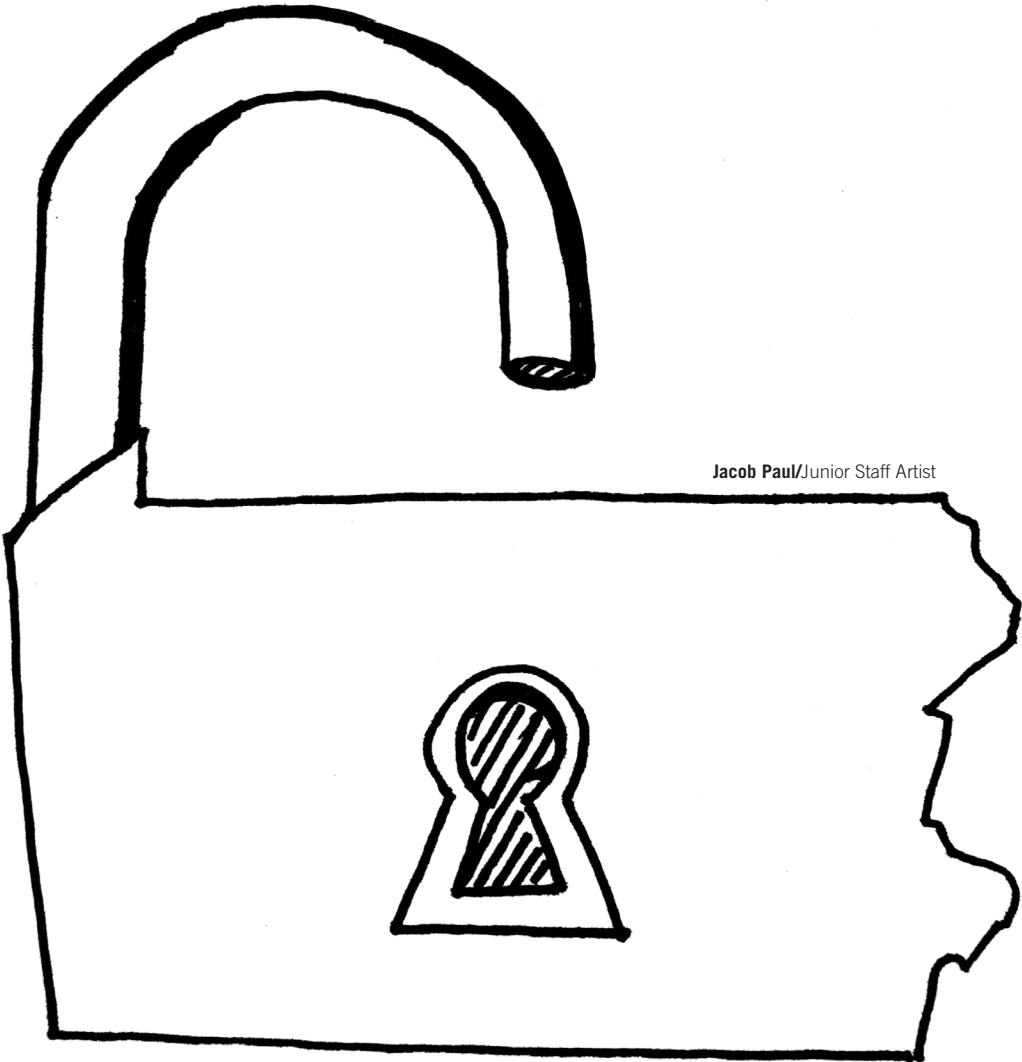


Election security in PA is flawed



Jacob Paul/Junior Staff Artist

EVANGELINE LIU
Staffwriter

Much has been said in the news landscape on the topic of election security and integrity, especially after it became clear that Russian trolls used hacking and fake social media accounts to influence

the 2016 election. Besides foreign influence on election discourse, there have also been concerns about the security of our voting system infrastructure and its vulnerability to hacking by malicious actors.

Recently, a team of Carnegie Mellon graduates from the Heinz

College focused on election security in Allegheny County for their capstone project. According to a university press release, the students analyzed our local election processes and election data from the past eighteen years to

See **SECURITY**, A3

GSA gives report on priorities and progress

JACOB PAUL
Staffwriter

On Thursday, Nov. 15, the Graduate Student Assembly (GSA) met in Rangos Hall for a 3-year progress update of their ambitious, 10 year Strategic Plan that was released in 2015. The Plan’s stated mission was “to advocate for and support the diverse needs of all Carnegie Mellon University graduate students in their personal, professional, and public lives.”

The Strategic Plan has four primary themes, all of which are broken down into distinct areas with more concrete goals: Holistic Graduate Student Experience, Relationship to Campus Environment, Supporting a Diverse Community, and Development Beyond the Classroom.

The Holistic Graduate Student Experience is perhaps one of the most significant goals. “While graduate education has traditionally focused on professional development,” the plan states, “there are many factors that impact a graduate student’s holistic experience at Carnegie Mellon.” The plan sought to improve and support the graduate students in four primary areas: Health and Wellbeing — which included access to mental health resources and the development of programs to promote healthy lifestyles — Sense of Community, Financial Security, and Family Support.

At Thursday’s meeting, the

progress that has been made was celebrated and areas that have yet to be reformed were brought into focus. In attendance were university administrators, alumni, and more than 100 graduate student representatives, of which there are 103 across all university departments. The Carnegie Mellon administration was represented by Interim Provost Laurie Weingart, Vice President of University Affairs Gina Casalegno, and Vice Provost for Education Amy Burkert among others.

Many of the current graduate students were not enrolled when the Strategic Plan was released in 2015, and the Progress Meeting served to restate the plan’s significance. The graduate student population now represents more than half of the student population, with “about 5,600 masters students and 2,000 doctoral students,” according to Provost Laurie Weingart, and the proportion of international students rose from 60 percent to 63 percent.

Dr. Carolyn Commer, introduced as the “Mastermind behind the original 2015- 2025 Strategic Plan” who served as President of GSA from 2014 to 2016 and received a PhD in Rhetoric at Carnegie Mellon in 2016, spoke about what inspired the creation of the original plan. “I want to draw your attention to the choice we made; that our Strategic plan was not

See **GSA**, A3

The signs on The Cut: a project meant to start a reaction



ADAM TUNANRD
Operations Manger

As many on campus noticed these past few weeks, the Cut sidewalk has been fringed with several poster boards, each with its own religious message of tolerance, love, community, and peace. The posters went up almost immediately following the Tree of Life shooting, and stayed through wind and rain, until just this past Monday. The Tartan spoke to an organizer of the initiative, Clytze Sun, who shed light on the intentions, the impact, and the importance of the display.

The Tartan: Were all the quotes in reference to or inspired by religion and religious leaders? If so, what inspired that selection?

Sun: The quotes were all from different religions’ teachings. I asked for help from my friends when selecting these quotes. I wasn’t doing this project by myself. I was supported by INSPIRE (Interfaith Spirituality Embassy) and CORS (Consul of Religious Students). I’m an active member in both of them. During CORS’ meeting, we already had the idea of putting up signs around campus to raise campus’ awareness of students’ spiritual life, but we never set up a concrete plan. After the shooting, I thought putting up signs would be a perfect gesture to acknowledge the similarities between religions (how they value the same ideas and all advocate love), look for unity rather than separation, and use different religions’ beautiful teachings to console our campus. All teachings were about love, peace and unity.

Around 20 people came out and helped me to make those signs. The quotes were sent to me from the Jewish Student Association, Muslim Student Association, Catholic Newman Club, and representatives of Sikhism and the Baha’i faith. I really appreciate all the help and support I received.

The Tartan: What do you think should change in the campus community to better bring the messages from the signs to fruition?

Sun: When I put up the signs I actually doubted if my action was only preaching to the choir, because I believe that [Carnegie Mellon] already has a diverse and welcoming community. Apparently, the problem is the extremists outside of [Carnegie Mellon]—they should be learning about different cultures and religions.

But I took the action in making those signs because I was very dissatisfied with our campus’ immediate reaction. I can’t generalize but a lot of my friends were moving on with their lives as usual. Some of them even argued in a very logical way that since they couldn’t really change the politics, there’s no use in doing anything. I was completely disturbed by this kind of reactions. I want those signs to be a reminder of what happened more than anything else. I don’t want students to simply move and let it pass. I hope the presence of these signs can prompt students to internalize this event in their own way.

People have different definitions of what kind of change is “useful.” I believe that all actions toward love is useful and should be appreciated. I cannot say what’s absolutely necessary to do. I am more willing to see all sorts of creative solutions coming from students with different backgrounds and diversified skills. But I know that these solutions won’t appear if nobody’s internalizing what happened.

So to me, the beautiful messages on the signs were there to console anyone who was deeply impacted by the incident. But I hope the presence of those signs could change people’s individualistic mindset—only concerning about their test scores and assignments when things like this happened— and help [Carnegie Mellon] students to be more aware of what’s happening in the greater community.

The Tartan: I think the simplicity of displaying the words to others in regards to abandoning hate is really interesting. What informed this decision?

Sun: I think subconsciously I believe that word is an extremely powerful thing—also why I chose Creative Writing as my major. But with all the academic stress I had, simplicity wasn’t a deliberate choice, it was more about what I can do. I know words bring me comforts when I need it, so I just want to bring them to our campus.

I didn’t plan to take the lead in something like this. But when I saw that a vast majority of the student body remained quiet, I knew I had to do something to show that injustice like this should be followed by actions, not silence.



FEATURE PHOTO

Hundreds pack up meals at CMU to Rise Against Hunger



Lias Qian/Photo Editor

This Saturday, volunteers started showing up at 11 a.m. to pack meals in the CUC at the annual Rise Against Hunger event. Thousands of meals were packaged in an assembly line by hundreds of participants.

Campus Crime & Incident

Alcohol Amnesty

Oct. 11, 2018

Officers responded to Mudge House to find an intoxicated Carnegie Mellon Student. The student was provided medical attention and no citations were issued due to Alcohol Amnesty.

Theft by Extortion

Oct. 11, 2018

Officers responded to Mellon Institute to investigate a report of an internet scam. The Carnegie Mellon Student reported that their personal computer became immobilized after visiting a frequented website. The student called the telephone number listed on the computer screen, which at this point the student realized the incident was a scam.

Disorderly Conduct

Oct. 11, 2018

Officers responded to Donner House after being alerted about an odor of marijuana. Officers located the origin of the marijuana odor and made contact with a Carnegie Mellon student who admitted to smoking marijuana in the area. The student provided the officers with drug paraphernalia and was issued a non-traffic citation.

Theft by Extortion

Oct. 14, 2018

Officers made contact with a Carnegie Mellon student in West Wing who received emails demanding a large sum of bitcoin or the unknown party would release private information. No further suspicious activity was

discovered after receiving the original email.

Theft

Oct. 14, 2018

A student was caught shoplifting at the Rohr Commons in the Tepper Quadrangle.

Theft of an iPhone

Oct. 14, 2018

University Police recovered an iPhone that was stolen from a student in Baker Hall.

Compiled by
NORA MATTSON

WEATHER

Source: www.weather.com

TUESDAY



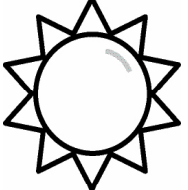
38° / 28°

WEDNESDAY



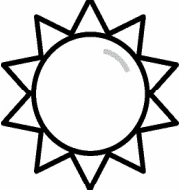
39° / 21°

THURSDAY



33° / 22°

FRIDAY



47° / 36°

SATURDAY



49° / 42°

SUNDAY



51° / 41°

SOCIAL JUSTICE CALENDAR

FORWARD!

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

FIRST TOGETHER ANNUAL THANKSGIVING DINNER
5:00PM-6:30PM, RANGOS

november 20

LECTURE: ANALYZING EXTREMIST IDEOLOGIES ONLINE AND OFFLINE
4:30PM, PORTER HALL 100

november 27

CONFERENCE: A DIVERSITY SOCIAL INNOVATION AND NETWORKING EXPERIENCE
4:30PM-8:30PM, TEPPER QUAD

november 30

Corrections & Clarifications

If you would like to submit a correction or clarification, please email The Tartan at news@thetartan.org or 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.



Jahanian announces donors behind \$50M scholarship fund

KIERAN WALSH
Junior Staffwriter

During his inauguration on Oct. 26, President Farnam Jahanian announced that Carnegie Mellon received a large donation pledge of \$50 million dollars from alumni Tod and Cindy Johnson.

The Johnsons, who graduated from Carnegie Mellon in 1966 and 1968 respectively, made this pledge specifically with student aid in mind. The funds will be used for scholarships and persistence services to help students succeed during their college career. Their scholarship gift is the largest one that the university has ever received.

Tod Johnson said in a Carnegie Mellon press release, “This is a gift that Cindy and I have always wanted to make. I see the societal and social effects of student debt in the lives of recent graduates whom my

company hires and through our company’s research on consumer spending; it is becoming more apparent than ever before...we hope that this gift makes it possible for many more students to choose Carnegie Mellon without taking on a financial burden.”

Tod is the executive chairman of the NPD Group, Inc., a market-research firm, and he is also the current vice chair of Carnegie Mellon University’s Board of Trustees. He was the leader of the Presidential Search Committee that appointed President Jahanian.

The Johnson Family Scholarship Endowment will be used to meet the financial needs of both current and prospective undergraduate students. The aid will be particularly impactful for low- and middle-income students.

Dean of Admission Michael Seidel believes that the

endowment will help alleviate the stress that families face in paying for education. He said, in the same press release “interest in Carnegie Mellon from students around the world continues to grow at an extraordinary pace, which we saw with a 19 percent increase in applicants last year. But prospective students and their families tell us the number one obstacle is the cost of attendance. Scholarship support like that made possible through the Johnsons’ tremendous generosity gives us the tools to help more of these talented students say ‘yes’ to CMU, their top choice.”

In addition to student scholarships, this contribution from the Johnsons will provide Carnegie Mellon with the financial flexibility needed to accommodate students who leave the university without completing their degrees, due to personal conflicts and

issues.

Speaking to the motivation behind the pledge, Cindy Johnson explained that she and Tod wanted to support students as they begin their lives, just as Carnegie Mellon supported them when they were undergraduates. “Carnegie Mellon has meant so much to Tod and me from our very first days as undergraduates,” Johnson said. “Financial aid played a key role as we began our lives together, and we look forward to many generations of students seeing how their world opens up because of something so simple yet important as a scholarship.”

The Johnsons met when they were students at Carnegie Institute of Technology and married while they were both still enrolled in the university. Carnegie Institute of Technology became Carnegie Mellon University while they were students. Tod first received a

bachelor’s degree in graphic arts management in 1966 and went on to earn a master’s degree in industrial administration in 1967. Cindy earned her bachelor’s degree in art in 1968.

During his speech, President Jahanian spoke about the role that education plays in changing people’s lives, and he expressed his gratitude toward the Johnsons. Jahanian said, “A Carnegie Mellon education and the unique experience our students gain during their time here is nothing short of life-changing. Especially at this time of societal transformation brought on by advances in technology, the world needs more CMU graduates who are prepared to lead this transition. We are awestruck by Cindy and Tod’s generosity and thrilled at how their support will greatly expand our ability to ensure a CMU education is within reach of all students.”

Heinz project questions Allegheny county election security

SECURITY, from A1

determine the types of possible attacks, their consequences for the elections, and concrete steps to secure these elections. One of these graduates, Will Cunha, a masters student who graduated in 2018, gave an interview to The Tartan where he reflected on the importance and challenges of the project and discussed concrete steps that could be taken to secure our elections and learn more about this issue.

The importance and relevance of election security was the idea that gave birth to this capstone project. “[T]he timeliness of this topic and the sheer importance of it for the American people and democracy was something that, personally, drove me to the project,” Cunha said. A fellow student on the team, Salvador Ayala, noted in the press release that “in four of the five presidential elections since 2000, the outcome was decided by less than 10 percent of total votes”, making the issue of securing the election process — especially in a swing state like Pennsylvania —

even more critical.

With a team of four students and three months to complete the project, the primary challenge was narrowing down the scope. The initial research question was studying the election system in the entire country, which was too broad for their constraints, and was eventually narrowed down to Allegheny County.

The Allegheny County election data, however, was not always up to the task, as it was not always up-to-date. Another major limitation with this research is that other counties have significantly different election systems, making their data model difficult to generalize beyond Allegheny County. “Unfortunately, we were unable to obtain enough information about other counties in the time frame allotted to test our model outside of Allegheny County,” Cunha said. “It took a lot of time to piece together the county-level processes from different sources, which is [a] reason why our final product focused only on Allegheny County.”

The team found that a swing state like Pennsylvania could be

an attractive target to someone who wants to manipulate election results. Because of the narrow margins of many election results in the state, “[b]y merely affecting 2 percent of votes cast, 9 percent of statewide elections in Pennsylvania since 2000 could have been compromised in favor of the second-place candidate. And if an attack could affect 10 percent of the vote, that jumps to 68 percent of elections compromised,” noted the university press release.

The students said in the press release that a potential way a malicious actor could compromise the election would be to legally buy voter registration data and merge it with personal data from the dark web, allowing him or her to change voter registrations and impersonate registered voters. Even just the appearance of election attacks could sow mistrust in the election results among the voting population, allowing a malicious actor to achieve his or her goals.

Based on their research, the team suggests five short-term remedies that government officials should take to secure our

votes before the next election, which Cunha outlined in an interview with The Tartan. First, more money should be allocated towards mitigating the higher-risk election vulnerabilities and preventing high-risk attacks. Second, the authentication process for making changes to voter registration should be strengthened, which they identified as one of the primary risks to election security in Allegheny County. Third, using paper printouts from personal electronic ballots (PEBs) during election audits would help with the certification process until we upgrade to new machines that leave paper records. Fourth, poll workers should be trained on the vulnerabilities of and how to handle sensitive items like PEBs. Fifth, there should be thorough background checks conducted on individuals who handle sensitive data.

Beyond the next election, Cunha and his teammates have more suggestions. Cunha says that legislation should be in place to speed up the security patch process for maintaining system security, without unnecessary

bureaucratic oversight slowing it down. “While the State must currently re-certify software before system patches can be applied, changing this constricting legislation to allow thoroughly vetted patches without an additional, bureaucratic certification process would eliminate many technical vulnerabilities more expeditiously,” Cunha stated. Cunha also stated the importance of paper auditing to the security process, as well as the principle of least privilege — i.e., giving insider roles the minimum access needed to perform the role, which can alleviate insider threats.

In the future, Cunha and his teammates hope to see a partnership between the Allegheny County Division of Elections and Heinz College. “Heinz College has an enormous amount of expertise and resources available to it and leveraging those resources, especially including the larger Carnegie Mellon University ecosystem, could bring a great deal of knowledge to leadership to help improve the election processes at the county and state level.”



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GSA progresses on 2015 Strategic Plan

GSA, from A1

a list of demands, it was not a student bill of rights, and it was not a policy.” Dr. Commer continued, “The kind of future we envisioned was something that could only come about through careful engagement and building with others.”

Though President Farnam Jahanian was scheduled to speak, he was not able to attend due doctor-recommended rest after a knee surgery. Nevertheless, Dr. Commer commended Jahanian’s support and “willingness to see this [plan] through” in his time as Provost, when the Strategic Plan was just getting off the ground.

Interim Provost Laurie Weingart spoke in Jahanian’s place. She emphasized that the GSA recently received the National Association of Graduate and Professional Students’ 2018 Northeast member of the year award for outstanding work in representing Carnegie Mellon’s graduate and professional students. Weingart praised, “We definitely have seen your hard work in action.”

“In the past year,” Weingart continued, “CMU GSA has become a national voice in the national conversation on immigration and tax reform.” The Carnegie Mellon GSA has been pushing for a federal reform of the F-1 visa program that would enable students to re-validate their F-1 visas while remaining in the United States. Earlier this year, along with 53 other University GSAs, they submitted a letter to the State Department. Though they received a response last month, the issue remains unresolved.

Other accomplishments of the GSA’s efforts include the

opening of a Graduate Student Lounge in 2016 and the establishment of Legal Consultation Services. Plenty of Graduate students and live off campus and have no legal recourse with their landlords. Partnering with the Provost’s office and the Undergraduate Senate, GSA started a program to provide free 20 minute legal consultations. Over 50 students have attended consultations this semester.

There is still a lot of work to do. In the coming year the GSA plans to continue advocating for better financial aid and assistance, especially for international students — for whom none exists. They are also looking to ensure that the transportation services and healthcare plans being offered by the university actually meet the needs of students. Additionally, they will continue to push for the establishment of childcare services, something that was proposed over 25 years ago. Many graduate students have trouble finding affordable childcare services for their families, while other Universities like MIT, Stanford and Cornell already have similar programs established.

Surya Aggarwal, GSA President, thought the meeting was productive. “Beyond the formal remarks, a lot of conversation happened and connections were made where we identified the unachieved aspects of the strategic plan so we can get moving on them.” An important takeaway was that the administration recognizes the importance of the GSA Strategic Plan, but “we need to do more to get it moving,” voiced Aggarwal. “Obviously a lot has been done, but we’d like to see continued action.”

Forum

FROM THE EDITORIAL BOARD

America must respect, not glorify, our veterans

Across America, bumper stickers proudly proclaim “Support Our Troops.” People stand up at sports games to honor the veterans in the crowd. Every Veterans Day, Facebook timelines explode in a cacophony of red, white, and blue. Pithy political comics use injured veterans to mock those who question the army. In some cases, the word “veteran” has become synonymous with “hero.”

The United States claims to adore its military and veterans, and recent events have only reinforced this claim. According to *The Washington Post*, there was a public outcry when *Saturday Night Live* (*SNL*) made a joke at the expense of Dan Crenshaw, “a former Navy SEAL and the newly elected Republican representative from Texas’s 2nd Congressional District.”

A little background: Crenshaw wears an eye patch because he lost his eye to an improvised explosive device in Afghanistan on his third combat tour. During the “Weekend Update” segment, *SNL* comedian Pete Davidson made a couple cracks at his appearance, including a comparison to a “hit man in a porno movie.” After the episode aired, both Democrats and Republicans demanded an apology on behalf of all veterans. *SNL*, usually unapologetic in its satire, complied. The next episode showed Davidson making an in-person apology to Crenshaw.

At around the same time, there was another veteran-related fiasco, this time centered on President Trump. According

to *The Huffington Post*, Trump skipped a visit to the Aisne-Marne American cemetery, the resting place of almost 2,000 American soldiers killed in World War I. He claimed that the weather prevented the visit, prompting hundreds of pictures on Twitter of other politicians giving speeches in the rain. A few days later, he made another blunder when he failed to go to Arlington National Cemetery on Veterans Day. His excuse was that he was “busy on calls for the country.” Predictably, this excuse also generated backlash.

These uproars, and similar ones throughout history, prove that Americans are quick to defend their hallowed veterans. But while there are heroic people in the military, the widespread adulation of its members can be troublesome.

America’s adulation of veterans and military personnel is not a benign social phenomenon. First, it allows bad apples to thrive and spread their rot. In the *National Review*, a former major says that “though I’ve seen heroism in the military, I’ve also seen craven corruption, cynical exploitation of the public, and grotesque incompetence.” He continues to say that deference and awe should be earned, and the mere act of donning a uniform is not enough. Treating military members like saints creates fertile ground for scandals and exploitation.

Second, military worship obfuscates the harm of U.S. imperialism. Despite what

millions of school children have been taught, the army is not always fighting for our freedom. The government has its own interests, and it has been known to use the military as a weapon through tactics like drone strikes and bombings, leaving torn countries and shattered families in its wake. If we call every single member of the military a hero, we do a great disservice to the victims of U.S. imperialism and collateral damage.

Finally, military worship doesn’t actually do anything to help struggling veterans. Veterans need better treatment and a more efficient Department of Veterans Affairs. They need tangible laws and policies. They need dedicated and highly trained support networks. They definitely do not need empty praise. In other words, you can slap as many American flag filters on your profile picture as you want, but it means nothing if you still avoid eye contact with the homeless veteran sitting on the sidewalk outside your office.

If we want to improve our military, we must take a moment to realize simply vocalizing our praises to veterans is not enough. If we want to help people suffering from U.S. imperialism, let’s begin to ask ourselves how to move past the aftermath. If we want to help veterans themselves, let’s help create policies to support them. There is a difference between reverence and respect, and moving from the former to the latter is not a disgrace; it’s necessary.

DEFY Media hurts content creators

SUJAY UTKARSH
Assistant Pillbox Editor

On Nov. 6, DEFY Media suddenly closed its doors, leaving many of its employees and YouTubers who relied on them for revenue in the dark. A multi-channel network that struck contracts with numerous YouTubers, DEFY promised consistent payment. This was especially relevant for content creators suffering from YouTube’s draconian demonetization policies, which continue to leave ad revenue an unreliable source of income.

The closure was a shock to several people, as DEFY had several powerhouse brands like Smosh and Clevver, along with \$70 million worth of investments from two years ago. There were some warning signs, such as DEFY laying off eight percent of its staff and closing its programming advertising business in March, as well as selling Screen Junkies in July. Since the closure of the company, YouTubers such as Chris Stuckmann have come out and shared their experience, discussing the suffocating contracts, failed payments of due ad revenue, and lack of compensation for sponsored videos. Anthony Padilla questioned how the company could somehow burn through their \$70 million worth of investments, saying that he only ever saw “a fraction of that money” himself.

The reason I am bringing up the entire situation with DEFY is that it’s another reminder of just how incorporated YouTube has become. It’s gone from a hub for video sharing and original content to a cynical platform that adheres to executive goals and business interests. The trending page is now full of talk shows, music videos, top ten lists, and the rare content that YouTube deems as advertiser-friendly, which formerly included Logan Paul.

The reason ad revenue has been unreliable for YouTubers is due to the “adpocalypse.” This situation arose when PewDiePie had a series of controversial, anti-Semitic videos picked up by news outlets, who showed how these sorts of comments were being monetized. As a result of this, several advertisers pulled their ads, and YouTube began making less money.

The problem is that this is a loss for everyone. For advertisers, they lost a significant audience, because a lot of young people use YouTube (and don’t know what Adblock is). For YouTube, they lost a lot of money due to less ad revenue. But YouTubers faced the worst of it, seeing much less income than before and no longer being able to have a consistent revenue stream. This pushed YouTubers to turn to alternate platforms such as Kickstarter, Patreon, and sponsored videos, or else to sign with multi-channel networks like DEFY in order to have a stable income.

It’s ironic that YouTubers had to sign contracts with another corporation so that they could make money on the platform of a different corporation. Google

and YouTube’s job is to be the middleman between content creators and advertisers. They have to keep the interests of both in mind and come up with the ideal solution to satisfy both. The issue is that YouTube took the route of punishing content creators instead. Their new monetization system is full of vague phrases, such as flagging “sensitive” or “sensational” content. With the implementation of this system, many YouTubers have faced the issue of their videos being demonetized regularly. This was combined with companies flagging several videos for copyright claims, despite the fact that all of the videos they flagged were valid under fair use. While YouTube has a system for disputing copyright claims, the fact that they let companies take down videos at will is troubling. YouTube also had a system where they allowed some content creators to be part of their exclusive ad revenue program. Through this program, these YouTubers were guaranteed consistent ad revenue, but it was really only for large YouTubers like Logan Paul (whose suicide forest video wasn’t even demonetized at first).

There are straightforward solutions to all these problems. For starters, make it clear that putting an advertisement on a video does not equate to sponsoring said video. The whole point of advertising is for companies to let people gain exposure to the product they’re selling. They shouldn’t care about what the content of the video is. If companies do care about the content, then YouTube should put in an extensive opt-out system for what types of content or specific videos companies don’t want their ads to be playing on. This will solve the issue of demonetization entirely, and YouTube will only need that system for serious violations of their community guidelines. YouTube should also protect their content creators by actively creating better rules about when companies are allowed to make copyright claims. Finally, they should compensate all the YouTubers who have been unfairly treated by DEFY and have lost a lot of money due to not being paid before the company’s shutdown, and YouTube needs to have a better system in place to prevent multi-channel networks from exploiting YouTubers.

YouTube shouldn’t even call it “community guidelines” at this point. They should just call it “corporate conduct.” Take a look at YouTube rewinds over the years and you can see how it’s gone from being focused on its content creators, to being focused on the models and trends that are attractive to the shareholders. It’s an unhealthy direction that won’t change anytime soon, since there is no reason for YouTube to stop. They now have a premium subscription service and are starting their own original content, clearly trying to compete with companies like Netflix and Hulu. For YouTubers, it’s wishful thinking at this point that YouTube would honor its roots as a content sharing platform.



Anna Boyle/Art Editor

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Intellectual Dark Web creates space for controversial voices



When you hear about the “dark web,” you probably think about the seedy underbelly of the internet where anonymous individuals circulate disturbing videos and images, contract killers advertise their services, and drug dealers peddle their goods for cryptocurrency.

What you probably don’t think about is a bunch of prominent figures of industry and academia gathering over dinner to discuss ideas that are deemed, by today’s standards, controversial like the fundamental biological differences between men and women, the constricting of Free Speech, and the dangers of identity politics. These are, coincidentally, a lot of the topics that we would brand as “conservative” ideas, ones that have fallen out of favor in the face of the rising tide of liberalism.

The Intellectual Dark Web — the name first coined by managing director of Thiel Capital Eric Weinstein — helps keep those ideas alive, isolating their discourse from the mainstream where they would be met with fierce backlash and opposition. Composed of powerful individuals such as Sam Harris, Dave Rubin, and Claire Lehmann, members of the dark web see themselves as vanguards in a war against the oppressive notion of political correctness, championing traditional values that continue to clash with the present.

The very fact that this splinter group exists is quite telling of the state of our politically polarized society, and it only goes to show just how divided our nation has become. However, as

questionable as the Intellectual Dark Web might sound, it’s not necessarily a bad thing.

It’s undeniable that with the growing focus on political correctness and sensitivity towards one another, topics that were once considered fair game have been labeled as inappropriate. Whoever dares to discuss these subjects are targeted for censorship or ostracization, as we saw in the case of YouTube censoring PragerU, a conservative media outlet. Since then, other social media platforms have come under increasing pressure to take an active role in censoring their content, especially in the wake of tragedies like the Pittsburgh shooting.

The problem with this systematic elimination of controversial voices is that just because they are kicked off popular platforms does not mean they won’t go somewhere else and continue their conversation. Luckily, the Intellectual Dark Web is just a group interested in civil discourse surrounding conservative ideals, which is a lot better than platforms like Gab which allows for the blossoming of hate speech.

So how can the Intellectual Dark Web be a good thing?

The greatest benefit that comes from the dark web is that they preserve ideas that otherwise don’t come up. This is important because it keeps an active debate going, and while many may not agree with their perspectives, it’s a lot better to have a discussion of opposing values than to have one universal set of values imposed upon everyone. To do so would be a disservice to the diversity of mankind, something that we are all keen to celebrate and revel in. After all, everyone should be free to express themselves. As the old saying goes, “I disapprove of what you say, but I will defend to the death your right to say it.”

The broader problem is that these controversial ideas have been used by some as justifications for hate crimes and hate speech, which sometimes leads to legitimate harm. The ideas in of themselves are innocuous, but because they have become associated with domestic terrorism, they are similarly denounced as dangerous.

Continuously redefining the mainstream with successively narrower boundaries in hopes of snuffing out hate speech will never work, because practitioners of evil will always find some workaround. Instead, we need to become more precise with who and what we are blaming rather than making indiscriminate blanket statements. As the dark web proves, there are those out there who are interested in investigating controversial ideas solely for intellectual reasons.

While it’s good that the dark web continues to preserve these taboo topics, the fact that they view and brand themselves as ideological pariahs operating on the outskirts of the national conversation is not quite as commendable. Rather than working at the fringes, the dark web should find more constructive ways to discuss their ideas with the opposing side instead of playing the victim. This concept of leaving each other alone is quite un-American given how our country was founded upon the principles of collaboration for the common good.

Whether or not the Intellectual Dark Web will continue to hide in the shadows or come forward into the light is their prerogative. Regardless, it’s good to know that there are those interested in looking at conservative and controversial subjects in an intellectual capacity, and there is little cause for concern so long as they steer away from weaponizing their ideology towards ulterior motives.



Courtesy of The Rubin Report via YouTube
Eric Weinstein meets with Dave Rubin on his show *The Rubin Report* to discuss the Intellectual Dark Web.

Humanities fall by the wayside at CMU



If you aren’t living under a rock, or possibly in the basement of Porter, you won’t find it hard to believe that the humanities are undervalued at Carnegie Mellon. We’ve all heard the jokes about Dietrich. We’ve all seen students forced to meet humanities requirements skim the course list with a resentful eye and a “let’s-get-this-over-with” attitude, gravitating toward the classes that seem low-effort. You might even be one of those students.

Even in an official capacity — think press releases and mailers to prospective students — the humanities only get noticed in interdisciplinary work, in conjunction with a scientific or technical component. Plenty of students on campus don’t care who Francis Bacon was or what he did, but could probably name the English department’s “Six Degrees of Francis Bacon” project as one of the university’s favorite examples of interdisciplinary innovation.

That’s not to say that that project isn’t incredibly cool (because it is!) or that interdisciplinary work doesn’t deserve the attention it gets. It’s just that the humanities only seem to be celebrated in conjunction with work in science, technology, engineering, and mathematics (STEM). Exploration and analysis of the human experience appear unimportant. Only when history, English, and modern languages are associated with statistics, psychology, engineering, computer science are they good enough.

It goes without saying that the reverse is totally unimaginable.

What’s less obvious is that, even within Dietrich itself, the humanities take a back seat to the social sciences. On Carnegie Mellon’s admissions website, Dietrich bills itself as “no ordinary liberal arts college.” What does that mean, really? If you think about it for more than five seconds it look bad from every angle, like an institutional-level I’m not like other girls.

Career events and job newsletters billed as “especially for Dietrich undergrads!” promise a break from endless lists of tech startups looking for software engineers. Instead, we get consulting firms looking to hire data analysts from the statistics department. Celebrations of Dietrich student work usually take the form of poster sessions, and inviting all students to participate regardless of major won’t change the fact that posters are a traditional medium of the scientific realm (and that it’s fundamentally easier for a decision science student to present their experimental research on a poster than it is for a creative writing student to show off their poetry).

If, for a second, we accept the premise that the humanities rarely get shout-outs on their own because the university’s favorite projects are interdisciplinary, then maybe this extends to Dietrich,

too. After all, as Pres. Jahanian acknowledged recently in an interview with The Tartan, the university really does want to focus on interdisciplinary work.

It might not be fair to make claims from the outside about what image Dietrich’s administration wants to promote, interdisciplinary or otherwise. That said, Dietrich’s ‘about’ page begins: “The Dietrich College is home to faculty and students who often cross disciplines to solve real-world problems.”

We can also look through the university press releases Dietrich shares on its website: on an informal count, Dietrich’s site displays 31 interdisciplinary news stories from 2018, versus 23 focused on the humanities. Maybe it isn’t about prioritizing the social sciences over the humanities after all: it’s about showing that collaboration is the future of both, that we are greater than the sum of our parts, and that neither the social sciences nor the humanities — but the combination of core concepts from both disciplines — are what makes Dietrich special.

Except there were 39 Dietrich press releases in 2018 that focused exclusively on departments in the social sciences, largely psychology and statistics, the most sciency of all. That’s more than interdisciplinary topics, and almost twice as many as the humanities. This might have something to do with the relative size of the departments (for example, the recently rechristened Department of Statistics and Data Science is one of the university’s fastest growing programs). Except if we’re still assuming that the number of press releases on a given topic roughly corresponds to the public image Dietrich wants to construct... the size of the department shouldn’t matter. So is the administration playing favorites, or just not making an effort?

Two new undergraduate minors in Dietrich — Environmental and Sustainability Studies, and Humanities Analytics — got plenty of hype from the university on campus and on social media when they were recently introduced, in accordance with the focus on forward-thinking interdisciplinary studies. Another shiny new interdisciplinary program, the Master of Arts in Global Communication and Applied Translation, didn’t even get a press release. Is it because the collaborating departments are English and Modern Languages? (“Six Degrees of Francis Bacon,” by the way, has had three press releases all to itself in the past few years.)

Am I just bitter? Maybe. More than that, though, I’m concerned about what messages humanities students are receiving about the value of their work and the students outside the humanities who aren’t shown anything that contradicts their preconceived notions. The university may not have created the campus culture that dismisses the intrinsic value of the humanities, but for now, it’s complicit.

LETTER TO THE EDITOR: CMU’S OBLIGATIONS TO DISPLACED TENANTS

Recently Carnegie Mellon University paid \$17 million for the Fifth Neville apartment building at 4705 Fifth Avenue. This property is adjacent to the Yi Chung Kwan Korean grocery store and across from the Residence on Fifth. Carnegie Mellon made a good investment move that helps address their shortfall of units, but I have a few problems regarding this acquisition that should prompt concern from both Carnegie Mellon students and staff.

The Post-Gazette reports that everyone must move out after their lease is finished and thus

buying out this building is an act of displacement. Moving out of an apartment is difficult, especially when tenants expect to live in the same residence. Now that tenants are told they cannot finish their lease, they have to deal with the stress of looking for a new home and, especially for lower-income tenants, the fear of homelessness.

Carnegie Mellon, as an institution and landlord, can alleviate the problems caused by displacement by offering support to tenants. Support can be any of the following: financial assistance, resources to find new housing, no

penalty for early lease termination, and communicating with tenants during and after the lease to ensure everything proceeded smoothly. By offering support, Carnegie Mellon can be a leader in the city of Pittsburgh for what tenants can expect and how landlords should treat tenants when displacement happens. At the least, I would hope, and eventually come to expect, that landlords to offer the type of support mentioned and kudos to Carnegie Mellon if they are engaging in some of these good neighbor policies already.

Students at Carnegie Mellon

should pay attention to the rent of the Fifth and Neville apartments after the university finishes renovating the buildings. Right now, the two single-bedroom apartments available in the building go for \$1,300 a month. University housing rent tends to be slightly above market rate. If the rent increases, then that means more money for students and fewer market-rate apartments available for both students and for the people of Pittsburgh. As students who already spend an inordinate amount of money on tuition and housing, we should encourage our university to be frugal and efficient

with our money.

I anticipate Carnegie Mellon will continue to buy out properties in the Oakland area to accommodate their housing need. I encourage students and staff to set a precedent and ask the university to support the people they displace and implement rent control measures to save students money. I plan to take my concerns stated in this op-ed to Housing Services, and I encourage the reader to do the same.

Daniel Sun is a Ph.D. student in Engineering and Public Policy at Carnegie Mellon University.

SPEAK YOUR MIND: WRITE FOR FORUM!



forum@thetartan.org



Science & Technology

Frederick Douglass and science’s emancipatory power

FRANK HU

Assistant Forum Editor

Science did not corrupt society; society corrupted science.

This was the key takeaway from Dr. Eric Herschthal’s talk “Frederick Douglass On Science: What He Said, Why He Said It, And What He Thought It Ought To Be,” which he delivered last Tuesday in Porter Hall. Dr. Herschthal, who holds a PhD in history from Columbia University, specializes in the study of African American history and the role that science played in shaping the dynamics of slavery and emancipation, as well as its impact on the society of post-slavery America. While Douglass is not the focus of his research — rather, one of many characters in an elaborate narrative — Dr. Herschthal decided to center the talk around Douglass because the abolitionist had a very complex relationship with scientific inquiry.

Like many fugitive slaves who escaped to the North, Douglass was not free from the shadow of prejudice and racism. It was there that he was introduced to the two intellectual realms that he would continue to grapple with for the rest of his life: racial science and technology.

To Douglass, technology went hand-in-hand with freedom. As opposed to the Southern economy that revolved around slave labor, the North depended on technological innovations such as pulley systems and steam engines to do the heavy lifting. This stark contrast was not lost upon Douglass, who remarked that while the South persevered as a collection of slave states, the North was moving forward, more concerned with economy.

While he disagreed that technology alone could solve the issues of slavery (white anti slavery sympathizers often posited the idea as a “technological fix” for slavery), Douglass believed that it was important for black individuals to receive technical training so that as the world advanced, they would not be left behind. To that end, he advocated for the creation of schools such as the Douglass Institute where African Americans could not only study, but also become confident in their own intelligence.

How Douglass fought the tide of racial science was the most interesting point of Dr. Herschthal’s talk. Racial science in the 1800s revolved around theories like phrenology and craniology, where many believed you could discern someone’s personality and intelligence by feeling the bumps on their skulls. These techniques were leveraged towards maintaining white supremacy and denigrating non-white populations, giving birth to some of the most debasing and ethnocentric publications of the age in the process. These views clashed harshly with Douglass’s principle that all people were created equal, and that any differences arose from their environment.

The inaccurate and offensive claims of these journals prompted many abolitionists to openly

criticize the authors, and while Douglass was tempted to join in, he decided to debate those whose views he

disagreed with. Douglass saw nothing would be accomplished by calling each other names; refuting science with more science was the only way, and he followed through with this approach in public forums and his own writings.

Many of the things that Douglass said may sound crude and racist by modern standards, but his goal was not to undermine the established scientific thought. Rather, he hoped to curtail the spread of scientific inaccuracies insofar as they did not impede his political arguments.

It was racial science that sparked conflict within Douglass. Clinging to enlightenment ideals, Douglass believed that science, if used properly, could help liberate all of mankind, and it astounded him how knowledge was used for nefarious purposes under the pretense of objectivity. Despite the challenges involved, Douglass still maintained the importance of engaging with science and mastering it, believing that banishing ignorance was the only way to achieve true emancipation.

Dr. Herschthal painted a picture of a humble and brilliant man who looked past the barriers of color and race, holding onto unbridled enthusiasm for the transformative power of science. Rather than shun science, Douglass embraced it, and encouraged others to do so as well.

After his presentation, there was a brief Q&A session during which Dr. Herschthal connected Douglass’s ideas to the present moment. In response to the question “what would Douglass say about our society right now,” Herschthal connected the 21st century with the 19th century by showing how the same problems continue to persist, albeit in novel and complex ways. Making it abundantly clear that he was not qualified to speak for Douglass, Herschthal speculated that despite all that has changed in the last 200 years, Douglass would continue with the same core message. It was incredible to see that even though we are nearing the 200th anniversary of Douglass’s birth, his ideas are more relevant than ever in our sociopolitical climate.

It’s important to realize that science and technology do not exist in their own little bubbles. As researchers and thinkers and scholars that live and operate in the real world, we have to recognize that our work has consequences for every other sector of society, and it’s important to recognize how we fit into the broader puzzle to ensure that we leverage the power of our innovations for the common good of humanity. In this way, we can one day achieve Douglass’s vision of the elevation of all mankind, regardless of color and creed.



Emma Flickinger/SciTech Editor

Graphene as a superconductor? Double layers could be the key

ROSE EILENBERG
Staffwriter

The familiar is often overlooked. A recent paper published in the journal *Science Advances* describes a newly-discovered property of double layers of graphene that may make it possible to turn the material into a superconductor. The system has been studied before, because it is also a semiconductor with a band gap, but never with instruments sensitive enough to recognize the necessary properties for superconductivity. “It is an overseen property of a well-studied

system,” said first author Dr. Dmitry Marchenko. There are many different allotropes, or forms, of pure carbon, depending

on how the atoms formed bonds. Some familiar allotropes include diamonds, graphite, and carbon nanotubes. Graphene is a

2-dimensional form of carbon, in which the atoms are arranged in a hexagonal crystal lattice. Graphite does conduct electricity

“It was previously unknown that there is a flat area in the band structure in such a simple well-known system.”

Dmitry Marchenko
Helmholtz-Zentrum Berlin

well in normal conditions — but it is not a superconductor. In a normal conducting material, the moving

electrons will collide with the ions in the material’s lattice. These collisions will take some of the electrons’ energy and convert it to heat, which is the source of electrical resistance. All superconductors, however, have zero resistivity; the electrons can flow without interference. This means that superconductors can theoretically maintain a current indefinitely without degradation, as well as support extremely high currents without suffering significant losses to heat. Researchers at MIT

See **GRAPHENE**, A7

Graphene may be the ultimate conductor

From **GRAPHENE**, A6

have found superconductivity in graphene bilayers before, but their system required the two flat lattices to be twisted precisely 1.1 degrees relative to each other. Other successful attempts at turning graphene into a superconductor have necessitated adding other metals, which limits the material's capabilities at higher temperatures. While an exciting development, there is limited potential for real-world applications, as the necessary conditions are challenging to manufacture in bulk.

Scientists at the Helmholtz-Zentrum Berlin, however, recently published a paper that describes the properties of bilayer graphene in which the lattices lie exactly on top of each other. This system is suitable for larger-scale production; the material is produced by heating a silicon carbide crystal until the silicon atoms evaporate from the surface, leaving first a single layer of graphene, then a second.

The researchers found a flat area in the band structure, which is a prerequisite for superconductivity. Band theory approximates the quantum mechanical state of a solid, describing the ranges of possible energies for electrons in the material. In a flat area, the energy level does not change with position. Angle-resolved photoemission spectroscopy (ARPES) is a direct method of studying the electronic structure of the surface of solids. The researchers in this study used an ARPES instrument with resolution high enough to find the flat area next to the band gap.

Superconductors are already being used in scientific and medical equipment, such as MRI machines, which need to generate large magnetic fields. Superconducting electromagnets are incredibly strong; the lack of resistance in the wire coils means that they can create strong magnetic fields by conducting much higher currents than their non-superconducting counterparts, without losing any energy to heat.

There are many potential future applications of superconductors, including electric power transmission. Superconducting transmission lines would eliminate power transmission losses, which the U.S. Energy Information Administration estimates to be around five percent. This could increase the feasibility of renewable energy, which is often generated far from the populations that use it.

In its existing form, graphene is an excellent conductor of electricity. Exploiting the property discovered by these researchers could produce the ultimate, purest conductor with uses in everything from solar power to water purification.



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
Application Deadline: March 31, 2019
(Applications may be accepted after the deadline until all positions are filled.)

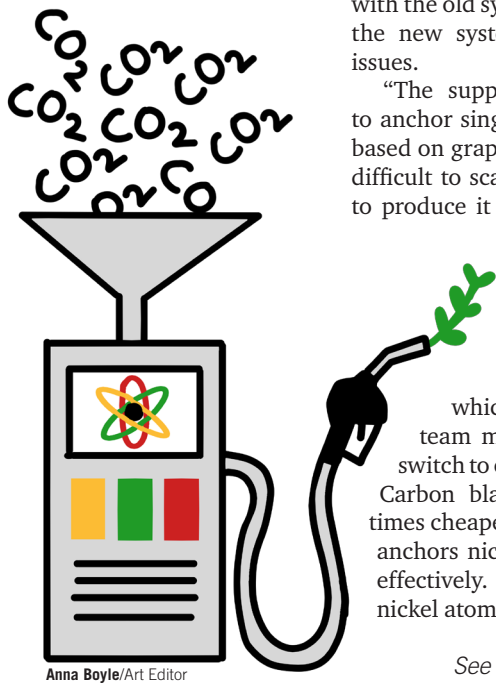
Carbon dioxide to carbon monoxide: reusing pollutants

SEAN MIN
Staffwriter

Haotian Wang, a fellow at Harvard University's Rowland Institute, and his team have recently detailed improvements they made to a system they first outlined in 2017. This system was already capable of reducing carbon dioxide into carbon monoxide, a reactant commonly used in a

variety of industrial processes, but the the team has made it drastically more practical and effective. Wang, who is slated to join Rice University as an assistant professor of chemical and biomolecular engineering, has developed a series of small reactors which help catalyze various greenhouse gases into carbon monoxide, by using single atoms of nickel. In the research paper, Wang describes his plan to

connect his system to power plants or other industrial sites which emit a great deal of pollutants. Since carbon dioxide makes up about 20 percent of these pollutants, Wang hopes it could one day be pumped into his system and converted into useful chemicals when combined with clean electricity. The old system was roughly as large as a cell phone and consisted of two electrodes in two electrolyte-filled chambers. The new system is far smaller – a mere 10-by-10 centimeter cell. It is also far more efficient; as much as four liters of carbon monoxide per hour can be emitted from this type of cell. Rather than electrodes and electrolyte-filled chambers, the new system instead relies on enormous concentrations of water vapor and carbon dioxide. Cost and scalability were the main issues



with the old system, but Wang says the new system addresses these issues. “The support we were using to anchor single nickel atoms was based on graphene, which made it difficult to scale up if you wanted to produce it at gram or even kilogram scale for practical use in the future,” says Wang. Graphene is prohibitively expensive, which is why Wang's team made the decision to switch to carbon black instead. Carbon black is thousands of times cheaper than graphene but anchors nickel atoms almost as effectively. Positively charged nickel atoms can be absorbed

“The most promising idea may be to connect these devices with coal-fired power plants or other industry that produces a lot of carbon dioxide.”

Haotian Wang
Rowland Institute at Harvard University

Write for SciTech!
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Converting carbon dioxide emissions into clean fuel

From **CARBON**, A7

into negatively charged defects in carbon black nanoparticles, resulting in an inexpensive material that is still highly selective

for reduction of carbon dioxide. According to Wang, the system currently in his laboratory can only produce several grams of carbon monoxide per batch. He claims that this is due to the synthesis

equipment owned by Wang and his team; if someone utilized a larger tank instead, he speculates that “kilograms or even tons of this catalyst” could be produced. A major issue Wang’s team

encountered was that the old system only functioned in a liquid solution. The original system works by splitting water molecules into oxygen and protons in one chamber, then allowing the oxygen to leave the chamber and the protons to move into the second chamber. In the second chamber, the protons bind with carbon dioxide with the assistance of the nickel catalyst and break the carbon dioxide into carbon monoxide and water. This water is then driven back into the first chamber. However, since the only carbon dioxide capable of being reduced is that which is dissolved in water, only trace amounts of carbon dioxide would actually be reduced. According to Wang, “most of the molecules surrounding the catalyst were water.” Wang’s team was unable to increase the voltage applied to nickel because that would likely cause water molecules to split instead. Thus, they eventually decided to take out the liquid water out of the system entirely and replaced it with water vapor. Since water vapor does not act as an ion conductor like liquid water does, Wang’s team can enormously increase the voltage and, in turn,

the efficiency of the overall system. Ion exchange membranes take the place of the liquid water in moving ions in the chamber. Although Wang’s team has already patched up many of the challenges faced by their original system, Wang believes that their main challenge concerns the stability of the system. The system can currently be run for tens of hours, but it has to be developed to a point where it can continuously operate for thousands of hours to have a tangible environmental or economic impact. In spite of this massive gap, Wang is confident that this goal will eventually become a reality through careful analysis of “both the carbon dioxide reaction catalyst and the water oxidation catalyst.” In addition to their nickel-based reactor, Wang and his team have developed copper-based systems dedicated to further reducing carbon dioxide. Carbon monoxide’s value is quite low compared to other products which can be acquired through further reduction, making these copper-based catalysts more ideal to produce even more valuable products.



Courtesy of Pixabay
Carbon dioxide makes up 20 percent of industry emissions. Haotian Wang hopes to convert these gases into clean fuel.

Earth’s water could be from the Sun

ASHWIN SRINIVASAN
Assistant SciTech Editor

Scientists have been attempting to decipher the origin of water on Earth for decades. A new study in the *Journal of Geophysical Research: Planets* of the American Geophysical Union puts forward a new theory towards resolving this mystery, suggesting that the hydrogen in Earth’s water originated from clouds of dust and gas remaining after the formation of the Sun. Historically, it has been widely accepted that most, if not all, of Earth’s water

heavier isotope of ordinary hydrogen). Researchers for the study, conducted at Arizona State University, chose to study hydrogen since it is much more common in our solar system than oxygen, the other chemical component of water. According to the authors, the hydrogen in oceans does not represent all hydrogen on Earth, since hydrogen found near the boundary between the core and mantle of the planet have significantly less deuterium than ocean water. In a statement, Steven Desch, a professor of

water and they see that it is pretty close to what we see in asteroids, it was always easy to believe it all came from asteroids.” To disprove this assumption, Desch and co-author Peter Buseck, a Regents’ Professor in the School of Earth and Space Exploration and School of Molecular Sciences, developed a novel theoretical model of Earth’s foundation several billion years ago where large waterlogged asteroids developed into planets while clouds of dust and gas still spun around the Sun. These planetary embryos rapidly collided and grew, the largest of which eventually became Earth. Gases from the cloud around the Sun became Earth’s atmosphere, and hydrogen from the Sun’s gas cloud dissolved into the molten iron of the still-forming Earth’s magma ocean (this hydrogen was lighter and had less deuterium than the hydrogen in other asteroids at the time). As more asteroids impacted Earth, their hydrogen was pulled towards the core of the planet due to the attraction between molten iron and hydrogen with higher amounts of deuterium. Once Earth cooled,

much of the hydrogen from asteroids was left in the mantle while atmospheric hydrogen originating from the gas cloud around the Sun settled into Earth’s oceans. The research team used their model to estimate the quantities of hydrogen originating from each source, concluding that most was indeed from asteroids but a significant portion came from the gas cloud around the sun. Lead author Jun Wu, assistant research professor in the School of Molecular Sciences and School of Earth and Space Exploration at Arizona State University, said in a statement, “For every 100 molecules of Earth’s water, there are one or two coming from solar nebula.” A major application of this study could be new models about the development of other planets and their ability to support life. Other planets could have developed in a similar fashion to the theoretical model put forth by the authors. “This model suggests that the inevitable formation of water would likely occur on any sufficiently large rocky exoplanets in extrasolar systems,” Wu said. “I think this is very exciting.”

“For every 100 molecules of Earth’s water, there are one or two coming from solar nebula.”

Jun Wu
Arizona State University

came from asteroids, largely due to a similar deuterium-to-hydrogen ratio between oceanic water and that found on asteroids in our solar systems (the deuterium-to-hydrogen ratio is a unique chemical signature of water sources, since deuterium is a

astrophysics in the School of Earth and Space Exploration at Arizona State University, said of the use of the deuterium-to-hydrogen ratio, “it’s a bit of a blind spot in the community. When people measure the [deuterium-to-hydrogen] ratio in ocean



Courtesy of NOAA, NASA, Pxhere

News Editor Mattson drops to eighth place

FANTASY, from A10

mmichelle123 over TARTAN FANTASY, 111.90 to 90.00

Madlansacay’s mmichelle123 pulled ahead of Qian’s TARTAN FANTASY right at the end of the weekend. She scored a lot on Sunday, after a relatively poor performance on Thursday. Both teams had three starters earn them zero points. I would recommend to both Madlansacay and Qian making Yang sit down with them and teach them how to drop players, as she did for me! Madlansacay’s team was led by Philadelphia Eagles tight end Zach Ertz, who scored 26.50 points, and football-player-who-I-know-because-he’s-hot Odell Beckham, Jr. scored her 19.30 points. Qian will take on Le’s winning team futbol and Madlansacay will compete against Miller’s second-ranked Last Manning Standing.

Gin and Bear It over newz, 64.82 to 63.46

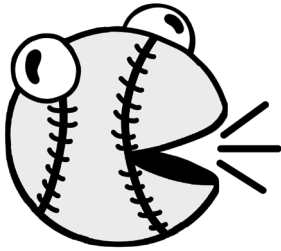
Unfortunately, now I have to relive the reality of the 1.36-point margin that means I have to write this article. This match-up was hard-fought and close, so the fact

that my mythical football team sucks at the very least spiced up the league. New England Patriots tight end Rob Gronkowski, who I will call out because he was supposed to be good, earned me no points but Yang’s New York Jets defense earned her negative three points, which I did not know was possible.

Yang’s team had two players, Allen Robinson, wide receiver for the Chicago Bears and Jared Goff, quarterback for the Rams, who each earned her more than 20 points. I had zero players who accomplished the same feat. Next week Yang will face Sio’s GOAT But Ironically and I will beat Tunnard’s Slugs.

The next issue will be our final issue of The Tartan for the semester, and thus the final installment of Fantasy Football in 2018. I hope that I will make a last minute comeback, or I will have to live with the shame of losing until next year. This might be an issue, because I, for one, would not respect the authority of an editor that finished last place in a fantasy football league. So this is a desperate plea to my players, whose names I do not remember, to put it all out there. The respect of my colleagues here at The Tartan is on the line.

Penalty Shouts: MLB mascots come together in Kansas City



MATTHEW BENUSA
Assistant 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.

Last Tuesday, the magic mascot conch shell blew calling for an assembly of MLB mascots in Kansas City. Fortunately, Pittsburgh’s very own Pirates Parrot heeded the call and joined twelve others of his partners-in-crime, from the Houston Astro’s Orbit to Mr. Met and whatever bat out of Looney Tunes Hell passes for the Atlanta Braves’ mascot Blooper, for a day of things that mascots do.

We were able to get a hold of the Parrot for an interview to hear more about the day, but he

was only able to repeat things we said back to us. However, the Parrot’s agent was on hand to tell us a little more about the conference. “The day started with a roundtable discussion on the current state of the world of mascotting, and it revolved mostly around topics of social justice, specifically the lack of mascots attending the conference from already underrepresented teams. I mean, where is the Tampa Bay Rays’ Raymond?” said the agent.

From there, the day turned into a series of leadership exercises and icebreakers. At least one of the exercises involved the mascots walking in circles with their eyes closed; the focus of the exercise was to teach mascots about spatial relationships. Time after time, Mr. Met would lose his head due to it being much larger than his body.

As for the icebreakers, almost all of them involved the mascots actually breaking the ice. The de-icing contest saw the mascots race around the Kansas City Royals’ Kauffman Stadium to see how quickly they could get rid of the icicles hanging around the freezing stadium. There was the ice sculpture competition, where the

mascots had to sculpt a partner while wearing a blindfold. Not to mention, the final icebreaker that crowned this year’s Most Valuable Mascot featured the mascots taking turns bowling the Athletics’ mascot, Stomper the Elephant, across a frozen pond. Whoever breaks the ice first is crowned the winner and Most Valuable Mascot of 2018. Unfortunately for the Pirates Parrot, parrots don’t have arms, so he was unable to compete fully with his compatriots.

The night ended with hugs and smiles all around because the Los Angeles Dodgers and the New York Yankees still don’t have mascots — at least the Flyers have Gritty.



Rebecca Enright/Staff Artist

Champions league: Red Star Belgrade shocks Liverpool

YANNICK SHETTY MENON
Junior Staffwriter

The UEFA Champions League (UCL) was back in action last week with each participating team playing their fourth of six group stage fixtures. At this point, the groups have already begun taking shape, with the results of this week’s games sounding the death knell for several clubs’ 2018-19 Champions League run.

Real Madrid and Manchester City both won dominantly. This week was Madrid’s third consecutive win after firing their manager Julen Lopetegui, who oversaw only one win in his last seven games in charge. Nail-biting draws in both star-studded matches between Paris Saint-Germain and Napoli as well as Barcelona and Inter Milan keep the fight for a knockout round qualification

spot extremely tense in their respective groups.

And after Atletico Madrid’s devastating 4-0 loss to Dortmund in Week 3, their 2-0 victory this week over Dortmund offered some consolation and keeps both clubs tied at nine points with two games to go. Beyond all of these results though, two other fixtures stole the headlines this week.

The second clash between English and Italian giants

Manchester United and Juventus was bound to demand the world’s attention this week. The buzz around Paul Pogba’s return to Turin and Cristiano Ronaldo’s second shot this season at facing his former club was incredible. Since the international superstar’s \$125 million move to Juventus, the club has seen its best start to a season in 88 years, while at United, Mourinho continued to be under fire for his side’s poor performances and low league position of 7th place.

Ronaldo put Juventus in front 65 minutes into the game scoring a timed volley that can only be considered an early contender for UCL goal of the season, a fair reflection of a game that had so far seen Juventus’ Paulo Dybala and Sami Khedira hit the frame of United’s goal, with United themselves showing little impetus. Juventus continued to dominate, coming close to scoring three times after the first goal.

Juventus only saw their goal threatened within the final 12 minutes of the match. United’s Juan Mata buried a free kick into the bottom left corner to seemingly salvage a draw, and also record the first goal Juventus conceded in this season’s UCL. With one minute of the game to go, the traveling United fans roared in jubilation as another ball swung into the box saw Juventus haphazardly scramble to defend, somehow leading to defender Bonucci inadvertently put the ball into his own net.

The win was massive not only for Manchester United’s UCL aspirations but also for the under-pressure manager Mourinho who made an “I can’t hear your jeers now” gesture at the Juventus fans as he walked out of the stadium. Perhaps this result could be the push this struggling team needs to

turn their season around. United fans remain hopeful.

United’s Merseyside rivals Liverpool traveled to Serbia to face the club Red Star Belgrade in what was considered a meaningless match. From a league with a fraction of the finances Europe’s elite teams possess, Red Star’s UCL dreams were bleak even before they got put into the group of death with PSG, Napoli, and Liverpool. To contextualize, the starting 11 fielded by Red Star this week is valued at \$24.5 million, while just this summer PSG, Liverpool, and Napoli spent \$228, \$211, and \$83 million, respectively, on transfers. Therefore even the one draw Red Star managed in the opening three fixtures was considered a job well done.

In their October match with Red Star Belgrade, Liverpool cruised to a 4-0 victory, so even though they were down 1-0 by the 22nd minute and Red Star fans were celebrating maniacally, viewers expected their victory. The goal came against the run of play and from a set piece. Milan Pavkov somehow bagged another, this time a wonder strike from 30 yards out, and the extreme underdogs somehow held on for the next 61 minutes to preserve this lead and win the game 2-0.

Liverpool was unbeaten in the Premier League and was considered a contender for both their domestic league title as well as the UCL trophy, which made Red Star’s victory all the more fantastical. Though analysts still say that it remains unlikely that Red Star will make it out of the group stages, this victory was one for the fans to celebrate for days, and will go into the Champions League history books as being one of the biggest upsets in recent European football history.



Courtesy of Dickson Dagogo via Flickr Wikimedia Commons

Among some unsurprising matches, Red Star Belgrade upset Liverpool 2-0 on Nov. 6.

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Sports

Football: Tartans defeat Geneva, 38–14, on Senior Day



Courtesy of Martin Santek via CMU Athletics

On Senior Day, the Carnegie Mellon football team sent the team’s senior players off with a commanding 35-14 win over Geneva.

MARIKA YANG
Sports Editor

The Carnegie Mellon University football team played its final game of the 2018 season on Saturday, Nov. 17, squaring off against Geneva College in the Go4theGoal Game for Pediatric Cancer. Saturday also marked Senior Day, the final game seniors would play in the Cardinal and Gray uniform. The Tartans scored 28 unanswered points to defeat the Geneva Golden Tornadoes, finishing the season with a 6–4 overall record and a 5–4 record in the Presidents’ Athletic Conference (PAC).

The Tartans started the game with the ball, but their drive stalled on the Geneva 31-yard line. A holding penalty set the offense back at 4th and 13, and senior quarterback Alex Cline threw an interception to give the Golden Tornadoes the ball. But the Tartan defense responded. Senior defensive end Long Tran

forced a fumble on The Tartans’ very first offensive play, and senior outside linebacker Quinn Zsido recovered the ball to give possession right back to the Tartan offense.

On the following drive, Cline and the offense marched down the field to the Geneva 17-yard line, converting a fourth down past midfield and spreading the offense around. Cline took a sack for an 11-yard loss to the 38-yard line, but scored on the ensuing play with a 28-yard strike to sophomore wide receiver Alec Oshita in the back right corner of the end zone to get on the board first, 7–0.

On Geneva’s first play of their next drive, they ran 71 yards all the way to the Carnegie Mellon two-yard line. Two plays later, Geneva ran up the middle into the end zone to tie the game, 7–7.

In the second quarter, Geneva took the lead 14–7 after another long run on the first play of the drive, this time for 59 yards. The

Tartans responded with a 75-yard drive that finished with a 20-yard touchdown from Cline to Oshita, to tie the game at 14–14.

Geneva’s turnovers continued on the next drive. Junior safety Thomas Polutchko intercepted the ball on Geneva’s first passing attempt of the game, with 6:52 left to play in the first half. The Tartan offense took over on the Geneva 40-yard line, and reclaimed the lead, 21–14, with 5-yard Cline touchdown to senior halfback Karl Kumm.

In the second half, the Tartans continued to score. Cline’s fourth and final touchdown of the game came early in the third quarter. From the Geneva 16-yard line, Cline kept the ball and rushed 14 yards to the two-yard line. He then completed a quick throw to first-yard wide receiver Kris Hughes in the end zone, extending the lead to 28–14.

With 4:34 left in the third quarter, sophomore running back Luke Bikulege scored the Tartans’



Courtesy of Allen Howard/HDIC Productions via CMU Athletics

Senior Damola Orimolade celebrates with senior Karl Kumm following a touchdown.

only rushing touchdown of the game with 26-yards out. The 35–14 score would stand after a scoreless fourth quarter.

Though the Tartan defense played well in the first half, forcing turnovers and limiting Geneva to two scores, they made adjustments in the second half to stop the Golden Tornadoes’ powerful run game and shutting them out in the second half.

Zsido and Polutchko both recorded 11 tackles each to lead the team. Senior cornerback Ethan Anderson also made an impact with eight tackles, six of them solo, a tackle for a six-yard

loss, a forced fumble, and an interception.

In his final game as a Tartan, Cline threw for four touchdowns to become Carnegie Mellon’s all-time leader in touchdown passes at 56. He finished the day 33-for-47 for 332 yards. He also extended his records the school’s all-time leader in passing yards and all-time leader in completions.

Kumm had a career day, with 11 catches for 115 yards and a touchdown. Oshita was one of Cline’s favorite targets, recording five catches for 73 yards and two touchdowns.

Volleyball’s Maia So-Holloway looks to future after great 2018



Courtesy of Sports Information Staff via CMU Athletics

Junior Maia So-Holloway helped lead the volleyball team to their best ever placement in the NCAA Volleyball Championship.

GABRIELA COLON ROURA
Junior Staffwriter

Last weekend, Carnegie Mellon University’s volleyball team played against Ithaca College in the Regional Final of the 2018 NCAA Division III Women’s Volleyball Championship. Though the Tartans lost by the scores 25–21, 25–22, and 25–23, the team made history by becoming the first Carnegie Mellon volleyball team to make it to the Sweet 16 in the NCAA Volleyball Championship tournament.

Several team members were recognized as All-America Honorable Mention nominees for their effort and their amazing season by the American Volleyball Coaches Association. Two others gained even higher distinctions. Junior Maia So-Holloway was named Second Team All-America and junior Sarah Jurgens secured a spot on the third team. This week, The Tartan sat with team co-captain So-Holloway, who was also named a first-team all-University Athletic Association (UAA) honoree.

So-Holloway is a junior

business administration major with a global systems and management minor from Oakland, CA, who plays setter for the Carnegie Mellon volleyball team. Because she was recruited to play volleyball for the university, she cites the sport as her main reason for choosing to attend Carnegie Mellon, but she also chose to come to Pittsburgh because she knew she would be able to balance playing the sport she loves with high-quality academics.

So-Holloway acknowledges that being a part of the team takes up a significant amount of her time, but says her favorite part of being a part of the volleyball team is getting a break from school every day to play the sport she loves with her teammates, who have since become close friends. Though she doesn’t have a lot of down time, her favorite pastimes are spending time with friends, getting dinner, and, of course, playing volleyball. Off the court, she is also a part of the Kappa Alpha Theta sorority on campus.

As for volleyball, she says her proudest moment and favorite memory since joining the team is

this year’s NCAA Championship tournament, where the team made it to the round of 16 for the first time in university history. Nonetheless, she recognizes that being a part of the team can be challenging. This season, the team began slowly, losing four of its first seven matches. This string of bad results forced the team to reflect on its performances and commit to working harder. The team’s commitment led to more competitive play on the court, improving their record for this past season as well as earlier seasons’ results. Upon reflection, So-Holloway says that overall, this season served as a lesson for her and the team to not let recent bad results get in the way of the work and preparation for what lies ahead.

Now that the 2018 season is over, So-Holloway is looking forward to next season, her senior season. She eagerly anticipates being able to meet the new first-year team members and playing with her teammates, both returning and new. Now a co-captain of the team, she is also embracing the opportunity to act as a role model for her fellow team members.

Le’s futbol takes over as our league leader

NORA MATTSO
News Editor

As someone who takes a lot of stats classes, I crunched the numbers, and I have lost a total of a fifth of all of the games of the Tartan Fantasy League. Ordinarily, I would try and mitigate this humiliating statistic by pointing out that Sports Editor Marika Yang has lost somewhere on the order of half of all of the games, but unfortunately I cannot even do that this week because I was bested by Yang herself.

She showed me last week how to drop players and I got rid of my inactive players, so don’t anticipate me writing this column ever again. If nothing else, trying my hand at pretend-football has led me to be concerned for the health and wellbeing of real-life football players because at one point literally half of my team was taking a sick day. I suppose that’s rich, coming from someone who, as she is writing this, is extremely sore from an exercise class that was called, I kid you not, “Mild Cardio.”

Anywho, on to what actually happened this week. This week saw a major upset in the rankings. I dropped a STUNNING four places in the rankings, finishing in eighth place. Visual Editor Tracy Le is now first place, unseating publisher Caleb Miller, now in second place. Yang and Pillbox editor Michelle Madlansacay both rose three spots in the rankings, reaching fourth and fifth place, respectively. Photo Editor Lisa Qian also dropped one rung, ending up in seventh place. If I lose again next week, I promise to learn what a running back is so I can make these articles spicier and more informative for you guys.

GOAT but Ironically over Slugs, 97.10 to 97.36

Assistant Pillbox editor Izzy Sio’s GOAT but Ironically beat out Operations Manager Adam Tunnard’s Slugs. This does not

surprise me, as I have heard directly from the horse’s mouth that Tunnard does not even know who is on his autodrafted team, where Sio is a verifiable imaginary football enthusiast. Sio’s team had two high scores, earning 22.00 points from Los Angeles Rams running back Todd Gurley and 20.06 points from Patrick Mahomes, quarterback for the Kansas City Chiefs.

Sio’s third-ranked team has proved to be impressive, as Mahomes earns the title of best quarterback in the league for the third week straight. Sio lost to Tunnard in Week 3, but more than paid him back in kind with this decisive victory. Sio will go on to play Yang’s Gin and Bear it, while Tunnard will face off against me. He is not prepared, and he will be crushed, mentally and emotionally.

futbol over Last Manning Standing, 151.42 to 131.50

This game led to Le’s futbol unseating Miller’s Last Manning Standing from its long-held spot at the top of the league, which means that Miller’s team name now should read Second to Last Manning Standing. Le and Miller were the top scorers this week, so their faceoff was an exciting one. The fantasy football website’s game-summarizing algorithm tells me that this week, Miller scored the most points anyone has ever scored without winning thus far.

Both teams over-performed their projections, due in a large part to their high scorers. Le got 32.90 points from Nick Chubb, running back for the Cleveland Browns and 30.30 from David Johnson, running back for the Arizona Cardinals. I am impressed and I don’t even know what a running back does! futbol will take on Qian’s TARTAN FANTASY and Last Manning Standing will face off against Madlansacay’s mmichelle123.

See **FANTASY**, A9

pillbox

The Tartan's Art & Culture Magazine



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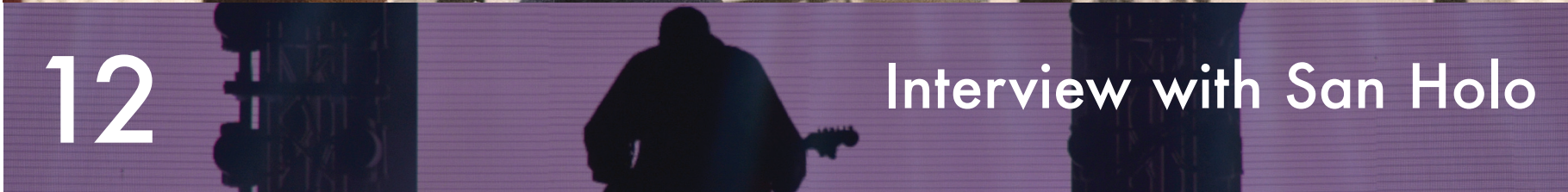
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Advice for Awkward People

Alexandra Yu | Pillbox Editor

Dear Alexandra,

I am going home for Thanksgiving and really want to be able to enjoy my time with friends and family back home, but I am really stressed about the last two weeks of classes before finals. I have several major assignments and tests when we return from break, and I don't know how to balance work with taking a break. Please help!

Too Hard-pressed, Always Need to Kill Stress

Dear THANKS,

You deserve a break after 3 months of non-stop grind, but classes unfortunately don't slow down as much as we'd like them to, even when our professors wish us a happy holiday. It's definitely hard to decide how to allocate your time, and I know this is the easier-said-than-done answer, but try to divide your days home into different segments.

Maybe Wednesday you want to allocate towards spending more time with friends and family, since you haven't been home in a while. But, if you know there will be a lull in the activities, block out a chunk of that time to strictly do work with minimal distractions. Or, if you know you'll spend all morning on Friday going Black Friday shopping, spend the rest of the day working on that essay due next week.

Even if you're traveling to a relative's on Thursday for Thanksgiving dinner, if it's a long trip, you can bring some flash cards or your textbook and familiarize yourself with some key terms for your upcoming tests (unless you get car sick, maybe don't do that).

If you're worried about not following through in the moment, make a plan beforehand. Whether it's alternating between work and social life every other day or allocating certain hours of the day to each type of task, make that plan and stick to it. Of course, it's not set in stone, but if you shift things around in one domain, try to have some self-control and retain the same proportion, whatever you deem it to be.

Hope this helps!
Alexandra

Brunch Buddies: Smoke Barbeque Taqueria

Technically a supper with my mother.

Sujay Utkarsh | Assistant Pillbox Editor

My mother came to Pittsburgh recently, which meant that I had an excuse to go to several new and exciting restaurants and break her bank account. One of these new and exciting restaurants I went to was Smoke Barbeque Taqueria in Lawrenceville, a Mexican restaurant that primarily specializes in large tacos and queso.

The location: The restaurant is located near Row House Cinema, but the entrance isn't particularly flashy or easy to see. This fact combined with my mother's awful sense of direction led to us getting lost for a minute. However, the location is fairly intuitive, and its proximity to Row House is a huge plus. The restaurant is also cash only, which was somewhat inconvenient for us. However, they have an ATM located in the back of the restaurant, so they clearly anticipate people not having cash.

The food: My mother and I ordered the house queso dip with chips. The queso had chicken, avocado, black beans, onions, and hot sauce in it. We each also ordered tacos, which were quite possibly the largest tacos I've ever eaten. I don't exactly remember what we ordered, but one taco had chorizo in it and the other was the house special of the day. This was clearly a more Americanized take on Mexican food, which would normally be a criticism. However, in this case, the food was incredibly rich, flavorful, and actually much better than I anticipated it being.

The chips and queso came first, and the presentation of the food was an absolute surprise. The chips were most likely house made and were not like traditional nacho chips, and the queso was one of the heaviest things I've had in a long

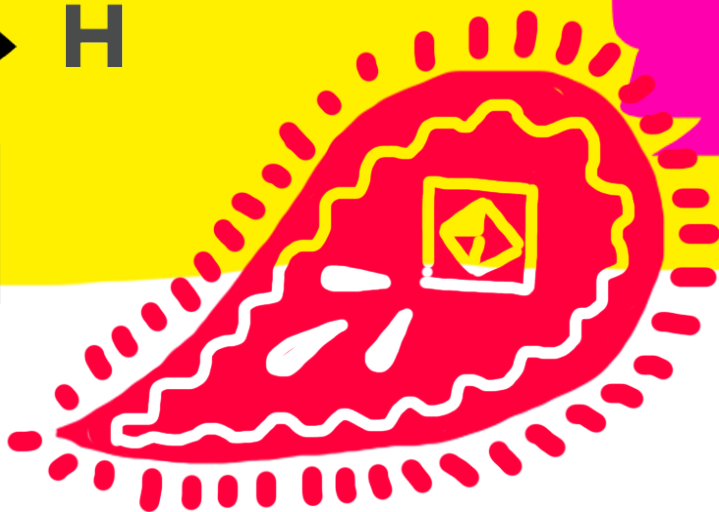
time. Despite all the food being very rich, it wasn't overbearing to the point where I couldn't eat anymore. Overall, the food was a delight and not at all what I was expecting.

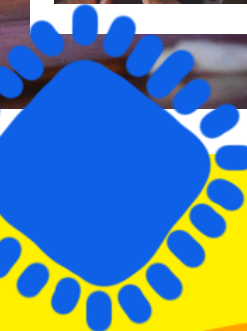
The vibe: Lawrenceville has a number of restaurants that look a lot more upscale and bourgeois, and Smoke Barbeque Taqueria falls into the same category. The interior decor was this nice small space that somehow managed to feel open. Everything was made of wood was a really nice touch. Everyone was having a great time, and the music really complemented the good vibes.

Lit or Nah: This place is definitely lit. I'll definitely be returning to this restaurant several more times to try every queso and every taco they possibly have.

THE
FESTIVAL
OF
THE
BURGH

IN
THE
BURGH





written by Izzy Sio | Assistant Pillbox Editor

art by Anna Boyle | Art Editor

remembering



I'm pretty sure I knew who Stan Lee was before I knew about Marvel. Maybe that's why the death of the founder of Marvel Comics still doesn't feel real to me.

Stan Lee passed away at the age of 95 on Nov. 12. Lee always seemed like someone who would outlive even me. He always seemed so energetic, full of life, and eager to create. Amidst the scandals and tragedies of his life, Stan Lee seemed like a man who would always pull through, never give up, and remain standing.

If his body can't, his spirit will certainly outlive us all. Throughout Marvel, Lee was everywhere, all-encompassing. He laid the foundations for all the heroes you see in the Marvel Cinematic Universe, all of Fox's *X-Men* movies, and Sony's *Spider-Man* movies. It's even hard to pin down what he truly is responsible for, because the answer is simply everything. Marvel Entertainment has a few constants, and he was undoubtedly one of them.

I'm still trying to remember what exactly led me to the entertainment giant in the first place, but I think it was *Wolverine & The X-Men*, an old and forgotten cartoon series on Nickelodeon about, well, Wolverine and the X-Men. It wasn't as popular and iconic as the older 90s animated series (heck even I almost forgot about this series when I was writing this article), but I loved the different kinds of mutants, the moral compass of Charles Xavier, Logan's aloofness. Even years later, at one mention of the TV series, I can remember Kitty Pryde's youthful energy, Iceman's humor and sass, and the awe-inspiring power of Jean Grey – the most powerful mutant of her time. The world of the X-Men seemed so expansive with endless possibilities, and I just wanted to learn more about it.



That eagerness to learn more about the X-Men led me to *X-Men: First Class*, a movie about a younger Charles Xavier and Magneto that ultimately led me to a deeper plunge into Marvel and the entertainment industry. I was blown away by the acting talent, and I was excited by this deep world I had seen on TV being explored (and done justice) right before me.

While I was seeking to learn more about the X-Men, I was drawn to how the story of the X-Men served as such a huge mirror on the social issues of its creation: racism and civil rights, anti-Semitism, diversity, LGBTQ+ themes, genocide, and many more. It's amazing how one superhero team was so diverse at the time of its creation, and how not just the X-Men comics, but the entirety of Marvel, still tries to explore these themes today.

I'm incredibly thankful that throughout Marvel's history, Stan Lee has inspired others to thread this diversity and rich storytelling throughout the company. Whenever I stand back to look at Marvel's legacy, I'm in awe of how inclusive and revolutionary it has become, as well as Stan Lee's commitment to pushing new ground, something he's set a precedent for. And whenever I get into a heated debate with my friends about Marvel, I know where that shared passion we have stems from.

Stan Lee once said that as a child, he always wanted to write the "Great American Novel," and I think through Marvel he's achieved something greater than that. Marvel has become a company that doesn't just represent the United States at one point in time. It's become a company that we've grown up with and that we've seen rise to astounding heights. It reaches out and carries an understanding of all types of U.S. citizens, and has taught us to educate, accept, fight, and never give up. Throughout Marvel's countless movies, video games, TV series, and comic book series, Stan Lee truly taught us what true heroes are and what they represent.

I never expected that Marvel would be such a huge part of my life now. It's helped me to find my closest friends, and has helped me fuel my passions and find the career path I want to pursue in the future. But behind the franchise, seeing Stan Lee never falter and be such a strong, representative force for his creations is even more inspiring. I only hope that wherever I go in life and wherever I work, that I can display half of the passion, love, and care that Stan Lee showed for Marvel – the company and life force that's changed the lives of so many people.

Excelsior Stan Lee, and thank you for everything.

a Korean's take on the increasing popularity of Korean makeup brands

Being the beauty product fiend that I am, I wanted to check out the latest products trending on Sephora's website in light of their store-wide fall sale. When I clicked on the "Beauty's Rising Stars" tab, I was shocked to see that so many of the brands were Korean. For this week, Kaja's Cheeky Blush Stamps made it to Sephora's Beauty's Rising Stars. This is not the first time Sephora featured a Korean brand as a Rising Star; skin-care brand Saturday Skin was featured in Volume 14 in Jan. 2018.

Before Sephora gave these specific products shoutouts, I was well aware that K-Beauty was increasing in popularity in recent years. I saw Western beauty gurus on YouTube testing out these exotic products packaged in cutesy containers. Cushion foundations, sheet masks, and BB creams were entering drugstores' shelves — all products originating from Korea — and covered the shelves of practically every beauty section in every drugstore I visited. Seeing brands that are more popular in the U.S., from affordable brands like Wet n' Wild to luxury brands like Lancome, try to adopt trends set by Korean brands filled me with a sense of great joy.

Obviously, I'm not the mastermind who invented any of those products. However, being able to share them with my loved ones lets me feel like I can share a part of my world with others. Imagine having a friend who lives far away from you visit you. You take them to your favorite restaurant and share the experience of enjoying your favorite dishes. Now, take this experience and amplify it. That's essentially what it feels like to be able to go shopping with my friends and be able to recommend products that I grew up watching my mother and other empowering women in my life use.

My mother recently saw her sister for the first time in over two years. One of the things they got to bond over was an emerging Korean skin-care brand, Belif. "How'd you know about this brand; it's a Korean brand!" my aunt said. I had actually recommended my mother this skin-care brand after receiving some free samples.

Unfortunately, I have yet to test out my mother's favorites from back when she was in college, as many of the brands still test on animals due to China's requirement for products to be tested on animals before hitting brick and mortar shelves. However, if the animal testing policy were to be lifted, something reminiscent of my mother's college days could linger even decades after she graduated on the opposite side of the globe. Luckily, an end to China's animal testing policy may be on the

horizon. Once that domino is toppled, brands will no longer have incentives to continue animal testing, as other methods, such as in-vitro testing are more ethical, accurate, and cost-efficient.

Of course, there is room for improvement in Korean beauty. Because of their origins, the shade range for Korean complexion products is extremely lacking for Western standards. Some brands with a larger international reach such as Laneige has expanded their shade selection beyond the traditional four or five most other brands offer, but potential consumers with darker or lighter complexions often don't have many options, if any at all. It makes sense that Korean products mainly cater to light beige skin colors, as Korea's demographics are much more homogeneous than America's. However, as K-beauty increases its global spread, I think it's safe to say that brands will expand and allow not just those with light beige skin to enjoy their products, but also people with all other skin colors.

There is room for optimism. Julep, a brand owned by Korean entrepreneur Jane Park, offers thirty shades for concealers. Park remembered what it was like to immigrate from South Korea to Canada at the age of four, and she remembered what it was like to feel like she had no voice. Now, through her nail care, skin care, and cosmetics line, she is aspiring to inspire women everywhere to build confidence and take risks. Julep is one of the fastest-growing beauty brands and sets the example of how to make Korean beauty more inclusive to a diverse population. Similarly, Kaja's models display the versatility of their product range by showing how their products work on the fairest and darkest skin tones.

It's fantastic that I can finally get my K-beauty fix without paying ridiculous international fees or asking my friends and family in Korea to send over some goods. However, nothing can truly replace the unique experience of going into a store with some friends or my mother, and testing out different products on the back of my hand (and consequently turning my hand into a shimmery painter's palette). It sounds silly that I find so much value in beauty products; at the end of the day, it's just powders and creams. However, for me, I also see them as experiences I get to share with others. As I count down the days until I get to see my mother, I cannot wait to chat over sheet masks with her.



written by Natalie Schmidt | Staffwriter
photos courtesy of Josh Brown

Compōs-it Opera Festival

If you were around the Cohon Center Studio Theater on Friday night or the Alumni Concert Hall on Saturday evening, you may have heard the graceful lilts of a harp and sharp powerhouse vocals drifting down the hall – that was Compōs-it's New Works Opera Festival. Featuring seven operas written, composed, and performed by students, Compōs-it's second festival was even more successful and vivid than the first.

According to their website, Compōs-it is "a proto-opera company focused on rapid-prototyping new works of musical drama and facilitating student collaborations." Founded originally by Artistic Director Russell Henry Holbert and Executive Director Josh Brown in 2017, the second Compōs-it festival began with a lineup over triple in size – from two operas to seven. It was a weekend full of excitement, heartfelt emotion, and student ingenuity, featuring stories of a girl falling in

love with a star to a petrified Russian government worker faced with a drastic decision.

"This entire festival has been an amazing opportunity to get to know people and their working styles, and see people who might not have generally considered themselves writers or composers by study or degree to just kind of 'do a thing.' And that's really the ethic of this festival, the 'Do the thing!'" said founder Josh Brown.





Deed of Trust – by Russell Henry Holbert
 Music Director: Andrew Hook
 Stage Director: Sydney Roslin
 Starring: Ben Cherington, Colleen Michelle McGovern, Megan Mateosky & Sophie Carpenter



Regenesiis – by Ziyu Wang & Daniel Burns
 Music Director: Evan Neely
 Stage Director: Rachel Pospíšil
 Starring: Kristina Marie & Jacqueline Tardanico

An Empirical Setting of Memory – by Clayton Brown & Brennan Brown
 Music Director: Jordan Speranzo
 Stage Director: Maxine Ewing
 Starring: Alyssa Vieau & Jun Yang

On Our Street – by Zach Ritter & Sydney Roslin
 Music Director: Alexander Chen
 Stage Director: Nora Gair
 Starring: Alex Aks, Erica D’Ancona, Ian Young & Kaya Giroux

PETROV – by Ivan Plazacic & Alex Taylor
 Music Director: Caleb Glickman
 Stage Director: Padra Crisafulli
 Starring: Joseph Sandler

Starsong – by Elliot Yokum & Sarah Florence Barker
 Music Director: Emma McAlister
 Stage Director: Kai Huizenga
 Starring: Anna Sophia Boyd, Emily Gallagher & Taylor Troyer

Virgula Divina – by Karen Brown & Jessica Lanay Smith
 Music Director: Edward Leonard
 Stage Director: Padra Crisafulli
 Starring: Daniel Brennan, Hannah Wolfe & Jacqueline Tardanico



Can You Ever Forgive Me?

written by **Matthew Benusa** | Assistant Sports Editor

This article contains spoilers for *Can You Ever Forgive Me?*

In a poignant narrative for our current time, where we question the veracity of established institutions, the Marianne Heller-directed biopic about 90's writer Lee Israel (Melissa McCarthy) titled *Can You Ever Forgive Me?* tells the story of a monetarily-challenged writer whose hustle involves embodying characters of famous people in the past. Israel forges letters that pass as originals from whichever person she decides to embody, and then she sells them to collectors for hundreds of dollars at a time.

Both people she encounters in early exploits, Jack Hock (Richard Grant) and bookish collector Anna (Dolly Wells), end up following the descent of McCarthy's character into increasingly more involved crimes. Anna falls off the ride after an awkward dinner encounter, suggestive of Israel's infatuation with Anna, but Hock, the other apple of Israel's eye, sticks with it until the very end. Previously the introverted cat-lady, Israel finds herself in increasingly intimate relationships with the people she is drawing into harm. After cutting off Anna, Israel places the dependency of her happiness onto Hock, and she forms a bond with a close friend that's suggested she has never had before. However, when Israel's prize cat dies while she is away on the climactic heist of the film, she blames Hock, throwing him out of her life. Ultimately, Israel is an abrasive and emotionally abusive character towards Hock, but the film does not color it that way. Israel is in conversation with every brooding, male, Byronic hero that has captured the narrative imagination for years. McCarthy herself has said that Israel is the character every woman wants to play. Every nuance of character drawn out by the film seems like a rational character digression, until the point where it is too much. But unlike the male protagonist of days past, Israel does not quite get everything she wants.

All of the film is not just one performance though, and every piece comes together to create a nostalgic sense of New York City, of flamboyant characters, and of feeling real import. There are shots that linger in just the right places to leave you bathing in the colors, the beauty, and the experience of it all. It's a narrative film that touches all the right notes of character development and plot progression, but also one interspersed with moments of poetry, like the sickly yellow and black gay bar on the Upper West Side, that left me wanting more.

In the end, this slow burn drama is filled with expansive characters and moments of non-narrative cinema that help transform a potentially standard biopic into a film that draws the imagination away from the face value question of trust in the post-truth era. The questions left to us by the film are the defining questions of our humanity. What does it mean to love another person? Are we able to forgive those people for their misdeeds? Should we?

written by
Michelle Madlansacay | Pillbox Editor

Light

Up

Night

It's usually around this time of the year that my workload piles up, and I have so many things going on that it's difficult to start getting into the holiday spirit. Although I do appreciate Au Bon Pain's seasonal change in their disposable container designs, it's really hard to find any other form of celebration for the holiday season on campus. That's why I always get so excited for Pittsburgh's annual Light Up Night.

It's become a tradition for me and my friends to go to Light Up Night and see all the wonderful decorations and festivities put on by the city. From the big concerts to the fireworks, my friends and I would always do our best to hit up the night's main events. However, this year we decided to do things a little differently. We started the night with dinner at Talia Cucina & Rosticceria, which we had to book reservations for way in advance because most of the restaurants downtown get fully booked during Light Up Night. They served some delicious Italian food, and the atmosphere was so comfortable and festive, with families, dates, and adult friend groups all chatting over candle-lit tables. It was a wonderful place to have dinner during such an exciting and holiday-spirited event.

After dinner, my friends and I went straight to Market Square, which is transformed every year into a little Christmas village. We went here instead of going to the annual big concert that's hosted during Light Up Night. This year, A Great Big World was the main performer, and although it would have been cool to see them, my friends and I were craving some sweets and thought the market would have some. In previous years, I never actually took the time to go through the market because usually it's always so crowded with people. It's not like this year was any different, but it was really nice to see all the holiday-themed shops, the live performances by some local artists, and Dunkin' Donuts' convenient hot chocolate and munchkin outdoor sale for the hungry and freezing event-goers.

Exploring the Christmas market for the first time was definitely a fun experience for me, especially since it reminded me of the outdoor holiday markets that are organized around where I'm from. From the market, our original plan was to go ice skating and then watch the fireworks. Unfortunately, the lines were extremely long for ice skating, where I think we waited almost two hours; so we never actually made it to see the fireworks (but I don't think they change drastically from year to year). At least my friends and I got our annual experience of skating around the giant Christmas tree in the center of the rink. Having this quality time to spend with some of my closest friends and to start off my holiday festivities was certainly much needed. Best of all, this event only marks the beginning of the holiday season, and there's still so much more to look forward to!

RECENTLY, SAN HOLO CAME TO PITTSBURGH AS PART OF HIS TOUR, AND THE TARTAN GOT A CHANCE TO INTERVIEW HIM. THIS IS A SHORTENED AND EDITED TRANSCRIPT OF THE ORIGINAL INTERVIEW.

The Tartan: So my first question I want to ask where did you get the name San Holo?

San Holo: So my real name is Sander Van Dijck. It's a super dutch name. San Holo just started out as a joke. People would call me San for a long time, and one time I was with a group of friends and they were like, "San, you know your name isn't cool enough to be an artist name, you know. Maybe you should do something like San Holo," and everyone started laughing because of the Star Wars thing. But then I kind of started using that, and now I'm here, you know. I never expected to blow up this way.

The Tartan: Yeah, I was wondering about your name. There had to be a Star Wars joke in there somewhere.

SH: The thing is I'm not a huge Star Wars fan at all. But it's just because my name is San, or Sander.

The Tartan: Alright, we got the obligatory name question out of the way. I recently got around to listening to your album and I have very limited experience with EDM music. You can probably tell by my Metallica shirt. But your music sounds a lot more airy and ambient than what I've heard, and you use guitar in there quite often. So my question is who are your primary influences and what is your writing process?

SH: So I'm from your scene. I used to be

in rock bands and indie bands, and then I studied guitar, and I'm a graduated guitarist. No one ever asked me for my credentials, or my diploma, ever, but I studied guitar for a long time. At some point I didn't feel like I could do anything new on the guitar anymore. Everyone sounded the same, you know. All bands sounded the same, and I was like "I'm gonna make some beats." And with the beats stuff, I was really able to go into my own direction. I even dropped the guitar for years. But at a certain point, I started feeling the same way about electronic music. You know, I can't do anything new anymore. I want to be able to innovate s**t. And that's when the guitar came back in my production, and I feel like I'm in my own lane again. I love bands like Explosions in the Sky, I don't know if you know them. I love Metallica too, I mean they're great. I really listen to a lot of music, you know, classical music, rock music, ambient music. Yeah.

The Tartan: The other thing I was interested in is the persona of San Holo. Where do you think you'd take this persona next? What do you plan on doing with this style of music in the future?

SH: Yeah, I really want to keep developing my own style. For me, the most important thing is to be in my own lane always. I always want to feel like I'm doing something of my own. Like, I don't like being compared to other DJs. I don't like it when someone says, "Yeah yeah you're great. You sound a little bit like that." I never like that. I always want to be known for my sound. If someone puts on my music, I want them to instantly know that it's a San Holo song because of the guitar, or the samples or sounds I use. So I want to keep doing that as long as I can, you know. Staying in my lane and doing my own thing. And yeah, that's it.

The Tartan: Yeah, I also write music on the side. I have a prog band and one of the challenges we have is to not sound like Dream Theater you know? So your answer was really relatable.

SH: My girlfriend has a kind of a prog band,



san holo

like a math band. Have you ever heard of Covet?

The Tartan: *Oh yeah, I've heard of Covet. I've been meaning to get into their stuff lately.*

SH: Yeah they've been touring with Polyphia. You probably know Polyphia as well.

The Tartan: *Yeah, I know Polyphia.*

SH: Yeah I have fairly limited experience in the prog scene because I don't really listen to that specifically. But yeah, like you said. At first you think, "Oh it's cool, we're great because we sound a little bit like that band." But then you realize that it's not good to sound like someone else. Everyone starts out with an instrument copying other people. I started out trying to be Jimi Hendrix, you know. John Mayer, Stevie Ray Vaughn, all those guitar players that I love. Then at some point you realize that this has all been done before. I'm just looking for that new sound always.

The Tartan: *I know one of the questions artists get asked a lot is, what to made you want to start writing music? What was that flashpoint? I'm assuming for you that it's that drive to find your own sound and your own unique voice, right?*

SH: Yeah. My own unique thing, I think. I started guitar because I felt like it was a cool thing to do, and you know, sometimes there's not really a reason for it. It's just a feeling. It never was a choice for me, like I wanted to be a musician. Ever since I started playing guitar, I knew that music was going to be a big thing in my life.

The Tartan: *So this next question is something I really want to ask to up and coming artists in the industry, and it's a two part question. So the first part of the question is, what's something you've learned about the industry that hasn't necessarily made you jaded, but has changed your viewpoint on the glamor of the industry?*

SH: Yeah the music industry is not about

music. It's about industry. I'm in it for the music. The music industry is more about the brand and everything around it. You know, I've noticed a lot of beautiful things. I think it's beautiful how people can relate to my music sometimes, and like, feel something. It's mind-blowing. I have fans that help me through hard times in my life. There's music that speaks to you and motivates you to do stuff, and to have people look at me the same way I look at my heroes, you know that's really a crazy feeling. I'm literally making music that speaks to so many people in the crowd tonight, and it's surreal and it's overwhelming. Also, maybe kind of a sad thing I realized, a thing that made me a little depressed when I found out was that music is not, per se, all about music. I think people who are fans of a band are mostly because of the music but there's also a lot of people that are fans of them because of the aesthetic, or the way they present themselves you know. Like if it's a beautiful guy or a beautiful girl on stage, or they have a really cool brand or a really cool helmet on.

There's a lot of people that can't distinguish sounds from each other. Like, you're a musician. You would probably be able to say, "Oh I know the difference between Dream Theater and Polyphia." But a lot of people can't. They just hear the sound coming out, and it's good for me to realize that. I think I have a fairly distinct sound, and if you put me beside other EDM producers, I could definitely tell that this is different. A lot of people can't. I don't know how to explain this, but if people can't distinguish artists by listening to them, then it becomes a visual thing. It's definitely not only the music, and I'm also guilty of it. Like when I listened to Limp Bizkit when I was a kid. I still think they're an awesome band. It's not a very fair comparison, but there is a reason that Limp Bizkit was bigger and more hype back then than Rage Against the Machine was. Because I feel like, you know, Limp Bizkit was just the guy with the hat on, and there was Fred Durst, you know, the guitar player with the f*****g makeup on and that really works as well. The music

has to be good you know, but there is more to music than just music. But for me as a creator, it's just music. That was a really long and complicated answer.

The Tartan: *No, it's a really tough question to answer. Because part two of the question is what's something you wish you knew about the industry before you entered it? Because from what it sounds like, you wish you understood the fact that the industry isn't always about the music.*

SH: Yeah, yeah. That's a very good question. Almost too good. Let me just answer it like this. There are so many things I've learned throughout the years by touring and listening to music, and you know, just being in the music industry that I can't even remember what I didn't know when I started because I've learned so much. It's been a crazy trip. But when we think of, you know, Jimi Hendrix, the first thing you think about when you hear the name Jimi Hendrix, you think about how he looks and what guitar he plays. But we should actually be thinking about the music right? If you think about a band, you kind of visualize the band right. Like how they look or the logo or something, but not the songs. I personally don't, maybe you do. Sorry, I'm going in the completely wrong direction.

The Tartan: *No, I understand what you're going for.*

SH: Let me answer that question by I learned a lot. I learned a lot throughout the years about my life, about love, human beings in general. It's just too much to talk about.

The Tartan: *Alright, this was great. Thank you so much for your time.*

SH: No problem, man. Don't write too badly about me.

CHECK OUT SAN HOLO'S ALBUM, ALBUM1, ON SPOTIFY, ITUNES, AND SOUNDCLOUD.

Josh Groban Concert

article and photos by Natalie Schmidt | Staffwriter

Last Friday, on Nov. 16, CMU alum and Broadway star Josh Groban performed at PPG Paints Arena as part of his *Bridges* album tour.

Opening the show was special guest Idina Menzel, known for her roles in *Wicked*, *Rent*, and most recently, *Frozen*. Performing a variety of Broadway hits and songs from her album, Menzel's trademark powerhouse vocals and vibrant presence lit the audience up and energized the stadium. She was sassy and unapologetically her, and watching her onstage really showcased her abilities as a performer. Most notably, though, was a performance she dedicated to "choosing love over bigotry and hate." Wearing a bejeweled "Stronger than Hate" Pittsburgh shirt, Menzel brought the stadium together to celebrate strength and love through difficult, painful times.

Josh Groban was equally vibrant, his soothing lullaby-like voice echoing across the ice-rink floor of PPG Paints. He said about his time at Carnegie Mellon University: "We are so thrilled to be back here, this is a city that holds a lot of incredible memories for me, I would be remiss if I did not mention that this is a city that I went to college in, for a very short amount of time. I went to Carnegie Mellon, which is an incredible university, we're still very deeply connected. They are really one of the top schools in the country, period, but they are also such an amazing school for theater. I was a musical theater major, which meant we worked like, ALL DAY. We

did the acting classes, the singing classes, the ballet classes – I had to do ballet at Carnegie Mellon University. Pittsburgh, this is just how intensive the Carnegie Mellon program is. They saw my audition, they knew I was a double threat and not a triple threat! And yet! 'These are spandex, you will wear them Groban!' It was good, it built character. Carnegie Mellon humbled me. [It was a] very very hard program, but an amazing program."

"And I hit a fork in the road, and I got an opportunity," he continued. "I was there for performance art, so I got this opportunity to do an incredible record deal and work on an album, and it was a huge risk to leave Carnegie Mellon, because that place is a dream facility. Any student that goes to that school is blessed and lucky to go through that program. And by the way, I was in a class with incredible people like Josh Gad, Leslie Odom Jr., Katy Mixon, Rory O'Malley – anybody who's been in *Hamilton* was in my class. So we were a talented class, but it was a fork in the road, and it was an insane decision to make, but to come back after all these years and to feel the love and support after all these years has given so much to me. It means so much to come back again and again. It's very full circle and very cool and fun to be here."





He ended the night with a heartfelt two-song encore dedicated to the victims and families affected by the Tree of Life shooting: "I am grieving along with you, I know, that this has been such a devastating time of healing and grieving for a city that is known for its compassion and its love and its togetherness. It's with a heavy heart that we come here, to celebrate life with all of you, to come together in times of grief to celebrate life. I want to dedicate these next two encores to the victims at the Tree of Life shooting and their families. They are forever in our hearts, and we think of them every day." There were tears in the audience's eyes as Groban sang with genuine heartfelt emotion, leaving a sense of community and solidarity in the air.



To see and hear more, check out Groban's album *Bridges* and Menzel's most recent work *idina:live*. Both Groban and Menzel do philanthropic work to help ensure that children across America have access to arts education. Having both been encouraged by their arts teachers to do what they do today, the musicians have established the Find Your Light and A Broader Way foundations.



horoscopes: the signs as Marvel heroes

sudoku

Aries march 21 – april 19	<i>Deadpool</i>
Taurus april 20 – may 20	<i>Thor</i>
Gemini may 21 – june 20	<i>Hawkeye</i>
Cancer june 21 – july 22	<i>Iron Man</i>
Leo july 23 – aug. 22	<i>Black Panther</i>
Virgo aug. 23 – sept. 22	<i>Groot</i>
Libra sept. 23 – oct. 22	<i>Gamora</i>
Scorpio oct. 23 – nov. 21	<i>Spider Man</i>
Sagittarius nov. 22 – dec. 21	<i>Black Widow</i>
Capricorn dec. 22 – jan. 19	<i>Captain America</i>
Aquarius jan. 20 – feb. 18	<i>Shuri</i>
Pisces feb. 19 – march 20	<i>Hulk</i>

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4		7		9		6	8	
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		2	9		7		4	
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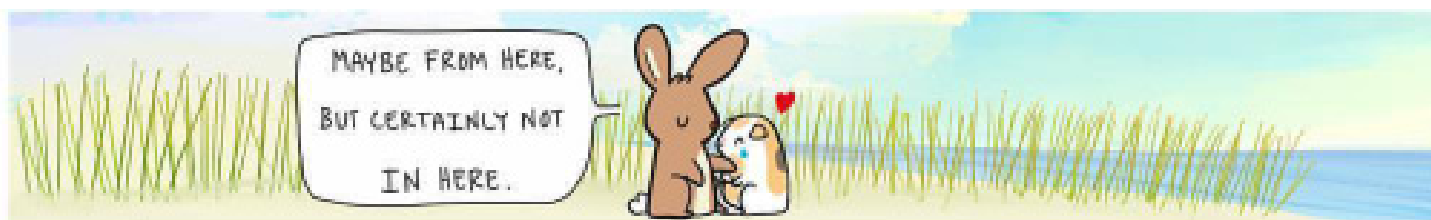
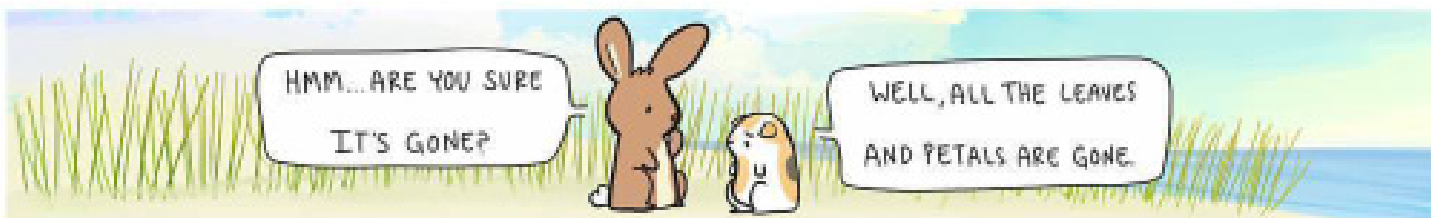
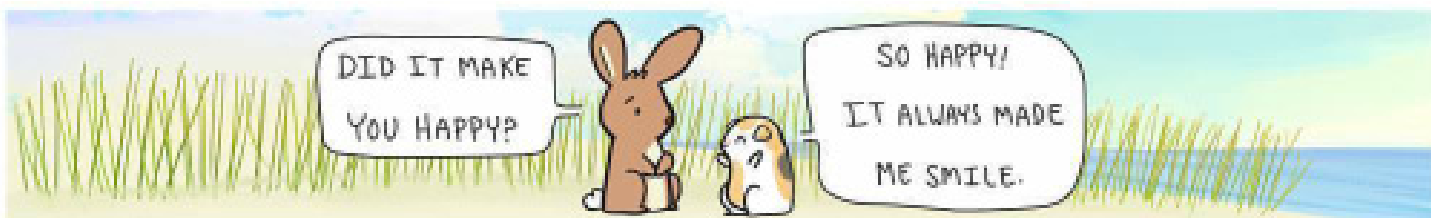
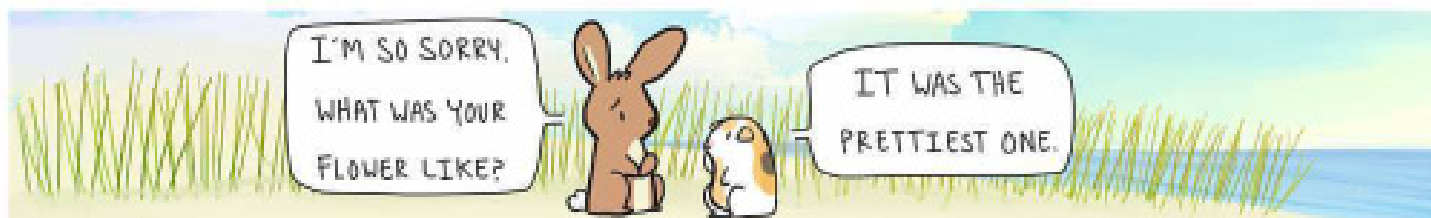
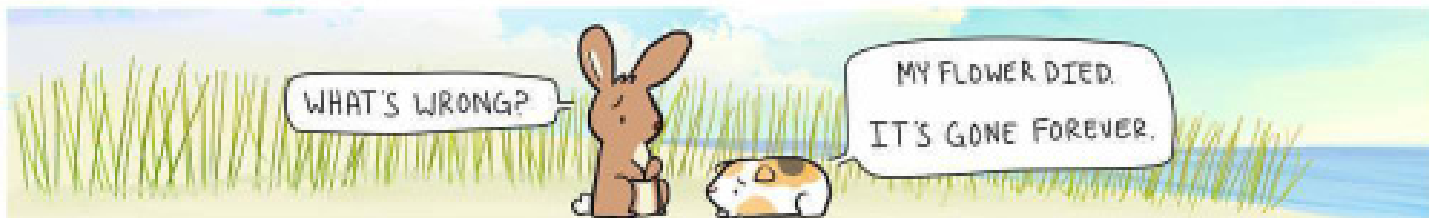
sudoku courtesy of www.krazydad.com

last week’s solution
11-12-18

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

With You

by Guy Kopsumbut



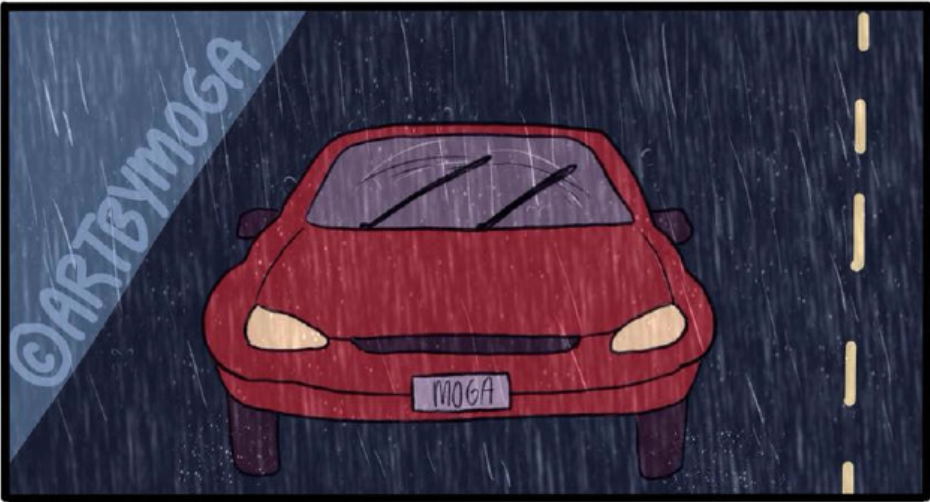
4amshower.tumblr.com

Kitty Baby
by Sarah Andersen



sarahcandersen.com

Wiper Dilemma
by Meg Quinn



artbymoga.tumblr.com

friday

11.23.18

Holiday Magic: Let it Glow!

Phipps Conservatory and Botanical Gardens

9:30 a.m. - 11 p.m.

Phipps' annual Winter Flower Show returns this Friday for another spectacular season. With flowers, lights, music boxes, nutcrackers, and more in celebration of the holidays, you won't want to miss this festive display!

Open Nov. 23 until Jan. 6.

tuesday

11.27.18

Detroit '67

Purnell Center for the Arts

8 - 10:30 p.m., additional 2 - 4:30 p.m. show on Saturday

The School of Drama will transport you back in time to 1967 during the heat of the Detroit race riots with Dominique Morisseau's *Detroit '67*, and it is an emotional show you won't want to miss!

Performances Nov. 27 through Dec. 1

friday

11.30.18

The Joy of Cookies: Cookie Tour 2018

Lawrenceville

10 a.m.

Join the Lawrenceville community along Butler Street and Penn Avenue for free cookies in over 40 locations!

Open Nov. 30 until Dec. 2

wednesday

11.28.18

Films of Kubrick

Row House Cinema

1:30 p.m.

Row House Cinema celebrates the films of Stanley Kubrick all week with showings of *2001: A Space Odyssey*, *Paths of Glory*, and *The Shining*.

Playing Nov. 23 through Nov. 29.

A/B Machines

Purnell Center for the Arts

8 - 10 p.m., additional 2 - 4 p.m. show on Saturday

Inspired by the works of Andy Warhol, three performers will defy expectations and explore identity, seeking to answer the question, "What is at stake when we differentiate 'me' from 'you,' and how does our popular culture participate in these power dynamics?"

Performances Nov. 28 through Dec. 1

Miyazaki Week

Row House Cinema

3:45 pm

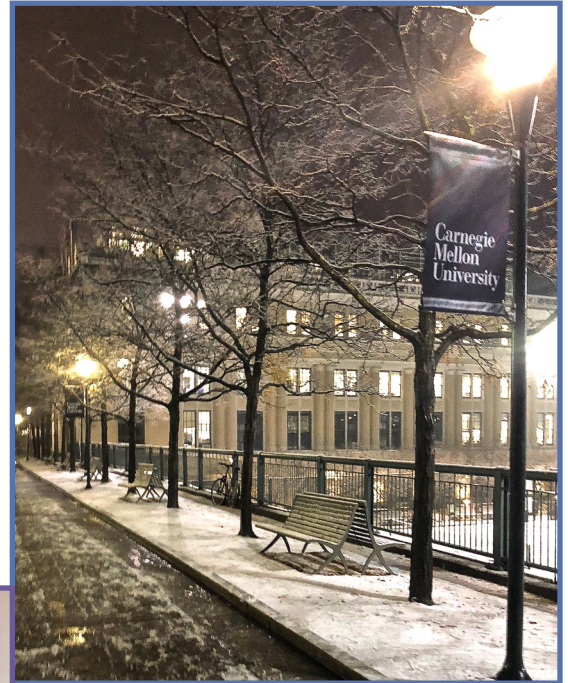
Row House Cinema brings Miyazaki Week back once again with screenings of beloved Hayao Miyazaki movies such as *Howl's Moving Castle*, *Kiki's Delivery Service*, *My Neighbor Totoro*, and *Nausicaä of the Valley of the Wind*. Attend screenings before 6pm for the movies dubbed in English, or go after for the films in the original Japanese with English subtitles.

Playing Nov. 30 through Dec. 6



first snow

Thursday, Nov. 15 was the first snow of the semester at Carnegie Mellon University! It might not have been a foot deep but that didn't stop students from starting snowball fights – or rather slush-ball fights – building snowmen, and creating snow angels on the football field.



description and photos by
Aishwarya Vijai | Staffwriter

