first step toward education.

"When you have a wonder about something, then that builds curiosity and curiosity inspires you to learn more, when you learn more you ultimately respect and maybe want to protect our natural world," Wheeler-Dubas says.

Wheeler-Dubas says her job is to connect the community to science and nature, through her coordination and teaching of different programs and workshops. There are programs for all and a wide selection of topics, including biophilia, which emphasizes an innate love of nature and our interaction with it.

"We have this pipeline of programming so that no matter what age you are there's somewhere you can fit in and there's somewhere that you can plug in and start making a difference," Wheeler-Dubas says.

Phipps' young adult program, the Youth Climate Advocacy Program, allows students who are passionate about the climate to complete projects with peers based on their interests. In addition, Phipps offers local industries a "climate toolkit" to help them address specific climate goals. Phipps has even sent staff members to the United Nations Climate Talks.

"We're trying to get up at the forefront of conversations about climate policy and what the world is doing about climate change," Wheeler-Dubas says.

Phipps operates under the belief that research is incomplete unless shared with those whom it impacts. Its programming puts great emphasis on science communication with the aim of helping scientists make their work easily accessible to a broad audience.

"Our goal is just to help a scientist who is an expert in one area make their work more accessible to someone who's an expert in something else," Wheeler-Dubas says.

Phipps' programmers are quick to point out they don't "dumb down" information for the public, but rather make it more accessible.

Phipps' history has shaped its future. The design of its original greenhouse is the "best example of the worst way to do something," Wheeler-Dubas says.

The original greenhouse wasted both energy and water – it was the opposite of a sustainable building. Over the years, the greenhouse and other buildings have been refurbished to make them sustainable.

According to Phipps' Interpretive Manager Adam Haas, the Center for Sustainable Landscapes, which houses classrooms and most offices, was only the seventh building in the world to be certified a "living building." This designation from the International Living Future Institute means the building is designated as NetZero energy. Energy is sourced from solar panels, and any water that falls on the building or leaves it is processed on site and reused.

The botanical garden has been given six awards this year including "Leadership in Green Power Education" from the United States Environmental Protection Agency and Center for Research Solutions. The Center for Sustainable Landscapes, Production Greenhouse and Exhibit Staging Center have all been given platinum certifications, the highest rating.

As interpretive manager,

Haas connects and educates guests by writing signage and giving tours.

"It's not just telling them information but helping them craft an experience for themselves that is meaningful," Haas says.

Phipps aims to change the mindset of guests and shift their behavior because those who don't feel a connection to the natural world don't feel a need to care for it. Its newest exhibit, "Tropical Forest Hawai'i," looks back at Hawaiian indigenous land management practices to see how we can learn from their ecosystem to enhance our own lives, Haas says.

Amalia Lombardi, a visitor at Phipps, said the Hawai'i room made a big impression.

"They talk about the science of plants really well and our impact on the environment a lot throughout without 100% being like, oh, humans are awful humans are the problem. It's like, oh, here's what we can do to help," Lombardi says.

That's the reaction that pleases Wheeler-Dubas.

"We've really elevated the conversation around what a green building can be and what it can look like. It doesn't have to be gloomy and old fashioned, it can be beautiful, and it can be a healthy space for occupants, whether you're an office worker or if it's a home," she says. "You know, it can be a beautiful place to live."

Phipps isn't only about education. If visitors are looking to make family memories or to relax, Haas says that's okay too. As Edie Slezak, Phipps volunteer of 13 years says, "you can't be sad when the flowers are blooming." •

Photo by Megan Trotter

Photos by Megan Trotter

Photo by Eliyahu Gasson

How the Healthcare Industry Practices Sustainability

Eliyahu Gasson

Not long ago, the skies over Pittsburgh were blanketed with smog caused by the heavy manufacturing that lined the region's riverfronts.

The dominance of steel manufacturing in Pittsburgh's economy is now in the past. Focus has shifted away from heavy manufacturing in favor of the medical industry and healthcare services led by the University of Pittsburgh Medical Center and Allegheny Health Network.

But while the skies above the city are cleaner now, Pittsburgh's new flagship industry comes with its own set of environmental issues: According to a study published by the Journal of Advanced Nursing, the healthcare industry is responsible for 4%-5% of all greenhouse gas emissions worldwide.

UPMC, the largest private employer in the Pittsburgh region, says that it's aware of the pollution the industry creates and that it is working to mitigate its own impact on the environment. The non-profit established a Center for Sustainability in 2022 after signing onto an initiative led by the White House and the United States Department of Health and Human Services that vowed to lower the industry's greenhouse gas emissions by 50% by the year 2030 as well as to achieve net zero emissions by 2050.

Holly Vogt, UPMC's senior director of sustainability for UPMC is the first person to hold that position since the Center for Sustainability was created last year. Vogt says the center is implementing a number of initiatives to lower its greenhouse gas emissions.

"We actually have a bunch of initiatives that go everywhere from transportation to the operating rooms," Vogt says.

According to Vogt, UPMC has already cut back on the use of polluting materials like styrofoam in their hospitals' kitchens and are currently analyzing the food it serves to patients such as red meat the production of which is harmful to the environment.

Vogt also says that UPMC gives its employees the opportunity to make suggestions on more ways they can limit their environtal impact.

"Being able to hear what the employee feels is a possible solution or what they feel most motivat-

ed to work towards has been really exciting," Vogt says. "We've added forms where any employee, whether you're in EVS (environmental services), food and nutrition or transportation, if you have an idea, you can submit that to the Center for Sustainability."

The goal, says Vogt, is to tackle the issue of greenhouse gas emissions from a "triple win standpoint."

"One, we look at what is impacting our patients," she says. "Two, it has environmental impact and lastly, what does it do from a cost initiative? When we buy locally or produce locally, there's less greenhouse gas emissions from transport."

UPMC's website boasts that it has recycled more than 40 tons of appliances and equipment over the last five years. According to Vogt, UPMC works with the Pittsburgh based non-profit Global Links to donate and distribute their surplus medical supplies and equipment.

Angela Garcia, the executive director of Global Links, says the agency receives surplus items from many different sectors of the medical industry.

"Our main sources of medical surplus are U.S. hospitals, senior care facilities, physicians' practices, universities and consumers from the home care sector," Garcia says. "Everything from crutches after you're no longer in need of them to a lot more complex item."

Once the surplus supplies are collected, Global Links volunteers assess its quality and pack it up to be sent to areas that need it most. The organizations supply medical facilities in Cuba, Bolivia, Nicaragua, Haiti and Honduras according to Kelly Schlick, program manager of volunteer engagement at Global Links.

According to Schlick, Global Links has over 5,000 volunteers who, in 2022, spent a combined 17,000 hours working for the non-profit.

Global Links operates a 58,000 square foot warehouse filled from floor to ceiling with old donated medical equipment and furniture. Hospital beds waiting to find a new home are covered in dorm mattresses donated by Duquesne University.

During a recent visit to the Global Links warehouse, a reporter watched a group of volunteers dumping large blue pull-string bags filled with medical supplies including masks, syringes and bandages. The group sifts through the supplies, assessing its quality before packaging it in plastic bags and placing it on the appropriate shelf.

"We receive a lot of plastic bags," Schlick says. "We reuse all of them when we pack our products."

Recipients of Global Link's products then reuse the plastic bags for storage, according to Schlick.

In another room labeled "wheelchair wranglers" volunteers were collecting parts off of broken wheelchairs and repairing others.

"We have five dedicated volunteers who each come at least once a week," Schlick says. "We refurbish wheelchairs. And even if a wheelchair could not be refurbished, we would pull it for parts and use it."

According to Garcia, Global Links reuses and redistributes between 250 and 300 tons of material every year.

"That allows us to re-equip or refurnish hospitals that were potentially hit with things like hurricanes," Garcia says.

Garcia says that a Global Links calculator that keeps track of "lives impacted" shows that 300 tons turns into about 1,000,000 lives improved through the use of surplus each year. Global Links warehouse in Pittsburgh that, according to Garcia, is run entirely off of solar power.

"We generate all our own energy through our solar array," Garcia says. "So, it's a part of everything we do, weaving the environmental and the humanitarian."

Garcia says that she wants to see more consideration put towards how the medical industry treats its surplus, not only to promote sustainability, but also to improve lives.

"We have a responsibility to not take the easy discard, it's easy to throw things away here," Garcia says.

"It's easy and cheap to throw things away here, but if my dearly departed grandmother's wheelchair is in in great condition, why should I throw that away when it can be reused and distributed to a neighbor that doesn't have one and completely changes their quality of life?" •

Photo by Isabella Abbott

Sustainability and the Power of Public Art

Travis Barkefelt

Pittsburgh is a city of the arts, from performances and paintings to public art. An often-overlooked facet of public art, however, is the role it can play in sharing an environmental message.

The purpose of public art is to enrich a community by making art accessible. The public art in the city of Pittsburgh is coordinated by the Office For Public Art. In 2021, it introduced the Environment, Health and Public Art Initiative, part of OPA's Civic Engagement Public Art Program, which featured works that focused on soil, air and water pollution.

The first version of the Initiative was responsible for the creation of three pieces of environmental art, the first of which, "Nine Mile Run Viewfinder" by Ginger Brookes Takahashi, involves several installations in Wilkinsburg.

Each installation features an ADA compliant metal grate, allowing viewers to view and reflect on the water beneath their feet. Each is accompanied by a short poem that can be accessed on the website.

The second installation, concerning air pollution, "How Did This Happen?" by Aaron Henderson consists of a series of projections displayed in various communities that consists of words accompanied by audio of community members sharing their stories.

"Dirt is Beautiful" by Mary Tremonte is an interactive multipart work that promotes soil health awareness and education. Consisting of Dirt Tales, a zine and SHEd, a mobile garden event resource cart containing information and materials to set up community gardening events. Dirt is Beautiful also promotes the creation and awareness of city gardens.

Divya Roa Heffley, director of the initiative, emphasized OPA's core tenets. "We believe artists are catalysts...change agents, that have the power to build awareness, to build advocacy," she says. "We also believe that community members are powerful voices of change. They are experts in their neighborhood and what matters to them most."

Part of what makes Public

Art special is its ability to speak to the culture of a community. The Duquesne Ring sculpture on campus is one example. The ring, an icon of the university, is also presented as a point of pride and admiration for viewers, and presents a way to connect to the culture of community Duquesne seeks to cultivate. "We believe the most powerful works...come into being because they speak to the people who have to live with it," Heffley says.

"We do an open call for organizations and for [this] Initiative, it's organizations that have environmental health at the heart of their mission"

OPA Research and Events Associate Tess Wilson says that when choosing organizations, it's important to keep an open mind. "They weren't all art organizations, one of them...was the Pennsylvania Department of Environmental Justice," she says.

In addition to blending academia and art, OPA puts considerable effort into working with diverse organizations that represent the project's goals and the communities that would host the art.

"[We wanted] to make sure all the regions are well represented...more that we aren't picking three organizations from downtown." Heffley says.

Through the work done in both editions of the Initiative, the lives and lived experiences of the communities OPA works with are always top priority.

One major goal of the work is to be "additive, not extractive, not even in the smallest way." Heffley says, which emphasizes that OPA's work should make community members feel they are part of the process, and not subjects to be studied and then discarded.

Independent artists also have a role to play.

Originally from Los Angeles, artist and community member Christine Wheeler creates unique pieces by utilizing objects found in nature such as plants and animal remains.

"My art is dead things." Christine says. "I make art with ... anything that's biologic."

Wheeler explained her art primarily consists of plants, teeth, claws and even bones. Nothing is off the table ... if it can be found.

"I will never kill something ... to make art with ... if I find something [dead] ... I'll give it a proper burial so that the remains go back to the Earth and work as fertilizer." Sometimes, after the animal has fully decayed, Wheeler will come back to collect remaining material for her art, often jewelry or dioramas.

"Artwork is supposed to have a positive impact," Wheeler says. "When working with art sustainably, you're making a positive impact on people who see your art and the environment. I don't think that art ... can be called art if you're making any kind of negative impact."

Elizabeth Dawn, a multimedia artist, also has performance and writing credits to her name, with her current project being editing her memoir and working on her personal site, "Memiortisrty." When working in visual mediums, Dawn employs the Three R's: Reduce, Reuse and Recycle.

"I get a lot of used books and I'll cut them up and put them into my work," she says.

Dawn emphasized that being aware of how much one uses is just as important as what one uses. "I'm very particular about how much paint I use, and I don't buy what I don't need."

This allows Dawn to create with a cleaner conscience, and it's more cost effective to be sustainable. "I know people don't want the starving artist thing to be a thing, but it is...and so what has allowed me to continue progressing in my art is getting really creative with what I have."

Public Art is essential for the overall feeling of a community. According to Dawn, "it gives a sense of community, and there's a welcoming feeling about it... when I don't see [public art] then I typically don't feel safe in a community."

Wilson, of the Office of Public Art, agrees: "Art can reach into parts of humanity that research and data can't necessarily on its own."

Editor's Note: All information on work and artists involved with Environment, Health, and Public Art Initiative courtesy of OPA's website. More information is available at opapgh.org. ●

Photo by
Isabella Abbott

Pittsburgh Ranked Among Worst Metro Areas in U.S. for Air Quality, According to Recent Report

Andrew Cummings

Pittsburgh traces much of its success to the steel industry that once dominated the region, employed countless people and created an economic boom. But the industry wasn't all good. With the jobs and economic growth came pollution more specifically, air pollution. Older residents can often recall the days where people would have to change their shirts partway through because of the smog that would accumulate on the fabric.

Pittsburgh has since moved away from a steel-based, industrial economy. There are now countless medical and educational facilities throughout the region, with The University of Pittsburgh being the largest non-governmental employer in the city, according to pittsburghregion.org. UPMC is the largest non-governmental employer in Western Pennsylvania, with more than 92,000 employees, according to the same report.

One might assume that with this shift in focus from steel production to "eds and meds," the city's air quality troubles would have dissipated. However, Pittsburgh is ranked among the 25 worst metro areas in the United States for air quality, according to a 2023 report by the American Lung Association.

Duquesne University student Andrew Kamis, an asthma sufferer, said that in 2023 air quality made his condition much worse.

"When my oxygen level was low in my body, the nurses here had me step outside to the city because they wanted me to get fresh air. They thought that would help my body with the oxygen level, but it actually did the opposite," Kamis says. "It made my oxygen level dip down really low. And because of that they had to take me to the hospital."

Kamis pays close attention to air quality ratings. He sometimes wear a mask when the air quality is especially poor, and he uses an inhaler. He stayed inside when the Canadian wildfires infiltrated the region.

Dr. Phillip Reeder, a professor in the Center for Environmental Research and Education at Duquesne University, says that air pollution

in Pittsburgh can be contributed to a variety of factors, including industrial holdouts.

"We're the steel city for a reason. Historically, Pittsburgh had really bad air quality, because of the industry associated with Pittsburgh," Reeder says.

He specifically mentioned the coke batteries in Clairton as a major polluter. This plant has been embroiled in controversy over its emission levels, and has clashed with Mon Valley residents and the Environmental Protection Agency.

Other major polluters include cars and lawn equipment, both devices that make use of combustion engines.

"The big polluter now is mostly automobiles, and automobile exhaust," Reeder says. "The amount of gasses that are coming out of an automobile as part of the combustion process has been decreased through time as well, with the creation of the catalytic converter that cars have now to reduce the amount of gasses that are coming out of the tailpipe."

A recent PennEnvironment study details the high amount of air pollution caused by lawn equipment in Allegheny County, and Pennsylvania more generally.

In 2020, gas-powered lawn equipment in Allegheny County generated more than 100,000 tons of air and climate pollution — more than 1 million cars. The study ranks Allegheny County as the 49th-worst county in the U.S. for "fine particulate pollution emissions from lawn and garden equipment," and second-worst in Pennsylvania. The Keystone State ranks fourth-worst in the country.

The alternative to these combustion-based tools is to switch to electric-based ones. Electric lawn equipment may sometimes cost more up front, but consumers can save money over time through lower operating costs, according to PennEnvironment. Users don't have to buy gasoline, for example.

Reeder is not convinced that electric cars are currently widespread enough to make a significant impact in Pittsburgh.

"If you think of all the cars that come to, go through, move through Pittsburgh in any one day, probably a very small percentage are hybrid or electric," Reeder says.

He adds that increasing the use of public transportation in Pittsburgh is one way air emissions from cars can be reduced. He personally uses the Light Rail, commonly known as "The T," to commute to Duquesne University from the South Hills.

One feature that is somewhat unique to Allegheny County is its topography. Situated in the Mon Valley, Pittsburgh experiences worse air circulation than other regions in the U.S., according to Reeder. This exacerbates the other air quality problems in the area.

"The air gets trapped down in the valleys, sometimes by a process that's called inversion. It happens in places where you have distinct changes in the landscape," he says. "A lot of time the air kind of, quote unquote, gets stuck in the Pittsburgh area. It's not being recycled by natural atmospheric processes, it's staying, it's here for a while."

Dr. Faina Linkov, department chair of Health Administration and Public Health at Duquesne University, says poor air quality can have detrimental health effects.

"Pittsburgh traditionally has been rated really poorly on the air quality," Linkov says. "That affects people from multiple vulnerable groups, including the children, the elderly, individuals who are pregnant, individuals with underlying conditions such as asthma."

The study from the American Lung Association points out that air pollution disproportionately affects people of color:

"Out of the nearly 120 million people who live in areas with unhealthy air quality, a disproportionate number – more than 64 million (54%) – are people of color," according to the study.

Linkov says individuals can reference the air quality index to determine the air condition in their geographic area. On days where the quality is particularly bad, it may be a good idea to stay indoors. ●

Eco-Friendly Options are not Always Economical Options

Amanda Riisen

As you turn on the news, you are met with numerous reports about the deteriorating state of our environment. To do your part to limit the problem, you find yourself in the grocery store shopping for eco-friendly options.

Then you are stopped in your tracks when you see the price tag. The shocking realization hits you: being eco-friendly is out of your price range.

A study by Kearny, a Netherlands consulting firm, found that green products cost 75-85% more than conventional products. If someone is already struggling to make ends meet, this extreme price difference eliminates these alternatives as options.

For many consumers, the most important thing is to find what they need at the cheapest price possible. Being sustainable is becoming increasingly important but doing so can feel impossible. To improve the state of our planet, improving the accessibility of sustainability is crucial.

Elise Wynn, a recent Carlow University graduate and full-time nurse who just bought a house, struggles with the sustainability-cost issue constantly. For her, spending money wisely is essential to successful starting a career and building a life.

"I try my best to go with the eco-friendly option as much as I can, but sometimes, with the price, it just doesn't make sense for me," Wynn says.

The upfront cost for eco-friendly products is a major deterrent. If the organic version of laundry detergent is $2 more, especially given the recent rate of inflation, budget-conscious consumers like Wynn are probably going to go with regular detergent. As much as they might want to help save the environment, the reality is that saving money tops the priority list.

"With all of the bills that I have to pay, I can't afford to pay for something so expensive," Wynn says.

Allison Rousu, an Information Systems and Technology student at Duquesne University, studies consumer trends. She has found that a large part of the reason why someone would opt for a mainstream product over a sustainable one has a lot to do with advertising.

"Eco products are marketed toward those who are wealthier. A lot of it is community-based. Convenience is the bigger concern when you are lower income," she says.

Sustainability isn't a luxury that lower income people can think about as much as the wealthy can. With a more expensive cost upfront, it can be difficult to convince people that the sacrifice is worth it.

The upfront cost is only half of the story though. Choosing eco-friendly options is often an investment. It costs more initially, but saves money in the long term. If you buy a reusable water bottle, the initial purchase will cost more but you will cut down on the cost of continuously buying plastic. By installing solar panels, you cut down on the cost of electricity. The difficult part though is convincing people to make the initial investment, says Debbie Horan, a facilities administrator at financial services firms SEI.

"It takes baby steps," Horan says.

SEI has taken steps in recent years to incorporate more sustainable practices into its business. Horan has been a leader in this process, pushing for these changes. While it is easy to convince consumers to switch to paper straws or reusable containers, it is much harder to convince a company to make bigger changes.

"You have to have the highest level of a company's buy-in," Horan says. "That's hard to do unless you're talking to someone who is really passionate about the issue."

Jane Holt, director of sustainable solutions at SEI, says the best way to approach the issue of sustainability is by reframing people's perspectives.

"You have to be creative about it," she says.

While many businesses are concerned with upfront costs, choosing sustainability is beneficial in the long run. Coming at it from this perspective can help people feel and respond differently to the issue. Even when there are sustainable options that are too expensive to opt for, there are still things that we can do to make a difference.

"We sometimes forget about the behavior side of things. There are a lot of little things we can do to be more sustainable, like considering food waste or the clothes we wear. It doesn't have to be all or nothing," Holt says. ●

Thrifty Pittsburghers Are Breaking the Cycle of Fast Fashion

Brooke Massaro

When the phrase 'fast fashion' comes to mind, many think of websites with stylish, cheap clothes. Seems like a dream come true, right? The reality of the fast fashion industry, however, is much darker.

How dark? Picture landfills piled with metric tons of discarded clothing and impoverished wage slaves laboring in humid and filthy factories with no end, or payment, in sight.

However, the fashion community in Pittsburgh is attempting to make a dent in this environmental crisis, one clothing garment at a time.

What is 'fast fashion?'

Fast fashion is the mass production of popular fashion trends that are offered at low cost to consumers. Retailers like Shein, Forever21, Romwe and Cider are leaders in fast fashion.

One problem with fast fashion is that with mass production and high consumption rates, the workers who are making the clothes are often overworked. According to Fashion Checker, a hub for fast fashion statistics, 93% of brands surveyed are not paying garment workers a living wage.

Another major problem that the fast fashion industry evokes is waste production. According to the website Sustainably Kind Living, "100-500 billion garments are produced every year. It's estimated that over 60% of these garments are discarded within the first year." This is wastefulness by design. Fast Fashion is a vicious cycle that calls for the consumer to constantly change the items in their closets to keep up with trends.

Not only is the action of constantly modifying their wardrobe detrimental to the consumer, but it is also detrimental to the environment. According to Sustainably Kind Living: "Clothing production is the third biggest manufacturing industry after the automotive and technology industries. Textile production contributes more to climate change than international aviation and shipping combined."

While the fast fashion industry offers cheap and easy fashion choices there are alternative ways to shop while saving money that can also help the environment.

Thrifting: The Popularization of Thrift Stores

Shopping at a thrift store, or thrifting, can help consumers reduce their carbon footprint.

Julie Lang, an administrative assistant in the Office of Residence Life at Duquesne University, says one of the reasons she started thrifting is because of the prices at retail stores.

"I was buying a lot of my clothes at retail stores off the sales rack," she says. "When I started thrifting, I started to find a lot more things that fit my style for even less money."

Lang, an avid cosplayer, finds that thrifting helps tremendously with putting together outfits to fit certain characters.

"I'll go in for specific pieces at thrift stores I know a lot of the times carry the items that I'm looking for," she says. "Usually, I can find the items I need without too much strife."

Thrifting has also allowed for Lang to curate a more personal style. "I've made way more of an effort to get pieces that I actually like rather than what's trending at that moment," she adds.

University of Pittsburgh sophomore Sarah Scanlon says shopping at thrift stores has enabled her to develop a sense of style that is unique to her, rather than what society deems as popular and trendy.

"I think thrifting has made my style more individualistic," she says. "Maybe that's my ego getting in the way, but I like it when my clothes have more of a story and history behind them. It makes them feel unique."

Pittsburgh Creators Are Trying to Make Sustainable Fashion Accessible to All

There is a growing community of designers in Pittsburgh who are not only creating sustainable clothing for their own use, but also making sustainable fashions available to others.

Photo by Isabella Abbott

Rebekah Joy does not consider herself a fashion designer. She thinks of her work and her business, Flux Bene, as "a solution to the problem of fast fashion and the global garment industry."

Flux Bene's mission is to "upcycle discarded secondhand garments into pieces that people are excited to wear again." Every piece made by Flux Bene is gender neutral, made with minimal waste and is one of a kind.

When starting Flux Bene, Joy was very conscious about fulfilling her personal creative endeavors without contributing to the problem of creating unnecessary waste.

"It was really important to me to not consume more because I am producing things," Joy says.

Everything that Joy uses to make Flux Bene pieces are secondhand, with the exception of thread.

"I want to recognize and honor all of the human effort that goes into making these garments," Joy says. "With our work, I feel that instead of destroying the effort that goes into it, I feel that we're honoring it by keeping those elements and allowing them to be used longer. It makes me feel like I'm doing something worthwhile."

Richard Parsakian, owner of Eons Fashion Antique in Shadyside, prides himself on making his store a safe space for people to explore fashion in a sustainable way.

Eons Fashion Antique on Ellsworth Avenue uses every inch of space to accommodate clothing suitable for every occasion. Many flock to Eons' large selection for costuming needs, or to simply buy vintage clothes for their own collection.

Parsakian says his mission is to respect the earth and celebrate the reuse of products and what they offer.

In addition to his participation in numerous advocacy and volunteer programs, Parasakian is the curator of Ecolution, a fashion show in Pittsburgh that showcases sustainable, recycled and organic couture designs. This event also includes performances by local performing artists, including elements of dance and drag.

Ecolution takes place during Pittsburgh Earth Day; Parasakian is a board member of the organization.

"I touch on all of my communities to bring together a show, and we try to elevate the discussion of what sustainability is," he says.

Parasakian adds that a large part of knowing how to shop for clothes in a sustainable way is to have a personal sense of style. This way, pieces will last longer in someone's wardrobe rather than being thrown out after little usage.

"People always comment on my look, and I tell them that I didn't buy anything on me firsthand – except my underwear," he says.

Change is Possible, One Shopping Trip at a Time

Although the idea of shopping and curating a wardrobe to be sustainable seems daunting, there are many people in the Pittsburgh community that are doing it all the while fighting the trend of fast fashion. Rebekah Joy says this is one of the main focuses and personal goals of her business.

"We spend so many hours of our lives working, and it's incredibly important to me that those hours are spent doing something important rather than pointless." ●

Photo by Isabella Abbott

Climate change is more than a crisis, it's a battle. And a variety of environmental generals and soldiers are fighting it on the front lines.

INITIATIVES

Photo by
Isabella Abbott

To Everything a Season? Climate Change Begs to Differ

Josh DeLia

Mary Sparico remembers the days when her young son spent the winter sledding and building snowmen.

Years later, things aren't the same.

"You don't even have enough snow to build a snowman," Sparico says.

Sparico grew up in McKeesport and now lives at The Oaks Retirement Residence in White Oak. She and fellow residents have noticed changes in the traditional four seasons, including a lack of snow and shorter periods of colorful fall foliage.

Sparico remembers winters being much more "brutal" when she was young and walked to school in cold and snowy conditions.

Pennsylvania State Climatologist Kyle Imhoff and his team collect and publicize weather and climate data as well as identify trends based on findings from the past 30-50 years.

While Imhoff does not have all of the answers, he is knowledgeable on certain aspects of how the traditional four seasons have been changing over time – and

will continue to.

"There's a noticeable trend in the data," he says.

Imhoff has found that each season has gotten about one degree warmer per century, except for winter, which has seen rises of two degrees in the same amount of time.

The most direct implication stemming from this is that it no longer gets as cold during the night, which likely contributes to fewer days of snow, and to the snow sticking around for less time, he says.

The upward trend of rising temperatures started in the late 1970s. However, it was not recognized until later, as scientists originally believed the Earth to be cooling, Imhoff says.

"Really since the late 80s, early 90s, that's when we've sort of become aware of this idea of global warming and climate change," he says.

In addition, rainfall has increased, particularly in the fall.

"We actually average about three to four inches of precipitation per month," Imhoff says. "So basically, for that same 3-month period of time, we're now getting an additional months' worth of precipitation of what we would have gotten in the early 1900s."

Imhoff mentioned that since the nights are not as cold in the spring and the fall as they used to be, growing seasons have seemingly gotten longer. However, while there are benefits to this – such as the possibility for farmers to grow more diverse crops – there are also concerns.

"Warm and wet weather can lead to disease growth, fungus that grows," Imhoff says. "So, while you may be able to grow for a longer period of time, you start introducing things that will potentially hurt your crop growth."

Dr. John Stolz, a professor of microbiology and the Director of the Center for Environmental Research and Education at Duquesne University, echoed Imhoff's comments about rising temperatures.

"Statistically, 2023 is probably going to be the hottest year on record," he says.

While he is unsure whether that will be the case for Pittsburgh in particular, he is positive it will be true globally.

A large contributor to the changing climate has been human activity, Stolz says.

Over the past 200 or so years, due to population growth, industrialization and catastrophic forest fires, like the Canadian fires that blanketed North America with smoke in 2023, C02 has been dumped into the atmosphere at a rapid pace.

"We are emitting CO2 at an increasingly high rate every single year. So, that no doubt plays a role in the changing climate that we're seeing," Imhoff says.

Stolz, who grew up on Long Island in New York, has lived in Pittsburgh for 33 years. During those three decades, Pittsburgh's frigid, snowy winters have become increasingly rare.

"Last year, I couldn't believe it, but I did not use the snow blower once," he says.

In addition, he's noticed that it has been taking birds longer to start migrating, and questions whether these trends will be long-term.

Both Stolz and Imhoff recognize the importance of not jumping to conclusions when it comes to odd weather events.

It is incredibly difficult to determine if an event is strictly the product of climate change.

"Sometimes I think people connect individual weather events to climate change when it really is just the weather," Imhoff says.

In order to help combat the negative effects of the changing climate, Imhoff recommends undertaking sustainable or "green" initiatives, such as running the dishwasher and using other appliances sparingly.

Glenda Roberts, another Oaks Retirement resident, says that as the weather has changed, so have peoples' attitudes.

"The whole thing changed," she says. "Not only the weather, but the people. They got further away from each other. I mean, we used to gather and play games and do things and go sing carols." •

Worsening Subsidence Contributes to Pittsburgh's Sinking Status

Eliyahu Gasson

The events of October 28th, 2019, live in the minds of those Pittsburghers around to have seen them unfold on their televisions and on social media. Though few would remember the actual calendar date, the events of the day would become an icon used on t-shirts, mugs and Christmas tree ornaments.

The image of a light blue city bus with its front wheels aimed toward the sky and its rear firmly planted in a 20-foot hole along 10th Street in Downtown has become emblematic of the state of the city's infrastructure.

Two cranes were needed to hoist the bus out of its hole. The climax of the ordeal came in the form of the Gillig Low Floor bus flying out of the hole, through the air and onto solid ground.

So, what happened? Why did an innocuous piece of road collapse so spectacularly?

The answer is a sinkhole, a common occurrence in the Pittsburgh region partially due to a common characteristic of its topography known as karsts. According to the Pennsylvania Department of Environmental Protection's website, karst is a "description of a landscape developed upon limestone or dolomite rock. Karst is characterized by sink holes, caves and underground drainage of water due to the dissolution of the rock."

So, sinkholes form when water eats away at bedrock, forming a cavity in the ground. Such cavities can form naturally, but they can also be the result of human activity. According to the United States Geological Survey website on the topic "groundwater pumping for urban water supply and for irrigation can produce new sinkholes in sinkhole-prone areas."

This is especially relevant considering the age of Pittsburgh's infrastructure, says Eric Setzler, chief engineer of Pittsburgh's Department of Mobility and Infrastructure (DOMI).

"Clearly, aging infrastructure has a big impact, both for the reliability of services like water and also those impacts on the street," Setzler says.

Issues with water lines seem to be a trend among sinkholes in city streets. The Instagram account PWSA SINKHOLES documents instances of water main breaks and sinkholes in Pittsburgh.

A post from November 24th, claims to show a video taken in the city's Manchester neighborhood in which water rushes through a sinkhole in a parking lot. Another shows images of a short bus with its front passenger wheel stuck in a curbside sink hole in the South Side. The page is littered with images of sinkholes still forming marked with spray paint and even one with a chair placed next to it. On the chair is a sign that reads: "city aware, coming asap."

According to Setzler, the problem of infrastructure succumbing to land subsidence is not just a symptom of the region's geology or the age of the infrastructure, but also a product of how the city was built.

"When the city was being developed a couple hundred years ago it was not something they really thought about," Setzler says. "There're houses on hillsides, roads on hillsides and a lot of the older stuff wasn't necessarily engineered per se."

It is not just sinkholes that engineers like Setzler are worried about.

In 2018 the Mount Washington neighborhood experienced a devastating landslide that "spilled significant debris onto Saw Mill Run Blvd causing substantial traffic impacts," according to the website for Pittsburgh's Mount Washington Landslide Remediation project.

Christine Tongel, a resident of Mount Washington for 30 years, says that the landslides in the area have been terrible for residents.

"Everything has just been slowly getting worse," Tongel says.

Tongel lives on Greenleaf Street where the 2018 landslide occurred, causing a tem-


Photo by Eliyahu Gasson

porary closure of the road which acts as a connection between Mount Washington and the West End.

Tongel says that her family has had to perform a number of repairs to their property due to the landslides.

"We've had to rebuild the retaining wall," Tongel says. "My son's been putting in new things to make the hill sturdier."

2018 saw a record amount of rainfall in the area. According to precipitation reports from the National Weather Service, it was the wettest year in Pittsburgh since 1836, the furthest back the reports go.

Setzler says that the increase in annual rainfall is expected to continue, and that is a bad omen for the city's infrastructure.

"We're getting more intense rain, so bigger rainfall events with multiple inches of rain coming in a very short period of time," Setzler says. "Those events can overwhelm our sewer system, overwhelm everything."

Mount Washington, once called Coal Hill, is littered with abandoned underground mines according to surveys done by the Pennsylvania Department of Environmental Protection, as are large chunks of Allegheny County. Those abandoned mines, Setzler explains, contribute to the landslides and sinkholes.

"Sinkholes due to mining are certainly an issue," Setzler says. "We do get a lot of mine drainage where old mines have filled with water and then leach water into the hillside. That contributes to some of our problems because introducing water into soil generally makes it less stable."

Another geological feature threatening Pittsburgh's hillside infrastructure are red beds, thin layers of claystone located between rocks. When saturated, they become slick and can no longer support the hill side.

"You have this slick layer and it kind of just wrecks the stability of the whole hillside," Seltzer says.

So how does the city respond to these existential threats to its infrastructure?

Setzler says that DOMI has been taking a more reactive approach to damaged infrastructure in the past. They are trying to be more proactive, though for issues involving land subsidence, being proactive is incredibly difficult.

"It's not necessarily immediately clear how we would become proactive," Setzler says. "We've seen some kind of proposals out there for ways to maybe monitor sensitive slopes and get advanced notice if something's starting to move a little bit."

Setzler says that he has not necessarily seen anything in practice yet, but is "very interested if there are those kinds of technologies that would let us get out ahead of landslides."

The city seems forced to take a reactionary approach to land subsidence due to its unpredictability. With the expectation that the region will see more landslides and sinkholes it seems like the city is putting more resources into DOMI so that it can more effectively respond to more instances of infrastructure damaged by land subsidence. ●

Climate Change Hits Low-Income Communities Hardest

Amanda Riisen

None of us can escape the effects of climate change: Flooding from rising sea level; severe weather events from changing climate patterns; and extreme heat waves from rising temperatures. While climate change will be devastating to every person from every continent, those who suffer the harshest consequences are those who come from a low-income background.

A study led by University of Pittsburgh professor Dr. James Fabisiak, who is also the director of Pitt's Center of Healthy Environments and Communities, Environmental and Occupational Health, found that the regions hit hardest by pollution are within poor and minority communities. In contrast, it was found that the areas with the least pollution are whiter and wealthier communities. As a result, poor and minority individuals are the ones left to suffer the repercussions of climate change, often without any tools to combat the ef-

fects that come along with it.

That's the reality for Pittsburgh's Hazelwood neighborhood. Tiffany Taulton, the director of outreach and sustainability of the Hazelwood Initiative, understands how our changing climate significantly impacts the quality of life within lower-income communities. The purpose of the Initiative is to empower Hazelwood residents to build generational wealth and improve their living conditions. Among the Initiative goals is to "build climate resilience."

"There are many environmental threats that exist within the community," Taulton says.

She says the main threat climate change poses to low-income communities is that they often don't have the resources to adapt to the changing environment. Many of the schools and homes in Hazelwood don't have quality air conditioning units, making them unable to respond to the rising temperatures. Homes often have poor infrastructure, making them more susceptible to damage from flooding. To help those within this community thrive in the face of climate change, it is crucial to resolve these problems.

"The urgency is just not there to fix our kids' schools to prepare them for climate change," Taulton says. "There are several times a year where public schools are cancelled, not because of snow, but because of heat."

The growing divide between rich and poor in the U.S. exacerbates the problem of climate change for communities like Hazelwood. According to the US Global Change Research Program, the length of the average heat wave season in the US has tripled since the 1960s. Despite this, the Center for Disease Control reports that over half of high-poverty schools do not have updated AC units.

The Hazelwood Initiative has implemented several strategies to try and fight back against inequality. Such as a program that enables residents to have home repairs done for free. And those repairs can include updated technologies like solar panels.

"Within these communities, a lot of times the maintenance to their house has been neglected because they're just struggling to pay the bills," Taulton says. "The main limiting factor to be able to move to solar is the fact that people's roofs are so old."

By repairing these homes and installing solar panels, the Hazelwood community is able to be included in the transition to cleaner energy. Typically, low-income communities get left behind in these eco-friendly "trends." In addition, the Hazelwood Initiative has worked to create green spaces within the community. The purpose of this is to not only make the neighborhood more beautiful, but it helps prevent flooding in residents' homes by slowing the flow of rainwater.

"We just want to have something that's an amenity to the community, not a liability. If homes are being flooded from water running down the hill, that's a liability," Taulton says.

The organization has also built community gardens where families can plant and grow their own food. This has enhanced community engagement while empowering the families to create and rely on their own resources. This builds resiliency and empowers those within the neighborhood. In addition to this, according to the CA Air Resources Board, these gardens help fight against climate change, as they reduce CGH emissions and reduce waste through community composting.

"It helps make the neighborhood look better overall but it also teaches them the skills to enhance their lives," she says.

Climate change is a reality that weighs on all of us. Despite this, low-income neighborhoods do not have to be the ones to bear the brunt of it. Through the work of organizations like the Hazelwood Initiative, we can begin to close the gap between the upper and lower class, creating more equity within the field of environmental action. •

Photo by
Travis Barkefelt

Once a Leader in Pollution, Pittsburgh Seeks to Lead in Clean Energy

Travis Barkefelt

Once known as a grimy industrial city choked with a miasma of industrial toxins, Pittsburgh has spent decades rehabilitating its image.

The mills have been mostly replaced with gleaming glass and steel skyscrapers. The industrial riverbanks are home to parks. And a once-smog filled sky is bright and clear. Despite this work, a new challenge awaits Pittsburgh: stalling climate change and protecting precious resources by utilizing clean energy and reducing the carbon footprint of existing industries.

Rising to this challenge, CMU's Wilton E. Scott Institute for Energy Innovation and the Metro21 Smart Cities Institute are working to ensure a better, more environmentally conscious future. Interestingly, the challenge has less to do with technology and research, and more to do with the social aspects of creating change.

The Wilton E. Scott Institute for Energy Innovation, or Scott Institute for short, is headed by Daniel Tkacik. He has always had a vested interest in the environment, getting his start in meteorology before moving to his current field.

A key feature of Tkacik's job as executive director is interdisciplinary communication.

"Energy is everything. It's engineering, it's computer science, it's public policy. It's all of these different groups that speak slightly different languages," he says. "So it's really important that if an energy institute were to bring all those people together to work together, they have to be able to successfully communicate."

Acting as something of a communications hub for those "in the know" about energy, the Scott Institute has its sights set on a number of exciting projects.

"One example is an initiative we're trying to form right now on decarbonization."

Which, as it turns out, is an extremely broad term, at least from the technological applications perspective.

"That can be renewable energy, that can be carbon capture and sequestration," Tkacik says listing just a few projects that fall under the umbrella of "decarbonization" – a point that only further emphasizes his and the wider Scott Institute's role as a synthesizer of information and bridge between different disciplines.

Even with technological applications covered, there is also the matter of policy, and how findings from different studies find their way to appropriate government officials and to the people policies stand to impact.

Enter Metro21 Smart Cities Institute, another initiative from Carnegie Mellon University, led by executive director Karen Lightman.

Lightman doesn't consider herself a typical researcher.

"Although I am involved in many research projects the role that I play is the voice of municipalities and equity [and municipal] deployment partners," she says.

Like the collaborative work done by Tkacik at the Scott Institute, Lightman's role at Metro21 is building the bridges to turn ideas into effort. "You have to go beyond just proving the technology," Lightman says. "You have to work with somebody who is [in] an organization, an institution that is going to champion and integrate and scale the technology."

Lightman strongly emphasizes the importance of developing strong policy to compliment the research being done by Metro21 and the Scott Institute. "So, Allegheny County has a health department," Lightman says. But "they don't have enforcement. They can monitor, but their enforcement power is very limited so there are policies that limit change."

Fortunately, a cleaner future may not be far off for residents of communities disproportionately impacted by pollution, thanks to a process being developed as a joint effort between US Steel and CMU researchers that will use hydrogen in the process of iron creation.

"When you make iron, you remove oxygen from the iron ore using natural gas," Tkacik says. "Before they were using natural gas, they were using coke. That has a lot of carbon dioxide emissions."

The new technology, referred to as direct reduced iron using hydrogen would drastically reduce emissions by emitting harmless water vapor, "a much friendlier molecule," Tkacik adds.

For more information visit https://www.cmu.edu/energy/. ●

Should Climate Change Affect Decisions About Having Children?

Brooke Massaro

The choice of whether or not to have children is one of life's biggest decisions.

People may choose to have children for their own personal fulfillment. Many have children so there is a piece of themselves in this world when they are gone.

But what if a child won't have a sustainable world to grow up in?

Young people, now more than ever, are questioning whether or not to have children because of climate change.

Will and Abbie Enders are among those couples.

For this newly married couple, climate change is most definitely a contributing factor when deciding whether to have children.

Abbie, a 26-year-old data scientist, says she has always considered having kids, but as she has gotten older and the general climate has worsened, her thoughts have changed.

"It's a lot of posturing about whether it's just selfish to want a child," Abbie says. "We've thought pretty broadly about the life we'll bring a kid into."

Her husband, 25-year-old Will, a product control analyst at a pharmaceutical company, agrees. "I think a lot about if I were to have a child now or in the future, would they be able to have a good life? Would they be able to enjoy the things I've enjoyed?"

An important factor contributing to the Enders' taking pause with having children is the possibility of worsening natural disasters.

"There's the possibility for extreme weather events and extensive climate change will just make it harder for them to have a good life," Abbie explains. "Then there's the possibility of our future children not being able to get to live their whole life because of premature death due to climate change. It's really morbid."

The Enders aren't alone in their doubts of having children due to climate change. According to a survey done by Morning Consult, 11% of couples who do not have children consider climate change to be a main reason why.

A climate-friendly option to couples who are considering having children is adoption. Instead of creating new life, couples can give small children a life who come from difficult circumstances. According to a study by ABC News and Ipsos, adoption was considered by 1 in 10 people surveyed.

It is an option that the Enders have considered.

"I have the innate biology of definitely wanting a kid, but I don't want to make the decision selfishly," Abbie says. "I think climate change opens up more possibilities for unique family arrangements, whether that be adoption or fostering children who need a home."

Is climate change a factor for college students' plans to have children?

Factoring climate change into plans for the future is familiar not only to committed couples, but young people at large. College student Joseph Vitatoe, 20, has given thought to possibly not having children since the state of the climate seems to be deteriorating.

"It's really alarming when you think about it and actually look into the research," Joseph says. "If the world is up in flames in 15 years or sooner, I'm not having kids."

He is not alone in his stance on bringing children into a world that may not have a substantial future. In 2021, the University of Arizona conducted a study where participants were asked what climate related reasons made them consider not having children. The results showed that overconsumption, overpopulation and the worry of an uncertain future are their chief concerns.

CNBC also reported that analysts at Morgan Stanley

stated in a note to investors that couples not having children because of climate change is "impacting fertility rates quicker than any preceding trend in the field of fertility decline."

Duquesne University faculty emeritus Dr. Maureen O'Brien, who taught courses such as Marriage and Family, as well as Thinking, Believing, and Feeling says climate change could be a factor in couples not having children.

While the topic never came up directly in her classes, she says that if it did, she would favor the idea that having children is a moral and social good.

"Having children, the way I taught in my class, is seen as helping the environment and being productive members of society," O'Brien says. "In the Christian perspective, making the choice to reproduce and being fruitful was an important topic in my class."

However, O'Brien says, considering the effects of climate change when making decisions about having children is worthy of contemplation.

"Having a child is one choice, but there are a lot of choices that would follow that," O'Brien says. "I think if I were making that choice today, it would require a fair amount of reflection."

Kids or no kids: what is the "right" answer?

Couples have always been subjected to answer the age-old question: when are you going to have children? This question has mostly haunted young couples at every social gathering. Now, there is a new angle to consider: Is the state of the world's climate too far gone to consider bringing life into the world?

Unfortunately, there is no right answer to this question. What it comes down to is how far one is willing to go to try and combat climate change, even if it means possibly giving up the dream of becoming a parent and raising a child. But is it fair to ask people to possibly give up a sense of personal fulfillment, such as bringing life into the world, without concrete data available to show that that is the right choice?

Climate activist Greta Thunberg, who has spoken about how climate change will affect future generations, says the key to combating climate is acting now, and not leaving it up to future generations.

"What we do or don't do right now will affect my entire life and the lives of my children and grandchildren," Thunberg says. "I don't want you to be hopeful, I want you to panic and act as if your house is on fire. Because it is." •

Coming of Age in an Age of Uncertainty:

Ember Duke

Whether it's looking critically at politics, making small sustainable swaps, or considering new approaches to work and family, Generation Z is conscious of the growing climate crisis, a crisis that will affect how they navigate the passage into adulthood.

Dr. Elizabeth Fein, associate psychology professor at Duquesne, says anxiety about climate change is having a profound impact on the psyches of young people she works with in the classroom.

"I think that it is contributing to the anxiety of those who engage with it directly, who really think about what's happening and wonder what we can do to make things better" Fein says. "I think it also affects the anxiety of those who are trying not to think about it and trying not to engage with it."

Choosing to disengage is still a choice and it doesn't provide an escape from the issue or the anxiety it produces.

"That disengagement causes problems in and of itself ... it's very easy for climate change to feed into that anxiety about everything," Fein says.

History and English Writing major Alivia Austin, 23, despairs that this country's individualistic nature and ignorant lawmakers will prevent progress to reverse climate damage. Still, the impending crisis hasn't caused Austin to abandon her goals of pursuing grad school and a career.

"I know at some point it's not going to be feasible to have a career, but I'm not going through life like, 'well I'm not going to do anything' because of it," Austin says.

Nurturing friendships with people who don't share similar climate views is a different story. Austin says someone's perspective on the issue is indicative of their character.

"I think it's a big talking point and if you agree with people on it you align yourself with them because I wouldn't be friends with someone who thinks climate change isn't real," Austin says.

Nursing student Rachael Garland, 21, feels this generation's attitude can be concerning. The melting pot of existential dread – social media – is at our fingertips. Garland feels the internet is used

as an outlet for people struggling to cope with the state of the world.

"You can see it on TikTok all the time, like world-deprecating jokes," she says.

With her ample workload, she struggles to focus on the climate because it causes so much anxiety. "You have to choose one thing to worry about at a time," she says. "I cannot worry about five world crushing things at once."

Constant worry can lead to a generational push towards finding a greater purpose, Fein says.

"As a psychologist I know that demoralization is powerful and can be very pervasive. If we feel demoralized in one aspect of our lives it's easy for that feeling to spread to other areas," she says.

While not the driving force of young people's anti-work mentality, climate change is one of many issues that has Gen Z considering its responsibilities, according to *Fortune*.

"So certainly if young people are feeling like they are having to deal with a threat that is out of their control, that could certainly affect one's willingness to engage with work that feels meaningless or even to be future oriented like the traditional career trajectory calls for," Fein says.

Some of this sense of purpose may lead to questioning social and political norms related to climate change.

"I do think that people in Gen Z, from what I've seen, are asking really serious questions about the meaning and purpose of their life's efforts," Fein says.

Finding purpose professionally could mean looking for jobs that align with a person's values. For Garland, the medical field can make this complicated because the jobs that might be the most important pay the least.

"I have considered working outpatient or working with public health communities to go to people and actually help make a difference. It just sucks that it's terribly paying," Garland says.

The question of who is responsible for change is at the root of the climate issues. Some feel it's on individuals, others see the solution in political and economic reform.

"I feel like that contributes to a lot of the anger toward bigger corporations, because it's like if I as a person want to make a difference, I have to spend more money on sustainable things, I have to take lower paying jobs," Garland says.

Gen Z is described as one of the most political generations according to the Pew Research Center. Finding purpose through online conversation, activism or engaging in political spheres may be a way of coping.

"Developing a sense of self efficacy is often beneficial in situations like this, and it's important to not let that cross the line into something that is delusional or a fantasy that you have greater control over situations than you have, but to be able to ground oneself in a sense of purpose where you can make change, see the results of those changes, and feel good about that," Fein says.

For Communication major Christian Glass, 21, finding purpose and power may mean working with like-minded people.

"I don't see our generation as anti-work, I see it more as anti-obviously large corporations," Glass says. "I think people look for work in general to look for a type of meaning. I think if a company aligns with my values and I'm doing work that I actually enjoy, people that I actually like working with, because culture is a big part of that, yeah I think I would rather take that position."

Other problems will arise as Gen Z grows into older adulthood. Glass has dreamed of having a big family of his own in the future, but said that he would consider climate change when the time comes.

"When that time comes it's definitely something to think about because I wouldn't want to put someone in a situation where they're guaranteed to suffer," he says. "I feel like that would be selfish."

By keeping the discussion alive, Glass feels this generation is doing all it can to try to fix the issue.

"I don't see us being able to adapt to what we've put ourselves into," he says. "I think that just being aware of it and talking about it is its own way of coping with it and that is the best thing we can do right now."

It's too soon to tell to what extent climate change will affect Gen Z, but it's a weight young people are learning to carry and it, along with other shifts in cultural norms, is changing the way they engage with the world around them.

"What we see are very high levels of engagement around things like voting and around other forms of civic participation around things that are trying to question and potentially rebuild the system in a way that will be more sustainable," Fein says. •

Journalists Covering Climate Change Face Stiff Political Winds

Giona Ciacco

In a time where many facts about the natural world have yet to be discovered, journalist Maddy Lauria begins her research for each environmentally themed story with two questions: Why is it important? And why should readers care about it? Often, the answer is the topic's connection to climate change.

When the Duquesne University Journalism alum begins writing, she starts with a couple sentences to inform the reader about what climate change is, what it's doing, and how we know it's a man-made issue.

"You want to work under the assumption that maybe somebody is reading about this for the first time," Lauria says.

Like many journalists, Lauria works to educate the public on climate change but faces political pushback from climate-change deniers. She says the challenge is worth it to move us toward a more sustainable future.

Katie Surma, a Pittsburgh journalist at Inside Climate News, covers stories about the environment, law and for the rights of people and nature.

"In order for people to make the best decisions for themselves, their families and their communities, etc., they need to be informed," Surma says. "That is the role of journalists. It is a role that is protected in the U.S. Constitution and one that is fundamental to our republic."

When writing on climate change, a topic heavily rooted in science, journalists must take precautions to ensure readers understand the stories and experience a call to action.

Surma does this by connecting to both the reader's rational and emotional sides, pulling them closer to the heart of the story.

"I try to cover [climate change and human rights] in a way that brings a little light and understanding to a topic that can, for many people, feel like a distant problem happening to people far away," says Surma.

Because climate change is such a contentious issue, the decision to pursue environmental journalism can be a difficult one for both students and professional journalists who have to ask themselves if the political pushback is worth the cost.

Spencer Thomas, a junior at Duquesne and the Duke's sports editor, plans to pursue a sports journalism career to avoid the stress of environmental journalism.

"Part of why I love sports writing so much is it's an escape from all the crazy stuff we have to deal with in the real world," Thomas says. "I think I'd last about a week as an environmental journalist before I'd start ripping my hair out."

While Duke Editor-in-Chief Emma Polen loves environmentalism and is a fourth-year board member of Duquesne's Evergreen Environmental Club, she too plans to avoid environmental journalism.

"These climate activist reporters have to sometimes speak against what people want to hear," Polen says. "So, I personally am not big into the political side of journalism because I feel like you have to really step on people's toes."

Thomas's and Polen's choices are warranted considering the amount of pressure put on journalists covering climate change and the large amount of pushback they experience, something Surma has seen a lot in her career.

"My colleagues and I have pretty much all received threatening or mean-spirited emails that don't factually challenge our reporting, but just attack us for doing our jobs," she says. "Then there are the rare but serious accounts of journalists being physically attacked or killed, like Dom Phillips in Brazil in 2022."

Why is climate change such a polarizing topic? Lauria says that while it has become impos-

sible to deny the science, some refuse to acknowledge that climate change is man-made.

"They hook on to that small percentage of scientists who claim that the science is unsettled. Well, if you really look into that, those scientists aren't typically climatologists, they're studying other kinds of science," Lauria says.

Lauria adds that many people oppose sustainability efforts because of the fear that jobs will be lost with a switch to a greener economy.

"I think that a lot of it has to do with money," Lauria says. "The oil and gas industry is a very profitable very powerful industry, right? And so, if you look at their contributions to political campaigns, on both sides of the aisle, really, they'll make the argument about jobs."

However, Lauria points to the fact while some jobs will indeed be lost, sustainability will also create new kinds of jobs. Just as many new ones as workers will be needed to build and operate solar farms and everything else following this shift, she says.

In her decade-long journalism career, Lauria has noticed an important change in focus to the people affected by climate change, environmental justice and injustice issues.

"Who are the people that are usually hit the hardest? It's the people who don't have access to the resources to move or leave. So, it's the places that have the least contribution to the problem that are seeing the worst," Lauria says.

Getting this information out there is important so we can help those most affected by Climate Change, a goal that begins with a shift in how we live. Polen says this shift needs to begin within the education system.

"There needs to be some sort of educational effort, advocacy efforts for students before they go off into the world to get practice doing sustainable things," Polen says.

Lauria understands that confronting climate change as a global, multifaceted problem is intimidating, which makes it necessary to inform the public on small steps they can make to push us towards a more sustainable future.

"I think that if collectively, we all start caring more, not just about the planet that we live on but each other, I think then naturally, you're going to start doing things differently and live a more sustainable life," Lauria says.

Surma says our future, as reported by scientists and researchers, is projected to include worsening droughts, flooding, more intense storms, disruptions to supply chains, water shortages, famines, increased migration and extreme heat along with other catastrophic effects.

"I think it is one of the biggest stories in the world and one that will become increasingly important in the years to come," says Surma. •

What Does It Mean to Be the "Steel City?" Understanding Pittsburgh's Industrial Past

Andrew Cummings

Steelmaking is an essential part of Pittsburgh history. The allure of a booming industry, especially in the midst of two world wars, proved tempting for the city. But in communities like Clairton, that benefit came with a price.

"It gave false hope that the jobs were more important than the health of the community," explained Melanie Meade, a climate activist with the Black Appalachian Coalition, who lives in Clairton.

Steelmaking has historically accounted for many jobs in the region, especially before the shift to the medical industry and education. However, the steel industry's growth didn't come without trade offs. In 1868, writer James Parton famously called Pittsburgh "Hell with the lid off." Within living memory, older residents can recall a time people needed to change shirts throughout the day because of the smog that would accumulate on clothing.

Clairton, hard along the Monongahela south of Pittsburgh, is one of the holdouts from Pittsburgh's industrial past. Clairton is home to the largest coke plant in the U.S., with seven functioning coke batteries. (Coke is a type of fuel used in the steelmaking process)

According to the Environmental Protection Agency, the area in Clairton around the coke plant is within the 95th – 100th national percentile for toxic releases to the air. It is also within the 90th – 95th national percentile for particulate matter 2.5 and air toxins cancer risk.

Meade says children in Clairton face an increased risk of asthma compared to other areas of the U.S. Children in Clairton develop asthma at a rate triple the national average.

The pollution generated by the Clairton plant also makes life difficult for Black women like Meade.

"The average life expectancy of Black women in Pittsburgh is 60," she says. "And I buried my sister here at the age of 58. I buried two cousins, one was 48 and another was 38. So, you know, we have a very low life expectancy."

Dr. Billy Barker is a staff physician with Allegheny Health Network. He says some ways for people to combat poor air quality is to maintain good physical health and avoid habits like smoking, as well as avoiding strenuous outdoor activity on days where the air quality is especially bad.

"If you have poor air quality, you can be short of breath doing your normal daily activities," Barker says. "People may develop a cough and that can be due to particulate matter getting in the lungs or aggravating other conditions such as allergies."

Barker says environmental conditions like air quality have improved in Pittsburgh since its industrial heyday.

"Part of that is from our moving along from being more of an industrial city to more of a high-tech city and being employed in other industries than just steel mills and coal mines. And as a result, having less pollutants coming from factories going into the air," Barker says.

The steel industry may have adverse effects on the environment, but it was also a driving force in the economy in Pittsburgh's past.

"The smoke from the steel mill, they would say that smoke gets money," says Bob Bauder, a former steel worker and retired journalist.

Curtis Da'Von, the southwest Pennsylvania organizing director for Clean Water Action, an environmental advocacy group, says industries deliberately put their plants where they would cause harm to the least powerful members of the community.

"They put their factories in places where Black, low-income people of color live," says Da'Von.

But he says there is a disconnect between mill workers and the local community in places like Clairton. Clairton suffers the consequences of pollution but most of the people who work at the mill are from outside the community.

"The people who occupy the mills do not live in the area,"

Da'Von says. "The mill is more occupied by people who live outside of Braddock, who live outside of Clairton. If you're going to say the argument of 'well, we need it, we need these jobs,' well, jobs for whom?"

He explained that groups like African Americans and Eastern Europeans were excluded from working at the mills for a long time. Many of the economic benefits provided by steel industry jobs weren't accessible to everybody.

Da'Von says the relationship members of Pittsburgh and the Mon Valley have with the steel industry is akin to an abusive relationship.

"I believe it's a matter of Stockholm disease, essentially, where you're loving your abuser. And what I mean by that is because we're the steel city, because of all of this, it's ingratiated," Da'Von says. "Like this is what we have to do. What do you mean? We're the Steel City, we have to? I think people are really stuck on that." ●

Photo by Isabella Abbott

Photo by Isabella Abbott

Water, Water Everywhere – And That's The Problem

Camille Agie

Water.

Water is everywhere. Sixty percent of the human body is made up of water. We swim in water. We drink water. We bathe in water. Water connects everything. But what happens when climate change begins to degrade and destroy bodies of water?

Heather VanTassel is the director of Three Rivers Waterkeeper, an environmental nonprofit based in the city of Pittsburgh that advocates for clean water.

"We are always on the water monitoring, patrolling all year round. Checking for changes in water quality, looking for pollution, noting the good things we're seeing," VanTassel says.

Although VanTassel is seeing positive trends like the resurgence of certain vegetation and plants popping up along riverbanks, the impact of climate change on the regions lakes, streams and rivers is very evident.

Rainfall patterns are adding to the rate of change. The city is now alternating between long dry spells and getting a bucketful of water dropped on it all in one day every few months.

"Our biggest impact of climate change with water quality issues is the change in precipitation," VanTassel says. "We are predicted to have longer periods of drought with no rain and then large amounts of rain at one time."

According to the National Weather Service, Pittsburgh in 1903 had a total precipitation of 38.81 inches. In 2022 the annual amount of precipitation in Pittsburgh was 42.58 inches.

"This is really challenging because we now don't have ground systems that are semi-wet. When you have completely dry grounds, they act like concrete because the water that is falling doesn't actually get to absorb because it's like rock," VanTassel says.

The topography of Pennsylvania has a lot of steep hills that drain into streams

and rivers. When it rains, the flow picks up toxins from sidewalks and streets and very often sewage overflows.

"In our system in Pittsburgh, what you flush in the toilet is directly connected to what flows into the storm drains," VanTassel says. "But when it rains a lot, which is quite often, what happens is the tunnel that is going to the waste treatment facility gets overloaded and can't process the water fast enough."

These issues are not just affecting Pittsburgh, but places all over the globe like Michigan for example. Jennifer Read is the director of the Water Center at the University of Michigan.

"The speed at which lakes go up and down seems to be impacted by changing climate patterns," Read says. "We see more lake effect snows but also freezing rain and things that really impact us, like big storms and flooding. So, there is quite a lot of impact."

Read believes that these changes are subtle and don't attract attention until it's too late.

"Warmer waters in the summer combined with the nutrients that are brought into the water through those rain events means we see more algae blooms," Read says.

You know that green stuff that you see sometimes floating in oceans or lakes? That's algae. Algae produces half of the Earth's oxygen and is food for many sea creatures. Algae blooms, on the other hand, are not good. Blooms can produce toxins that make animals and humans sick, says Kushal Som, an environmental engineer at the Environmental Protection Agency (EPA) in Chicago.

"You're going to have all these algae blooms that are going to explode," Som says. "And the problem with that is algae will actually use a lot more oxygen. That will create dissolved oxygen deficits in certain areas which will kill fish."

With climate change, we are getting bigger storms and more rainfall, and in turn, a lot more nutrients are going into the waterways. Therefore, that's more food for algae and more problems for us. Not only will more algae blooms occur, but more flooding will occur as well.

"So, when you have a lot of bigger water events, you're going to have more flooding," Som says. "When you have flooding, what happens to the industrial facilities? They get flooded out and all the toxic chemicals that they had in there are going to get in our waterways. Also, a lot of times when you have floods, it gets into wastewater treatment."

Wastewater treatment facilities are run by municipalities. It costs a lot of money to upgrade these facilities to be able to handle increased water flow and floods. Many municipalities don't have the funds or desire to spend the money to upgrade.

"The problem is as we get more storms, you're going to get overflows from these wastewater treatment plants because they are handling more water. And therefore, the water in the tanks will overflow into the waterways," Som says. "That's why you have beach advisories. It's kind of gross actually because that's human waste."

These sewer overflows usually happen in cities whose systems mix stormwater with wastewater. According to the Pittsburgh Water and Sewer Authority, across 75% of Pittsburgh, sewage and stormwater are routed into the same underground pipes.

Duquesne University associate professor and environmental sociologist Michael Irwin says most people don't think much about underground water systems, but they are substantial and important.

"You tend to think of lakes, rivers and streams but there is a huge amount of water underground that constitutes most of our water wells," Irwin says. "As the other sources of water dry up, the aquifers underneath the ground are getting more and more dry."

An aquifer is an underground body of rock that essentially is a storage unit for large volumes of groundwater.

"Most cities out west and other areas in the world are based upon aquifers. But without water, you don't have


Photo by Isabella Abbott

drinking, you don't have sewage. You don't have all the things that make urban living possible," Irwin says.

We may be getting more rain in Pittsburgh and many other places, but lower rainfall in rainforests. Many people don't think the lack of rain in a rainforest affects them at all, but it does, Irwin says.

"Most of India and Pakistan are dependent on water systems that originate in the glaciers up in the Himalayas and those glaciers are drying up," he says. "And that means the water dries up. You have one of the most populous nations in the world, where you can't support the number of people they have in the past and they'll move. And so, migration begins."

Climate change is now our reality but that doesn't mean there isn't hope for the future. Koa Reitz, an environmental scientist at Three Rivers Waterkeeper, is hopeful about the future of our environment.

"There are things that can be done as a single person that may seem small but end up having really large impacts," Reitz says. "Pittsburgh has many groups and organizations you can get involved in that are fighting for climate and environmental justice. I hope there can be true progress made in environmental justice, where everyone can have access to the same clean water and air." •









While each issue of *Off the Bluff* has a particular theme and focus, the magazine also has a tradition of giving its writers space to share their views on the ideas and experiences that shape their perspectives and identities.

COLUMNS

The Past Isn't Dead. But It's Pricey

Giona Ciacco

A call to save the earth has landed Gen Z in a retro competition fueled by an obsession with TikTok popularity – it's a contest of inauthenticity and only trust fund college kids with massive expendable incomes can win.

Whether it be JFK assassination conspiracies or arguing SNL peaked in the 80s, we love to dwell on the past. For Gen Z, it's retro fashion and old technology that has caught our eye.

With the earth heating up and the environment crumbling, sustainable fashion has become a popular topic among young people. However, given that fast fashion

serves as a short cut to Tik-Tok fame, many are more concerned with achieving the "retro aesthetic" than saving the earth.

A quick Google search can take you to Urban Outfitters, one of the most popular clothing brands for anyone under 30.

If you're looking to overpay for fast fashion, or even a comforter set that arrives with a hole in the pillow cover, Urban Outfitters is the place for you.

Under its website's vintage tab is its very own sustainability brand, "Urban Renewal," which is described as a "way of making old new again" by "repurposing and reinventing sustainably-sourced vintage pieces."

In other words, this brand is perfect for someone who wants to dress retro but is too scared to be spotted shopping at Goodwill.

Because why would you buy a $5 vintage graphic tee from Goodwill when you can buy a "Vintage Y2K Metallica Pushead Graphic T-shirt" for $330 or a "Vintage 1990s Red Hot Chili Peppers Psychedelic Graphic T-Shirt" for $777.

Sarcasm aside, it's true that both sides are supporting sustainability through buying from a nonprofit or from "Urban Renewal," but it all goes back to inauthenticity. If having that "retro aesthetic" takes you buying a prewashed vintage piece for six times its actual value, maybe you're not cut out for it.

When someone asks you where you got your skirt, half the fun is getting to respond, "I got it from Goodwill." Have you no sense of joy?

Everyone knows that one person who owns a Nirvana, Rolling Stones, or Van Halen shirt but for a million dollars couldn't name one song by them, or doesn't even know they're bands. Some like to call the idea of asking "name 10 songs by the band on your shirt" gatekeeping, but if you want to wear a Nirvana shirt at least listen to "Smells Like Teen Spirit." That's the bare minimum.

Speaking of graphic tees, Urban Outfitters sells many for between $35-45. Just in case you want that pricey shirt to have the "moths-ate-my-whole-wardrobe" aesthetic, they sell "distressed" ones.

Here's a crazy idea: Try buying a shirt so well worn and loved it has real holes. But wait, that would be gross, right? Better to pay eight times more for a machine made one.

As someone who bought a Blink-182 shirt from UO a couple months ago, I too have fallen prey to their fantastic marketing. At least there aren't any holes in it though, something that cannot be said for the pillow cover from my UO comforter set.

With vintage clothes comes a fascination with vintage technology which UO also sells. Well, it's not actually vintage, more like overpriced replicas.

Film cameras, polaroid cameras, TVs, record-players, cassette players, they have it all. Even a $120 dollar Bluetooth cassette player because teenagers in the 80s definitely used air pods to listen to their cassettes not wired headphones.

I would say my favorite find is the $399 "Deadstock Zenith White CRT TV and VCR Television" which they call a "brand-new, unused piece of retro technology." So, is it retro or new? I have absolutely no idea, but eBay is overflowing with VHS TV's, most of which are half the price for the same or larger size.

Rather than taking the time to browse eBay or hunt around at a Goodwill, these influencers take the more expensive shortcut of having that vintage tech found for them.

Part of the trend is meant to be finding your own treasures and getting to tell the story of finding them, however this method completely negates that.

In the end people can do whatever they want, but don't claim to be retro or vintage if all your clothes/technology are replicas. If you can only buy prewashed or refurbished clothes/technology then are you in it for a love of old things or do you just like the popularity it brings you? •

Music is a Swift Path to Wellbeing

Brooke Massaro

Not everyone can remember the first song they heard as a child.

But I can.

The year was 2008. I was three years old, sitting in the back of my mom's green Ford Explorer. With my mom driving and my sister sitting in the front seat, I happily bobbed along to whatever music was playing, as any three-year-old would do.

My sister decided to put in her new favorite CD. She wouldn't even let my little hands touch her most prized possession. It was Taylor Swift's new album, "Fearless."

The song "Love Story" started to play, and I'll never forget watching my mom and sister

scream along to the song. I don't remember what I was thinking, but I remember feeling happy. It's one of the first clear memories that I have in my life. No cares in the world, watching my family have a carefree, wholesome moment. It's an image I'll never forget.

Over the years and as I grew up, I became a big Taylor Swift fan. Not only does her music interest me, she is one of the only artists I know who has been consistently making music for as long as I've been alive. She has aptly named her most recent tour 'The Eras Tour,' because her career has shown her experiences growing into adulthood, and her music is very representative of that.

When I was in high school, I participated in show choir. We would learn a compilation of song and dance that would total about 20 minutes. We would travel to competitions around the state, as well as themed cabaret performances. These were meant to raise money for our competition season, as well as a chance for us to practice our performance skills. For the cabaret, we were meant to sing popular radio songs. My friend and I decided to sing Taylor Swift's new song "Exile," a duet with Bon Iver.

I was extremely nervous. I had never done a duet before, and I had never sung a song like this. My hands shook and an apprehensive smile stretched across my face. But, as soon as the music started, all of my nerves washed away. My friend and I did what we needed to do, and we got a standing ovation from the audience. After the show, our director came up to us and said that was the best we had ever sung. If I was singing a song by any other artist, I wouldn't have felt as calm and confident during the performance.

Music is central to the human experience. It can shape you, guide you, and comfort you in ways you can't even begin to imagine. Listening to a song that reminds you of a better time has been linked to improving mental health. According to a study done by the University of Helsinki, adults who listened to their favorite music at home and in a work setting had significantly reduced cortisol levels, the hormone that produces stress.

The concept of 'comfort artist' is a term that fits how I feel about Taylor Swift, and how I believe many people feel about an artist who means a lot to them. A 'comfort artist' is an artist or collection of songs by an artist that brings one peace. For example, you are having an extremely bad day at work, and you cannot wait to get into your car and go home. As you angrily slam the door, you plug in your phone, pull up your favorite artist's songs, and just simply listen.

For me, I feel the stress fade away into the distance. The sense of security is unshakeable.

Everyone deserves to have that experience with an artist they love and admire. Whether or not you understand why that artist means so much to you, even just finding a song that helps you calm your mind and relax is so important.

Sometimes, it's the light at the end of the tunnel. A calm in the storm. Knowing who that artist is that brings you back to Earth when you're spiraling is also very important. Even if you cannot think of an artist, there is a song that calms your nervous system and brings a sense of relief.

As I've grown into adulthood, Taylor Swift has become the soundtrack of my life. Her music has become a great comfort to me. The comfort comes from not only her reliability as an artist, but her songwriting touches people and makes them feel emotions they didn't know they felt. Knowing I can go to Spotify and put Taylor Swift's entire discography on shuffle brings me solace.

Music can pull you out of any funk you could possibly be in. Music heals. Music transcends generations. Music calms your soul when you need it the most. Finding the right music is so incredibly important to learning who you are, where you belong and what kind of person you want to be.

Music has uplifted me in times of trouble, and I am so very thankful and lucky for finding my comfort, my peace in the midst of trouble.

In the words of Taylor Swift: "People haven't always been there for me, but music has." •

The Internet: A Menace to Childhood

Amanda Riisen

When I was a kid, I remember hearing a man on the radio talking about how the world was about to end. My 10-year-old self listened as the man described how by the end of the day, we would all be dead after a meteor hit Earth.

My parents sat in the front seat laughing and making fun of him. I sat in the back seat, petrified, waiting for the meteor to hit.

I laugh looking back at this experience. The man on the radio was Harold Camping. He prophesized that "Judgement Day" would be on May 21st, 2011. Before this, he predicted that it would be September 6th, 1994. This later changed to September 29th and again to

October 2nd.

As an adult, I see how ridiculous my fear was and I understand why my parents were laughing. In my child brain though, I whole-heartedly believed what I was hearing. I didn't have the perspective or life experience to be able to decipher the obvious lies that I was being told.

Today, children are being exposed to a much wider array of "crazies" who tout similar conspiracy theories. As children are spending more and more time on the internet, they are being increasingly exposed to dangerous content. Since children don't have the perspective or life experience to be able to recognize it when they see it, they are especially susceptible to falling down an extremist rabbit hole.

Take Nicolas Kenn De Balinthazy, or better known as "Sneako." He is a notable figure within the "Manosphere" of the internet. This refers to the online network of so-called "men's rights" activists that have increased in popularity within the past few years. While the professed goal of many of these groups is to promote masculinity, many of their ideas encourage feelings of resentment toward woman and girls. Sneako specifically perpetuates ideas that include woman needing to "know their place" and that woman are rarely as smart or funny as men.

Recently, Sneako was stopped by a group of young fans who wanted to take a picture with him. The boys, who were at most 10 years old, posed with him as they chanted "F- the women" and "death to gays." Sneako appeared to be shocked by what they were saying. To anybody who has seen his content though, it should have been no surprise.

This kind of content is found across several platforms, including YouTube, Instagram, and TikTok. The algorithms on these sites recommend similar videos continuously the more you watch them. It is very easy to fall down the rabbit hole, since the more you watch, the more normal these kinds of ideas seem. Disaster occurs when a child who is looking for a sense of belonging and whose brain is extremely malleable stumbles into this area of the internet.

Content from shooting games, YouTube videos and memes specifically work to appeal to a younger audience. These children are drawn in and groomed by "fun" graphics, where the extremist rhetoric is subtly hidden in between. The child's innocence is taken from them, and they suddenly begin parroting ideas like "F- the woman" and "death to gays."

As unfathomable as all of this might be, we are already encountering some very real consequences of this phenomenon.

In a study done by Child Mind Institute, it was found that nearly one in five children ages 9-15 spend more than 6 hours a day on their devices. In a study done by Internet Matters, it was found that a third of these children are exposed to sexist, racist, or discriminatory content within this internet consumption.

We are in an unsettling era in history where children are being raised by the cyberworld. When I was a child, my worldview was shaped by my mom, dad, siblings and Disney Channel. Now, kids' worldviews are being shaped by TikTok algorithms and radicalized Youtubers. This is detrimental not only to their mental development. The broader cultural impact is terrifying to consider.

In order to protect children from this radicalization, it is important that parents are aware of the kind of content that their kids are consuming. Allowing children to have unrestricted access to the internet is setting them up to be exposed to the inevitable dangers that are to come.

Children are not capable of discerning what they trust as opposed to adults. If there is an adult on the internet telling a child to believe something, they most likely will. The best way to deal with this online radicalization is to avoid it altogether. Doing so starts with parents safeguarding their children against it.

Whether it's a man on the radio or a funny Youtuber, it is important to be cautious of the kind of rhetoric that children are being exposed to. The nature of the internet prevents us from being able to avoid encountering these kinds of individuals.

The best we can do is be aware when children are listening. •

When the Answer is Right in Front of Us

Eliyahu Gasson

I was unsure of what I wanted to do when I graduated high school in 2019.

I had the impression that I needed to go directly into college. Unfortunately for me I had put no effort into searching for a school nor did I know what I wanted to study. Thinking that an associate degree in business would be easy, I enrolled in the Community College of Allegheny County as a business major.

I thought I was going to succeed effortlessly and immediately, that getting a college education would be easy. I thought I could balance being a full-time student with an hour-long commute on public transportation and a part-

time job as a dry-cleaning clerk. I was wrong and soon began failing every one of my classes. I hated myself for thinking I could pull off such an insane stunt and quickly became burnt out.

I dropped out of CCAC two months into my first semester. Well, I did not drop out so much as I just stopped going to class without communicating with my professors or the school. In despair, I took a bus from my home to a nearby bridge with the half-hearted intention of plunging the 50-some feet into the frigid and filthy water below. I did not follow through with my plan and instead crossed the bridge and took the next bus home. I ended the semester with an abysmal 1-point-something GPA.

I spent the next year or so coping with what had happened. I kept my job at the dry cleaner, busting my butt for $10/hour. I dedicated all my time to being the best dry-cleaning clerk I could be. I practically ran to the front of the store. It did not matter how hard I worked, however; my boss let the business fall behind. I had the choice of being hounded by angry customers all day or jumping ship and finding a new job. I chose the latter option and moved to another, better, dry-cleaner in the neighborhood.

The dry cleaner was better. However, my new job was much worse. I was making more per hour, but my hours kept getting cut. Not a day went by at that store that I did not think of killing myself. I felt like I did at CCAC, hating myself for every decision I had ever made.

All my friends had seemed to move past me. Granted, they would still invite me out to lame social events, but I still felt disconnected from the group.

I finally realized that I was wasting my time. I was a talented employee and I stand by that. I was fast and accurate, our customers would often leave compliments about me to my manager and coworker. During my dry-cleaning career, I became an expert on the processes involved in the business. I had memorized the care label symbols and their meanings and I could tell the customer the difference between trichloroethylene, perchloroethylene, hydrocarbon and liquid silicone.

The epiphany struck me one day: I am smart, it just takes time and effort to get good at stuff. Crazy simple idea, I know. But for someone who never had that thought it is a huge life-changer.

I spent my downtime analyzing my skills and interests. I liked talking chemicals, their effectiveness at cleaning fabric, their carcinogenic nature, and the damage that they do to the environment. From that I started looking at universities in the city that offered programs related to my interest in chemicals and the environment. Duquesne University had what I was looking for in the Environmental Science program.

Duquesne was the only school I applied to. I had gotten a spot in the free Bidwell Training Center so, if I was rejected by Duquesne, I knew I still had a way out of the miserable service industry.

By the grace of God, Duquesne approved my application and I was set to start in the Spring of 2021.

About two months into my first semester at Duquesne, I was again failing most of my classes.

Determined to not let Duquesne be a repeat of CCAC, I stuck with it and started looking into a different major, one with less math. Again, I looked at what I was passionate about now that I was surrounded by all the options academia has to offer. I excelled in my writing courses. I was also a solid researcher. At the same time, I was falling back in love with digital media, which I had given up on after graduating high school.

Looking at Duquesne's course catalogue, I found a multiplatform journalism program. Suddenly, a B.A. in journalism looked exciting. I changed my major as soon as I could.

I have been a journalism major for almost three semesters now, and I have been doing well academically. I have gotten my GPA a far way up from where it was, I have a regular byline in the Duquesne Duke and have two leadership roles in the university's Media Department, one of which helps me pay for my tuition.

I have taken the lessons over the last few years and applied them, an achievement I am proud of. ●

You're a Unique Individual. Just Like Everyone Else

Ember Duke

Logging into social media feels like opening a personality catalog with thousands of products for sale. For a price, you can become anyone by adopting a specific image.

In recent years, online culture has created the perfect atmosphere for hyper-categorized fashion aesthetics to emerge. The strict confines of these aesthetics, and the subcultures that grow from them, rely on a continual purchasing of "it" items.

They can also serve as a distraction from genuine expression.

If you like cherry lip gloss, ballet flats, or the warm nostalgia of listening to vinyl, you have to be coquette. You should probably buy the newest trending mini skirt too.

We're all jealous of the "clean girls" with their slicked back buns, viral water bottles and daily oat milk lattes. They have disposable income to sustain the aesthetic, but just try to keep up.

Smudge your eyeliner, thrift

vintage denim and listen to alt rock? Must be indie sleaze.

And so on and so forth: Interests don't stand simply as interests anymore, but rather are fine print on the labels we choose for ourselves.

I've recently become bored with TikTok. An incredibly dystopian admission, but one that has brought to the surface a feeling I've been trying to understand for some time. For so long I thought I had a spending problem (which is still up for some debate), but since my absence from the app my itch for online spending has quickly diminished.

I realized my sensibilities were being targeted to make me feel the need to spend my money on low-quality items so I could be accepted into the fold of whatever community my "for you" page decided I'd be interested in.

The "for you" page, an endless doom scroll of coded advertisements and numbing distractions, is ground zero for these niches. They begin often innocently as forms of community for people with similar interests, and even in their extremes, there is still genuine connection within them. However they often devolve into extreme forms of pervasive advertising.

The TikTok shop allows content creators to advertise products for commissions. This minor level influencer culture helps to normalize excessive spending. When every fifth video suggests that buying something off Amazon will make you complete, it's easy to believe it. Seeing regular people advertising makes these items seem necessary and the joy from them genuine.

This is a subconscious form of marketing that makes us feel incomplete without the items. As younger generations grow into adulthood, we are trying to figure out who we are. With so many options, feeling like you stand out is more confusing, but more desirable than ever.

In her essay "Micro-Individuality," culture writer Rayne Fisher-Quann observes that, "we are living in the era of the personal brand... Aesthetic individuality isn't a virtue — it's a bare necessity of capitalistic production." We package ourselves for sale when we hyper-categorize our physical expression.

Individuality is now a group effort. Everyone is scrambling to be seen as one of a kind, but we're all doing and buying the same things. We've gone so far inwards that it's hard to see how the only difference between any of it is the label.

Online discourse often alludes to this generation feeling unseen yet always on display. There is this insurmountable pressure to be better than those before us and yet a constant distrust of our abilities because of our media saturation.

It seems only natural that we would choose escapism through aesthetics as a form of coping with the instability of our social and political systems. By staking our ground in niche groups we have a sense of identity, but we fail to recognize how this identity is being targeted as a selling point. How this "identity" can fit on a mood board, how it's all a distraction from what we really wish to find in ourselves: a voice.

None of this is to say that I feel having fun with aesthetics or fashion is inherently bad. I often find these subcultures an endearing, unique marker of our generation's connection.

But, I have felt the empty guilt of seeing a collection of careless items in the mirror, none of which I feel any genuine connection to, but have somehow spent the last of my paycheck on. It's the sick feeling of being tricked, that the person staring back won't go away when she's clad in the latest trends. Realizing that running from myself through aesthetics is still running from myself.

A good thing should not take more of our money, more of our energy and make us feel that genuine expression risks subverting the image we wish to achieve. The real voice may be in taking fun parts of cultural phenomena, while maintaining real expression and thinking critically about how our identity is formed by the reality we create. ●

Bracing for the Future

Camille Agie

Doing that slightly embarrassing light jog across the street before the light changes.

Carrying all your groceries into the house in a single trip.

Getting out of bed after a refreshing sleep.

Although all of these activities are different, they have one thing in common: they are all deemed "normal," yet they are so easily taken for granted. These small physical activities are some of the things I try not to take for granted.

I was diagnosed with scoliosis, which means curvature of the spine, in first grade. It wasn't severe at the time, so it didn't cross my mind often. But as the years went on my curve got progressively worse. By the time I was in third grade, I had to start wearing an orthopedic back brace. I already had braces on my teeth, an expander and tiny purple glasses now this...I didn't think I looked that flattering.

My brace was off-white and fit to shape my torso area. It

smelled like the dentist and honestly kind of looked like a tooth. The doctor encouraged me to wear it during the day. As soon as he made that suggestion, anxiety-ridden thoughts entered my mind. I didn't want people to pity me. I was completely fine. I went to ballet every Saturday; I was able to do backbends and cartwheels and run around. Normal activities, I felt fine. That being said, I ended up only wearing it once in public – the fear of people looking at me or thinking things about me weighed down my 9-year-old brain.

So, I wore it just at night. That lasted for five years. "Camille, you really need to wear that brace, it's supposed to help you," my mom would say. She was right, but I loathed that stiff, pasty white brace with a passion. It would press down on my stomach. I couldn't get a good breath in for years and it would take forever to fall asleep. It would make me sweat profusely. It would pinch into the sides of my stomach making a stinging sensation like I was getting stung by a bee.

I felt like the Tin Man from *The Wizard of Oz*.

At times, I would feel sorry for myself and tears would fall from my eyes – not out of sadness, but from frustration and anger. I couldn't believe this was my nightly routine.

I believe that significant life experiences have the potential to change your outlook. The small joy of just going to sleep with an oversized shirt and shorts is a wonderful experience and being able to inhale and exhale as deeply as I want brings me joy. A few summers ago, our air conditioner broke in the middle of July. I was so hot and uncomfortable, but I was so thankful my brace wasn't still included in my nightly routine.

"I was still in pain. A pain I wouldn't wish on anyone"

By 8th grade, my doctor said the brace wasn't helping my spine at all, so he suggested that my parents and I consider spinal surgery. In spite of my experience with doctor visits over the years and trips to UPMC Children's Hospital for spinal X-rays, the thought of surgery never crossed my mind for some reason – but then it became my reality in a matter of minutes. My surgery was scheduled for the end of June, right after my 8th-grade promotion and our annual summer trip. Life continued on as usual until June. Surprisingly the nerves I had about the surgery seemed to dissipate – I simply just wanted this whole thing to be over with. After promotion and vacation, I had two days to mentally prepare.

Early in the morning, my family and I ventured into an unfamiliar section of the hospital. This was it – six months of anticipation coming to an end. My doctor discussed the surgery and he was so confident it gave me a sense of comfort. Thankfully, the five-hour surgery was successful. My body now contains one of the toughest metals – two titanium rods that reinforce my spine.

I was in the hospital for a week. During my stay, sleep and heavy medications dominated my days. Despite how heavy the medication was, I still was in pain. A pain I wouldn't wish on anyone. I spent most of my summer in 2016 lying down on the living room couch in pain and watching Netflix.

Simple tasks like sitting up and walking up and down the stairs became challenges I thought I left in infancy.

Most people sit right up or run down the stairs without giving it a thought, taking their mobility for granted. I don't. I can't sit up, walk, run, and move my body without pain. I can bend down to touch my toes and pick things up off the ground.

Reflecting on the whole situation now at 21, I appreciate the little trivial details in life so much more. It is so easy to get caught up in the big things in life like work, school, etc.

But it really is the little things that shape you. •

Finding Home... 400 Miles Away

Travis Barkefelt

Stepping out of Penn Station into the cold, wet mid-winter streets of New York, two thoughts filled my head: "Wow! I'm in New York!" and "Damn, is it cold out!"

After struggling to open my broken umbrella and figuring out the best route to my hostel was via the 1 Line, I ducked into a nearby subway station and was greeted by a helpful New Yorker holding the gate open, allowing me to skip the fare. Not even in the city for an hour and I already felt like a true New Yorker!

I had arrived mostly on a whim. Just deciding to get up and go somewhere "just because" is something that many people may have considered, but few are brave enough to go through with, even more so when that involves traveling alone.

For me, it was imperative. I knew before long I would be out of school, or at least living off campus, and wouldn't have the time or money to follow such whims. What I didn't expect during my travels, however, was to find friendship, a surprising feeling of familiarity and to be reminded of home in the most unexpected of ways.

With damp socks and a head filled with the rush of visiting somewhere new, I arrived at my hostel with a singular goal in mind: Visit Tom's Restaurant. The façade of Tom's Restaurant, for the uninitiated, served as the establishing shot for Monk's Café, the iconic go-to eatery of Seinfeld.

My plans were interrupted when an employee of the hostel led me to a large meeting room, complete with free snacks and music. It was the "Thursday Night Meet and Greet." In a New York minute I found myself surrounded by other wayward travelers, eager to be let loose into the Big Apple. By the time I left, I had gathered unto me a few companions to share in my pilgrimage to the Seinfeldian Holy Site.

Despite not being able to sleep the night before, I found myself not returning to the hostel until well after 3 a.m., carried solely by the insomnious energy of the "City that Never Sleeps."

By daylight, I found myself ready to tackle the city on my own, my only solid plan being a checklist of various sight-seeing spots, The Empire State Building, Saint Patrick's Cathedral and the Big M&M at the M&M's store in Times Square. (Guess which one I made of point of visiting first?) My lack of planning ultimately led me to spend a good portion of my days underground, jumping from subterranean station to subterranean station.

Before long however, armed with my MTA card, I was able to navigate from line to line with the efficiency of a long-time resident. I was impressed by the efficiency of it all. My experience with public transportation at home, though not bad, was certainty less than stellar.

With a subway system that barely meets the essentials for traversing in any direction but south of Downtown and buses that either showed up on time or twenty minutes late, the relative swiftness in which I could cover an area that three Pittsburgh's could fit within was a rather notable experience.

As the days of my trip continued, I checked off more of my sightseeing list. Nights were spent deepening the bonds with my necessarily ephemeral friends. Through this process, something very strange happened. The city of New York, while never losing its mystique (I spent most of my time in Manhattan and had only four days, after all), began to feel less big, less strange and less imposing.

It was one night, as my companions and I stood shivering outside a bar on the upper West side, braced against the winter air, desperately trying to light our cigarettes against the wind, that I took note of my surroundings.

Aside from the bar and a nearby corner store, all the businesses on the street had closed for the night. In fact, in this "City that Never Sleeps" the relative lack of activity on the street seemed to indicate that this part of the city, does, in fact, sleep.

In that moment, I felt more at home than ever. The street looked and felt just as any ordinary late night side street in Pittsburgh.

To think, I had come all that way, so sure I was leaving home behind, just for a few nights, to find it again in the most unexpected of places. •

You *Can* Go Home Again

Andrew Cummings

"College will be the best time of your life."

This is a sentiment I heard many times leading up to and throughout my time in college. I've had family members and friends tell me this, and it seems like a common idea in American life and media. College is where many people branch off on their own for the first time. A lot of people make friends and connections that last their entire life.

As I write this column in my final semester of college, I can confidently say this has not been my experience.

I started college in the fall of 2020, in the midst of the Covid-19 pandemic. At the time, there were widespread social restrictions. There were hardly any activities for students, including for freshman like myself. There could only be so many people gathered in one place, and many classes adopted a hybrid or entirely online model.

By the start of the spring semester in 2021, I moved back to my home, where I completed the semester online. I had spent all of my time in my dorm room in the fall, so I decided there was no reason to stay on campus.

College gradually became more "normal" as Covid restrictions were lifted. I lived on campus for all of my sophomore and junior years, but I could never shake a persistent feeling of loneliness and isolation. For context, I have a very close group of friends from high school who I saw regularly before we all went to college.

I was fortunate in high school to have close friends. I grew up with many of these people, some as far back as elementary school. To this day, we all make time to see each other when we are on break from college. Since finishing high school, we have taken an annual week-long vacation during the summer, usually to a beach.

None of my newer college relationships are comparable to the ones I have with my high school friends and my family. To be fair, I've known the people from my hometown for most of my life. This is certainly a contributing factor to me feeling closer to them.

I have a hard time imagining many of my Duquesne relationships developing or lasting past graduation. This isn't to say there won't be any, but there will probably be less than I expected when starting college.

I've wrestled with this throughout much of my time in college. I've experienced loneliness and mental health challenges, and I've struggled to reconcile these issues and find meaning.

But as I write this column one month out from graduation, I've come to a new perspective; I've developed a renewed appreciation for my hometown community namely my friends and family.

Learning to lean on my hometown community provided me with a source of strength I previously left untapped. It made me more confident about who I am and the kind of person I want to be.

I've spent a lot of time in college dwelling on the lack of new, comparable relationships. But in retrospect, I think that expectation may have been unrealistic. The friends and family from my hometown are people that I have, in some cases, known for my entire life. Those relationships have ebbed and flowed over the years and had significant time to develop.

This realization made me more appreciative of my hometown, but also of some of my Duquesne relationships. I think there is more potential for growth and development over time than I have previously given credit for. I am more optimistic in this regard than I've been in the past.

When I left campus in spring 2021, it felt like defeat. But leaving campus and commuting in fall 2023 was a huge relief. Being closer to my family and community had an enormously positive effect on my happiness and sense of well-being.

Through the chaos of the past three-and-a-half years, between the Covid-19 pandemic and the uprooting and transitional experience of college, I now feel the most confident and excited for the future out of all my time at Duquesne.

College may not have been the experience I expected or wanted. There were hardships along the way, but I think it was an important developmental chapter that will help yield a fulfilling life going forward. •

Our Celebrity “Friends”

Josh DeLia

On Saturday, October 28th, 2023, actor Matthew Perry was found dead in a hot tub at his home in Los Angeles.

Perry was 54 years old. He was a son, had close friends and loved Batman.

As I scanned through posts from various news sources reporting Perry's passing on Instagram, however, it was clear that the essence of his authentic identity was mostly missing.

The comment sections were filled with sentiments from users ... but not actually for Perry.

On an Instagram post from ABC7 Los Angeles, user "claudetteyaya76" commented, "The one where my heart died a little today... you will be missed Chandler Bing."

Another from a user named "nutrished," said: "My heart broke into million pieces for you Chandler."

Chandler Bing, Perry's most notable role, is a character from the sitcom "Friends."

The show lasted ten seasons and aired from 1994 until 2004.

Ten years of Perry's 54 shaped his perceived public identity forever.

It makes you wonder. Are there "Friends" fans who would prefer to see Bing engraved on Perry's headstone?

And is it hard for Perry's friends and family to see his real name fall beneath the one of a fictitious character he played?

That, I don't know, but it brings to light the question of how far a person's professional life should intersect with their personal life.

A bartender is more than a bartender.

A teacher is more than a teacher.

A bus driver is more than a bus driver.

An actor is more than an actor.

The difference between Perry, an actor, and any given bartender is that the patrons a bartender serves, more often than not, see them as human.

The average bartender doesn't have to deal with a constant stream of paparazzi or presumptuous tabloid gossip.

When a celebrity dies, fans mourn. But do they even know who they are mourning?

How many fans sat down and had lunch with Perry before he passed away?

Surely not each and every one of the hundreds of thousands who typed grieving comments underneath social media posts.

I find it hard to believe that the common Perry fan would be able to say his middle name.

It was Langford, by the way.

Why does the death of a celebrity trigger a tournament of dedication among fans?

Between "heartfelt" comments, video edits and tribute posts, you would think that these fans were remembering close family members or loved ones.

Instead, they were honoring a person that they never truly knew and likely never met. Somebody who faced their own unique challenges and scored their own unique victories.

Imagine how different the conversations in comment sections might be right now if these fans would have channeled all the effort put into honoring Chandler Bing into spreading real stories of Matthew Perry's humanity, of his good qualities and ambitions.

I can only believe that would have been preferable to his friends and family compared to the celebration of one of his scripted television characters.

How would you feel if the world mourned somebody else completely after one of your loved ones passed away?

Maybe we need to start looking at our heroes a bit differently.

Yes, they might be more notable, but they're no less human.

When most people get home from work, they are able to leave their work at the door.

Not actors, or celebrities in general. They can never fully clock out or set that briefcase down.

Maybe what they really need is an acceptance of space and a clearer respect of the separation between person and character from their fans. Maybe then we'd better understand.

When asked during an interview on the "Q with Tom Power" podcast in November 2022, Matthew Perry said that he wanted to be remembered as somebody who wanted to help people more than anything else.

Chandler Bing didn't seem a passing thought. •


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From the start, Pittsburgh has been a wellspring of innovation, industry and energy, as well as all of the environmental problems that follow in their wake. These stories connect past to present … and foreshadow the future.

HISTORY

The History of the Standard Oil Company

Ida Tarbell

Ida Tarbell & Standard Oil

Josh DeLia

It takes about 80 people to maintain an oil rig.

It only took one to bring down an oil monopoly.

Investigative journalist and writer Ida Tarbell wrote a 19-part piece on the illicit business practices of the Standard Oil Company for *McClure's Magazine*.

Tarbell was one of the first journalists to be considered a "muckraker," which meant she investigated and exposed wrongdoings.

Readers of her Standard Oil magazine series (eventually turned into the book, *The History of the Standard Oil Company*) took her writing to heart.

"Public fury over the exposé is credited with the eventual breakup of Standard Oil," wrote Gilbert King in his "The Woman Who Took on the Tycoon" article for *Smithsonian Magazine*.

In 1911, the U.S. Supreme Court determined that tycoon John D. Rockefeller's company had violated the Sherman Anti-Trust Act, King wrote.

"The Sherman Anti-Trust Act authorized the federal government to institute proceedings against trusts in order to dissolve them," according to the National Archives website.

A central source who aided Tarbell in her investigations on the company actually came from within it - Henry H. Rogers, Rockefeller's colleague of 25 years, King wrote.

Tarbell interviewed Rogers early in her research and he responded candidly, going as far as providing her with exclusive and private documents and continuing to participate in interviews after pieces from the series began being published in *McClure's*, he wrote.

At its peak in the year 1904, Standard Oil had control of "91% of oil production and 85% of final sales in the Unites States," wrote Jeff Desjardins in his Chart: The Evolution of Standard Oil article for *Visual Capitalist*.

The makeup of the company – once one of the most powerful in the world – was soon to change.

Largely due to Tarbell's writing and influence, the Supreme Court ruled to break the company into 34 individual companies, according to writer Andy Piascik's "Ida Tarbell: The Woman Who Took On Standard Oil" article for *Connecticut History*.

Despite the apparent success, this ruling in no way diminished Rockefeller's fortune, wrote Piascik.

Tarbell remained strictly objective throughout her writing, never denying that there was a sense of brilliance to Rockefeller, but never hesitating to criticize him when necessary, King pointed out in his article.

Historically, the breaking up of the Standard Oil Company itself spoke volumes to the potential of investigative journalism to be able to significantly drive change.

Dr. Andrew Simpson, an associate professor of history at Duquesne University, knows Ida Tarbell's Standard Oil story well, teaching environmental history courses.

"I think it largely points to the power of journalism to shape public opinion and to call attention to issues that are occurring in society and bringing those issues in front of a larger audience to stimulate a conversation," Simpson said.

Even though Ida Tarbell's writing was not the sole reason for the fall of John D. Rockefeller's Standard Oil Company monopoly, it became a testament to the weight investigative journalism can hold. •


TIME
THE WEEKLY NEWSMAGAZINE
1963
Rachel Carson
Force of nature

Rachel Carson's Legacy

Ember Duke

Biologist and conservationist, Rachel Carson pioneered the idea that humans can cause irreparable damage to the environment. Her writing changed how people understood their relationship with nature, but she was not always praised for it.

Her book *Silent Spring*, which called for the investigation of insecticides and better awareness of ecological issues disrupted the status quo of the agricultural industry when it was published in 1962.

Despite the power of her research, her adversaries tried to discredit her through public insults. One, Dr. Robert Metcalf, vice-chancellor of the University of California at Riverside, went so far as to call her a witch.

"We are going to progress logically and scientifically upward, or we are going to drift back to the dark ages where witchcraft and witches reign," Metcalf said in a *Time* article.

Her writing highlighted malpractice by leading chemical companies and government officials at the time, said Lou Leonard, Dean of Chatham University's Falk School of Environmental Studies.

"There was a way in which her message really threatened the business model of many big powerful actors," Leonard said. "She clearly was speaking a truth about science and how those scientific systems operate and the way in which things that we do come back to impact those systems at a time when there were very little consequences for pollution, for using the planet as a free way to deal with costs associated with your business."

Carson persevered, despite the volatile criticism and went so far as to testify before Congress. Her book led to the introduction of the Environmental Protection Agency (EPA) and eventually to the banning of DDT, a highly toxic insecticide.

By pushing the buttons of policy and industry in the 1960's, Carson created a chain reaction of change.

"She was one of the first, so of course she was going to face a really strong push back. What is kind of sad is she did not live long enough to see this bravery and the risk that she put herself in the face of actually resulted in this major transformation in both our cultural story and willingness to talk about and understand the impacts of pollution, but also this new set of laws that made some of the things she was hoping for a reality," Leonard said.

In her wake began a legacy of legislative change, advocacy and heightened cultural awareness of how we treat nature. Though not the only person of her time to speak on such topics, she was one of the few individuals who captured her audience so successfully and was able to show the magnitude of the issue, Leonard said.

Despite the widespread praise of her work and the mountains of evidence that have since supported her research, Carson still receives occasional criticism often from politicians or commentators. In 2007 Oklahoma Sen. Tom Coburn even tried to derail a day honoring her, claiming her research caused "hysteria and misinformation," according to *Reuters*.

"She certainly was one of the best first people to bring those disciplines together, and that is a legacy we are still trying to emulate," Leonard said. •


DRAKE

Drake Oil Well

Giona Ciacco

A railroad conductor-turned-oil driller's success made America's economy skyrocket but that same driller's neglect of the environment brought with it more trouble than the nation was prepared for.

The year was 1859. Six years after his arrival in Titusville, about 100 miles northwest of Pittsburgh, Edwin L. Drake struck oil at a depth of 69 feet, according to the *Drake Well Museum* Website.

According to a 1959 *Journal of Petroleum Technology* article, "no one is likely to question the fact that it was the Drake Well at Titusville which started the [oil] industry on its spectacular career."

Before Drake's well, 18 gallons of oil a day were produced from siphoning surface pools. Drake's innovative drilling technique, using an iron pipe to prevent collapse, yielded 12-20 barrels of oil, according to the article "The Oil Industry" from the United States Census Bureau. According to Statistica, in just 122 years, that number has grown to 2.4 million barrels produced a day in 2022 globally just by ExxonMobil, America's largest oil company.

People flocked to Titusville hoping to get rich on what was called "black gold." This drove the small town's population from 243 up to 8,639 by 1870. They drilled hundreds of wells by the end of 1859, producing thousands of barrels a day. However, this sudden influx of oil dropped the price per barrel from 16 dollars to $0.49 by 1861, just two years after Drake struck oil.

The town fell victim to a boom-and-bust pattern that plagued the Pennsylvania oil industry until John D. Rockefeller monopolized the market in the 1870s, according to the American Chemical Society. The new century brought with it new uses for oil and Rockefeller's company grew so large it was split into 34 independent companies in 1911, one of which is now ExxonMobil.

Today oil is used for airplanes, cars, trucks, heating homes, medicines and plastics, driving the industry's current worth up to 332.9 billion dollars according to Statistica. While the economic success of the Drake Well has offered plenty of bragging rights for small towns like Titusville, the environmental impact of the oil industry continues to be a danger locally and abroad. Seven oil spills were recorded in 2022, bringing the average to six per year.

Dr. John Stolz, director of the Center for Environmental Research and Education at Duquesne University, said the future hinges on developing alternative sources of energy and leaving the oil boom in the past.

"We can make all the natural gas we need renewably and sustainably from human waste, animal waste and agricultural waste," Stolz said.

Drake never patented his drilling techniques and died penniless 10 years after striking oil. *Time* magazine later described him as a "sickly, bearded failure of a man in a stovepipe hat." Titusville will continue to symbolize the past promises of what the oil industry has done for the local economy. However, the oil industry's destruction of Drake draws many parallels to the industry's treatment of the environment. ●

GASP

Camille Agie

Michelle Madoff moved to Pittsburgh from Canada in 1961. But when she arrived she found herself gasping for air every time she stepped outside. The polluted air from the Steel City affected her asthma severely. So, in 1969 Madoff co-founded the Group Against Smog and Pollution (GASP).

This is one of the first public service announcements aired by GASP in 1970:

The young and the old. Babies and children. Grandmothers and grandfathers. These are the unfortunates who are affected most by the killer gases in Pittsburgh's polluted air.

You are living in the sixth most air-polluted city in the United States. Yes, Pittsburgh was cited by the federal government as having one of the nation's six biggest pollution problems.

Who is pouring the killer gas, sulfuric dioxide into your children's lungs? A leading environmental scientist says that essentially all of the sulfur in the air of Allegheny County comes from the steel mills and the power plants. Can you support life without clean air? Don't hold your breath. Join GASP, the Pittsburgh-based citizens' GROUP AGAINST SMOG AND POLLUTION.

So, what is smog? It is a mixture of smoke, chemicals and gases. In simple terms, it is something nobody should inhale. Unfortunately, in the sixties and seventies Pittsburgh was filled with smog.

Many of the corporations behind this pollution insisted that there was no way to clean up their plants and steel mills. Suzi Bloom is the director of education with Rivers of Steel and has worked at the nonprofit for over 20 years.

Bloom says that since polluting industries also supplied jobs, residents just learned to live with the smog despite its ill-effects, taking an attitude that might be summed up as: "We know this is bad and can lead to health issues, but it is paying us a lot of money and paying our bills."

One of the first significant things GASP did was create "The Dirty Dozen" list that included lawmakers who were profiting from polluters. This list forced these lawmakers to be open to the public regarding their decisions on air quality.

Fifty-four years after it was created, GASP is still alive and well. One of the nonprofit's more recent successes, according to the Pittsburgh *City Paper* was negotiating a cap on lead emissions at RRI Energy's coal-fired Cheswick plant.

The non-profit is still educating, advocating and policymaking on environmental issues, with most of its focus being on air quality. •

Westinghouse Collider

Amanda Riisen

Abandoned in the middle of a field in Forest Hills, lays a 65-foot-long bulb-like structure. At first glance, it could be mistaken for a fallen UFO. Pittsburghers have spent years driving past, wondering what this strange structure might be. Decades ago, this structure, known as the Westinghouse Atom Smasher, stood tall as a site for nuclear research. Unbeknownst to many, this object played a crucial role in the development of nuclear technology and energy.

The Westinghouse Atom Smasher, better known as the Westinghouse Collider, was built in 1937. At the time, it was the most powerful accelerator in existence, energizing particles up to five million electron volts.

Its' unique shape provided the perfect environment for experimentation. Two high-speed belts led up the shaft toward the bulb enclosure. At the top, a charge would accumulate until a radioactive filament released ions back down the shaft at the speed of light. They then crashed into experimental targets that were placed inside the tube, causing numerous nuclear reactions to occur.

When the plan to build the collider was hatched, information about nuclear reactions was extremely slim. The Westinghouse Electric Company started this project solely for research purposes. The company simply hoped that discoveries and application opportunities would arise later on.

In the meantime, nuclear fission was discovered in Berlin by German physicists two years after the collider's construction. This discovery enabled physicists to discover the photofission of uranium right here in Pittsburgh.

"The fission, or combination, of uranium and thorium, produces an eradiation of gamma-rays," said Hayley Jenkins, a Duquesne molecular biology student. "The intersection of this combination created by gamma-rays creates a really interesting energy opportunity that has been reasearched since the mid-twentieth century."

Everything changed as the world entered World War II. The U.S. government shifted all attention on nuclear research into the classified Manhattan Project. As a result, the Westinghouse Electric Company temporarily shut down the collider. Then, the U.S. dropped atomic bombs on Hiroshima and Nagasaki, completely altering the public's perception on nuclear research. While the Westinghouse Collider was previously a symbol of pride for the Pittsburgh community, it suddenly became a symbol of devastation and destruction.

The atom smasher did make a momentary come-back after the war ended. By the time the 50's came around, colliders that were much smaller and more powerful than the Westinghouse structure began to be built. As a result, the site was permanently shut down in 1958.

Since then, the land where the collider lays has been bought by a construction company. The surrounding buildings were demolished; the collider eventually collapsed. ●

The Johnstown Flood: A Deluge Born of Hubris

Andrew Cummings

Wealthy patrons at the South Fork Fishing and Hunting Club enjoyed a variety of activities, including sailing on Conemaugh Lake. But in 1889, their carefree idylls left more than 2,200 Johnstown residents dead in their wake.

The Johnstown Flood was unleashed where the South Fork Dam, located on the Little Conemaugh, burst and unleashed a devastating wave of death and destruction on the people of Johnstown.

A small part of the failure of the dam can be attributed to weather. There was heavy rainfall in the area leading up to the flood, as described by the National Park Service. However, this was not the primary cause of the disaster.

The South Fork Fishing and Hunting Club on the shore of Conemaugh Lake, created by the South Fork Dam, was 450 feet in elevation above Johnstown. At this elite retreat, wealthy Pittsburghers enjoyed hunting, fishing and sailing.

That's not all they did or didn't do though. Over the years, the club owners engaged in negligent and irresponsible activities regarding the maintenance of the South Fork Dam.

According to Elaine Adams, the recording secretary for the Johnstown Area Genealogical and Historical Society, at one point the club owners began to sell the dam's pipes. After the pipes were removed, they would fill in the space with dirt and stone.

Replacing the pipes with earth damaged the integrity of the dam to the point where once it experienced the heavy rainfall in 1889, it washed away and unleashed the devastating flood.

Adams also said that drains in the dam were covered over by the club owners so that the fish they stocked in Conemaugh Lake couldn't escape.

"These were rich men that had money and they didn't care what they were doing," Adams said. "They just wanted more money. They were greedy."

According to a report by the National Park Service, it was well known in the Johnstown community that the South Fork Dam was faulty. Apparently, it was commonplace in the years leading up to the flood for there to be flood warnings, but nothing ever came of them until 1889.

Hours before the flood, residents of Johnstown were warned three times. But these warnings weren't any different than the countless ones that had come before and they were ignored.

The flood resulted in 2,209 confirmed deaths. Hundreds more missing people were never found, according to the National Park Service. There was $17 million in property damage.

The Johnstown community also suffered legal indignity after the catastrophe. Survivors who sued the South Fork Fishing and Hunting Club for reparations were unsuccessful.

"The majority of the men, they just moved on with their lives. And no one was ever compensated for

When Mt. Washington, née Coal Hill, Powered the Nation

Travis Barkefelt

Coal Hill may not sound familiar to modern Pittsburghers, yet it's visible from anywhere downtown. What today is known as Mount Washington was once an essential generator of the industrial boom that transformed Pennsylvania and the nation.

During the 1800s, Pennsylvania led the charge in the coal industry nationwide, as well as providing valuable fuel for the burgeoning steel industry. Even before large-scale industrialization, Coal Hill, had something special: exposed veins of coal.

"That would be back in the 1700's," said Pitt professor Elise Ryan. Ryan's perspective is rooted in a class she taught called Secret Pittsburgh, that encouraged students to explore the history of the different neighborhoods of the city. Coal Hill was one such neighborhood.

Ease of access to coal was a major factor in the region developing into an industrial powerhouse. Coal was used to fuel early pig iron plants, with one of the earliest in the city dating back to the 1700s, located near modern-day Point State Park.

"The connection between being able to just get the coal immediately out of the ground [and to the plant] meant iron manufacturing goes back quite a way in the region," Ryan said.

The coal that fueled the mills led to industrial developments that evolved into Pittsburgh's iconic steel industry.

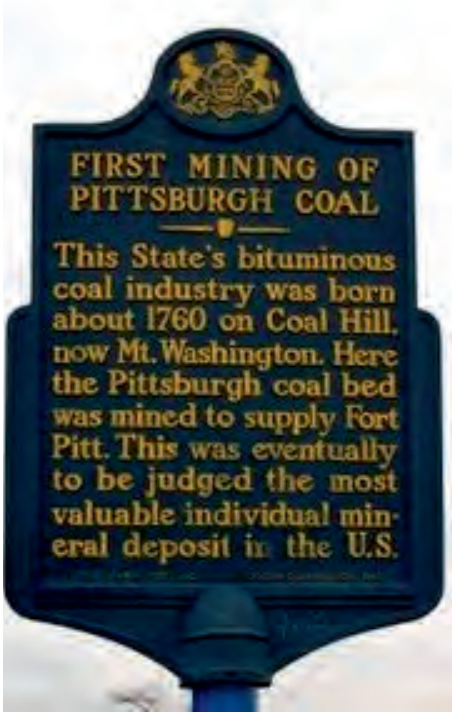
"I think that it literally shaped the region…it certainly created a mindset about the region's resources," Ryan said.

Not only has Coal Hill acted as a flashpoint for the industry that put Pittsburgh on the map, it also saw the development of two modes of transportation that are tied to the city's identity as much as the steel industry: the city's mammoth stairs and its inclines.

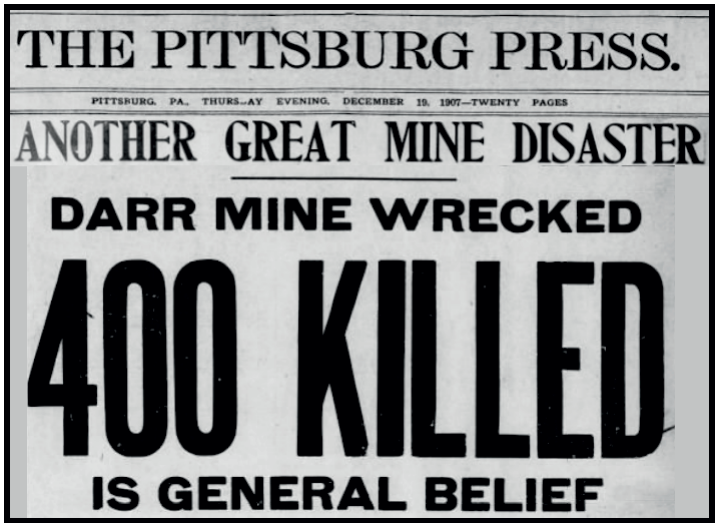
According to Pittsburgh history site, Brookline Connection, an early example of the iconic city stairs were the Indian Trail Steps, a mile long trail leading up the side of Mount Washington to aid workers on their trek from the neighborhoods at the bottom of the mountain to work at the top.

The route the stairs follow dates to pre-colonial times and was a treacherous dirt path up the mountain used by indigenous tribes in the area long before settlers arrived.

Seeking to further expedite the transportation of workers in the now highly industrialized region, several inclines were constructed, the first of which is the still-operational Monongahela Incline. The start of the incline era marked the end of the Coal Hill era, with the name of the neighborhood being changed to Mount Washington in 1876, five years after the construction of the Monongahela incline. •



Mine Disasters: An Early Warning About Fossil Fuel Extraction


THE PITTSBURG PRESS.

PITTSBURG, PA., THURSDAY EVENING, DECEMBER 19, 1907—TWENTY PAGES

ANOTHER GREAT MINE DISASTER

DARR MINE WRECKED

400 KILLED

IS GENERAL BELIEF

Eliyahu Gasson

As the morning ends on December 19, 1907, the ground rumbles violently and a loud noise emanates from the depths of the Darr Mine, marking the start of one of the deadliest mining disasters in American history. The explosion that shook southwestern Pennsylvania is a tragic chapter in the annals of industrial disasters, underscoring the dangers faced by coal miners in the early 20th century.

The Darr Mine was situated along the banks of the Youghiogheny River in the town of Van Meter, in Westmoreland County, and was part of the vast Pittsburgh coal field. Its operation was part of the broader coal mining industry, which was critical to the region's economy and played a large part in fueling the industrial growth of the United States.

According to a contemporary account in the *New York Times*, the mine employed roughly 400 men. The collapse could have been worse, as many men were not at work because they were celebrating St. Nicholas Day.

The explosion of Darr Mine was not an isolated incident in its era. The Naomi Mine in neighboring Fayette County saw a similar disaster just 18 days prior, resulting in the deaths of at least 35 miners according to another *New York Times* article.

According to Abby Tancin, archivist for the Coal and Coke Heritage Center at Penn State University Fayette, a combination of poor mine ventilation and the use of open flame lanterns was to blame for both explosions and subsequent mine collapses.

"In mines during that time, ventilation was not very strong," Tancin said. "A lot of the mine gases and coal dust could build up in the air, and those were very easily ignited."

The reverberations of these mining disasters were devastating for surrounding communities. In the case of the Darr Mine, of the 240 men and boys that went in on the day of the disaster, only one managed to make it home. Families were shattered.

According to the official state historical marker about the Darr Mine disaster, the explosion left in its wake, "130 widows, 300 children without fathers and 542 people without a source of income."

The Darr and Naomi Mine disasters remain sober reminders of the sacrifices made by coal miners and their families during an era of rapid industrialization, when workplace safety was often an overlooked factor.

While the mining industry evolved significantly since then, these historical tragedies continue to inform discussions about worker safety and the importance of robust regulations in hazardous industries.

From Section 2 Sub Section 2 of the Pennsylvania Mine Families First Act of October 4th, 2007, "as a result of mine accidents like the Darr Mine in 1907 … Pennsylvania adopted some of the first mine safety statutes in the United States." ●

Carnegie's Dinosaur Obsession

Brooke Massaro

Dinosaurs, digs and diplomacy, these were all in the forefront of Andrew Carnegie's mind when he funded the expedition that discovered the complete skeleton of the diplodocus.

The diplodocus was discovered by Jacob Wortman in Sheep Creek, Wyoming in 1899. This dig was funded by Carnegie and the Carnegie Museum of Natural History, where the complete skeleton was eventually sent and remains to this day.

The discovery of the Diplodocus Carnegii, named after Andrew Carnegie himself, caught the attention of many world leaders. King Edward VII of England commented on a sketch of the dinosaur, affectionally known as Dippy, when visiting Carnegie in Scotland.

His fascination with Dippy led to Carnegie commissioning a reconstruction of the Diplodocus Carnegii to be sent to London. Carnegie ended up commissioning ten reconstructions of Dippy to be sent to museums around the world in cities such as Paris, Berlin, Vienna and Moscow.

Carnegie's donations of the Dippys was an attempt to bring peace to countries on the brink of war. William Thomson, Carnegie's great-grandson, says the act of gifting these reconstructions was to promote "inter-state dialogue and demonstrate that nations have more in common than what separates them."

Tom Rea, author of *Bone Wars,* a novel that focuses on a partial history of Carnegie and the diplodocus, says part of Carnegie's reasoning for making the reconstructions was ego-driven.

"By giving casts of the diplodocus to kings, emperors and presidents, he also put himself on their level," Rea said. "He had a big ego and he wanted to be remembered."

Carnegie's hopes for world peace to be established via dinosaurs were demolished when World War I began in 1914.

Dippy the dinosaur has been nicknamed the "star-spangled dinosaur," due to Carnegie's diplomatic efforts and the fact that the discovery of the diplodocus occurred on America's Independence Day.

A statue of Dippy sits outside the Carnegie Museum of Natural History in Oakland, and has become a beloved figure to historians, museum-goers, and the people of the city of Pittsburgh. Dippy is often dressed in colorful scarves for winter, is seen sporting a Terrible Towel on Steelers' game days and dons a witch's hat during the Halloween season. •

The endgame of the Magazine Journalism class is to produce *Off the Bluff*. But on the journey to that goal, writers work to enhance their reporting and writing chops. In this section, they reflect upon what they learned.

REFLECTION

Ember Duke

As I lay to rest this tumultuous semester, I am grateful for the pressures this and my other classes have put me under.

I am always measuring my growth, maybe to an extreme extent. The past few months have been the most writing intensive of my college career and I feel I am coming out of them stronger in my craft than ever.

Magazine journalism has lifted my spirits as a reporter and shown me there is room for creativity and expression within this field. Having the time to thoroughly explore stories I was interested in helped me to become more invested in them and to figure out my personal reporting and writing process.

The confidence as a journalist I found this semester is something I am so grateful for and eager to build on in the future. The overall atmosphere of this experience eased some of the general anxiety I have about leaving college and becoming a "real" adult.

I began to realize what I want out of journalism, writing, and creative expression. For so long I couldn't see myself within the writing I was doing in college, but I feel I'm beginning to address some of the "imposter syndrome" that has stopped me from pushing myself in my work.

This is largely due to the pressure and need to deliver, as well as the conversations I had in this class. Working with peers who understand the nuanced struggles of journalism and having intelligent conversations about our experiences in the class gave me a sense of place within this work. It was the first time in my major classes that my excitement outweighed the fear of leaving the classroom. •

Andrew Cummings

As human beings, we ultimately strive for acceptance. They say humans are social animals, after all.

A key part of acceptance is understanding, which can sometimes seem in short supply. Being a reporter is all about understanding, whether that means getting the facts right or understanding different perspectives.

To me, the greatest joy of being a journalist comes from talking to people who are completely different from me. Maybe they come from a different background, or they have different opinions. Connecting with others and gaining insight into different perspectives never ceases to interest me.

I'm disappointed by the bigoted rhetoric that is so often espoused in the world, in some cases from our leaders. But I try not to dwell on things outside of my control. Instead I focus on what I can do as an individual to help bring goodness and acceptance into the world.

John Coltrane once said, "I want to be a force for real good. In other words. I know that there are bad forces, forces that bring suffering to others and misery to the world. But I want to be the opposite force. I want to be the force which is truly for good."

Journalists have a responsibility to serve the common good and keep those in power accountable.

I am grateful for the professional opportunities I have received to improve my journalistic craft while at Duquesne. Regardless of where I arrive after departing the Bluff, the journalistic mission of seeking understanding in the world is something that will always be a part of me. •

Giona Ciacco

I've always naturally been a very introverted person, tending to avoid as much human interaction as possible – a true INTP.

I'm sure you're wondering why in the world I would choose to pursue journalism, a field that largely involves having to talk to people I don't know. Truthfully, I threw the journalism major on as a backup for my creative writing one, a worst-case scenario one might say.

I began this class very unconfident in my skills as a journalist, dreading the awkwardness of interviews and thinking I was horrible at the journalistic style of writing. I will always dread interviews, but this class pushed me to become much more confident in my ability to conduct them and taught me how to keep the flow of the conversation natural.

Along with that, while the concentration of large stories in such a short period of time coupled with my busy schedule was stressful, it taught me how to put together a well-written story quickly through the learned organization of source quotes and the confidence gained from writing so much.

Furthermore, I'm now much improved in revision and how to recognize where it is needed. The best way to get better at something is to do it more than you want to, which this class successfully forced on me.

Much of my dislike of journalistic writing came from my belief that it was absent of creativity, but I've learned that while this genre is far different from creative writing, a certain kind of creativity in choice of words and weaving in quotes is what makes a journalistic story worth reading. •

Camille Agie

Throughout this class, I learned so many things about our environment, but also about myself as a writer. I was looking forward to writing for *Off the Bluff* and taking another class with Dr. Dillon.

I considered myself a decent writer, but when the theme of the magazine was announced on the first day of class I panicked. "The environment? I don't even know where to start," I thought to myself in College Hall 345.

The thought of interviewing people in person and putting myself out there initially was a very daunting task and way out of my comfort zone. But as the semester continued and I had a few interviews under my belt I started to feel more confident. Of course, I was still a little nervous going into an interview, but I now knew I could do it.

This semester, I had the honor of telling people's stories, which is one of my favorite things about writing. I had the chance to meet many individuals who are passionate about making our environment better.

From interviewing urban farmer John Bixler to interviewing high school environmental science teacher Melissa Diaz, each interview taught me something different and shined a light on a new perspective.

I didn't know what to expect when this semester began and, honestly, I'm glad I didn't. I had a few challenges here and there, but it pushed me as a writer and for that I am thankful. I am now leaving this class a better writer and listener, a little more confident, and with a newfound love for magazine journalism. •

Travis Barkefelt

This class was an interesting experience for me. As someone with a background in creative writing and scriptwriting, I'm used to being able to just say whatever and – as long as it's entertaining, and in my case, funny – I could get away with it.

In the world of journalism, that really isn't the case. Like really isn't the case. Needless to say, this course did a good job of pushing me outside of my comfort zone as a writer and really made me reexamine what I say in my writing and how I say it.

Now that everything's said and done, I'm not sure that I've become great, or even good, at article writing (passable, maybe) but I valued the experience overall. I know the skills I've gained here will be useful moving forward, especially as I slowly but surely build my freelance writing career (two whole Fiverr clients so far!).

Glibness aside, when I sat down to write this, I noticed a handful of themes that cropped up in some way or form across my interviews: the importance of community, the value of communication and the way nothing gets done without the willingness to learn and listen to those around us.

So, if nothing else, I walk away from this class with some pretty solid life lessons, made all the more interesting by the fact they were learned in pursuit of a topic you really wouldn't expect to gain such lessons in. There might be some deeper philosophical meaning in that, but then again, maybe the artist in me is just looking a little too far into it. •

Amanda Riisen

Reporting for *Off the Bluff* this semester has challenged me to step out of my comfort zone in a way that I never have before.

I have always been the kind of person who avoids raising my hand in class out of fear of asking a "stupid" question or not knowing the right answer. Admitting I don't know something feels like exposing a flaw in my character. I've always tried to avoid drawing attention to the more "imperfect" parts of myself.

When I found out that the theme of this issue was going to be environmental issues, I was intimidated. This was a subject that I knew nothing about. I knew that this meant I was going to have to step out of my comfort zone and ask questions about things that I didn't understand.

I've grown so much from doing this. I learned about community solar and "living" buildings. I learned about how the photofission of uranium works. I learned about how climate change impacts low-income communities.

Every single person I interviewed was happy to answer my questions. I never felt judged for my ignorance. Instead, people seemed excited to be able to share their knowledge with me. Although this was scary for me at first, I never would have learned any of this if I didn't reach out and ask the questions first.

I now realize that by allowing myself to not know something, I am allowing myself to learn. Instead of being ashamed of the things I don't know, I can approach them with curiosity. This curiosity is what helps us to grow and change. I am grateful that I was forced to face this fear this past semester. This lesson is something that I will carry with me as I continue on in my career as a journalist. •

Brooke Massaro

What I learned this semester working as a magazine journalist is the importance of asking good questions.

Asking questions to a source is one thing, but being able to ask questions that will allow the source to give you the most information possible is something entirely different. Phrasing the questions in a way that does not seem too formal, but also staying professional is a delicate balance to maintain. For me, I found a way to ask a sufficient amount of questions without it seeming too much like a job interview.

I also learned that persistence is key when it comes to finding sources for a story. While people are reluctant to speak to student reporters, never underestimate a thoughtful email or a well-spoken phone call. It goes a long way when talking to professional sources, and they will be more willing to talk to you if you speak clearly and confidently.

A cool experience that I had while writing as a magazine journalist this semester was visiting Eons Vintage Antique in Shadyside. I was able to speak to the owner Richard Parasakian, who gave me lots of useful information about shopping for clothes sustainably and what that looks like in Pittsburgh. He was extremely kind, and his store was incredible (I, of course, ended up buying a few things). It is one of the most memorable interviews I have ever done, and I would not have had the experience if it wasn't for this class.

This class has made me grow immensely as a journalist, and I will take with me the skills and lessons I have learned over the past few months throughout my career. •

Eliyahu Gasson

The thought of being a writer is one I've always found romantic. When I think of what a writer is I think of the canon of larger-than-life characters of American literature. People like Mark Twain and Hunter Thompson who have so greatly affected the culture through their ability to contort language in a way that tells engaging stories.

I want to be like that. Not just in the hopes that I will one day have a movie made about my life or something I wrote (though that would be nice), but because I love language and research and seeking truth. I love telling stories that widen my readers' horizons as much as they do my own. I love expressing myself through what is arguably the most direct and personal way to do so: language.

Writing for *Off the Bluff*, I've had the opportunity to flex my writing ability. I have had the chance to embody my inner linguist, researcher and truth seeker.

I've done my best to tell stories that people may not have yet heard and will most importantly find engaging.

My stories have taken me around Pittsburgh from Lawrenceville to Uptown, to the City-County Building on Grant Street to a warehouse off of I-376.

All of the experiences I've had coming up with ideas, investigating leads and reporting on my adventures and conversations not only serve as lessons on how to be a good journalist, but also how to write compelling and engaging stories. •

Josh DeLia

Growing up, I never foresaw myself becoming a writer of nonfiction. My heart has always leaned towards the fictional side of things. However, as I transitioned from high school into college, journalism dropped me a line and opened my mind to a new perspective on a craft that had always brought me happiness.

It took me awhile to adjust to such a different type of writing, especially since it was built off the backbone of strong reporting skills, which I lacked. I remember thinking as a freshman that I'd never be able to write nonfiction as well as I was able to write fiction, but I can confidently say as a senior at the end of my final journalism course – Magazine Journalism – that I was wrong.

For much of my freshman and sophomore years at Duquesne, I would enter into a phase of great anxiety leading up to any day I knew I would be reporting. The same was true for drafting days. These things were just so unusual to me, and that was daunting. It was hard for me to wrap my head around the fact that I was writing about the real world – about real people and their experiences.

Now, nothing about journalism is daunting, and I honestly didn't realize that until I came to write this reflection. Any worries I once had are gone. Reporting and writing come much more naturally to me. I'm completely comfortable interviewing sources and have even developed my own unique voice when it comes to actually writing my stories. This course is a testament to how far I've come as a journalist, and I couldn't be more grateful. •