

# Transit ridership up against trends



Courtesy of Daniel Lobo via Flickr Wikimedia Commons  
Port Authority buses and transit have faced issues handling the increased demand after an atypical year of increased ridership.

JACOB PAUL  
Layout Manager

In 2018, Pittsburgh's Port Authority bucked an industry trend with a 1.95 percent increase in total ridership. The increase was primarily in bus operations, with 54,872,268 total bus rides. 2,893,059 rides were made by Carnegie Mellon students, staff, and faculty, comprising 5.27 percent of the total.

Figures released by Port Authority show that ridership across all systems — Bus, Light Rail, the Monongahela Incline, and ParaTransit — increased

from just under 63 million to 64.2 million in 2018. Bus ridership increased by over 1.7 million, but ridership of all other systems dipped. Port Authority spokesman Adam Brandolph told the *Pittsburgh Post-Gazette* that the decrease in Light Rail traffic can be attributed to flooding that occurred in June and an Aug. freight train derailment.

Nationally, public transportation has seen a decrease in ridership. Figures released by The American Public Transit Association showed that as of the third quarter of 2018, national ridership had decreased 1.75 percent from 2017.

Pittsburgh's public transit system is the 26th largest in the country, but by the third quarter of 2018 only three "big cities" marked larger increases than Pittsburgh's 3.8 percent; Houston, Texas (9.2 percent), Columbus, Ohio (6 percent), and Oakland, California (4.7 percent).

Brandolph told the *Pittsburgh Post-Gazette* the agency is "certainly very happy" with the increase in ridership, but is still working to determine why it occurred. He attributed the

See **TRANSIT**, A3

# Firearm ordinances in standing committee

ADAM TUNNARD  
News Editor

In response to the Tree of Life synagogue shooting last Oct., the Pittsburgh City Council along with Mayor Bill Peduto moved swiftly to propose an array of five new firearm regulations. Though these types of regulations are being considered across the country, some Pittsburgh residents worry the ordinances might not lead to proper enforcement.

The ordinances proposed amend past wording in Pittsburgh gun legislation and replace certain sections "to update existing laws to meet the public safety needs of residents," as well as adding a new section "to place a prohibition on certain firearm accessories, ammunition, and modifications," according to the Pittsburgh City Council's public records.

Specifically addressed in the legislation are assault weapons, including those similar to the AR-15 style rifle used in the Tree of Life shooting, as well as modifications to other types of weapons that increase their load capacity. Other accessories, like the bump stocks that were used in the 2017 Las Vegas shooting that killed 58 and injured 851, are banned in the proposed Pittsburgh legislation.

Not all Pittsburgh residents are in favor of the legislation. Peduto told *The Washington Post* that he viewed a lot of

the opposition as coming from outside of the city, "where they don't have homicides on a continuous basis and where guns are viewed in a different social context."

Some gun control advocates from just outside of Pittsburgh, as well as legislators from Harrisburg, have called the attempt to regulate guns with the Pittsburgh City Council ordinances illegal, as Pennsylvania state law currently disallows municipal legislation of firearms.

In a separate critique leveled against the Pittsburgh City Council, several community leaders aired concern with how the legislation will be enforced. Rev. DeNeice Welch, the president of the Pennsylvania Interfaith Impact Network, told PublicSource that "any ordinance like this ... always lands on the backs of young African Americans ... always."

David Harris, law professor at University of Pittsburgh, told PublicSource that "it may seem to some people as an overreaction to jump up and say these [ordinances] are dangerous to black communities," but continued, "it has less to do with the specific laws in this case and more to do with the overall problem of disproportionate enforcement ... this could happen with jaywalking or any

See **FIREARM**, A3

# Mental health advocate Dennis Gillan presents in Tepper

MADELINE KIM  
Forum Editor

On Feb. 10, mental health speaker Dennis Gillan came to Carnegie Mellon to give his presentation, "Suicide Stinks." He shared his personal experiences with mental health and how losing both of his brothers to suicide has impacted him.

Junior Mikey Fernandez, president of Phi Delta Theta, invited Gillan to Carnegie Mellon. This past summer, he had heard Gillan speak for the Phi Delta Theta Emerging Leaders. Although Fernandez had not previously felt strongly about mental health, he was in awe at Gillan's presentation. "It was the best presentation I had ever seen," he recalled. Despite the gravity of the topic and Gillan's personal impact from mental health, he managed to make his presentation not daunting and "not super heavy."

Gillan studied accounting at West Virginia University and does not have a background in psychology. In 1983, while he was a student, he was preparing for two exams when one of his sisters called him saying "Mark died in a car accident." He later learned that it was no accident that killed his brother; it was a suicide.

Although the stigma surrounding mental health and suicide persists today, it did even more so back then. Gillan went home right after hearing the news, but he returned to school the following Tuesday and acted as though nothing had happened. "I tried to put it in a box and put it away," he explained. At just 20 years old without knowing how to cope, he turned to alcohol to deal with his depression. Eleven years later, he lost his other brother, Matt.

Losing both his brothers led Gillan to realize he needed change. The first was to stop drinking. After Matt's funeral,

he made a commitment to sober up. In his presentation, he proudly shared that he was 8961 days sober.

The "best decision I ever made," however, was seeking counseling, Gillan stated. Regarding professional help, Gillan had only one regret: he wished he had done it sooner. The pain and grief hadn't stopped, but seeing a counselor helped recovery become that much more manageable. He used his testimony and experience with counseling to encourage students and faculty to take advantage of the resources available to them. Some of those listed are provided by the university such as Counseling and Psychological Services (CaPS) while some are available in the general Pittsburgh area such as Western Psychiatric Institute and Clinic (WPIC). Help does not stop outside Pittsburgh; resources such as the Crisis Text Line (text "HOME" to 741741) and the National Suicide Hotline (1-800-273-8255) remain open to anyone across the nation.

Over the years, Gillan has done more than just speaking out about mental health. He works with the suicide prevention hotline on Thursday nights from 8 p.m. to 12 a.m. Before he could start, he went through a 12-week training. He was ready for the content of the calls, but nothing could have prepared him with the volume of the calls. Too many people in our country have nowhere to turn to, whether it be because they cannot afford to seek out professional help, are too scared due to the stigma built up around mental health, or they are otherwise in a position where getting help is not an option.

One remarkable story of a caller resonated with him. Someone whom he referred to as Kyle called the hotline on behalf of a friend. Kyle received text messages from his friend that appeared to allude to suicide. "Kyle, you've been a good friend"



Madeline Kim/Forum Editor  
Last Sunday night, in Carnegie Mellon's Simmons Auditorium, Dennis Gillan told his own personal experiences with suicide.

soon followed with "Kyle, I'll see you from the other side." Kyle received no response following the second message.

Breaking the standards and regulations for callers in the suicide hotline, Gillan asked Kyle for his friend's number to check on the friend's safety himself. Gillan found that the friend was an only child who was failing college. As a result, he felt as though there was no resolve other than suicide. At the end of the call, he and Gillan created a plan to tell his parents. There's no way of knowing whether Kyle or his

friend is okay today, but looking back, Gillan reflected saying that they decided to answer the question "where do we go from here? It's what we do."

"CMU is gonna bend you but not gonna break you," said Gillan. Carnegie Mellon is ranked as one of the most stressful and sleep-deprived universities in the country, and there is much work that needs to be done to promote wellness. However, the university and its community is slowly starting initiatives to create an environment that welcomes these important discussions.

"Delad glädje är dubbel glädje; delad sorg är halv sorg," Gillan shared towards the end of his presentation. This Swedish saying translates to "a shared joy is a double joy; a shared sorrow is half a sorrow." Just as we share our joys to our classmates and followers on social media, it's time that our community here at Carnegie Mellon shares our sorrows and hardships. Even if continuously halving sorrows can never truly erase them, we must continue to try and do better in cultivating a safe and caring community that supports others.



FEATURE PHOTO

# “Now it’s time”: Trailblazing composers present and discuss



Saturday, the Carnegie Mellon Contemporary Ensemble played works by five female composers, from left to right, Alexa Woloshyn, Nancy Galbraith, Marilyn Taft Thomas, Binna Kim, Annika Socolofsky, with Abigail Langhorst.

## Campus Crime & Incident

**Alcohol Amnesty**  
Feb. 10, 2019  
An intoxicated student in Webster Hall was given alcohol amnesty after Carnegie Mellon police responded to the scene.

**Fire**  
Feb. 12, 2019  
Officers responded to the IDeATe fabrication lab located in Hunt Library after a small fire broke out inside a laser cutting machine. Officers were able to put out the fire safely with a fire extinguisher and no individuals were injured.

**Access Device Fraud**  
Feb. 13, 2019  
Officers responded to Baker

Hall to meet with a Carnegie Mellon student who observed fraudulent charges on their DineX Account. The investigation is ongoing.

**Theft by Deception**  
Feb. 15, 2019

Officers responded to the Greek Quadrangle over a report of a Carnegie Mellon student involved in an internet scam sourced from Indeed.com.

**Alcohol Amnesty**  
Feb. 16, 2019  
Officers responded to the Cohon University Center to aid an intoxicated Carnegie Mellon student. The student was provided medical attention and no citations were issued due to alcohol amnesty.


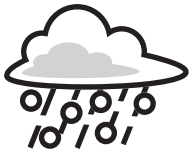




**Alcohol Amnesty**  
Feb. 16, 2019  
Officers responded to Stever House after hearing of an intoxicated Carnegie Mellon student. The student was provided medical attention and no citations were issued due to alcohol amnesty.

**Alcohol Amnesty**  
Feb. 12, 2019  
Officers responded to Stever House for an intoxicated student. The student was provided medical attention and no citations were issued due to alcohol amnesty.

Compiled by  
ADAM TUNNARD

### WEATHER

Source: [www.weather.com](http://www.weather.com)

<b>TUESDAY</b>  35° / 27°	<b>WEDNESDAY</b>  42° / 41°
<b>THURSDAY</b>  45° / 30°	<b>FRIDAY</b>  47° / 34°
<b>SATURDAY</b>  50° / 45°	<b>SUNDAY</b>  48° / 35°

### SOCIAL ACTION CALENDAR



# FORWARD!

a few of this week's activism opportunities at Carnegie Mellon

**DIVERSITY TALK**  
SERIES: MULTIRACIAL EXPERIENCE  
12:00PM-1:00PM, RANGOS

February 19

**THE SOCIAL LIFE OF DNA: RACE, REPARATIONS AND RECONCILIATION AFTER THE GENOME**  
12:00PM-1:30PM, HH A301

February 22

**CMU INTERNATIONAL FILM FESTIVAL: WOMEN AT WAR**  
6:30PM, MCCOMMY

February 22

#### Corrections & Clarifications

Last week, we published an article about the new head of the Electrical and Computer Engineering program, Larry Pileggi, but incorrectly referred to him and his predecessor’s position as “dean.” The actual position is “head” of the department.

If you would like to submit a correction or clarification, please email The Tartan at [news@thetartan.org](mailto:news@thetartan.org) or [editor@thetartan.org](mailto:editor@thetartan.org) with your inquiry, as well as the date of the issue and the name of the article. We will print the correction or clarification in the next print issue and publish it online.





# Port Authority ridership up, creating supply-demand issue



Courtesy of Daniel Lobo, kaffeeinstein via Flickr Wikimedia Commons

Port Authority buses and rails, which have seen an significant increase in ridership this year, are trying to keep up with demand by modernizing their online presence and expanding the fleet of buses that many depend on.

**TRANSIT**, from A1

increase to a “strong commuter base” that uses the bus system to get to and from work in Oakland and Downtown.

“We know that those riders who work eight-to-four or nine-to-five are becoming less frequent and a lot of our ridership is based on those who do work odd shifts,” he said. “Our service plans for the short term and the long term are looking at ways we can meet those needs.”

Port Authority bus usage seems to have been largely unaffected by the rising popularity of rideshare services. Chief Communications Officer of Port Authority, Jim

Ritchie, called the impact of Uber and Lyft “negligible.” That said, a dip in ridership has been noticed on the 28X, the bus that runs from university areas in Oakland to the Pittsburgh International Airport. In 2013, before Uber and Lyft became commonplace, the 28X averaged 58,786 rides per month. By 2017, WESA reported that the 28X’s monthly ridership had fallen to just above 50,000, making it the bus line that has been most impacted by rideshare services.

Despite the overall increase in ridership, some students report being dissatisfied with the agency’s bus operations. Chloe Desaulles, a senior BXA major, said that she thinks the

system works “terribly.” One of Desaulles’ biggest problems is that “there isn’t even an official app.” She uses two different apps to track bus schedules — “Transit” and “P-Track” — yet “buses still disappear from the map sometimes.”

Students also report having trouble depending on the bus system during rush hours, when buses are consistently too full to allow anyone aboard.

Port Authority is working to accommodate the growth in ridership but faces budgetary limitations. There is no surplus room in Port Authority’s four garages to increase its bus fleet above the current amount of 720. Though the agency acknowledges

the need for a fifth garage, that would require at least 25 acres of land to be located conveniently and would cost upwards of \$140 million.

“We’ve known for a long time a fifth garage is key to expanding service,” Brandolph told the *Pittsburgh Post-Gazette*. “That certainly is dependent on our finances.”

For now, Pittsburgh Port Authority is taking small steps to make its bus services more efficient. Next month, the agency will eliminate a congested turn on the 54 bus route that serves North Side, the Strip District, Oakland, and South Side, hoping to shave 10 minutes off each trip.

Additionally, Port Authority is

negotiating with the Amalgamated Transit Union to economize the drivers’ lunch breaks. Drivers currently return to garages for their 30-minute lunch break. The agency is pitching the idea of drivers taking a lunch break on the road to eliminate the 10 to 20 minutes that are wasted traveling to the garage.

Ritchie added that Port Authority is working on a major rebranding, which is currently in the “research phase.” A mobile app is being developed that will focus on “transit payment” rather than “transit ride planning.” Additionally, Port Authority is working to “more efficiently send out real-time information about detours, closures, and disruptions in service.”



Courtesy of nextPittsburgh

City Council member Erika Strassburger, who propped the ordinances, Governor Tom Wolf, and Mayor Bill Peduto after a meeting.

## Pittsburgh City Council weighs gun ordinances

**FIREARM**, from A1

These firearm regulation ordinances have continued through the Pittsburgh City Council, from initial reading to public hearings to where they currently sit in “Standing Committee,” awaiting final modifications and a vote. As the city cannot enforce them with arrests, the ordinances offer only additional citations that can be issued.

As the ordinances are finalized in Standing Committee, Pittsburgh residents continue to air both critique and support for the modernization of gun regulation in Pittsburgh. With the ordinances past public hearings now, the legislation is now in the hands of the Pittsburgh City Council.

number of issues.”

With these concerns raised to the Pittsburgh City Council, in addition to council members’ desires to include provisions in the ordinance relating to mental health, the ordinances did not pass before the Feb. 14 target, which also serves as the one-year anniversary of the Marjory Stoneman Douglas shooting.

Carnegie Mellon University placed a strict deadly weapons ban at “any property owned or controlled by the university” on June 23, 2000, so the proposed Pittsburgh ordinances would change nothing about the current university policy.

# DeRay Mckesson talks police violence at PublicSource talk

**JACOB PAUL**  
*Layout Manager*

“Did you know that one-third of people shot by a stranger in America are shot by police?” Mckesson asked the 250 in attendance at the Carnegie Library Lecture Hall. Though those in attendance were socially aware fans of DeRay Mckesson, most were not aware of this grim statistic.

In the five years since the shooting of teenager Michael Brown and subsequent protests in Ferguson, Missouri, DeRay Mckesson has become a prominent voice for social justice, the Black Lives Matter movement, and police reform. After marching for 400 days in Ferguson, he helped launch a project called Campaign Zero that seeks to end police violence. In 2018, Mckesson published a book titled *On the Other Side of Freedom*, and he recently began hosting a podcast called *Pod Save the People*.

Though the national conversation about race and policing is “in a fundamentally different place,” Mckesson emphasized that “outcomes have not changed.” The amount of people killed by police every year has largely remained constant.

Mckesson does not take his mission lightly, but at a talk

on Tuesday, Feb. 12, hosted by PublicSource, a local public interest journalism organization, he was distinctly upbeat. Mckesson wore his signature blue Patagonia vest over a button-down shirt, jeans, and bright red sneakers as he told personal stories to reinforce his points.

Mckesson, now well known as an activist, has a background in teaching public school. On Tuesday, the Carnegie Library Lecture Hall became a classroom when Mckesson asked the audience to estimate what percent of arrests are made for violent crimes. Most presumed that between 30 percent and 50 percent of arrests are for violent crimes. But the answer was five. Mckesson underscored his point: “The idea that police spend most of their time on violent crime is just false.”

“We never let the system off the hook,” Mckesson told the audience. He criticized the manner in which the American wealth gap is discussed, saying “it doesn’t get at the root of inequality.” Mckesson argues that, for any legitimate reform, “values and beliefs need to be examined and challenged.”

The high profile activist has been criticized for exploiting the work of activists and the tragic circumstances of Michael



Courtesy of Kat Procyk, PublicSource

DeRay Mckesson spoke at the Carnegie Library Lecture Hall about a variety of social issues, from police violence to the 2020 election.

Brown’s death for personal gain. At a Sept. book talk in St. Louis, someone identifying as a Ferguson activist interrupted Mckesson to call him “a liar” and claim that he “did nothing in Ferguson for us” and has made “money constantly off us.” Some Pittsburgh based activists also pushed back via social media about Mckesson’s appearance in Pittsburgh, as reported by PublicSource. They accused Mckesson of profiting off of Ferguson and called for someone from Ferguson to speak instead.

In a Q&A after the talk, Jourdan Hicks, community

correspondent for PublicSource, asked Mckesson about the criticism. He told the audience that he gained his following on Twitter — on which he now has over 1 million followers — when people sought him out as an information source to see what was happening in the protests. People criticize him for going on TV, but he stated “I’m on TV talking about police killings.” He added that he is not celebrating, and is “mindful every single day that we have not won yet.”

One audience member asked what Mckesson thought of the Democratic candidates for the

2020 election. Mckesson joked that it was “a little early,” but he predicted that the Democratic candidates will be united on criminal justice reform and healthcare, but divided on the role of the U.S. in the world, and what to do about handling extreme wealth.

Many of the audience members clearly felt a connection to Mckesson. After the talk, nearly 50 attendees lined up to meet DeRay, shake his hand, and, for some, take a selfie. Books were being sold at the event by White Whale bookstore, which Mckesson was happy to sign for attendees.



# Forum

FROM THE EDITORIAL BOARD

## The ethics behind rich people “philanthropy”

Andrew Carnegie gave away over \$350 million in his lifetime. According to the Columbia University Libraries, he was the first extremely wealthy person to publicly state that “the rich have a moral obligation to give away their fortunes.” He even wrote a manifesto, The Gospel of Wealth, that claimed all personal wealth beyond the necessities should be regarded as a trust fund to be administered for the benefit of the community. He seemingly adhered to this ideal, helping build over 2,000 libraries and establishing various trusts.

But this is not an article intended to praise Andrew Carnegie. Libraries mean very little when the community has no time to visit them. According to pbs.org, while Carnegie resided in a mansion, his steel workers worked 12-hour shifts, seven days a week. They had no time to eat or rest. Their only holiday was the Fourth of July. Protective gear was scarce, horrific injuries were common, and 40 years was considered old. For their grueling efforts, they skated just above the poverty line, averaging about 0.00025 percent of Carnegie’s yearly earnings.

Any efforts to fight back were squashed. At the Homestead Strike, for example, the Carnegie Steel Company clashed with union members, resulting in the death of 16 people. With the threat of violence hanging over their heads, workers were forced to toil in inhumane conditions. Under Carnegie, it was clear that profits, not people, were paramount.

So how do we reconcile Carnegie’s philanthropy and avarice? We attend a school that bears his name and is built on his fortune. Should we be grateful? Should we be uncomfortable? Should we be indifferent to something we have no control over? At what point do the positives of philanthropy outweigh the negatives of poor working conditions?

The answer is never. Philanthropy does not erase the abuse and exploitation of workers, and we cannot pretend it does.

First of all, philanthropy is not that impressive when you have a huge fortune.

Large donations are incredibly helpful and meaningful to their recipients, but they have little to no effect on the donors. Billionaires have a truly ludicrous amount of money. They could give away millions of dollars and see no change in their lifestyle. They could give away \$900 million and still live an incredibly pampered life. A struggling student who donates \$20 to an online fundraiser is more generous than most philanthropists because the loss of that cash will actually affect their life. We shouldn’t malign philanthropy, of course, but neither should we worship billionaires for something that affected them no further than a slight cramp in their hand as they wrote a check on their private jet. The incredibly wealthy need to recognize their responsibility to society as Carnegie did, but they should not let that understanding end with philanthropic efforts.

Additionally, no matter how hard billionaires work, no matter how smart they are, there is no way their wealth is proportional to their effort. They aren’t working a billion times harder than a fast food worker, they just have power and ownership that a fast food worker doesn’t. We cannot praise them for giving away their hard earned money when, for the most part, it’s actually the money their employees earned for them. We also have to consider people who inherited their wealth, rich for no other reason than the circumstances of their birth.

Finally, we need to know if the means justify the ends. Imagine, for a moment, two scenarios. In the first, a boss treats his employees fairly. He gives them livable wages and plenty of holidays. The company thrives, but stays relatively small. The boss earns \$300,000 in a year, and he donates four percent to charity. A local charity receives \$12,000 and uses it to feed around five homeless people for a month.

In the second scenario, the boss works his employees to the bone. They struggle to feed their children. They work long shifts with no holidays, and too many sick days put them in danger of losing their job. The company

grows bigger and bigger, bringing on more mistreated employees. The boss earns \$300 million in a year, and he donates four percent to charity. A local charity receives \$12 million and builds an entirely new homeless shelter.

Some might suggest that the second situation is more desirable. After all, a donation of \$12 million can do so much more than a donation of \$12,000. People should earn large amounts of money so they can give large amounts of money back to the community.

While this is a nice idea in theory, the reality is much murkier. How much wealth is enough? How wealthy do you have to be before you can start funneling it back into the community? How much can you spend on yourself along the way? How many workers can be written off as collateral damage?

The truth is, there is no stage in the process where morals are irrelevant. No amount of philanthropy can excuse the abuse and exploitation of workers. Any future benefits are nebulous. Any current suffering is real and visceral. A low-level employee is entitled to a healthy work environment, but the boss is not entitled to the publicity and fame that philanthropy brings.

This isn’t a problem left behind in the empty steel mills. Andrew Carnegie is not the only person who built a fortune on the back of mistreated workers. Amazon CEO Jeff Bezos, the richest man alive, has a fortune of around \$150 billion dollars. This number is so large it’s nearly incomprehensible to the human mind. Meanwhile, his warehouse employees are punished for taking sick days and bathroom breaks.

In a world where such disparities exist, we have an obligation to consider our views of wealth. We need to think about duty and obligations. About what we are willing to forgive, and what we aren’t. About who we must hold accountable. And if we must leave behind the comforting pretext of philanthropy in order to confront the exploitation lurking beneath the surface, then so be it.

## Fake porn creators abuse technologies

GABE BAMFORTH  
Staffwriter

Last week, I wrote an article about video-retargeting research going on here at Carnegie Mellon. Generative Adversarial Networks (GAN) are a machine learning technique that, among other things, allow realistic images to be created from visual inputs. Like gunpowder and nuclear power, GANs represent powerful technologies that are just too good for our species to use responsibly.

The most (in)famous application of GAN is the creation of deepfake videos, which superimpose the likeness of a subject onto a source video, thus creating convincing false footage of the subject. In 2017, Reddit user ‘Deepfakes’ used open-source GAN software to release a series of porn videos with celebrity faces imposed on the actresses. In an interview with Motherboard, Deepfakes said about the videos:

“Every technology can be used with bad motivations, and it’s impossible to stop that [...] I don’t think it’s a bad thing for more average people [to] engage in machine learning research.”

The issue with Deepfakes’ deterministic view is that he ignores all personal responsibility. The celebrity victims of all of his videos have been women. He could have made something benign and viral, like the series of Nicolas Cage edits produced by another Redditor, derpfaces. But he chose to create something harmful and then pointed to an implied history of human technological ethics blunders to absolve himself of agency or misogyny.

Since then a number of automated GAN packages have been released, including the popular FakeApp algorithm, which makes creating fake videos free and easy. The algorithm developed here at Carnegie Mellon is similar in some ways to FakeApp but has a much broader range of applicable content. Either way, the tools for homemade video retargeting are out there and free, so the question becomes: how do we deal with them?

The solution seemed simple at first; wouldn’t the best way to approach this be like approaching gun control? I mean, is the enjoyment of watching ten minutes of Nicholas Cage’s face getting edited into random movie clips really worth the shame and emotional trauma of revenge porn? Is shooting an automatic rifle at paper targets really worth US-levels of gun violence? The answer to both is no.

But that’s not a fair comparison. Video retargeting is not like firearms. A gun is a weapon by design; video retargeting isn’t so easily categorized. A more fitting comparison might be gunpowder, which was used for celebratory fireworks for hundreds of years before somebody weaponized it. GAN and spinoff techniques could revolutionize animation, putting artistic power in the hands of people without the financial resources to pay a team of artists to tell their stories. Look at artists like Steve Lacy, who produced chart-topping tracks with nothing but his iPhone. The fact that apps like FakeApp and Recycle-GAN are freely available enables an entire group of artists and storytellers to produce their art when they were previously prevented from doing so.

So there are good and bad uses for this, as Deepfakes pointed out in his interview. Once again, people have managed to take something beautiful and turn it into a weapon, aimed at celebrities or politicians or whoever disagrees with the creator. Critics often talk about how policy is always behind the technology curve, but rarely about how our social reality is behind the technology curve.

Who would think to use GANs to create fake porn videos of celebrities if they weren’t brought up in a society that somehow validates (demands?) that sort of thing? And if the motivation lies elsewhere — if Deepfakes was making some bizarre devil’s advocate argument about the “inevitability” of this kind of thing — it makes no difference. Every person who uses new technology to harm someone else makes a decision to do so, and the world can’t afford apathy towards them.



Courtesy of Theodore Christopher Marceau via Wikipedia  
Andrew Carnegie contributed most of his wealth before his death but had accumulated it under unethical circumstances.



Courtesy of Aayush Bansal  
A video generated by GAN, which took as its input a video of another flower.

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# Pulwama: a victim of terrorism

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**LIKHITHA CHINTAREDDY**  
*Staffwriter*

This past Thursday, a suicide bomber targeted a convoy of Indian Central Reserve Police Force (CRPF) soldiers, killing 45 men in the Pulwama district of Kashmir. This incident is the latest in a series of attacks on the Indian Army in the ever-turbulent Kashmir, and Pakistan-based terrorist organization, Jaish-e-Mohammed, has taken responsibility for the attack. The horrific killings have drawn massive outrage all across India and led to growing calls for revenge, some calling for outright war against Pakistan and others demanding that a surgical strike gets carried out, the likes of the one that took place as retaliation for the attack on an Indian Army post in Uri in 2016.

As an Indian, I share the collective grief, pain, and anguish that is being expressed in my nation. Scrolling through my Twitter feed and reading the names of the men who were killed and their stories made it even more tragic.

The problem is that terrorism in Kashmir has become multidimensional. For example, Jaish Chief Masood Azhar, who was the mastermind behind the 26/11 attacks in Mumbai that

killed over 200 civilians and now the attack in Pulwama, has been allowed to contest elections in Pakistan and even preach to the public while China blocked India from listing Azhar as a designated International terrorist in the United Nations Security Council. Since 2017, China has kept the listing of Azhar on “technical hold” by citing “lack of consensus” in the UN sanctions committee.

This listing decision also comes months after the Wuhan summit, which was meant to thaw the icy Indo-Chinese relationship post the heightened tensions in Doklam in 2017, in which both Indian and Chinese forces had a standoff near a trijunction area when Indian forces opposed Chinese construction extending a road into an area which was claimed by both China and Bhutan, which is an Indian ally.

But whatever progress was made during Wuhan will undoubtedly take a backseat after these attacks, as China still cites technicalities to refuse listing Azhar as a terrorist.

With general elections only a little more than a month away in India, the Modi government is already under immense pressure to retaliate. India has stripped Pakistan of its “Most Favoured Nation” status, which had previously allowed it to enjoy low trade tariffs and high import quotas. It remains to be asked why the government did not remove this status from Pakistan immediately after Uri.

Though there are heightened calls for another surgical strike on terrorist camps in Pakistan, the very idea of a surgical strike demands an element of surprise that would be lost if the other side knows in advance and prepares for an attack, potentially catalyzing a warlike situation between the two nations leading to the further loss of life.

India could potentially pursue the isolation of Pakistan diplomatically and pressure it to arrest Mazhoor. However, India’s response to China will be one of utmost interest as China’s technical hold is the only obstacle to Azhar’s designation as an international terrorist. At this time, it is important for India to gather support from around the world to increase pressure on both Pakistan and China.

But beyond this affair, the real test for the Modi government is figuring out how to reevaluate its policy on Kashmir to provide a robust solution to the ongoing violence in the valley. While Pakistan provided training and China prevented the mastermind from being designated a terrorist, the militant suicide bomber who claimed 44 lives was from Kashmir. The problem in Kashmir has become multidimensional with multiple entities and multiple agendas, including independence and religion, and it is imperative that the government find long-term solutions to achieve this end.

Courtesy of Adam Jones via Flickr Wikimedia

# The power of collective caring shines over individual despair

**EVANGELINE LIU**  
*Staffwriter*

Last week, I saw a tweet from CBS News correspondent David Begnaud listing several outstanding issues that Puerto Rico is facing today over a year after Hurricane Maria. They include the island’s bankruptcy crisis, bodies being backlogged at the morgue, 911 calls taking up to three minutes to be answered, the decay of the island’s healthcare infrastructure, and earlier in the week, the president’s desire to divert unspent disaster funding appropriated for Puerto Rico and California by Congress in order to fund his border wall. The president eventually decided against this decision.

The next day, I looked at the tweet again and saw that it had blown up — it currently has over 22,000 retweets and over 47,000 likes as well as about 1,500 replies — and was shared by high-profile politicians like Rep. Alexandria Ocasio-Cortez (D-NY) and San Juan Mayor Carmen Yulin Cruz.

It was heartening to see this tweet getting so many likes and shares; Puerto Rico, a U.S. territory with a name that sounds like a foreign country and home to three million non-voting U.S. citizens who usually get little say in national politics, is becoming a larger part of the national conversation, receiving well-deserved attention.

But most importantly, I was encouraged by the popularity of this tweet because it is an example of social media being used in the best ways. After all,

awareness is the driver that compels people to care. I was glad that so many people wanted to show that they cared, helping increase the awareness of Puerto Rico’s issues within their own social media circles.

It has been reported that President Trump backed off on the plan to divert unspent disaster funding for Puerto Rico and California because he was told that it would be a political disaster for him. This reason by itself is selfish, but it is only possible for an issue to become a political disaster for a politician if people care about the issue and believe the politician does not care about the issue or is doing the wrong thing.

In other words, the president would likely have gone ahead with the plan to divert disaster funding had it not caused such an uproar, which resulted from journalists’ diligent reporting and the people’s collective voices speaking out in reaction to it. The plan was stopped solely because people cared — cared enough to hold politicians accountable over whether they are treating fellow citizens properly. And people were able to care, solely because they had information. After all, people cannot care about a topic about which they are ignorant.

Many of us students grow up wanting to make a positive difference in the world but feel overwhelmed with the sheer scale of the problems we are faced with and start to feel powerless. Often we think that if we don’t have a large platform of any kind, what can we do? Although we may not be influencers

with deep political or financial power, we can all start by caring about a problem and working to increase awareness, even via something as simple as a retweet or comment. The most-liked celebrity photos on Instagram are only popular because many people came together to make it popular. Likewise, by raising our voices in support of Puerto Rico or any other marginalized group, we add our voices to the chorus demanding accountability and solutions.

The collective power of many people caring is more potent than we think. The civil rights movement happened because people cared enough about equal rights for all races that they risked their reputations and lives for it. More recently, the number of people on the mainland caring about Puerto Rico’s issues post-Maria forced politicians to reckon with them as a voting force and so compelled them to pay attention to an island that has long been ignored. A drop of water may seem like just a weak little drop of water until you realize that a powerful ocean is made of many such drops.

Begnaud, who has received many journalism awards and became known and loved in Puerto Rican circles for his work on the island, summed up this power in a tweet, writing: “Using this platform to give voice to those who need/deserve/want to be heard is my mission. Always.” Not all of us have a platform like his, but by caring and raising awareness, whether about Puerto Rico or about any other issue, we can all make ourselves a part of this mission.

Courtesy of Joojin Clipart



# Vaccine hesitancy sparks outbreaks of measles



**FRANK HU**  
*Operations Manager*

A developed country, through decades of scientific research, makes reliable vaccines for some of the most virulent diseases known to mankind. These vaccines are administered and help to curtail illness and raise the quality of life for everyone.

Then, just when it seemed like these diseases were finally eradicated, groups of misguided individuals suddenly rise against and reject this necessary preventative measure, labeling them as a health risk and abstaining from vaccinations on “philosophical” grounds. Soon, those very diseases resurface, wreaking havoc in communities that are left vulnerable because of these groups’ decisions.

Sounds ridiculous, right? Yet as irrational as anti-vaccination groups may be, it doesn’t change the fact that the anti-vaxxer movement has made a resurgence in the past few years. That’s not to say that objection to vaccination is

anything new; people have resisted getting vaccinated since the introduction of vaccines, although such beliefs truly came into the limelight in the late ‘90s and early 2000s thanks to a single (emphasis on single) false study in 1998 that accused vaccines of causing autism.

Today, the problem is more serious than ever before, with outbreaks of measles sweeping the Pacific Northwest. What sets this region of the country apart is that it has a relatively higher concentration of anti-vaxxers, acting as a refuge for those seeking laxer regulations and greater autonomy. That’s not to say the rest of the country is perfect; in Ohio and 16 other states, parents can opt out of required vaccinations for philosophical reasons — whatever that means — and all states allow abstention from vaccinations for medical reasons.

It is disheartening to see the spread of these unfounded and dangerous ideologies, but, in the age of misinformation, it is not surprising. What’s truly frustrating about this situation is that no matter how much evidence is presented in favor of vaccines, those who oppose them will forever cling to their shoddy statistics and incorrect

nonsense; after all, convincing those mired in belief-perseverance is notoriously difficult.

What anti-vaxxers fail to realize is just how selfish their actions are. It may seem like a vaccine is a shot administered to the individual, but the reason that they work is because of the principle of herd immunity. If enough individuals in a certain population are vaccinated against a certain disease, then everyone in that community is protected. Conversely, when not enough people get vaccinated, preventable diseases have a field day. Once that happens, everyone is at risk.

Making the movement even more ludicrous is the fact that many anti-vaxxers were vaccinated by their parents, which paints the whole situation of depriving their children of vaccines as even more depraved and downright wrong. Luckily, teens suffering under anti-vaccination households are beginning to take initiative, seeking out ways to get vaccinated without their parent’s consent.

As encouraging as that may be, it isn’t nearly enough to fix the problem. So, what else can be done to neutralize the anti-vaxxer threat?

It’s been said before but

vaccinations should become mandatory for everyone who does not have a medical conflict. Understandably, making anything government-mandated is not going to be a popular choice, but people need to realize that vaccinations are not a personal or ethical issue like conscientiously objecting from the military: it is a matter of public health and well-being. If everyone gets vaccinated, no one gets sick, a literal win-win situation that should be the status quo. This is especially important in tight-knit communities such as college campuses where students are in close contact with one another; the fact that vaccination rates among college students are abysmally low is concerning. Luckily for us, Carnegie Mellon takes vaccinations seriously with University Health Services mounting aggressive campaigns to get students vaccinated to prevent outbreaks of flu and other preventable illnesses.

Beyond just giving everyone vaccines, however, there must be greater efforts toward combating the spread of anti-science in our society. Creating herd immunity through vaccinations, though important, is not the only problem that stems from a stigma against science; we see this exact same

narrative with climate change, and to a less serious degree in flat earthers.

Scientists who make the critical breakthroughs that elevate the standard of living must be more aggressive in spreading the word because radical discoveries are often demonized by those who fear great change. Only by dispelling doubts and rumors and advancing the truth can we ensure that populations can take advantage of these innovations and leverage them towards creating a better world. Additionally, the education system should be standardized to reflect the scientifically justified body of knowledge so that future generations are firmly grounded upon a foundation of facts rather than myths. To allow anything else would be a disservice, and only perpetuate misinformation.

As citizens in the 21st century, we should be focused on progression rather than regression. Illnesses like polio and measles became preventable in the 20th century, and are all but gone in the U.S. Instead of allowing these diseases to make a comeback, we should turn our attention towards more pressing matters of public health, taking a step forward rather than a step back.

# Exclusive areas are inconvenient for undergraduates



**TREVOR LAZAR**  
*Staffwriter*

Picture this: it’s Sunday morning, you have an essay or problem set due Monday, and you’re looking to finish it up. You go to the Tepper Quad, the brand new, beautifully lit building on campus with new tables and study rooms. You arrive around 11:00 a.m. and notice that most of the tables are full. After searching for over 20 minutes, you sit down at a table on the third floor with a great view of Oakland. You pull out your laptop and notice you have only 12 percent battery. You had the foresight to bring your charger, but you look around

and realize there are no outlets in sight. A set of three stand-up outlets has been monopolized by a group of students a few tables over, and they are too far away for your charger to reach. So, you decide to look for yet another table. You finally find a table on the fourth floor in a more secluded area with an outlet.

After finishing up your assignment, you realize the professor has requested it in print. You send it through the Carnegie Mellon printing system and consult the printing map to find the nearest printer. You write the room numbers in Tepper by which the printers are located in your Notes app and begin your search. Walking up to the first location, you realize the printer is located in the Master’s Lounge. You go up a floor to another location

and note that that printer is in the Ph.D. lounge. Both spaces are locked, and your ID does not grant you access. You are lucky though, and as a Ph.D. candidate exits the space you sneak in after them before the door shuts. You finally print your assignment amidst puzzled onlookers.

You return to the secluded spot on the fourth floor, which is no longer secluded. Dozens of people in business casual are meeting in the space, and someone informs you that you cannot work there as it is reserved. You collect your belongings and dejectedly move again. It is past noon now. Realizing how crowded Hunt and Sorrells probably are, you walk back to your room to complete your work.

If you have read this and think “that sounds familiar to

me,” you are not alone. Carnegie Mellon has a serious problem with the volume of study space on campus, and the brand new Tepper Quad is alarmingly devoid of it for how much square footage the building has. Especially for students in the Dietrich College of Humanities & Social Sciences or the Mellon College of Science, dedicated study space is severely limited and the University has shown little effort in addressing this issue.

Portions of the Tepper Quad and the upper floors of Gates should not be locked to students who are not in those programs. Spaces like the Master’s Lounge in Tepper have common study areas which are notoriously limited around campus, and restricting students from accessing that space only exacerbates the problem. In

Gates, saying that only certain undergraduates can access particular spaces is egregious. Given that tuition is the same for all undergraduates, these spaces should be open to all undergraduates so that any student in Carnegie Mellon can study in common spaces around campus other than places like chemistry labs or spaces that are restricted for common sense reasons.

I also call on the administration to prioritize building more dedicated study spaces. Even in a brand new building like Tepper, there is limited space and there are very few outlets. Given that most college students use laptops or other devices in their day-to-day lives, outlets should be readily available in all spaces on campus where there are open tables or seating.

## SPEAK YOUR MIND: WRITE FOR FORUM!



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## SPEAK YOUR MIND.



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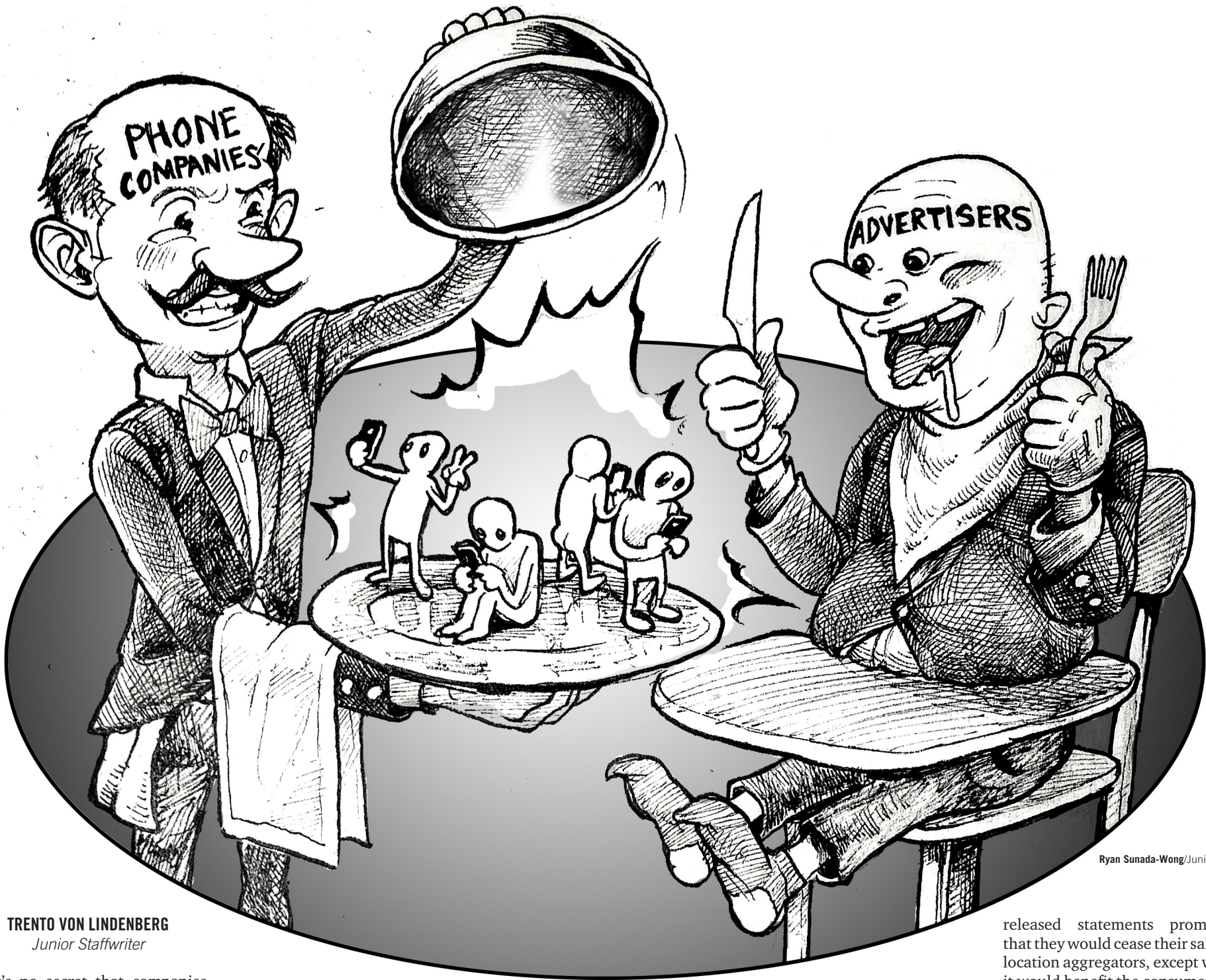


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# Science & Technology

## Carriers provide location (dis)services to customers



It's no secret that companies sell consumer data, but what you might not have known is that people can access that data and use it to track your location. On May 16, 2018, that is exactly what Dr. Robert Xiao, then a Ph.D. student in Carnegie Mellon's Human-Computer Interaction Institute, discovered.

15 minutes into browsing the website for the location aggregator LocationSmart, Dr. Xiao reportedly came across a security vulnerability that granted him access to a cellphone's real-time location data. Worse yet, it did so without requesting

permission from the cellphone user, after Dr. Xiao typed in the user's cell phone number.

At its core, location aggregators serve to disseminate data. Carriers sell location information to aggregators, who then sell that data to other companies for various purposes: geolocation, marketing, and even emergency assistance. However, this is only if the user has given explicit permission for the recipient to have their data, which you may have seen when installing applications that request location

permissions.

So what happens when a hacker can bypass the permission request like Dr. Xiao did? Well, it's hard to say. At the very least, it is a major violation of privacy. But what's worse is the potential for malicious individuals to access someone's location information with minimal difficulty. According to an investigation carried out by Motherboard, bounty hunters can readily find just about anyone's location by using location aggregators' data. And, since the data is carrier-based (as opposed

to application-based), it is likely impossible to opt-out.

Although the vulnerability was patched the following day on May 17, the fact that it had unknowingly existed for years led the U.S. Federal Communication Commission to open an investigation into LocationSmart. As of the writing of this article, there seems to be no news on the investigation's progress.

To round off last year's events, the telecommunications companies in question (such as T-Mobile, Sprint, and AT&T)

released statements promising that they would cease their sales to location aggregators, except when it would benefit the consumer.

This past Monday, however, the *Pittsburgh Post Gazette* published a story revealing that carriers still work with data aggregators. In his statement, Richard Young, a representative for Verizon, said, "We...provide location information only with the express consent of our customers."

However, when the data aggregators in question are still small third-party companies with limited budgets to fund cybersecurity, it is difficult to say if our data is any safer now than it was a year ago.

## Honeybees learn arithmetic by flying through a maze

**FRANK HU**  
*Operations Manager*

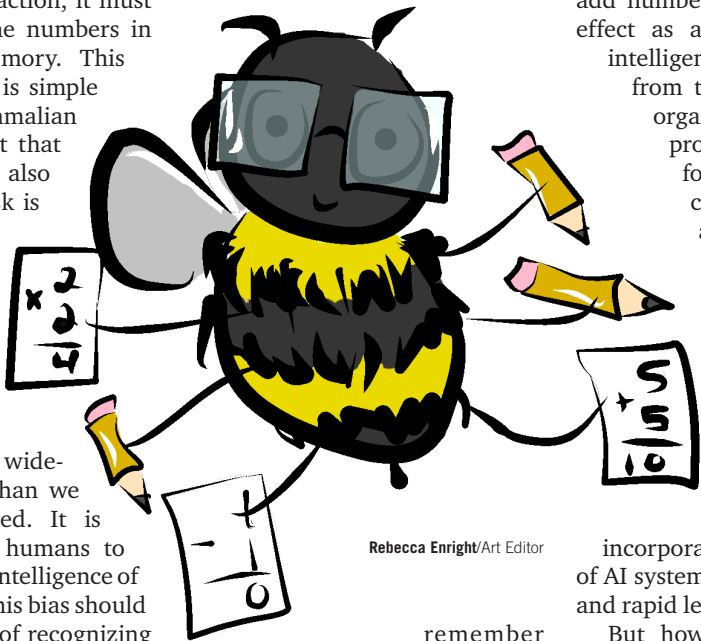
Personally, I've always found math to be a difficult subject. From arithmetic to algebra to differential and multivariate calculus, whenever numbers and letters come together, frustration ensues. Although high-level abstract mathematics are the sole domain of humans, arithmetic is more accessible to other members of the animal kingdom. Many species of monkeys, for example, are capable of adding and subtracting numbers in similar ways as us.

More humbling, however, is the fact that even the common honeybee can do math.

In a recent study, researchers from RMIT University in Melbourne, Australia, showed that bees can do math symbolically by associating color cues with arithmetic operations. While adding and subtracting numbers may seem simple to us, the task represents a big challenge for a bee: not only must the bee keep track of the rules surrounding

addition and subtraction, it must also manipulate the numbers in its short-term memory. This duality in analysis is simple enough in mammalian brains, but the fact that an insect brain can also accomplish this task is a significant revelation for two main reasons.

First, this analysis shows us that mathematical ability and comprehension may be more widespread in nature than we previously suspected. It is often easy for us humans to underestimate the intelligence of other species, but this bias should not get in the way of recognizing that other less mentally developed organisms can accomplish surprisingly complex tasks; desert ants, for example, can navigate tremendous distances without ever getting lost, and locusts are incredibly aerodynamically efficient pilots that can fly up to 80 kilometers in one day. We should



remember that appearances can be deceiving, and that simple creatures can have extraordinary talents.

Second, it demonstrates that mathematical cognition is not necessarily correlated with the brain size or processing power. The fact that a bee can

add numbers to much the same effect as a human shows that intelligence is not inextricable from the physiology of the organism. This finding has profound implications for the study of animal cognition, as well as in the field of AI. If it indeed proves true that arithmetic operations and associated logic does not depend on the presence of a powerful and localized brain, then this principle can be incorporated into the design of AI systems to promote efficient and rapid learning.

But how did scientists even discover that bees could do math? In an experiment conducted by Ph.D. researcher Scarlett Howard, honeybees had to navigate through a Y-shaped maze that represented an arithmetic problem. At the entrance, the bee was presented with a set of one to five shapes, painted either

blue for addition or yellow for subtraction. If the bee flew in the correct direction after reaching the decision chamber, it was rewarded with sugar water. If not, it received a bitter-tasting quinine solution. Initially, the bees made random choices in the math maze, but after 100 trials over four to seven hours, the bees learned that blue meant to add one and yellow meant to subtract one. Eventually, the bees were able to apply these rules to new numbers.

"These days, we learn as children that a plus symbol means you need to add two or more quantities, while a minus symbol means you subtract," Howard told RMIT News. "Our findings show that the complex understanding of maths symbols as a language is something that many brains can probably achieve, and helps explain how many human cultures independently developed numeracy skills."

Of course, we will likely never see insects doing integrals or derivatives, but the next time you struggle with mental math, just remember: even a bee could do it.



# How Stuff Works: The Science of Film Photography



MARIKA YANG  
Publisher

Whenever I travel back home during breaks, I always love going through our boxes of old photographs. I’m a nostalgic person. I love looking at photos of my parents before their gray years and their wrinkles, before they had me. I like searching for snapshots of old memories that my brain hasn’t held onto. In the boxes, the photos are stored in small packets, their plastic negatives at the bottom. These days, my first instinct when I want to snap a photo is to grab my phone, so old negatives are a relic of another time. But that time was not even 15 years ago.

Today, film photography is rare. When it is used, it’s mostly used as a form of artistic expression. But holding all those physical photos in my hands and running my finger along the edges of the negatives, I get curious. How does photographic film actually work?

The name gives it away. Photography comes from the Greek words “phōtos” and “graphé,” which translate to “light” and “drawing,” respectively, or “drawing with light.” That’s exactly what photography is, and how the mechanical and chemical process works to create a photograph. When the shutter of a camera opens, it allows light to travel through the lens and shine onto the film.

Photographer David Kachel calls black and white film “a piece of flexible clear plastic...covered with clear Jello, with salt in it.” This description, though rudimentary, is not far off. According to the University of Houston College of Technology, photographic film is made of four layers: the protective coating, emulsion, base, and anti-halation backing. The most important layer is the emulsion, which is made up of silver halide crystals suspended in gelatin — the salt and Jello™ from Kachel’s description. In black and white film

there is one emulsion while in color, there are several, ranging from three to twenty in more advanced types of film, each which react differently to the different colors of light.

When light hits the film, the silver halide crystals absorb the light and are converted to metallic silver. These exposed crystals turn to black, representing the areas with the most light. The areas of the film that are not exposed to as much light do not convert to metallic silver, and remain light. Therefore, this *latent image* of light and dark areas on the film is an inverse reflection of the real thing — the highlights are dark and the shadows are light. Film rolled in canisters, as it is most commonly used, is more efficient than sheet film (single sheets best associated with Polaroid cameras) because it allows a photographer to shoot multiple frames.

The roll of film is next developed with the *developer*, one or multiple chemicals that complete the process to convert the silver halide crystals to metallic silver. After using chemicals to *stop* the developer’s reaction and *fix* the film’s state, the film development is finished, and you can view the negative frames under light. To achieve the final product, a selected frame of film is put in an enlarger and light is shined through the negative onto a sheet of light-sensitive paper. This enlarging and printing process reverses the inverse picture on the negative, returning the image to the correct representation of light and dark areas. The paper goes through another series of development chemicals, and voilà! You have created a photograph.

Compared to the brief moment it takes to open my phone’s camera and take a snap, the film photography process is long and laborious — yet it’s also the science behind my beloved childhood photos. We take for granted how accessible cameras are and how easy it is to take a photo. But film photography was a necessary step of evolution to the instant gratification of photography today.



Courtesy of MaxPixel.net  
When exposed to light, images become visible on the photographic film.

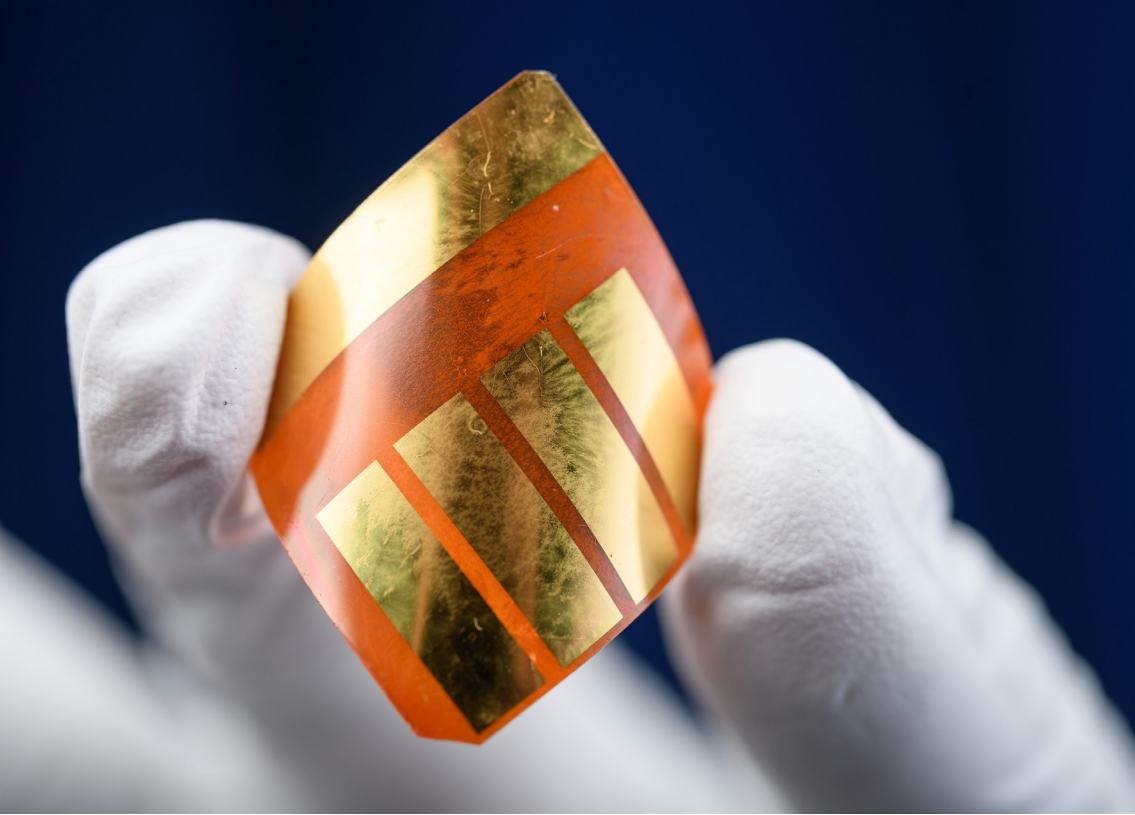


Courtesy of PxHere  
Camera film can be purchased in plastic rolls like the one pictured above.



Courtesy of Public Domain Pictures  
Cameras of the past required photographic film to save captured images.

## Perovskite solar cells bring flexibility and lower cost



Courtesy of Rob Brown via Georgia Institute of Technology  
Unlike traditional silicon-based solar cells, perovskite crystal materials can be made with flexible plastic. A multi-university report finds that adding alkali metals to perovskite cells increases their efficiency and demonstrates their robustness.

ASHWIN SRINIVASAN  
SciTech Editor

Solar cells are often heralded as the future in renewable energy technology, but have been hindered by their inflexible composition and high costs. In recent years, researchers have been developing improved solar cells using perovskite, a mineral composed primarily of calcium titanate. A new report published

in *Science* from scientists at the Georgia Institute of Technology, University of California San Diego, and Massachusetts Institute of Technology finds that perovskite-based energy devices have made immense progress towards flexibility and lower costs.

“Perovskite solar cells offer a lot of potential advantages because they are extremely lightweight and can be made with flexible plastic substrates,” Juan-Pablo

Correa-Baena, an assistant professor in the Georgia Tech School of Materials Science and Engineering, told Georgia Tech’s Research Horizons. “To be able to compete in the marketplace with silicon-based solar cells, however, they need to be more efficient.”

The main challenge has been producing perovskite cells that last longer than a few months. Perovskite crystals are made up of lead, an organic component such

as methylammonium, and halides such as bromine and iodine. Researchers have tested various methods in an attempt to achieve better efficiency. For example, they tried substituting cesium

in improving the performance of the device,” explained Yanqi Luo, a UC San Diego nanoengineering Ph.D. student. The cesium and rubidium caused the bromine and iodine to mix together more

“Perovskite solar cells offer a lot of potential advantages because they are extremely lightweight and can be made with flexible plastic substrates.”

Juan-Pablo Correa-Baena  
Georgia Institute of Technology

and rubidium into the part of the perovskite usually occupied by organic molecules.

Ultimately, scientists found that adding alkali metal to traditional perovskites improves performance. The newly published report details exactly why this is the case, which was previously unknown.

“We knew from earlier work that adding cesium and rubidium to a mixed bromine and iodine lead perovskite leads to better stability and higher performance,” Correa-Baena said.

The researchers used high-intensity X-ray mapping to study the perovskite crystals at nanoscale and learn how the alkali metals affect the structure. “By looking at the composition within the perovskite material, we can see how each individual element plays a role

homogeneously, leading to up to two percent higher efficiency than perovskite materials without these additives.

“We found that uniformity in the chemistry and structure is what helps a perovskite solar cell operate at its fullest potential,” said professor David Fenning of UC San Diego. “Any heterogeneity in that backbone is like a weak link in the chain.”

According to Fenning, the relative uniformity of the perovskite crystals, despite the existence of dead zones in them that produce no current, shows how robust the material is. “Perovskites could really change the game in solar,” Fenning said. “They have the potential to reduce costs without giving up performance. But there’s still a lot to learn fundamentally about these materials.”



# NCAA men’s basketball postseason is one month away

**MATTHEW BENUSA**  
*Sports Editor*

We’re officially one month away from Selection Sunday and the start of March Madness. The usual blue-chip top seeds are in contention once again for their same positions, with Duke, Kentucky, Virginia, North Carolina, Michigan, Michigan State, and Kansas as just a few teams who are all but selected for the NCAA Tournament. In recent years, there has been little success in the postseason for teams from Pittsburgh, but one memory I have is Robert Morris University’s upset victory against Kentucky in the first round of the National Invitation Tournament (NIT), the consolidation tournament, almost six years ago now. It was improbable, but they did it. Six years later, the magic is gone in Pittsburgh basketball.

With five games left in their season, the University of Pittsburgh is looking at an outside shot to even make the NIT. After two upset wins early in conference play, the Pitt Panthers were looking like a dark horse candidate in the tournament, but like most good things, they had to come to an end. Since then, Pitt has lost nine games straight to put their overall record at a dismal 12–14 and a bottom-dwelling 2–11 in the ACC. After such a strong start to conference play, it was a disappointing middle and atrocious end to the schedule. Hopefully they’ll have better luck next year.

The Duquesne Dukes are looking a little better off at 17–9 overall, which is a good enough record for an NIT appearance, and their 8–5 record in a surprisingly strong A-10 conference may be enough to push them into the NIT. As for the NCAA Tournament, their odds are a little dismal, but they may have a chance to get in as they push ahead in the last few games of the season. Three of the last five games for the Dukes are against some of the top teams in the A-10, and if they can win out, there may be enough for the selection committee to give the Dukes an



Photos courtesy of Will Richardson via Flickr

Pitt’s struggles in the second half of this year have killed their chances at a tournament berth, and Duquesne and Robert Morris have little chance.

at-large bid, albeit a lucky one.

Robert Morris is the other Division I team that is in the Pittsburgh Metro area, and the Northeast conference is not nearly on the same level as the ACC or A-10. So any chance Robert Morris has at either the NIT or NCAA Tournaments comes down to their conference tournament. The Colonials are one of the top teams in their conference, but they have been on a three-game slide. Although, one of the games was against the top team in the

conference, St. Francis, and the Colonials only lost by three points as the game came down to the final minute. If Robert Morris can get hot down the stretch, get lucky, and come close to winning their conference tournament, an NIT bid would be a definite. They obviously have to win their conference tournament to make the NCAA Tournament.

Overall, it looks like another unfortunate year for Pittsburgh college basketball in the postseason, so who should you root

for if you don’t have another team? After living in Pittsburgh for a few months, I’ve realized the sports culture in the city appreciates teams who are consistent champions; it’s one of the reasons why the Pirates struggle with attendance. But the city also has the small-town vibrancy of middle America. If you don’t have a team this March, you should root for the Wofford Terriers.

Wofford is located in Spartanburg, South Carolina, and they have been towards the top

of the Southern Conference for at least the last 10 years. This year is no different for them as they are at the top of the conference with a 23–4 record and a perfect conference record of 15–0. In second place is UNC Greensboro, who just lost by 30 points to the Terriers. It’s safe to say that the team has a killer instinct, and they are on the hunt for, not only a championship in their conference, but a deep run into the NCAA Tournament as a confident mid-major team.

## CMU Basketball at home

**BASKETBALL**, from A10

With this loss, the Tartans fall to 10 and 13 in a season that has seen glimpses of promise but that has ultimately failed to deliver. Despite a strong showing towards mid-season when the team went off on a four game win streak, the Tartans have been unable to recover from a 0–4 start, and have faded down the stretch, losing eight of their last 10. The YellowJackets will improve to 19–5 taking the first place spot

in the UAA conference.

The women’s team had an opposite fortune in their match-up against Rochester, with the final score coming in at 68–54 Tartans. They were led by first-year Caitlyn Clendenin whose 16 points and 14 rebounds earned her a double-double, her third of the season. After a tied score at the end of the first quarter, the Tartans dominated the second quarter. From there, they held a steady lead to keep Rochester under thumb.

Over the course of the game, the Tartans shot 47 percent

from the field to Rochester’s 28 percent, and the bench for Carnegie Mellon scored 18 points to Rochester’s five. In spite of a double-double from Rochester’s Julianna Okoniewski at 18 points and 12 boards, the combination of shooting prowess and bench ability kept the Tartans on top.

The women’s basketball team hopes to close out their season strong with a win over Case Western Reserve at 2:00 p.m. this Saturday. The men’s team starts right after the women’s game.



**Write For Sports!**  
Interviews,  
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### Summer Employment at Carnegie Mellon: Teaching Assistant and Residential Counselor Jobs in the Pennsylvania Governor’s School for the Sciences

Undergraduate summer employment at Carnegie Mellon University is available with the Pennsylvania Governor's School for the Sciences (PGSS). The PGSS is a five-week summer school for extremely talented high school students from Pennsylvania. Teaching Assistant/Counselor appointments are available in the areas of biology, chemistry, computer science, physics and mathematics. In addition, one or two positions may be available as Co-Directors of Residential Life. Academic duties of the TA/Counselor include assisting with lecture and lab courses and mentoring team research projects. Counselor duties of the TA/Counselor include living in the same dormitory as the PGSS students, ensuring that students adhere to the PGSS disciplinary rules, providing tutorial help in the academic program, and arranging and conducting social activities. Co-Directors of Residential Life (a.k.a. Head Counselors) are responsible for overseeing the TA/Counselors and fostering a safe, collaborative living and learning environment for the PGSS students.

TA/Counselor applicants should have finished their sophomore year by the start of the summer program. Consideration will also be given to extraordinarily qualified first-year applicants. Preference will be given to applicants with strong academic records and strong social skills. Prior experience with PGSS or a similar summer program is preferred, but not required. Applicants for Co-Director of Residential Life should have graduated from college or university by the start of the summer program. Further information is available at the PGSS web site: <http://sciences.pa-gov-schools.org/>.

**Stipend for five-and-one-half week period:**  
**\$2,500 for new TA/Counselors, \$2,750 for returning TA/Counselors**  
**\$3,000 for Co-Director of Residential Life**

**Housing is included (in the PGSS dorm) as well as a food allowance.**  
**Duties begin Wednesday, June 26, 2019, end Sunday, August 4, 2019**

Applications are available from the PGSS Office in DH A301  
or may be downloaded (pdf format) from the PGSS web site:

<http://sciences.pa-gov-schools.org/>

Contact the PGSS Program Office at (412) 268-6669

or e-mail [pgss@cmu.edu](mailto:pgss@cmu.edu)

**Application Deadline: March 31, 2019**

(Applications may be accepted after the deadline until all positions are filled.)

Paola Mathus/Contributing Editor



# Sports

## Swimming and diving team: titles for Britton, Bamforth

**MARIKA YANG**  
*Publisher*

Carnegie Mellon University’s men’s and women’s swimming and diving teams both posted top-five finishes at the University Athletic Association (UAA) Championships. This year, the championships were hosted by the University of Chicago, with the events spread out over four days beginning on Wednesday, Feb. 13, and concluding on Saturday, Feb. 16.

Adding up the points earned from all the individual and relay events, the men’s swimming and diving team finished in fourth place overall, behind Emory University, Washington University in St. Louis (WashU), and the University of Chicago.

On the first day of competition, senior diver Gabe Bamforth kicked off the championships for the Tartans, winning the men’s 1-meter diving board championship with 499.21 points. With the win, Bamforth claimed his second UAA title after winning the same event as a first-year and placing second in his sophomore and junior years. First-year James Kyle also qualified for the 1-meter finals events and finished in seventh place.

Later in the championships, Bamforth placed second in the 3-meter diving board. Right behind him was first-year Judson Kyle, who took third place. For the diving team’s great showing over the weekend, with multiple top finishes in the 1-meter and 3-meter diving board events, coach Alicia Gorman was named the Men’s Diving Coach of the Year, her fourth as leader of the Carnegie Mellon program.

In men’s swimming, the first night of the championships brought a school record-breaking performance in the 400-yard



Photo courtesy of Martin Santek via CMU Athletics

At the UAA championships, the men’s team placed fourth behind Britton and Bamforth, and the women’s team placed fifth behind Nicklas-Morris.

medley relay. Sophomore Justin Britton, senior Winston Chu, junior Sam Hawke, and first-year Richie Dauksher combined for a 3:19.14 time, shaving off 0.61 from the previous school record. They came in fourth place.

Britton had a great showing at the championships, winning both backstroke races: the 100-yard with a time of 48.88 seconds and the 200-yard with a time of 1:47.71.

“I was extremely excited for this meet because I had a lot of

confidence from my training and was ready to race,” Britton said in an interview with The Tartan. “I think this season has shown the level of a team we can be, both in training and competing. We’re looking forward to even better racing at nationals.”

Dauksher also had a good meet in the individual races, posting a 15:44.27 time in the 1,650-yard freestyle for third place and all-UAA honors. In the same race, he was followed by fellow first-year Doug Johnson in fourth place.

In the women’s competition, the Tartans finished in fifth place, behind Emory, Chicago, New York University, and WashU. Junior Emma Nicklas-Morris led the way for the team with a fifth-place performance in the 400-yard individual medley and a sixth-place performance in the 200-yard butterfly. Both of her race times should qualify her for the upcoming NCAA Championships.

Sophomore Jessica Chau contributed points to the team with a sixth-place finish in the

200-yard butterfly, while senior Cassidy Smith swam to seventh place in the 100-yard breast-stroke and first-year Madeline Hoedemaker came in 10th place in the 200-yard freestyle.

Next, both swimming and diving teams will compete at the Kenyon Fast Chance Meet at Kenyon College on Feb. 23. Individual competitors will also be looking for invitations to the NCAA Championships, which begin after NCAA Regionals are held in the first weekend of March.

## Tartan’s men, women basketball face opposite fortunes at home

**GUTHRIE SCRIMGEOUR**  
*Junior Staffwriter*

On Friday, the Carnegie Mellon men’s basketball struggled at home against a strong University of Rochester team that overpowered the Tartans on both ends of the floor, winning the game 79 – 58. The Tartans lost in spite of solid performances by Seth Henry and Zach Howarth, who scored 14 and 15 points respectively. Henry continued a hot shooting stretch, going three for five from the field. The senior guard averages 60 percent shooting from the

field for the season. He was also the one Tartan player who could consistently get to the free throw line against Rochester, drawing several fouls with a strong jump-step into the lane. Carnegie Mellon was unable to disrupt the YellowJackets offensive flow throughout the game, forcing only six turnovers to their own 13. On offense, the team was ice cold, finishing with a dismal shooting percentage of 34 percent and only seven assists to Rochester’s 15. On the perimeter, the Tartan defense was torched by Jacob

Wittig, whose second-half, eight point scoring run effectively iced the Tartan’s chances. The guard logged three boards, three assists and a steal along with 19 points in an impressive performance. In the paint, the Tartans had no answer for the lanky center Ryan Algier who contributed 12 points on six of eight shooting, along with seven rebounds, three blocks, and a steal. His presence down low made life difficult for Tartan big men, who had trouble finishing around the rim.

See **BASKETBALL**, A9



Photo courtesy of CMU Athletics

Tartan men’s basketball loses big at home, but women’s team wins behind big performance from Clendenin.

## Penalty Shouts: AAF is the new XFL, UFL

**MATTHEW BENUSA**  
*Sports Editor*

*This is Penalty Shouts, The Tartan’s sports column inspired by the The New Yorker’s column Daily Shouts. This satire-fueled column will focus on anything and everything funny in the sports world that is deserving of our comedic attention.*



Anna Boyle/Visual Editor

In a hilarious decision, a group of über wealthy magnates have decided to challenge the NFL’s monopoly on football in the United States. Their new league is called the Association of American Football, or AAF, or as I like to call it, BAD. With four teams in their Eastern Conference and four in the West, there will be at least five games played in Birmingham, Alabama. The last time I’ve thought about Birmingham was in third grade when we were learning the capitals of the United States (note: I realize Montgomery is the actual capital). I think it’s safe to say that the people in Birmingham don’t even think about Birmingham.

Although, there is some talent in the AAF. Colin Kaepernick was thinking about turning to this new league, but in true American fashion, didn’t get paid enough money to leave the NFL. I mean screw morality, right? Some of the talent that actually joined the league are hoping to make a splash to get their chance at the NFL, or to get their chance again. Christian Hackenberg, Trent Richardson, and AAF surprise of

the century, Nick Novak, are all finding a second life in the new development league. But Nick Novak? The man is a kicking god. The AAF feels like it has been done before, though. Maybe I’m just confusing it with a certain Keanu Reeves movie where the NFL hires replacement players during a league lockout, but then again, the big names already mentioned feel like a solid cast for *The Replacements*. Or maybe I’m confusing it with the UFL, a league from last decade that featured teams like the Omaha Nighthawks and Hartford Colonials: huge markets for football. Maybe it’s more similar to the XFL, whose single season started in the NFL’s offseason like the AAF, but the XFL is supposed to return at the end of the NFL’s 2020 season.

But the fun part about all of these leagues — the XFL, the UFL, and almost definitely for the AAF — is that their total collapse came within three seasons of playing. I think it was Albert Einstein who said that the definition of brilliance is to do the same thing over and over again without changing anything, and expecting a different result. If I were writing a serious article about the AAF, I would probably say something about how the league is a truly American institution: a stupid, overdone ploy designed to get a few people rich quick while destroying the lives of their workers. However this isn’t serious, so I’m going to wish the best of luck to the league’s investors who will most definitely turn a serious profit on something that is ethically sound and morally productive. Maybe Karl Marx will roll over in his grave to save the populace from the pain this league is going to spawn on every person everywhere, but two weeks into the league, two games played in Birmingham, and nothing has changed. I’ll be waiting.



# pillbox

The Tartan's Art & Culture Magazine



02.18.19 • B4 MLK Lecture • B5 deadmau5 • B10 *She Kills Monsters*



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# STREAMING PICKS OF THE WEEK

Sujay Utkarsh | Pillbox Editor

## MOVIES

### *Eternal Sunshine of the Spotless Mind* (Netflix)

From prolific writer and director, Charlie Kaufman, comes a simultaneously sweet, funny, heart-breaking, and depressing look at relationships. The story follows Joel (Jim Carrey) as he attempts to erase the memory of his relationship with his ex-girlfriend Clementine (Kate Winslet). As the procedure goes on, he realizes that he values the relationship a lot more than he realized. This is one of the best scripts for a romantic film ever written. It may be one of the best scripts out there in general. The dialogue is so fresh and interesting, with each person sounding real and so much like people you'd know in real life. Usually the performances elevate the script, but in this case, the opposite is true. Charlie Kaufman does so much with each character, and they all play into the central themes of the film. The sci-fi premise is used very interestingly to create entertaining and stylish sequences as Joel goes through his memories. This is a film that everyone needs to see at least once, and anyone who has been in a relationship that has ended will painfully relate to the characters.

### *Eighth Grade* (Amazon Prime)

This is Bo Burnham's directorial debut, and it follows an eighth-grade student, Kayla (Elsie Fisher), as she navigates the last week of her life in middle school. This is a film that easily could have been a pandering mess if handled incorrectly. But Burnham's film is refreshingly honest and, surprisingly, very well acted. Elsie Fisher's performance deserves an Oscar nomination. She handles some very difficult material with nuance that is seen from veteran actors. The film's sense of humor is refreshingly subtle, and from the opening minute, I was in tears from laughing. The most brave thing about the film is it doesn't shy away from getting uncomfortable. There is one scene towards the end of the second act that is one of the most heart-wrenching and discomfiting sequences I've seen in a film in a very long time. It's a nice, short, coming-of-age comedy/drama, and it was one of the best films of 2018. I highly recommend checking this one out.

## TV SHOWS

### *Mr. Robot* (Amazon Prime)

This is the best TV show on right now and no one can debate me otherwise. It's literally nearly perfect in every single way. The only flaw this show has is that one big twist was a bit predictable. That's it. The show is about a mentally ill hacker vigilante, Elliot (Rami Malek), who attempts to take down a large corporate conglomerate as part of a hacker group called fsociety. The dialogue, the acting, the cinematography, the editing, the sound, the show's thematic relevance, and its depiction of mental illness are all perfect. Every character is awesome. Every episode is at least very good, and many of them are some of the best episodes of television ever. Season three in particular is one of the best seasons of TV to ever be produced. It's just such a wildly entertaining, engaging, and compelling show, and more people need to watch it. Seasons one to three are on Amazon Prime right now and season four, the show's (sadly) final season, will be coming out soon. I beg you all to watch it because it's that good. I rarely hype things up, but *Mr. Robot* deserves all the hype and more.

### *Patriot Act with Hasan Minhaj* (Netflix)

Hasan Minhaj's new show joins the pantheon of political talk shows on TV, but yet it stands out far more than any others on TV. It's effectively a more hip version of *Last Week Tonight with John Oliver*. Minhaj covers a wide variety of topics with some incredible depth and insight, with topics ranging from oil production to Saudi Arabia to Supreme to Amazon. Each episode is then dedicated to that topic. What makes the show stand out is Minhaj's sense of humor and the show's incredible graphics team. Minhaj treats each episode like an extended stand-up bit, and he delivers everything like a stand-up comedy set. His jokes are very unique and unlike any other talk show comedian, filled with several niche references and unafraid to take shots at revered figures. He is aided by a very visually interesting graphic background, which moves through several images as seamlessly and efficiently as Minhaj moves through his jokes. It's a very unique and interesting take on the late night show format and a welcome change of pace from the normal slew of hosts who take themselves a little too seriously for their own good, and I definitely recommend checking this one out.



# — MLK KEYNOTE LECTURE —

written by Clytze Sun | Junior Staffwriter

art by Rebecca Enright | Art Editor

layout by Tracy Le | Visual Editor

Last Monday evening, Carnegie Mellon hosted the MLK Keynote Lecture in memory of Dr. Martin Luther King Jr. The keynote speaker was Dr. Khalil G. Muhammad, Professor of History, Race, and Public Policy at Harvard Kennedy School, who gave a talk titled "Who Controls the Past Controls the Future: Race, Inequality, and American Democracy," emphasizing the importance of pushing forward to achieve equality for all by reconciling with the past.

The event opened with Ph.D. student Sara Schwetschenau sharing her workforce experience as a female engineer and calling for more attention to gender inequality issues. After that, President Farnam Jahanian called for a more "thoughtful dialogue" and actions to strive for equality, placing the responsibility upon the campus community by pointing out that Carnegie Mellon has "the tool and platform" for changes. He ended his talk by welcoming Dr. Khalil G. Muhammad on stage.

Dr. Muhammad gave a sharp and passionate talk, pinpointing the deficiency in education that led to massive ignorance of the past, resulting in an inability to comprehend the direction of the future. He stated that if we, people of the United States, understood our history well enough, we won't be confused about what we should make of the "me too" movement or racism.

One example of such ignorance is Kanye West's controversial comment that "slavery was a choice." The rapper famously said last May that, "When you hear about slavery for 400 years ... For 400 years? That sounds like a choice." Unfortunately, this ignorance appears not only in the entertainment industry, but also in the political realm. Yvette Clarke, the congresswoman representing Brooklyn, told Stephen Colbert that Brooklyn was still enslaved by the Dutch in 1898, whereas in reality, the Dutch had ceded their control of

New Amsterdam to the English in the late 1600s, and New York state had abolished slavery in 1827. Dr. Muhammad went on listing more anecdotes, such as an ice-cream shop he found that hung a picture of a lynched Mexican to honor the Texas Rangers. His point was loud and clear.

Being in Carnegie Mellon's relatively secluded community, I never personally witnessed these acts of ignorance until the Tree of Life shooting brought me to the devastating realization that there are unresolved issues outside the Carnegie Mellon bubble.

Before further education, I thought the past was clearly explained in AP U.S. History courses. I thought that educators were doing enough.

I thought people were equipped with the right amount of knowledge to make the right decisions. But now I am unsatisfied, unsatisfied with the current progress on equality, of how we still tolerate these outward acts or microaggressions against minority and marginalized communities.

Another point Dr. Khalil G. Muhammad made was that our current society does not have a marketplace for history. People are naturally prone to be entertained rather than face the hard facts of history. Thus, people fail to recognize African Americans' contribution as the founding pioneers of the country. People hide micro-aggressions in jokes. For example, people "allow" the underrepresentation of Asians in Hollywood; among all top film roles in 2016, only 3.1 percent were played by Asian actors or actresses. Furthermore, social media continues to encourage the gender gap, targeting beauty products to girls and producing trends such as the popular "guys vs. girls" videos.

During the lecture, Schwetschenau, Jahanian, and Muhammad all called for actions against inequality, and I believe their consistent repetition of that message is absolutely necessary. We should share their discontentment and act upon it as students, future educators, and influencers in different industries. We should continue Dr. King's march for equality, and keep in mind that, as President Jahanian rightly stated, we have "the tool and platform" to effectively change society for the better.





# DEADMAU5

## ACT YOUR AGE, NOT YOUR SHOE SIZE.



Canadian DJ Joel Zimmerman, more commonly known as Deadmau5 (pronounced “dead mouse”) announced that he will quit using Twitch after getting temporarily suspended over using a homophobic slur during a livestream.

In the live stream, Zimmerman was playing battle royal game PUBG. Out of frustration over another player stream sniping — revealing his location in the game — Zimmerman used vulgar language and called him a homophobic slur. After being temporarily banned, he made a now-deleted Reddit post saying that he was “not going to stand for twitch’s double standard when it comes to censoring and suspending me... While we’ve had some fun partnerships here and there... im gunna have to cut this one short.”

Furthermore, he did not apologize for his choice of language. Instead, he said he was “sorry that we live in a world” where people on the Internet can sit around waiting for an opportunity to “get a few... clicks” by reporting something edgy. He claims that “sane people who knew what it was in the heat of the moment knew the purpose of the statement.” Zimmerman also justified his behavior by saying that he was directing his insult at the player, not “at an entire group of people who have a sexual orientation that differs from my own.”

Ironically, he added that he didn’t need to

defend himself with an “‘IM NOT THAT PERSON, I AM SORRY’ reflex,” yet that seems to have been the message of his post.

This is not the first time Zimmerman has used online anti-LGBTQ language. Just this past October, he insulted a SoundCloud musician by saying that he would bet that he engaged in homosexual behavior. When called out, he joked that “women don’t possess penises. You’ll find out when you’re older.” Activist and author Amanda Jette Knox tweeted her disappointment, saying that “we took our trans daughter to his concert in Montreal for her birthday. She’s been a huge fan.” Zimmerman replied with a sorry excuse of an apology: “i wasnt trying to make blatant transphobic statements, just got into a heated arguement [sic] with some dude online said something dumb and the internet took it way into somewhere unintended. I’ve since deleted the tweets, im not that kind of person. my apologies.”

The LGBTQ community is not the only demographic that Zimmerman has used derogatory language against. The same week when he cracked homophobic and transphobic jokes on Twitter, Zimmerman called a song he heard by Julian Scanlan — known as Slushii — “AIDS music” and “autistic s\*\*t” during a gaming stream. Scanlan posted, in a now-deleted Tweet, that “as someone who’s actually on the autism spectrum, this is really

disappointing.” Long-time fans generally know that Zimmerman did not mean to insult Scanlan in that manner and probably did not even know Scanlan was on the spectrum. But one would hope that Zimmerman learned better than to use such crude language.

This led to Zimmerman posting that he needed to seek professional help for mental health challenges that he had “wrestled with for the past several years... and I will be going off the radar and taking the time necessary to work on myself.” A month later, he updated that he was “on the right track and... feeling better” to the extent that he was doing shows in Europe later that month. Still, he was giving “the team at mau5trap my socials to get you info on touring and stuff” rather than handling social media himself. Still, he continues his Twitter hiatus and a member of his team controls his account.

Do I think Zimmerman has malicious intentions to hurt members of the LGBTQ community or those on the autism spectrum? No. His lack of filter and distasteful language is more than likely a sign of immaturity. Seeing the types of controversies he traps himself in makes him appear as though he would fit right in with the average 11-year-old playing *Call of Duty* while devouring Mountain Dew and Doritos. Until then, we can hope that he learns that his language carries more meaning than he realizes.

written by Madeline Kim | Forum Editor  
layout by Tracy Le | Visual Editor



A photograph of a meal on a light blue plate with a scalloped edge. The meal consists of two pieces of cooked salmon, a portion of green asparagus, and a serving of white rice. A silver fork and knife are placed to the left of the plate. The background is a dark red surface.

# MARIKA'S MENU

article and photos by Marika Yang | Publisher  
layout by Anna Boyle | Visual Editor

This past week's Valentine's Day festivities got me thinking about good date night food and even good food ideas to make with friends. What's something you can cook together that's a bit nicer, more than pasta or mac'n'cheese (nothing against those — I absolutely love comfort food), and a bit more challenging than throwing chicken and veggies in the oven? As a student, it's difficult to commit to making a full meal with the right balance of protein, veggies, and grains that's not too expensive or hard to make.

The menu recipe below is a combination of some of my favorite things to make when I'm in a fancier mood. Salmon is one of my favorite foods, so it is very much the star of this meal. Asparagus is such a simple vegetable to make that goes well with everything, and fried rice is always a great fall-back for your grains — there are so many different ways to make it! So invite some friends over, or plan a night in with your significant other and enjoy a fun night of food, friendship, and fun.



## Pan-seared and Oven-baked Salmon

This is one of my favorite dishes, and it's my go-to for almost any occasion. Cooking it takes two essential steps, the pan-searing and the baking, but it only takes about 10 minutes total.

### Ingredients

- salmon fillets
- salt and pepper
- 1 tbsp olive oil
- garlic, minced
- 1 fresh lemon
- 1 tbsp cooking wine
- spring onion, chopped (optional)
- cilantro, minced (optional)

### Directions

1. Preheat the oven to 400°F. Pat salt and pepper into each side of the salmon fillets, according to preference.
2. Cover a thin layer of a skillet with olive oil, and stir in the minced garlic. On medium-high heat, pan-sear the fillets, skin-side down, for two minutes. Squeeze in lemon juice and pour cooking wine over the fillets. Add in the cilantro and spring onion if you would like (I'm a huge herb and spice person, so I tend to throw in whatever I have). After the two minutes, carefully flip over the fillets and sear them for two more minutes, skin-side up.
3. Transfer the fillets into a bake-safe dish and bake in the oven for 7-8 minutes. I also like to squeeze in more lemon juice, and chop up the lemon itself and throw it in with the fillets.



## Stir-fry Asparagus

This is a standard stir-fry recipe, and it works with any vegetable I can think of. Other choices I like to eat with my salmon are broccoli, green beans, and snow peas.

### Ingredients

- asparagus
- garlic, minced
- 1 tbsp olive oil
- salt, to taste

### Directions

1. Chop your asparagus to the size you want. I like to make mine about an inch long, but any size will do.
2. Heat the olive oil in a skillet, and stir in the minced garlic. Stir-fry the asparagus in until deep green. Add in salt to taste.



## “Breakfast” Fried Rice

Full disclosure: this fried rice isn't really called “breakfast” fried rice, nor is it typically served as just breakfast. It's one of the many standard fried rice recipes I grew up eating. But I call it this because this is the kind of fried rice that is always served at the complimentary breakfasts of the hotels I have stayed at in China.

### Ingredients

- 2 cups cooked rice
- 1 tbsp olive oil
- 1 cooked scrambled egg
- 1/4 cup spring onion, chopped
- optional: cooked shrimp, peas, sausage, ham, etc.
- salt, pepper, spices, to taste

### Directions

1. Heat the oil in a skillet. Dump the rice in and mix, breaking up compact and sticky parts.
2. Stir in the scrambled eggs and spring onion, mixing it into the rice. By this step, you can add other cooked ingredients (my favorite being chopped Taiwanese sausage). Add salt, pepper, and other spices to taste. Fry until the rice is as soft or crispy as you like. Personally, I like my rice soft but with a slight crisp on the edges, so I only cook for about three minutes.

Now, set your table, serve, and enjoy!





written by Natalie Schmidt | Staff Writer  
art by Rebecca Enright | Art Editor  
layout by Anna Boyle | Visual Editor

# GRAMMYS

## Recap

Last Sunday was the 2019 Grammys. In a major step up from last year's event, where only one woman won a major award that was televised, women and people of color were heavily featured in this year's group of nominees, subsequent winners, and hosts. Hosted by Alicia Keys, who opened the show with powerhouse female figures like Lady Gaga, Jada Pinkett Smith, Jennifer Lopez, and Michelle Obama, the Grammys were bookended by a commitment to increased inclusion and representation of underrepresented groups in the music industry.

This year, the nominees were decidedly skewed towards the rap and modern R&B genre, highlighting artists like H.E.R., Post Malone, and Cardi B alongside country artists Kacey Musgraves and duo Lady Gaga and Bradley Cooper in categories like Album of Year and Record of the Year.

Compared to past years, the Recording Academy had also nominated one of the most diverse groups of artists in regards to race, gender, ethnicity, and genre. It seems they have made a concentrated effort to highlight artists of color, particularly women of color, with performances from Jennifer Lopez, Janelle Monáe, and Keys. Here are the major highlights from the night!

Childish Gambino, real name Donald Glover, made Grammys history with his track "This is America," winning a total of four Grammys for his powerful single. Winning the award for Best Music Video, Best Rap/Sung Performance, Song of the Year, and Record of the Year, Glover continues to showcase his talents for songwriting and culturally relevant critique. Beyond snatching four awards in one night, the win of "This is America" was

rap's first in the categories of Record of the Year and Song of the Year, once again solidifying itself as a genre that must be acknowledged. Where in the past, the Recording Academy had failed to recognize culturally relevant music (\*cough\* Kendrick Lamar's *To Pimp a Butterfly* \*cough\*), this year was truly one where rap and hip-hop shone.

Of course, the Grammys aren't the Grammys without controversy — this time over Cardi B's win for Best Rap Album. *Invasion of Privacy* stood amongst the likes of Travis Scott's *Astroworld*, Pusha T's *Daytona*, Nipsey Hussle's *Victory Lap*, and most notably, Mac Miller's *Swimming*. Cardi B, who sports one of the most impressive rises to popularity in the music industry, was the only female rapper nominated, and she made history by being the only female rapper who has



ever won the award for Best Rap Album. However, this historic win was clouded by disappointment over Mac Miller's snub, especially with this year being Miller's last to be included. This snub was made only more disappointing and insulting when you remember that Miller's parents were flown out by the Recording Academy to attend the event. Promised a touching video tribute if their son had won, Miller's parents — and the internet — had expected *Swimming* to win that night, only to be left hurt and insulted.

One of the best surprises of the night was country star Kacey Musgraves' win for Album of the Year with her album *Golden Hour*. Hailed as the country musician for people who don't like country, Musgraves stood in line for the award with Drake, Cardi B, Brandi Carlile, H.E.R., Post Malone, Janelle Monáe, and Kendrick Lamar, to stand out on top. The album mashed her country style with disco and synth pop, adopting a dreamier aesthetic than her previous albums. Known for her ability to successfully blend musical styles and experiment with her songwriting, Musgraves won three other awards for *Golden Hour*: Best Country Album, Best Country Song, and Country Solo Performance. Her win is a major one for country music, as she is the first country artist — and first female country artist — to be nominated since Taylor Swift's *Fearless* in 2010. As her album finds newfound popularity amongst mainstream listeners, Musgraves finds herself at the front of a new movement for country to begin integrating itself into pop culture.

Other notable wins of the night were Beyoncé and Jay-Z's album *Everything is Love* for Best Urban Contemporary Album, Ariana Grande's album *Sweetener* for Best Pop Album, and newcomer Ella Mai's summer hit, "Boo'd Up" for Best R&B Song.

While this has definitely been one of the best Grammys events in recent times (compared to the Recording Academy's decision to choose Taylor Swift's *1989* over Kendrick Lamar's *To Pimp a Butterfly* for best album), there is still something to be

said for the Academy's tendencies toward bias. Genres like indie rock, bedroom pop, and alternative still get pushed to the side in favor of the more commercially successful artists, clearly sticking to a bias for marketability and financial success over true inclusion of all forms of art. That said, hip-hop, rap, and R&B's growing popularity has solidified them as culturally important genres, and their overwhelming presence in this year's Grammys was well-deserved. Where artists like H.E.R., Janelle Monáe, and Tierra Whack have previously been left at the sidelines, their explorative and pioneering style of music has shown the music industry that woman artists of color are a force to be acknowledged — and acknowledged they finally have been.







# Scotch'n'Soda: She Kills Monsters



written by Alexandra Yu | Pillbox Editor  
layout by Tracy Le | Visual Editor  
photos courtesy of Bernice Yu

This past Friday and Saturday, Scotch'n'Soda Theatre performed Qui Nguyen's *She Kills Monsters*, a play about Agnes Evans (Heather Graci) and her younger sister, Tilly (Amber Quinn). The narrator (Jacqui Fashimpaur) begins by telling the audience that Agnes wants her life to be less "boring." Little does she know how much her life will turn upside down as she soon loses her parents and younger sister in a tragic accident.

"Average" Agnes shares nothing in common with her younger sister, a geeky teenager who escapes to other worlds through *Dungeons & Dragons* (D&D). Despite this, Agnes desperately seeks to learn more about the girl she never tried to know until it was too late. Through a complex D&D campaign Tilly left behind after her death, Agnes discovers who her sister really was while also opening her eyes to a new perspective.

While Agnes must navigate the world Tilly created with the help of D&D expert Chuck Biggs (Josh Fried), she also must struggle to

deal with the tension between her and her long-time boyfriend Miles (Nathan Blinn), the anti-Miles sentiments from her terrible guidance counselor friend Vera (Emily Schneider), and the kids at her sister's high school, many of whom have fictional counterparts in the storyline of Tilly's fantasy adventure. Whether it be Tilly's secret demon queen lover Lilith (Fiona Dubrosa), '90s-sitcom-loving ex-Overlord of the Underworld Orcus (Thomas von Davier), or the elegant, emotionless elven warrior Kaliope (Kai Huizenga), Agnes' many travel companions on this quest are nothing short of extraordinary.

On a quest to find Tilly's — or as she is known in D&D, Tillius the Paladin's — lost soul, Agnes, Tillius, and the rest of the crew must face enemies like a ferocious and fakely sweet fairy named Farrah (Shaelyn Parker), homophobic cheerleader succubi (Amy Liu, Jane Kogan), and a gelatinous, shape-shifting creature named Miles. Each foe reveals a different insecurity about Tilly, making the game all the more important to Agnes. After all, it's all she has left. Or so she believes, until Chuck gives her the chance to see the wonderful companions Tilly crafted her world around in real life.

Heart-wrenching and hilarious, *She Kills Monsters*, directed by Remy Davison and Emma McAlister, is a fascinating amalgam of odd '90s references, inopportune appearances of a ridiculously unprepared mage named Steve, deadly dance battles, awkward sex jokes, and unfiltered emotions. Although most of the show was laden with humor, at the heart of it all was Agnes' grief and growth. I teared up several times as I watched her grow as an individual and develop a relationship with her sister that transcended death. Once again, Scotch'n'Soda put on a brilliant performance.







# QUINN XCII

## To Michigan, With Love

written by Madeline Kim | Forum Editor

Mikael Temrowski, known as Quinn XCII (read as “Quinn 92”), just released his second album, *From Michigan, With Love* on Friday. His music elegantly fuses influences from various genres, most notably hip-hop, pop, electronic dance music (EDM), and reggae. His first album, *The Story of Us*, came out just two years ago and kicked his career off to a strong start with tracks like “Straightjacket” and “Flare Guns”. With the precedent so high, I was a little nervous going in. However, his EP *Road to Michigan*, which teased four tracks (“Life Must Go On,” “Tough,” “Werewolf,” and “Sad Still”) gave me confidence in the full-length album. I’m proud to say that I have not been let down.

### Track 1: “Holding Hands” (feat. Elohim) (9/10)

A strong opening to the album. Temrowski kicks off the album by telling the story of getting out of a five-year relationship and hoping that he can “tape my wounds and hopefully find someone new.” As expected, he hypnotizes the listener with the mellow beats and poetic lyrics. However, this song takes a more solemn tone than his other songs, incorporating a few notes of R&B.

### Track 2: “Autopilot” (9/10)

This track is much more up to what I would have expected from Temrowski. Much like many other millennials, Temrowski feels like he’s “in *Black Mirror*” in the sense that he’s trapped in a modern world of fear and paranoia.

### Track 3: “Life Must Go On” (feat. Jon Bellion) (7.5/10)

Again, a groovy and uplifting track that explores the struggles of coming-of-age and facing the troubles of the real world. However, it feels slightly repetitious and reminiscent of “Keep Your Head Up” by Andy Grammer (or is that just me?).

### Track 4: “U & Us” (7/10)

This ballad shares heartbreak in having to move on past a previous relationship. Although it’s not a bad track, everything about this track feels cliché. The acoustic guitar, the lyrics begging for a lover to come back, synthetic string orchestra...nothing that’s never been done before. Again, it’s not bad, but I expected something more original. This sounds like something that would be put in a young adult movie where the couple temporarily breaks up only to be reunited 30 minutes later in the film.

### Track 5: “Werewolf” (feat. Yoshi Flower) (8.5/10)

We’ve all been there: developing feelings for someone who we know isn’t good for us yet not being able to do much to control our feelings. However, Temrowski manages to turn this into a lighthearted-feeling bop. He compares someone to “moonlight” and himself as a “werewolf,” making the worst of him emerge. The tune and lyrics echo “Straightjacket,” but this track is distinct enough to not feel redundant.

### Track 6: “Tough” (feat. Noah Kahan) (8/10)

This album shows a sense of growth and maturity, and this track is confirmation. He takes a poke at the concept of toxic masculinity pressuring men



to appear “tough” and feeling that “your gym membership is not a crown.” Being tough and secure is beyond fitting the ideal image or hiding vulnerability; it lies in being secure in oneself.

### **Track 7: “Matches” (feat. Cautious Clay) (7.5/10)**

Musically, this isn’t the strongest on the album and I can’t exactly lay my finger on why. However, this song is relatable. As someone who also continues to “cycle through refresh and fear of loneliness; Seems I’ll never learn that bridges always burn.” Even if the song isn’t the strongest, it’s relatable.

### **Track 8: “When I Die” (8/10)**

Even in a cheesy love song, Temrowski manages to turn it into something almost cynical and morbid. In a moment where he’s supposed to feel happy with his lover (and he is!), he’s wondering if he’ll hold onto these memories when he dies. Much like a song from twenty one pilots, the song sounds happy and light until you scratch slightly beneath the surface.

### **Track 9: “Abel & Cain” (9.9/10)**

This track is probably my second favorite and would be my favorite if the first contender didn’t have such a strong personal connection (more on that later). This also took the longest for me to decode. When I first heard it, I thought that it was a really catchy song and put it on my monthly favorites playlist for easy reference. However, the more I listen to it, the more I uncover. It cleverly fuses together references from the Old Testament of the Bible and Greek mythology (“You’re Abel, I’m Cain, I fell in the rain; Without you, I feel like I’m Hades”). Even if it wasn’t his intention, his pain caused him to hurt his lover, yet they forgive him.

Overall, this album racks up to an average rating of 8.4/10. The standout tracks are “Holding Hands,” “Autopilot,” “Abel & Cain,” and “Sad Still,” all four being unique and fantastic in their own ways. It definitely did not disappoint, although I struggle to be able to compare it to *The Story of Us*. Still, I’m more than happy that I got to share his music with my boyfriend and even more excited to see Quinn XCII live this spring break with him.

### **Track 10: “Sad Still” (10/10)**

Not going to lie, this track took some time for it to grow on me. I wasn’t crazy about the rapping; it felt jumbled and out-of-sync. However, this became my favorite from the original EP that was released prior to the album, and it continues to be my favorite (although “Abel & Cain” is an extremely close second). Temrowski had previously been quieter about his personal struggles with anxiety and mental health, but he found that opening up with a song “seemed easier; Your conversations with friends, family go long ways,” and this track makes me wish that I could go back to when I was a young teen and be more candid with my loved ones about my struggles. In the meantime, I’m glad that Temrowski is comfortable sharing his struggles, showing his audience that it’s okay to struggle, and to reach out.

### **Track 11: “Good Thing Go” (8.5/10)**

Another cliché track, but this one is in the cheesiest romantic way. There’s really not much to say to that other than if you’re the type to make “singles awareness day” posts on Valentine’s Day, you might want to skip. It’s sweet, soft, and cute.

### **Track 12: “Right Where You Should Be” (feat. Luis Fulton, Ashe) (8/10)**

This uplifting track is basically what any Carnegie Mellon student needs to hear. “Life is running a race while you’re smoking, falling apart,” but “If you’re down on your face, it’s okay, you can look up.” The tune feels a bit cheesy, almost like someone patting your back and saying, “don’t worry; you’re doing great!” and only leading towards further feelings of self-doubt and thoughts of “are they just saying that?” Even then, a little musical reminder that it’s okay to go at one’s own pace is a nice ending to an album.



# A FORMER FAN REVISITS LINKIN PARK

written by Sujay Utkarsh | Pillbox Editor

Linkin Park has a pretty interesting reputation. Amongst their fans, they're revered for their earlier works but hated for their later ones, with the exception of *The Hunting Party*. Amongst many metal fans, they're regarded with disgust and not treated as "real metal." Outside of their fan base and the metal community, they're mainly known for being a very edgy, emo group that have left an indelible mark in many people's lives.

I personally have been on all sides of the spectrum like many others (minus metal elitism because that's just dumb). Linkin Park is a band that many listen to during a certain phase of their lives. There is an appeal to their angry sound that you relate to. Eventually, you grow up and move on, and you remember that phase of your life as a "dark time." So, after almost five years, I decided to revisit the band that defined my early teenage years and to reevaluate them with fresh eyes and a new perspective on music.

The first and most difficult thing to address is the lyricism. In 2017, the band's lead singer, Chester Bennington, tragically took his own life. It makes many of the lyrics much darker and almost difficult to listen to. The lyrics that were once classified as emo now sound like cries for help and warning signs. In one song, "Given Up," Bennington literally screams the line "put me out of my misery" for twenty straight seconds. In one of their most famous songs, "In the End," the main chorus, which is often treated like a meme, now sounds like a man who is on the verge of breaking, justifying ending his life.

In all honesty, the lyricism isn't particularly bad either. Even without the context of Bennington's death, they're actually raw and gritty lyrics. There are quite a few missteps, like "Hands Held High" with its attempt at criticizing George Bush and the war on terror. But the lyrics that deal with the themes of depression, suicide, anger, abuse, and other dark personal topics are actually really solid, even if they are very blunt. I regret calling them "edgy" and "emo" at one point because while they fall into that category, anyone who deals with mental illness knows how honest the band is about the struggles they communicate. The lyrics don't pretend or pander, and I find that to be a really great quality about them.

Having broadened my musical horizons over the years, I can say that I actually really respect Linkin Park in terms of their musicianship. This will probably get some disagreement from people, but hear me out. They're not technically talented players. The guitarist rarely, if ever, takes solos. The riffing and drumming are very straightforward. But they lock into the simplicity and grit of their style surprisingly well. Everything just has a flow to it, like the way Mike Shinoda's rapping and background vocals flow into Bennington's belted choruses. They are just so in sync with each other that it's hard to not rock out to a lot of their songs.

What I respect even more is how experimental they are. They are always switching up several styles throughout many of their songs and albums. They take influences from hardcore metal groups, punk, '90s hip-hop, and electronic sounds to create their own blend that is distinctly them. Their sounds change on each album too. Their earlier albums, *Hybrid Theory* and *Meteora*, have their distinct nu-metal sound with Bennington's demonic screams mixed with Shinoda's rapping. But albums like *A Thousand Suns* and *Living Things* go down a more experimental route and are primarily electronic, much to the dismay of fans. But I really, truly respect that about the band. They just do their own thing, and most of the time, it honestly works. I equally like their nu-metal days and their electronic days, and they wouldn't be Linkin Park if they ditched one phase in favor of the other.

This was a journey for me. I can't say I love Linkin Park like I once did, but there is a lot to appreciate and I have really taken them for granted over the years. There is a saying in the metal community that once you're a metalhead, you're always a metalhead. The same can extend to groups, and this is the case for me with Linkin Park. I'll be putting their songs on every now and then, and I encourage former fans to give them a second shot with a more open mind. There is a lot more to them than what you see on the surface.



This week, there is a light-hearted family film being screened in McConomy.

*Ralph Breaks the Internet*

Friday, Feb. 22  
Saturday, Feb. 23

*Ralph Breaks the Internet* sees the eponymous Ralph, along with Vanellope, journey into the online world in search of a rare arcade game component. With characteristic Disney charm and well-done animation, the film provides a light-hearted narrative interspersed with the themes of self-discovery and supportive friendship, set in a surprisingly accurate portrayal of the internet. Although the story feels awkward and forced at times during the more emotional scenes, the quirky humor and sheer abundance of memes and pop culture references make up for it. Overall, this film is just a fun time, and if you're a big Disney fan, I definitely recommend you check it out.

Oscars Viewing Party

Sunday, Feb. 24



horoscopes: the signs as desserts

sudoku

<b>Aries</b> march 21 – april 19	<i>Flan.</i>
<b>Taurus</b> april 20 – may 20	<i>Affogato.</i>
<b>Gemini</b> may 21 – june 20	<i>Blondies.</i>
<b>Cancer</b> june 21 – july 22	<i>Indian milk cake.</i>
<b>Leo</b> july 23 – aug. 22	<i>Chocolate mousse.</i>
<b>Virgo</b> aug. 23 – sept. 22	<i>Apple pie.</i>
<b>Libra</b> sept. 23 – oct. 22	<i>Gelato.</i>
<b>Scorpio</b> oct. 23 – nov. 21	<i>Cheesecake.</i>
<b>Sagittarius</b> nov. 22 – dec. 21	<i>Creme brulee.</i>
<b>Capricorn</b> dec. 22 – jan. 19	<i>Chocolate lava cake.</i>
<b>Aquarius</b> jan. 20 – feb. 18	<i>Macarons.</i>
<b>Pisces</b> feb. 19 – march 20	<i>Ice cream pint with a spoon.</i>

	8		9		1			
	3	9	5				7	1
	1	4			6		2	
	9	8	3	2			6	
7								2
	2			8	4	1	9	
	7		2			6	5	
9	5				3	7	1	
			7		8		3	

sudoku courtesy of [www.krazydad.com](http://www.krazydad.com)

last week’s solution  
2-11-19

6	4	2	8	7	1	3	9	5
9	5	1	4	3	2	6	7	8
7	8	3	9	6	5	2	1	4
5	6	8	1	2	7	4	3	9
1	3	4	5	9	6	7	8	2
2	7	9	3	4	8	5	6	1
4	2	7	6	1	9	8	5	3
8	1	6	2	5	3	9	4	7
3	9	5	7	8	4	1	2	6



# You're Pretty

by Sarah Andersen



sarahcandersen.com



# Be Prepared

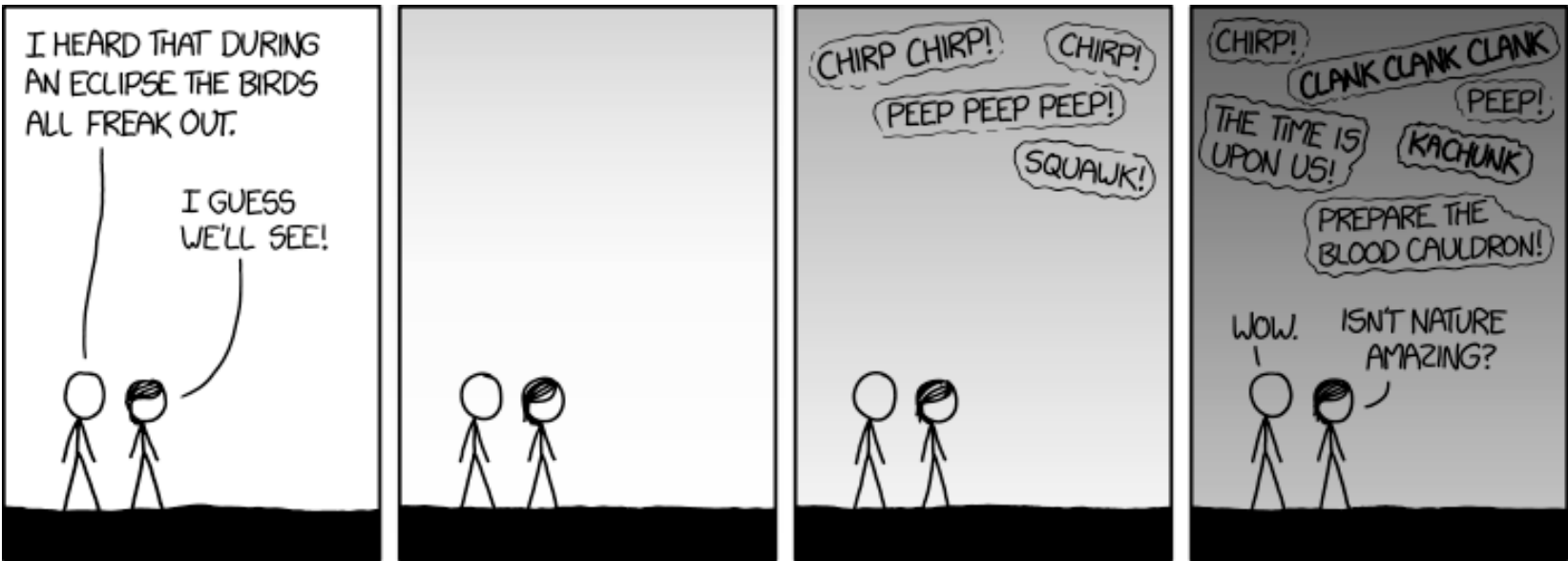
by Meg Quinn



[artbymoga.tumblr.com](http://artbymoga.tumblr.com)

# Eclipse Birds

by xkcd



[xkcd.com](http://xkcd.com)



## newly added

Art and Ballet, with Karina Smigla-Bobinski (The Mattress Factory)  
2.21.19 6 - 8 p.m.

In Bed by Ten Dance Party: February (Spirit)  
2.22.19 6 - 9 p.m.

Xoromancy (The Frame Gallery)  
2.22.19 - 2.24.19

The Ramen - An Onion Maiden Pop Up Kitchen (639 E Warrington Avenue)  
2.24.19 2 - 10 p.m.

Avalon Exchange Semi-Annual Dollar Sale (Avalon Exchange)  
3.1.19 - 3.3.19

Home Language (Assemble)  
3.1.19 - 3.29.19

Cirque Mechanics: 42ft - A Menagerie of Mechanical Marvels (Byham Theater)  
3.2.19 - 3.3.19 7:30 p.m. on Saturday, 2 p.m. on Sunday

CMU Art Lecture: Sean Lynch (CFA 300)  
3.5.19 6:30 - 8 p.m.

Pittsburgh Humanities Festival (Cultural District)  
3.22.19 - 3.24.19

Bookish in the 'Burgh (Cultural District)  
3.23.19 9 a.m. - 7 p.m.

Vintage Pittsburgh (Heinz History Center)  
3.23.19 10 a.m. - 3 p.m.

Battlezone XII: 1v1 Breaking | 1v1 All Styles (UC)  
3.23.19 6 p.m. - 11:59 p.m.

Pittsburgh Pickers: Vintage Market (Ace Hotel Pittsburgh)  
3.24.19 12 - 6 p.m.

2019 Pittsburgh Japanese Film Festival - presented with Tekko (Row House Cinema)  
3.29.19 - 4.11.19

## week of 2.18.19 - 2.24.19

Carnegie Mellon Chamber Series: "Music of the Americas" (Kresge Theater)  
2.18.19 7:30 - 9:30 p.m.

CMU Art Lecture: Thaddeus Mosley with Naomi Chambers (CFA 300)  
2.19.19 6:30 - 8 p.m.

School of Drama: It's in the Bag (Helen Wayne Rauh Studio Theater)  
2.20.19 - 2.23.19 8 p.m. every day, additional 2 p.m. showing on Saturday

Reception: CMU Design Exhibit - Generous Feedback (Miller ICA)  
2.21.19 6 - 8 p.m.

School of Drama: Cabaret (Philip Chosky Theater)  
2.21.19 - 3.2.19 8 - 10 p.m. shows every day, additional 2 p.m. showing on Saturdays

CMU Allies Presents: Kavi Ade (UC Rangos 3)  
2.21.19 7 p.m.

## week of 2.25.19 - 3.3.19

Pittsburgh's Harry Potter Film & Cultural Festival 2019 (Row House Cinema)  
2.24.19 - 3.7.19

CMU Art Lecture: Lenka Clayton & Jon Rubin (CFA 300)  
2.26.19 6:30 - 8 p.m.

Bloomfield Saturday Market  
3.2.19 11 a.m. - 2 p.m.

Lunar Gala 2019: Anomie (UC)  
3.2.19 8 - 11 p.m.

## ongoing

Black Bottom Film Festival 2019 (August Wilson Center)  
2.15.19 - 2.24.19

Orchid and Tropical Bonsai Show: Eye Candy (Phipps Conservatory)  
Open until 3.4.19 - open every day 9:30 - 5 p.m. (10 p.m. on Fridays)



# *pillbox polls:* OSCARS EDITION

learn what the Tartan editors think about this year's Academy Awards nominees

best picture: *Black Panther*, *BlacKkKlansman* (27.3%), *Bohemian Rhapsody* (9.1%), *The Favourite* (9.1%), *Green Book*, *Roma* (54.6%), *A Star is Born*, *Vice*

best director: Alfonso Cuarón (45.5%), Yorgos Lanthimos (9.1%), Spike Lee (36.4%), Adam McKay, Paweł Pawlikowski (9.1%)

best actress: Yalitza Aparicio (9.1%), Glenn Close (18.2%), Olivia Colman (45.5%), Lady Gaga (18.2%), Melissa McCarthy (9.1%)

best actor: Christian Bale (36.4%), Bradley Cooper, Willem Dafoe (18.2%), Rami Malek (45.5%), Viggo Mortensen

best supporting actress: Amy Adams (18.2%), Marina de Távira, Regina King (45.5%), Emma Stone (18.2%), Rachel Weisz (18.2%)

best supporting actor: Mahershala Ali (27.3%), Adam Driver (45.5%), Sam Elliott (9.1%), Richard E. Grant (9.1%), Sam Rockwell (9.1%)

best original screenplay: *The Favourite* (45.5%), *First Reformed* (9.1%), *Green Book*, *Roma* (45.5%), *Vice*

best adapted screenplay: *The Ballad of Buster Scruggs* (18.2%), *BlacKkKlansman* (27.3%), *Can You Ever Forgive Me?*, *If Beale Street Could Talk* (27.3%), *A Star is Born* (27.3%)

best makeup & hairstyling: *Border* (18.2%), *Mary Queen of Scots* (45.5%), *Vice* (36.4%)

best costume design: *The Ballad of Buster Scruggs* (18.2%), *Black Panther* (63.6%), *The Favourite* (18.2%), *Mary Poppins Returns*, *Mary Queen of Scots*

best cinematography: *Cold War* (9.1%), *The Favourite* (9.1%), *Never Look Away* (9.1%), *Roma* (63.6%), *A Star is Born* (9.1%)

best original song: "All the Stars" (9.1%), "I'll Fight", "The Place Where Lost Things Go" (18.2%), "Shallow" (54.5%), "When a Cowboy Trades His Spurs for Wings" (18.2%)

best original score: *Black Panther* (45.5%), *BlacKkKlansman*, *If Beale Street Could Talk* (27.3%), *Isle of Dogs* (18.2%), *Mary Poppins Returns* (9.1%)

best documentary feature: *Free Solo* (50%), *Hale County This Morning*, *This Evening* (10%), *Minding the Gap* (10%), *Of Fathers and Sons*, *RBG* (30%)

best animated feature: *Incredibles 2*, *Isle of Dogs* (27.3%), *Mirai*, *Ralph Breaks the Internet* (9.1%), *Spider-Man: Into the Spider-Verse* (63.6%)

best foreign-language film: *Capernaum*, *Cold War* (9.1%), *Never Look Away*, *Roma* (81.8%), *Shoplifters* (9.1%)

best production design: *Black Panther* (45.5%), *The Favourite* (36.4%), *First Man*, *Mary Poppins Returns* (18.2%), *Roma*

best visual effects: *Avengers: Infinity War* (81.8%), *Christopher Robin*, *First Man*, *Ready Player One*, *Solo: A Star Wars Story* (18.2%)

best film editing: *BlacKkKlansman* (18.2%), *Bohemian Rhapsody* (9.1%), *The Favourite* (54.5%), *Green Book*, *Vice* (18.2%)

best animated short: *Animal Behavior* (9.1%), *Bao* (81.8%), *Late Afternoon*, *One Small Step* (9.1%), *Weekends*

