

# Eugenia Cheng discusses her passion for math and its presence in various things...



...like cake

**EVANGELINE LIU**  
*Staffwriter*

On Feb. 23, Eugenia Cheng, an English mathematician and pianist, delivered a lecture at Carnegie Mellon titled “How to Bake Pi: Mathematics Made Tasty.”

Cheng has held several academic titles in her career, and is currently a Scientist in Residence at the School of the Art Institute of Chicago, and is also an Honorary Fellow of the University of Sheffield and Honorary Visiting Fellow of City University, London. Her primary research topic is category theory, a way to generalize different mathematical ideas into different categories. She has written two books, *How to Bake Pi* (which the lecture was based upon) and a more recent one called *Beyond Infinity*. She has also created a YouTube channel based on the mathematical topics she wants to introduce to a wider audience.

Cheng was introduced as someone who is known as “a rockstar in mathematics,” not just because of the research work she has done but also because of her passion for introducing mathematics to a wider audience. This was her primary reason for writing her two books and the inspiration behind her YouTube channel

— she has made it her mission in life to, as she put it: “reduce math-phobia around the world, and convince people who already love math to share that love to more people.” She aims to do this by using everyday examples the general public can relate to and revealing the math hiding behind them.

She credits her mother for her love of mathematics who she said introduced her to the logic and beauty of mathematics. While she was bored by high school math classes, she found in college that there was “something beautiful [in math] waiting for her,” just as her mother said.

She gave various examples of where math can be found where one might least expect it. This included having an audience member juggle three balls while walking across the front of the room, which she said formed various sinusoidal waves if one took a time-lapse picture of the balls’ movements. She said similar ideas can be applied in the shape of hair braids, brain cell tangling (which in a mutated form may signal Alzheimer’s disease), and the shapes of viruses. Even factors of an arbitrary number — 30, in her example — can be written in a tree-diagram-like fashion, which then turned out to be cube-shaped when she connected

multiples and factors together.

One might, at first glance, think that math and music have little to do with each other, but Cheng showed how it was possible to mathematically abstract out a representation of music as various entangled waves. Cheng played a Bach piece for the audience while discussing this example of music.

Cheng related that during her career, she had seen many art students — to whom she taught math classes — go from thinking that they never need to do math again, to finding how math is actually present in so many of the different forms of artwork they were studying.

In her lecture, she put an emphasis on edible examples, because, as she said in the lecture, “whenever [she] mention[s] food students perk up, not that they were all asleep before.” She even told a personal anecdote about how she once used Oreo cookies to explain conjugation theory. Her audience at that time surely remembered this association.

She spent a significant part of her lecture using the Battenberg cake as a metaphor for mathematical patterns. In Battenberg cake, there is a checker-like pattern of two different colors in four squares

and the two colors are not supposed to touch. Thus, the lower right and upper left corner are the same color, and the upper right and lower left are another color. She showed in her slideshow that if you make a table of multiplying one and negative one in different combinations, or adding even and odd numbers, or even multiplying real and imaginary numbers — these are mathematical examples that show a Battenberg cake-like pattern in their tables. There are even larger examples that make an expanded Battenberg cake pattern, which she called “iterated Battenberg cakes.”

Another edible example Cheng gave was custard, which she used as a metaphor for tree diagrams that can be both used to represent recipes and mathematical equations. While simple mathematical equations are often associative, recipes are not, as mixing ingredients in different orders can lead to very different results. Cheng said that this is reflective of what many mathematicians study, which is how dramatically these equivalencies differ in non-associative situations.

Her conclusion from all of these seemingly ordinary, everyday examples? “Abstraction is beautiful,” she said.

# Lauren Groff offers her insight on writing

**MARIKA YANG**  
*Assistant Sports Editor*

Writer Lauren Groff spoke at Carnegie Music Hall as part of Pittsburgh Arts & Lectures’ Ten Evenings, sponsored by the University of Pittsburgh Press, on Feb. 20. Groff is *The New York Times* bestselling author of *Fates and Furies*, which Barack Obama declared was his favorite book of 2015. She is also the writer of *The Monsters of Templeton*, *Arcadia*, and the acclaimed short story collection *Delicate Edible Birds*.

Writers have to be readers, Groff said to begin her lecture. In her writing process for her novel *Fates and Furies*, she found herself returning again and again to works of art that she loves, beginning with Shakespeare. Groff delved deeper to learn more about the man himself, finding little but ambiguity about his religious beliefs, his possible affairs, and his wife. Shakespeare lifted plots almost entirely from others, and in Groff’s words, he “took and took and took.” He was a “genius of synthesis.” Groff quoted the great American writer Cormac McCarthy: “The ugly fact is books are made out of books.” She agreed, stating that *Fates and Furies* is also made out of many other books.

If *Fates and Furies* was to be summed up in one word, Groff states it would be marriage. For Groff, this idea came from her confusing and contradictory views on marriage. She grew up in the feminist atmosphere of the 1990s, taking courses that discussed the sexism in the institution of marriage. However, when her now-husband proposed to her, she said yes, because though she had made it perfectly clear that “marriage was repugnant to her, [it was] deeply important to him.” Groff has been married for eleven years, with two children, and declared getting married was the best decision she ever made.

This hypocrisy — that she had benefited from an institution that she so deeply despised — influenced her writing. When Groff starts a new project, selecting the topic of the book is her most important decision. This is

because she has to live with it for several years and wants to wake up thinking about it every day.

Marriage was something she could look at endlessly and never grow tired of. This topic was combined with another idea that came to her, the idea that she could never really know someone, not even her husband, that we, as human beings, cannot ever “crawl into someone else’s mind.”

Groff saw marriage as a mature love worth analyzing. Marriage carries many of the ideas that are present in literature; power struggles, class struggles, and time. “Novels are a sculpture of words and time,” she said.

Part of her writing process is developing new passions. When writing *Fates and Furies*, the two passions began with no relation to her writing, but eventually developed and influenced important directions of her novel.

Groff’s first passion was, of course, Shakespeare. A few of Shakespeare’s characters influenced the creation of characters in *Fates and Furies*. Falstaff from *Henry IV, Part I, Part 2, The Merry Wives of Windsor*, and Hamlet were inspiration for Lotto, the husband in *Fates and Furies*. The wife, Mathilde, was inspired by Lady Macbeth.

Her second passion was Greek mythology. The title of the novel itself is a clear allusion to this. The Fates are three goddesses who spin the destinies of men, while the Furies are three goddesses who take vengeance from men who swear false oaths. But the most vital feature of Greek mythology that she stole, Groff said, was the idea of time. In literature, time is often confined to the years of a character’s life, in human time. In Greek mythology, there is a three-dimensional vision of time, the gods’ time. Groff incorporated this wider scope of time in her novel.

While Groff said there were many other influences for *Fates and Furies*, she decided to switch the focus of her lecture by using the remaining time to speak about something very urgent to her: the importance of art itself.

See **WRITING**, A3

# GCC panel imparts advice on publishing STEM research papers



Theodore Teichman/Visual Editor

A panel of speakers spoke to a group of students on how to successfully get their research published in journals.

**JAMES WHEATON**  
*Staffwriter*

This Thursday, Feb. 23, the Global Communication Center (GCC) hosted a panel on publishing research in the STEM domain. Rangos Hall was filled as eager graduate students hoped to gain insight on the act of getting their research published in journals. Three panel speakers offered their input and advice to young graduate students just beginning their journey into academia.

Members of the panel included Susan Finger, professor of civil and environmental engineering, associate dean for IDEATe, and founder and former co-Editor-in-Chief of the journal *Research in Engineering Design*; Michael Domach, professor of chemical engineering and editor of the

journal *Biotechnology Progress*; and Jonathan Cagan, George Tallman and Florence Barrett Ladd Professor for Mechanical Engineering, associate dean for Strategic Initiatives in the college of engineering, co-director of the Integrated Innovation Institute, co-director of the Swartz Center for Entrepreneurship, recipient of a Courtesy Appointment in the School of Design, and associate editor for Design Science and Design Studies.

Students had the opportunity to send in their questions ahead of time. The first question that the panelists responded to was how the process of publishing worked. They advised students to use what they called “the smallest publishable unit.” This is the smallest amount of research that is significant enough to be

published. In the surprisingly cutthroat environment of academia, waiting too long to publish your research can lead to a different researcher publishing the same work ahead of you.

They also warned the audience about a term known as “salami work.” Salami work is when a researcher splits their completed work into small sections and attempts to publish them. This is different from the smallest publishable unit in terms of completeness. Salami works are small, individual parts of a finished research project, while the smallest publishable unit refers to small but complete research projects. The panelists also agreed that one thing you never want to do when attempting to publish is submit your

See **RESEARCH**, A3



FEATURE PHOTO

# Students enjoy warm weather in the middle of winter



Aisha Han/Visual Editor

On Friday, Feb. 24, Carnegie Mellon University students gathered outside to enjoy a day of unusually warm weather. Students were seen lounging on The Cut playing music, reading novels, playing games, and doing work.

NEWS IN BRIEF

### Carnegie Mellon researchers make new discovery regarding synthetic nanoparticles

Chemists at Carnegie Mellon University have discovered that synthetic nanoparticles can be as structurally complex and accurate as biomolecules. This discovery has aided researchers in learning how nanoparticles form, which can then help them to eventually construct them. This can lead to the creation of new computer chips, materials, and drugs.

This discovery came from the lab of Carnegie Mellon chemistry professor Rongchao Jin. Jin has been attempting to create precise gold nanoparticles for years. He first established the structure of an ultra-small Au25 nanocluster and has worked on progressively larger ones.

“Most people think that nanoparticles are simple things, because they are so small. But when we look at nanoparticles at the atomic level, we found that they are full of wonders,” Jin said in a university press release.

The researchers, led by graduate student Chenjie Zeng, established the structure of Au246, one of the largest and most complex nanoparticles created by scientists to date and the largest gold nanoparticle to have its structure determined by X-ray crystallography.

The researchers also found that Au246 particles maximize the interactions between atoms and match symmetric surface patterns as they form. Similar to puzzle pieces coming together, matching shows that the components of the particle can recognize each other by their patterns and spontaneously assemble into the highly ordered structure of a nanoparticle.

In future studies, Jin hopes to push the crystallization limits of nanoparticles even farther to larger and larger particles. He also plans to explore the particles’ electronic and catalytic power.

### CMU Chemistry professor Yisong Guo receives CAREER award to study NHM-Fe

Yisong Guo, an assistant professor of chemistry at Carnegie Mellon University, recently received a Faculty Early Career Development Award from the National Science Foundation. This award comes with a five-year grant which will allow Guo to study non-heme mononuclear iron-containing (NHM-Fe) enzymes. These newly discovered enzymes play a role in many processes which impact health and aging.

The NHM-Fe enzymes catalyze key steps in the biosynthesis of two secondary metabolites that are beneficial to human health. One enzyme, FtmOx1, produces a toxic chemical called verruculogen. Verruculogen contains a unique functional group, endoperoxide, that displays a wide spectrum of abilities to combat bacteria and cancer.

The other enzymes, OvoA and EgtB, are involved in the biosynthesis of

ovothiol and ergothioneine, molecules with possible antioxidant and anti-aging properties. The grant will allow Guo to uncover the chemical principles that govern the function of all three enzymes and the production of their secondary metabolites.

“Mastering the unique biological transformations demonstrated by these enzymes could further lead to the discovery of new bioactive molecules that offer profound implications for human health,” Guo said in a university press release.

The grant will also allow Guo to provide training opportunities for students in physical chemistry, bioinorganic chemistry, biochemistry, enzymology, and catalysis.

STUDENT GOVERNMENT COLUMN



**DOMINIQUE ESCANDON**  
*Special to The Tartan*

*Editor’s Note: Dominique Escandon is the Cabinet Writer of The Student Government.*

Election season has officially started at Carnegie Mellon! Over the past year, I have been able to see up close the amazing work that executive members of Student Government have accomplished — from work in fiscal and government transparency to the introduction of so many new and exciting student organizations onto our campus. I’m definitely looking forward to seeing what new ideas come in with a new executive board and Senate. But what spots are open, and what unique opportunities do each have access to?

Serving as the Vice President of Finance (SBVPF), Neal Choudhary (sbvpf@) supervises the Joint Funding Committee applications processing, managing over \$1.5 million for student organization funding and monitoring its proper usage. Within this position, Choudhary has stated that the interactive nature of his role with so many organizations all over campus and the ability to help them make an impact is the most rewarding part of his role as SBVPF.

Nina Fan (sbvpo@) finds that the most meaning in her role of Vice President of Student Organizations (SBVPSO) comes from her ability to give back to the Carnegie Mellon community and help organizations achieve their goals. As SBVPSO, along with advocating for student organizations, Fan facilitates the process for new organizations seeking Student Government recognition and for the more

than 350 organizations seeking re-recognition. She also works with the Office of Student Activities to facilitate the biannual space allocation process.

In student government associations, the positions President for the Graduate Student Assembly and Undergraduate Student Senate are held by Daniel Gingerich (gsa-president@) and Nikki Ambalo (student-senate@), respectively, and both are responsible for representing students and facilitating action and organization in their respective associations. Petitions are also available to students who wish to serve as representatives in the Senate, a position where current College of Engineering Senator Dave Singh says he finds reward in “being able to enact tangible change on campus for issues that truly matter to students.”

Finally, the roles of Student Body President and Vice President are held by Vaasavi Unnava (sbp@) and Aaron Gutierrez (sbvp@), respectively. These positions manage initiatives through the President’s Cabinet and head the executive board. Unnava says her favorite part of this position has been talking to students about why they love Carnegie Mellon. When asked what he found most rewarding in this position, Gutierrez replied, “you see the amazing things happening on our campus, and you get to help students do the amazing work they love.”

There’s so many opportunities to do engaging and impactful work as part of Student Government, so if interested, please reach out to any member of Student Government and form a petition before March 7!

## Campus Crime & Incident Reports

#### Disorderly Conduct

Feb. 16, 2017

A University Security Officer had a bag of chalk thrown into his face by a male Carnegie Mellon alumnus. University Police escorted the male from campus after issuing him a citation for Disorderly Conduct.

#### Underage Drinking

Feb. 16, 2017

University Police reported to Mudge House after receiving a complaint about an underage drinking party. They recovered several bottles of alcohol and seven Carnegie Mellon students were issued

citations for underage drinking.

#### Assist Outside Agency/ Noise Complaint

Feb. 16, 2017

University Police reported to an address on Beeler Street to aid the City of Pittsburgh Police with a report of a rowdy party. University Police Officers assisted Pittsburgh Police Officers in shutting down the party.

#### Alcohol Amnesty

Feb. 17, 2017

University Police responded

ed to Delta Tau Delta after receiving a report of an intoxicated female. The Carnegie Mellon student received medical attention. Since the criteria of Alcohol Amnesty were met no citations were issued.

#### Request for Assistance

Feb. 17, 2017

University Police helped Carnegie Mellon Parking Services collect a hefty fine owed by a Carnegie Mellon student. A University Police Officer contacted the student and informed him that failing to pay the fine would result in him being charged

with Theft of Services. Parking Services confirmed that the student has paid off the outstanding fine.

#### Theft of Backpack

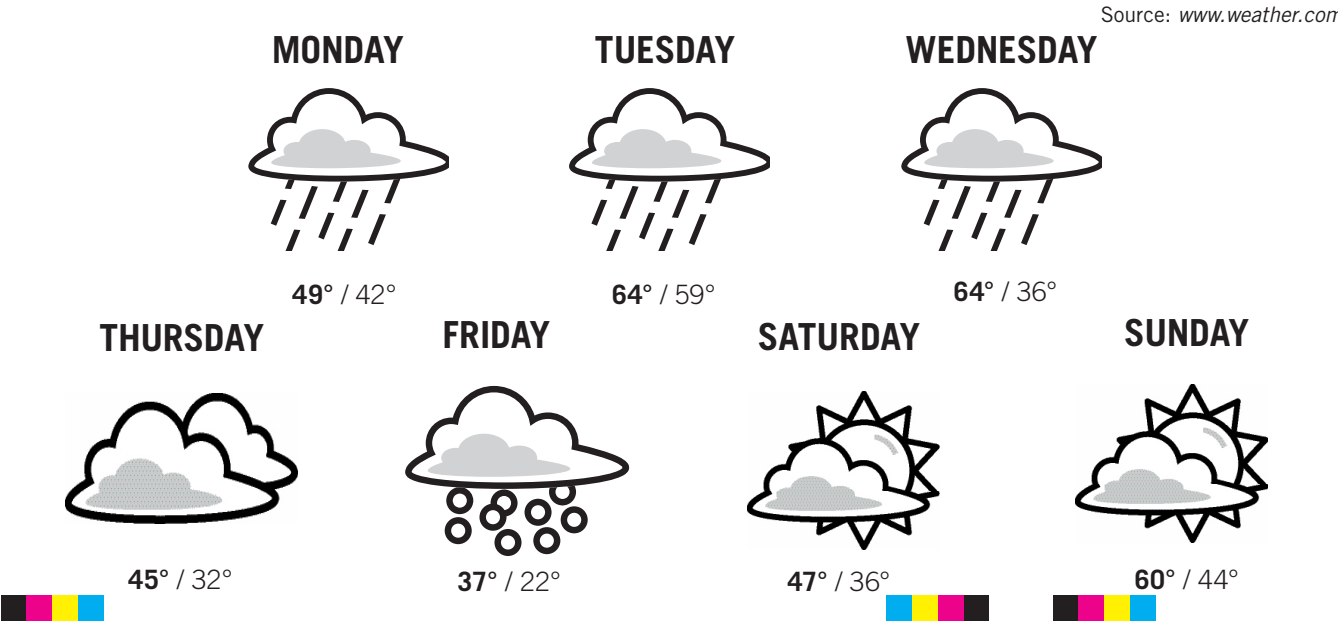
Feb.19, 2017

A Carnegie Mellon student informed University Police that her backpack was unlawfully removed from the Resnik Café. The student later reported that her backpack was mistakenly taken by another student and was returned to her intact.

Compiled by  
VALENE MEZMIN

Compiled by  
VALENE MEZMIN

WEATHER



Corrections & Clarifications

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





# Panelists discuss the importance of doing impactful research

**RESEARCH**, from A1

research to multiple journals at the same time. Not only will this be seen as rude, but it is likely that your work will end up being reviewed by the same person anyway before being published.

Another question that was raised was, “how do you become a reviewer?” Cagan laughed at this, saying, “well, you could do what I did: send an email and ask.” This seems almost laughably easy and simple, and all of the professors agreed that everyone in the audience was too young to truly consider it. Being a reviewer requires seniority and a strong reputation, which can only be developed with time. The panelists reflected on what they did as reviewers that they found effective, and decided upon

the three main things that they considered.

Cagan stated that he first questions why he should read this research. Without significant impact, research is not useful and therefore not worth the process of reviewing and publishing. Another impactful issue for them was that everyone whose name is on the paper was a participant in the research. Finally, they wanted every paper that they reviewed to have addressed whether there were any conflicts of interest in their research.

Finger, Domach, and Cagan next talked about what made a strong, publishable article. They said that the two most important issues are the quality of one’s research and the quality of one’s writing. A good research article must have both of these attributes to be successful. A successful

article will also address the proper audience. The panelists have reviewed papers that either assumed that the readers of their respective journals were all too familiar with a subject, which made the article far too technical, or considered the audience to know almost nothing about STEM, which led to the paper feeling almost insulting to the average reader. As in all things, the proper balance must be found.

The established panelists left the audience with a final message: all of these pieces of advice vary from field to field and with personal experience. While knowledgeable through years of experience, each of them only knew what their experiences had taught them and believe the students in the audience might find that their attempts at publishing could vary wildly.



Theodore Teichman/Visual Editor  
Students gathered in Rangos Hall to receive advice from panelists on how to successfully publish STEM research.

# Writer Lauren Groff criticizes budget cuts and defends the arts



Lauren Groff, author of novels such as *Arcadia* and *Fates and Furies*, visited Carnegie Mellon to discuss the theme of marriage in her novels, the legacy of Shakespeare, and her love for the arts.

**WRITING**, from A1

In January, the government proposed budget cuts for the Corporation

for Public Broadcasting, the National Endowment for the Arts, and the National Endowment for the Humanities, all collectively a

minuscule percent of the national budget. Groff claimed these cuts are not fiscally conservative but politically motivated and

partisan. They say that the arts don’t matter and essentially tell artists to “sit down and to shut up.” “Art is utterly necessary,”

Groff said, to large applause. “Art is culture. Culture is life.” She used the famous quote from William Carlos Williams’ poem “Asphodel, That Greeny

Flower.” In the poem, he states “it is difficult to get the news from poems yet men die miserably every day for lack of what is found there.” Groff argued that this is often misquoted and leads to the misconception that Williams believes a man dies without poetry. What Williams is really saying is less lyrical but more true. Men do not die because of lack of poetry, but die miserably with lack of poetry. Groff explained that Williams is saying that the pursuit of poetry and the pursuit to art leads a man to a death that is not miserable because he has led a noble, happy life.

“Art can lead the way to resist. Art can teach you how to love. Art can keep you from despair. Art is always political, and good art is always oppositional. Art can keep you alive. It feeds the soul,” Groff said. She concluded her lecture with a request to the audience: “Do everything you can do to keep art alive in this terrifying world of ours.” She asked us to fight for all artists, because in doing so, we are “fighting for [ourselves] and for the bright and living soul of this country.”



Courtesy of Wilmington University (left) and federico novaro (right) via Flickr Creative Commons

# Professor Andreas Pfenning seeks to discover cure for Alzheimer’s

**ROSE PAGANO**  
*Personnel Manager*

Andreas Pfenning, an assistant professor for the Department of Computational Biology at Carnegie Mellon, recently joined a renowned research team that is attempting to discover new ways to turn genetic findings into possible new therapies for Alzheimer’s.

Founded in 2004, the Cure Alzheimer’s Fund is considered to be a nonprofit

organization determined to support research that has the best likelihood of stopping, decelerating, or reversing Alzheimer’s disease.

Pfenning is connected to BrainHub, Carnegie Mellon’s neuroscience initiative. Along with colleague Morgan Wirthlin, who is BrainHub’s post-doctoral fellow, Pfenning has completed some preliminary work on this research.

Now that he is a member of the research team created

by the Cure Alzheimer’s Fund, Pfenning plans on performing computational techniques as a way to possibly identify the genetic sequences that contain therapeutic potential for people with Alzheimer’s. Pfenning is also creating biological techniques to evaluate the function of human DNA fragments in mice brains.

“We are looking for those parts of the human genome that are active in the brain cells of Alzheimer’s patients,”

Pfenning said in a university press release.

This project is a \$4 million investment that will last two years and is referred to as the Collaboration to Infer Regulatory Circuits to Uncover Innovative Therapeutic Strategies (CIRCUITS). Along with Pfenning, researchers from Massachusetts Institute of Technology, the Salk Institute for Biological Studies, Massachusetts General Hospital, the University of Sheffield, and

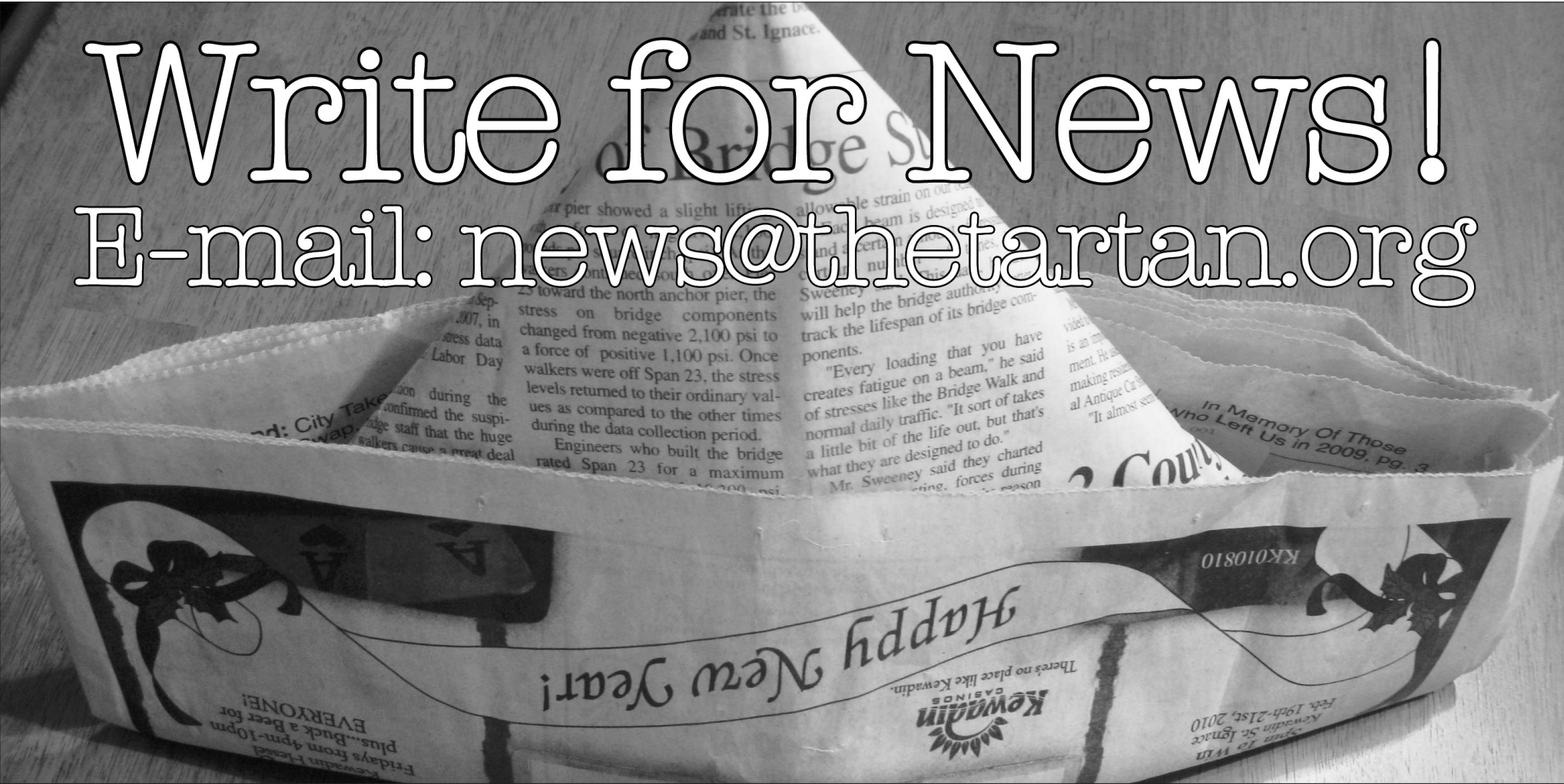
the University of Luebeck will be joining CIRCUITS.

The scientists are optimistic about their findings thus far and believe that they have located around 20 to 30 genetic sequences grouped with this type of dementia. They also think that there are hundreds and possibly thousands of segments associated with this disease.

The process of recognizing and assessing this large amount of DNA sequences

means that new analyses and methods to examine these large segments are necessary, according to Pfenning. Pfenning also claims that it is imperative to construct new ways to analyze the DNA in the brains of mice.

“In the past this has been done one gene at a time and it has not been done in a systematic way,” Pfenning said. “My lab will be creating new techniques that bridge analytics and experimentation.”





# Forum

FROM THE EDITORIAL BOARD

## Three-year college programs aren’t more economical

\$70,094.

This is how much a senior in high school who received or will receive an acceptance letter from Carnegie Mellon will be paying for one year of education. According to a 2015 Census, the median household income of an American family is \$55,775; some students are paying 25 percent more than an average family earns in one year to be here. College is expensive, and it’s getting more expensive, rising by three percent every year.

In response to the increasing pressure of student loans and debts, New York University (NYU) formally proposed a solution to its students: graduating in three years. They suggested that by using Advanced Placement (AP) credit from high school, taking the maximum number of credits every semester, and enrolling in summer courses, students can pay one less year of tuition and relieve some of the financial burden. In order to promote this “accelerated” program, NYU will increase the number of three-credit courses offered and start accepting transfer credits from community colleges, which offer inexpensive summer courses.

Carnegie Mellon is similar to NYU in a lot of ways: they are both elite, private research universities located in cities, and among the most expensive colleges in the country. But instead of encouraging students to graduate early, Carnegie Mellon wants them to take their time. Most of the undergraduate academic programs are designed for four years of study, and the only accelerated programs encourage you to get a master’s degree within four or five years. In other words, Carnegie Mellon refuses to water down the weight carried by its degree.

Traditionally, Carnegie Mellon has one of the strictest policies on the conversion of AP credits, only accepting a score of five in the majority of the subjects instead of both fours and fives like many of its peer schools. In early February, the University Task Force held the Add/Drop/Withdraw Forum to announce their academic policy proposals, which includes a proposed change to the overloading policy. Instead of automatically removing the credit limit based on students’ QPAs, overloading requests will be examined and approved on a case-by-case basis. In order to enroll in more than 54 units per semester, students would have to not only achieve the QPA limit of their own programs, but also gain approval from their advisors. For the students who wish to finish early, overloading is unavoidable, especially if they are looking to spend their summers working, participating in internships, or gaining research experience.

These policies were proposed with good intentions in response to the overall stress culture at Carnegie Mellon. Given the competitive nature among students, having an official plan to graduate early may compel more students — who are very likely to be overworked and stressed — to push themselves even harder. These concerns are real, and there is no point in denying the existence of stress culture, but there is another side to this story as well.

A fellow Carnegie Mellon student complained earlier in the year that he was bored in the required courses. When he was

choosing his courses for the spring semester, he was discouraged from overloading with more challenging courses, despite clearly demonstrating his ability to learn and excel. This semester, he ended up being bored by his courses again. And he is not alone: Many other people also face the same dilemma; they have the willingness and ability to learn and achieve more, but they are held back from their goals because of these policies.

Blaming the stress culture on the few who are able to achieve more is absurd. Being a proudly diverse university, Carnegie Mellon should embrace not only differences in socioeconomic backgrounds, genders, races, but also the wide range of talented students it attracts. Instead of trying to normalize the difference, Carnegie Mellon should work to personalize the college experience for people with different abilities and goals. Providing a structured program for students with advanced knowledge, AP credits, and clear career goals early on would be less stressful for these students than leaving them to plan out their path on their own without guidance, sometimes secretly because they have been told to relax and not push themselves too hard.

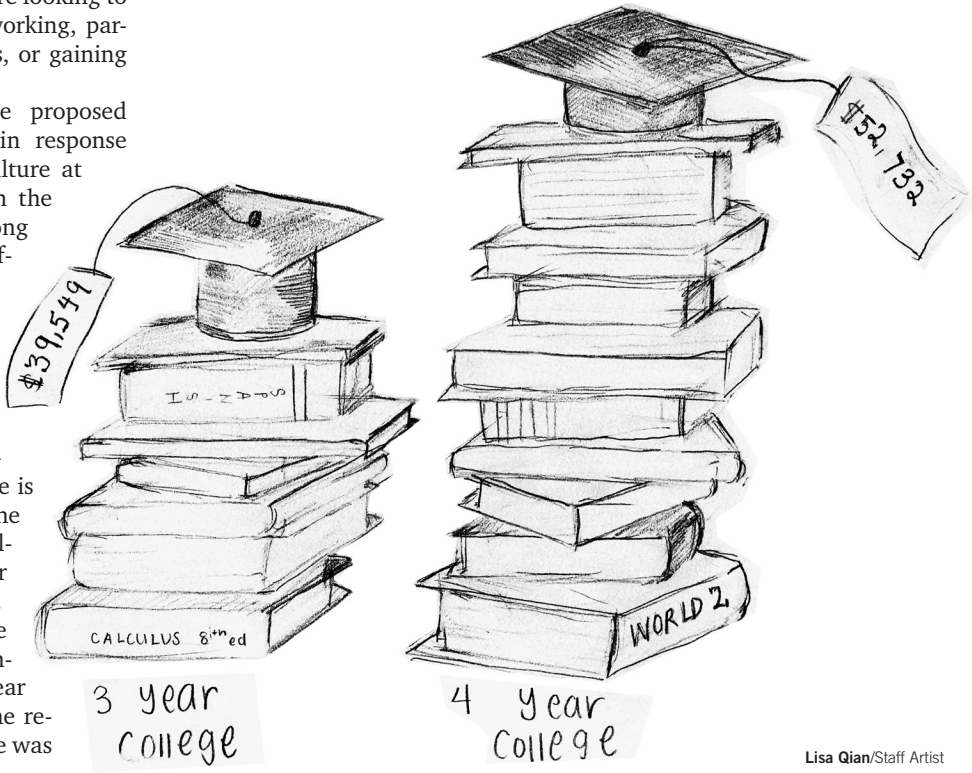
But NYU’s plan to “cut costs” for college students does nothing to relieve the financial burden on students, and possibly worsens it. A college education is becoming a minimum requirement for many jobs, and attending elite universities such as NYU and Carnegie Mellon would supposedly boost your chance of getting well-paying jobs. But the reason that the “requirement” exists is because a college degree holds some weight, and the knowledge one learns and the experience they accumulate during undergraduate years are crucial to their career success. Offering “placeholder courses” that help students fulfill graduation requirements reduces the content required for an undergraduate degree and thereby reduces stress for the students who aim to finish in four years, but it also reduces the meaning of such a degree. Lowering the graduation requirement to make college more affordable would only result in employers and companies realizing that three-year degrees do not hold the same weight as four-year ones, and the students will be paying for their shortcuts in the future.

Wesleyan University, a liberal arts college in Connecticut, began its formalized three-year bachelor’s degree program five years ago. The

plan specifies that students who aim to graduate in three years not only have to overload during their academic semesters, but also enroll in approved summer courses every year in order to finish on time. These summer courses can be taken at other accredited universities, but they can also be taken at community colleges, which offer a more affordable tuition rate and often easier, less in-depth courses. Accepting credits from community colleges and summer programs could be a trade-off, because the quality of these programs and courses vary among institutions.

People who attend elite colleges like Wesleyan and NYU are more competitive in the job market, not because these schools are somehow inherently better than community colleges, but because they offer stronger programs and courses that challenge their students to learn more. You may be able to take an introductory level computer science course anywhere else in the nation and get the same credit, but that experience will not level with taking 15–112 at Carnegie Mellon. Carnegie Mellon is regarded more highly because of courses like 15–112: the fact that students have come out of the course with more expertise than their peers makes up the weight of the degree. Taking summer courses has another opportunity cost: in addition to not being able to take advantage of the academic resources within the university, students are also giving up their opportunities to take advantage of the university career services, which could help you find research and internships over the summer.

Why do we take four years to finish college? Michael S. Roth, the Wesleyan president thinks that there is nothing magical about the number four. “I think [finishing college in four years] is just a convention,” he said. He was right: the importance of “four” has been overly emphasized among colleges. But just like a lot of educators, experts, critiques, and politicians (such as Ohio Governor John Kasich) who think graduating early is a solution to the tuition problem, he was wrong, ultimately, because by conforming to this, the higher education industry in America will suffer, and will pay for “dumbing down” their curriculum and taking this shortcut at the end. The three-year graduation plan can potentially benefit the people who are already able to graduate early by pointing out a clear path, but for others, this plan simply adds to their stress and fear of missing out on such a “good deal.”



Lisa Qian/Staff Artist

## New DNC chair pick sticks with status quo



Editor’s note: *Post-Mortem* is a weekly column that seeks to explain the outcome and effects of the 2016 presidential election. Find previous installments @thetartan.org

Democrats made the first important decision about the future of their party since the 2016 election by selecting former Labor Secretary Tom Perez as their new chairman last Saturday, Feb. 25. It’s possible that all the hype surrounding the DNC Chair race was overblown. This is, after all, the Democratic Party’s version of a student council election. On the other hand, it’s a student council election whose top candidates rose close to \$1 million apiece in fundrasing. While the Democratic chair’s role is limited and the job description is much more about party mechanics than policy or messaging, the election was played out in the media and within Democratic circles as a “fight for the soul of the party,” pitting its “establishment” and progressive wings against one another.

Aside from Perez, the top candidate was Minnesota Rep. Keith Ellison, the first Muslim-American

## Democrats have started 2017 by once again allowing the inertia of the status quo to overwhelm their party at the grassroots and within the progressive wing.

elected to congress and a strident Bernie Sanders supporter during the Democratic presidential primary elections. Ellison was long the frontrunner for the DNC Chair, earning early endorsements from progressive icons like Senators Bernie Sanders and Elizabeth Warren, as well as endorsements from top establishment figures like Senate Majority Leader Chuck Schumer and former Senate majority leader Harry Reid. But Perez entered the race late, reportedly at the urging of former President Barack Obama, and quickly emerged as the new favorite because of his ties to the Democratic establishment, which controls much of the voting membership of the DNC.

Thus, the DNC chair race emerged as a proxy battle between establishment and progressive Democrats, pitting the Bernie Sanders/Elizabeth Warren wing of the party against its Barack Obama/Hillary Clinton wing. Just like during the primary elections a year before, the Democratic Party is divided over its vision of its own future. Essentially, progressives want sweeping change within the party going forward, with a new emphasis on grassroots

organizing, local party-building, and a full-throated commitment to economic populism. By contrast, establishment Democrats acknowledge the need for some reforms around the edges, but they insist that the party is already on the right track and just needs to do better with turnout in the future. Just like in the primaries, this election boiled down to change vs. status quo.

Both Perez and Ellison themselves were hesitant to embrace this narrative. Throughout their campaigns, they both stressed the need for party unity and pledged to work closely with whoever was selected to be the new party chair. And both candidates could be seen as compromise choices. Ellison was a die-hard Sanders supporter, but he backed Clinton every bit as enthusiastically during the general election, emerging as one of her key surrogates in the midwest. Meanwhile, Perez was arguably the most progressive member of Obama’s cabinet. The DNC chair debates were almost laughable for how much the candidates agreed with each other on just about everything.

Yet, Ellison and Perez emphasized different agendas for the DNC and disagreed over how to interpret the 2016 election results. Ellison spoke for the need not just of a “50-state party,” but for a “3007-County Party,” which invests significant energy and resources into grassroots mobilization and rebuilding the party from the ground up by competing for local and state offices. Perez, on the other hand, argued that the party’s organizing and infrastructure is fine, but that the key to winning elections going forward is to turn out the votes through even more advanced data strategies and old-fashioned retail politics.

Ellison blamed Clinton’s loss on her weaknesses regarding Wall Street, trade, and other economic

### Editorial Board

JADE CROCKEM\*  
Publisher

INDIA PRICE\*  
Editor-in-Chief

SARAH BENDER  
Forum Editor

YIYUAN CHEN\*  
Operations Manager

VALENE MEZMIN  
News Editor

JOSH ANDAH  
SciTech Editor

SYDNEY ROSLIN  
Staffwriter

### Editorial Staff

SINEAD FOLEY  
Pillbox Editor

APEKSHA ATAL  
Pillbox Editor

JULIE SANS CARTIER  
Comics Editor

IAN TANAYA  
Sports Editor

MARIKA YANG  
Assistant Sports Editor

COREY EMERY  
Advertising Manager

SOPHIA CHENG  
Business Manager

GEAR JIAN THANAKANON  
Systems Manager

RUTH SCHERR  
Copy Manager

THEODORE TEICHMAN  
Visual Editor

AISHA HAN\*  
Visual Editor

SIMIN LI  
Art Editor

ZICHEN LIU  
Photo Editor

PAULINE TING  
Online Editor

ABHISHEK TAYAL\*  
Layout Manager

SARAH GUTEKUNST  
Contributing Editor

ZEKE ROSENBERG  
Contributing Editor

\* Denotes executive committee member

### Staff

COPY  
Amelia Britton, Yiyuan Chen, Jade Crockem, Aisha Han, Charles Li, Lydia Green, Sarah Gutekunst, Zeke Rosenberg, Ian Tanaya, Pauline Ting, Marika Yang

ADVERTISING  
Benjamin Stern, Andy Gao

BUSINESS  
Lindsey Shi

## THE TARTAN

The Tartan is a student newspaper at Carnegie Mellon University, funded in part by the student activities fee. It is a weekly publication by students during the fall and spring semesters, printed by Trib Total Media. The Tartan is not an official publication of Carnegie Mellon University.

The Editorials appearing at the beginning of the opinion section are the official opinion of The Tartan Editorial Board. Columns, Editorial Cartoons, and Reviews are the opinions of their individual creators. The Tartan Editorial Staff reserves the right to withhold from publication any copy it deems unfit.

Letters to the Editor Letters must be submitted by 5 p.m. on the Wednesday before publication by mail or to forum@thetartan.org. Letters from within the university community take precedence. Letters intended for publication must be signed and include the author’s address. Letters will be edited for grammar, punctuation, spelling, and Tartan and AP style. The Tartan reserves the right to edit for length and ethical reasons, including such matters as defamation, plagiarism, inaccuracies, profanity and slurs. Author’s names may be withheld at the Editor-in-Chief’s discretion upon request. The Tartan reserves the right to reject any letter.

Office: University Center 314  
Web: www.thetartan.org  
E-mail: contact@thetartan.org

Mail:  
The Tartan  
Box 119, UC Suite 103  
5000 Forbes Avenue  
Pittsburgh, PA 15213





# Knock Every Door stresses crucial role of listening in politics

**LYDIA GREEN**  
*Junior Staffwriter*

On a lovely Sunday afternoon last weekend, I led a group of five to Squirrel Hill to knock on doors and listen to the thoughts of complete strangers about the election. We took with us scripts with suggested questions about the candidates and parties, but most of the time the people we talked to just wanted to freely vent their feelings. Our job was simply to listen, not to argue or push an agenda. I held the event in collaboration with Carnegie Mellon College Democrats and a new national organization called Knock Every Door, which trains volunteers across the country to host similar canvasses locally. The information we and other canvassers collected will eventually go to the Democratic party and the media in a report to help make the party stronger and more attentive for future elections.

Knock Every Door was created in the wake of the 2016 election by

former Bernie Sanders staffers and other progressives. The idea behind the organization is that by listening to people of diverse ideological beliefs about what they need from their government and what motivates them to vote, we can create a unified, progressive, grassroots movement to dismantle “Trumpism.”

2016 saw unprecedented numbers of registered Democrats not showing up to the polls or, worse, voting for Trump. If progressives are to take back the country, we’ll need to build a revolution that addresses both social and economic issues and gets everyone back on the same page.

This sort of canvassing with the primary purpose of listening rather than talking is called deep canvassing, and a recent political science study out of Stanford University and the University of California at Berkeley found that it works: the best way to change voters’ minds is to have respectful conversations with them and really listen. When a canvasser approaches a voter with the intent of listening and understand-

ing, the voter will be more open to listening to and considering the canvasser’s views in return.

When I went out myself, I found that people were surprisingly grateful to just have someone listen non-judgmentally to their random thoughts. Since Squirrel Hill is a fairly liberal area, three out of the four people I had full conversations with were Hillary Clinton voters. Their feelings ranged from a disbelief in Trump’s power or desire to actually accomplish the things he campaigned on to a deep fear that the rich will get richer and everyone else will suffer. All had been primarily content with President Obama and were frustrated with the leadership of the Democratic Party. The Clinton voters were most concerned with civil rights and how Trump will harm the Americans who already struggle the most to help themselves, such as undocumented immigrants and working mothers.

The one Trump voter I heard from mentioned her distrust of politicians of both parties and her belief that

they make money at the expense of voters. She also believed that the Obama administration was anti-Semitic in their dealings with Israel and, as a descendant of a Holocaust survivor herself, had a deep distaste for anyone getting between the Jews and their homeland.

Back in 2008, she supported Clinton, but changed her mind after the Benghazi scandal and wished that Clinton had at least apologized. She thinks that Trump will provide more jobs for Americans who want to work, and that the only people who will suffer from a Trump presidency are people who are lazy or violent or otherwise wildly break the rules of civilized society. I was surprised to find that she didn’t vote for Trump because of his racism but in spite of it, and, in fact, that she believed Clinton to be the more racist candidate.

From my liberal Democratic background, this woman’s opinions sounded to me like they were based in falsehoods, but we did have one thing in common: we

both voted for the candidate we believed would make people’s lives better. My vote was about bettering the lives of marginalized people and protecting public resources. Her vote was about rewarding hard workers.

This sort of conversation, where a progressive and a conservative respectfully listen to each other’s differing opinions, has become largely unheard of. Progressives and conservatives have come to exist in such separate spaces that we have all but ceased to see the humanity in each other. From feminists to the alt-right people on both sides are regularly called Nazis — that is, equated with pure evil — whether they are or not. We have lost sight of the difference between people who intend to harm others and people who unintentionally cause harm.

Even though the effect of the two groups’ actions may be the same, it’s an important distinction to make, because the former are truly bad people through-and-through, while the latter want others to be happy and healthy and would be open to changing their actions if they were appropriately approached and educated on the consequences of said actions. Progressives ought to enable the personal growth of such people as much as possible.

Some Trump supporters are deserving of the title of “Nazi”, but I believe that most were severely conned into believing that Trump would make people’s lives better. If we paint all conservatives as pure evil, they will go running back to ego-pumping candidates like Trump and become even more set in their beliefs. If we give them a space to express their needs and then explain our needs to them, we can work together to meet everyone’s needs. The conversations that come out of Knock Every Door canvasses begin this important work.

Listening to strangers with harmful opinions may not be for everyone, but if you have the time and the emotional energy to do so, I would recommend attending or organizing a deep canvass, because listening should be at the foreground of progressive change.



Paola Mathus/Staff Artist

# Trump tax policy favors corporate elites, threatens workers

**JEREMY GOLDSTEIN**  
*Junior Staffwriter*

Donald Trump rose to the presidency largely by preaching a populist message of economic nationalism to stand up to neoliberal corporate globalization. The president is to be commended for remaining consistent on that message when it comes to his withdrawal from the Trans-Pacific Partnership (TPP) trade deal, which gave provisions for corporations to change environmental, safety, and labor laws of sovereign nations without the consent of the governed through seeking arbitration in the corporate-representative dominated court known as the Investor State Dispute Settlement (ISDS). Still, whether Mr. Trump will actually make trade deals that advance the interests of workers remains to be seen, and the possibility exists that he might in fact make worse trade deals than the TPP. The opposite of anti-corporate economic nationalism is certainly being pursued, however, in the President’s tax plan, which portends an alarming ceding of American leadership and a threat to democracy and sovereignty around the world.

Despite the good of maintaining democratic institutions and sovereignty brought about by withdrawing from TPP and avoiding the ISDS, the downside is that it gives authoritarian China — under whose hegemony environmental, safety, and labor standards are also unlikely to be met — the upper-hand in setting economic conditions for the Asia-Pacific region. This abdication of American leadership in the region is all the more troubling considering that the Bank of China is a tenant in one of the president’s buildings, and the president may be paying back loans from China. However, the public cannot know if the loans are being paid, because the president has

not released his taxes. Tough talk notwithstanding, Trump showed China a sign of warmth in his appointment of Governor Terry Branstad (R-IA), who has a relationship with Chinese President Xi Jinping dating back to 1985, to be the U.S. ambassador to Beijing.

The president’s tax plan calls for corporate taxes to be lowered from 35 percent to 15 percent; the highest income tax bracket of individuals, who make \$415,050 and over annually, to be lowered from 40 percent to 32 percent; and the lowest taxpaying bracket of individuals, who make annually \$0 to \$9275, to be increased from 10 percent to 12 percent. Such tax cuts for the rich and corporations, besides causing unfair increased tax burdens on those less able to afford it, are widely considered to be laying the groundwork for an explosion in the national debt (the nonpartisan Congressional Budget Office estimates \$10 trillion growth in debt over the next 10 years, playing into the hands of China who owns much of the debt).

The Trump-GOP tax argument goes that in order

to realistically provide Americans with jobs, the U.S. must repatriate billions of dollars of offshore corporate funds by incentivizing with a warmer business environment of deregulation and lower taxes. They claim the economy will grow so much by lowering restrictive taxes that government revenue will increase, despite taxing at a lower rate, because more people or items will be taxed than before since employment and consumption will increase substantially. However, the experience of former Presidents Ronald Reagan and H.W. Bush should show that revenue does not increase with supply-side economics because if taxes are effectively not being collected because they are so low during times of increased spending on the military and defense (as Mr. Trump proposes), then there will be no revenue for the government and debt will increase greatly as it indeed did under Reagan (from \$1 trillion to \$2.9 trillion, according to White House historical

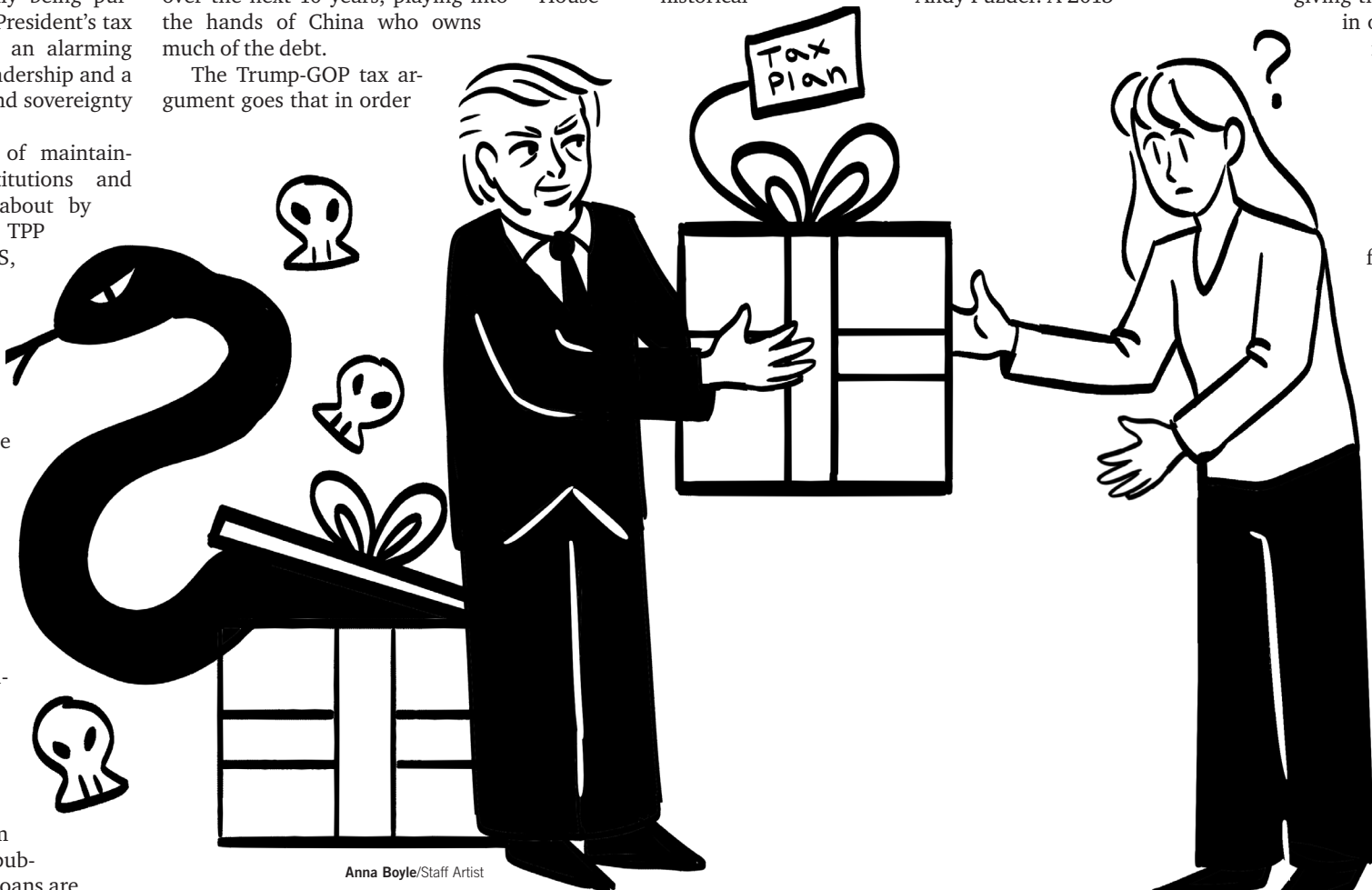
budget tables), which is why Bush famously, or rather infamously, had to raise taxes despite the campaign promise of his much-read lips.

Beyond a debt explosion, incentivizing corporations to repatriate funds to the U.S. does not actually guarantee substantial increase in good or equitable jobs. According to non-partisan think tank, the Economic Policy Institute, “the CEO-to-worker compensation ratio, 20-to-1 in 1965, peaked at 376-to-1 in 2000 and was 303-to-1 in 2014, far higher than in the 1960s, 1970s, 1980s, or 1990s.” Such pay disparity, combined with the President’s and the GOP’s opposition to raising the minimum wage, means that there is no guarantee that the jobs corporations provide are going to actually be well-paying.

Corporations increasingly use automation to replace human workers, a practice championed by the President’s withdrawn Labor Secretary pick, Hardee’s and Carl’s Jr. CEO Andy Puzder. A 2013

study by Oxford researchers Dr. Michael A. Osborne and Dr. Carl Benedikt Frey “estimated that 47 percent of jobs in the U.S. are ‘at risk’ of being automated in the next 20 years.” This means there is no guarantee that corporations repatriating funds will really result in substantial increases in human employees or that the jobs available will be not just accessible to those fortunate enough to receive university education. If the GOP is going to take credit for providing better, higher-paying jobs for Americans in engineering or robotics, then it must back that up by supporting universal access to education that will support those careers. The administration must at least execute a plan to significantly lower student debt. It is unlikely, however, that the GOP would advance an expensive idea like universal education to which they are currently ideologically opposed.

Rather than beg corporations for alms in the form of employment by giving them carte blanche operation in our country, the U.S. should instead take the stance that our resources and labor force are valuable. It is the government acting on behalf of American workers that has leverage over corporations to demand that they pay their fair share of taxes, rather than let them off the hook with the excuse that they are job creators. With revenue from corporate taxes, the government, which is controlled by the will of the voters, rather than corporations controlled by the will of the Board of Directors, can then fund good jobs in public programs. Furthermore, the U.S. should use its great influence to lead other countries to tax corporations their fair share so nations do not undergo a Hobbesian process of undercutting each other’s corporate tax rates, which is exactly the division that the corporate elites use to conquer.



Anna Boyle/Staff Artist



# Overcoming shyness is a vital life skill

NINA NELLY KOWALEWSKI  
Junior Staffwriter

Being shy is cute when you are still five years old and people are pinching your cheeks and giggling with glee while watching your face flush as you tuck yourself behind your mother’s dress. But when you’re all grown up and off to college? Not so much.

I have been overshadowed, and would even go so far as to say “plagued”, by this personality trait of timidity my entire life — and I just can’t seem to get entirely rid of it.

I am not alone — nearly half of all Americans report feeling the same way. Yet when working my way through a throng, it can still feel like I am the only one.

People always seem to say you should “remain true to yourself” and “don’t ever feel like you have to change,” but when a large chunk of your own self holds you back from seizing opportunities and enriching your life, then I say it’s time to reassess the conditions under which you operate and re-wire your circuitry a tad.

At times, it often ends up feeling like I have two different people bashing heads inside of me; one an extroverted being and the other a massive introvert, who overpowers and muffles the extroverted personality for fear of being too loud. Sometimes I feel limited by it, but I believe that we are all capable of overcoming our internal limits to begin to climb to the external, seemingly-unbounded ladder of our own futures that awaits if only we can free ourselves from an incessant, often random, and unrelenting fear.

When this slightly irrational fear occurs, a conflict of interest happens right inside of you. On the one hand, you want more than anything to feel relatively at ease confronting large seas of unfamiliar faces and settings. But at the same time, as you step into the wave of people, it sucks you down, your stomach drops, and your smile is really a half grimace as you feel your insides lurch. You feel like part of you

is betraying yourself, holding you back, an angry and poor emotion. Being angry, though, is nothing but an idle feeling unless you use it as a spurring motivator toward change. Simply remaining upset at yourself will only further drag you back.

Yes, it is a part of my personality and my quirks and a part of what makes me “me”. But when it begins to interfere with what I desire and my life in a larger context, when it surpasses that threshold and begins to affect me emotionally in a manner that is detrimental rather than constructive, then that’s the point where it’s no longer just a part of my personality, but more akin to a parasite living on my shoulder pulling me away from the things that are a finger’s width from my reach.

But why is shyness so difficult to overcome? Why is it such a powerful emotion, and why does it have so much control over our lives?

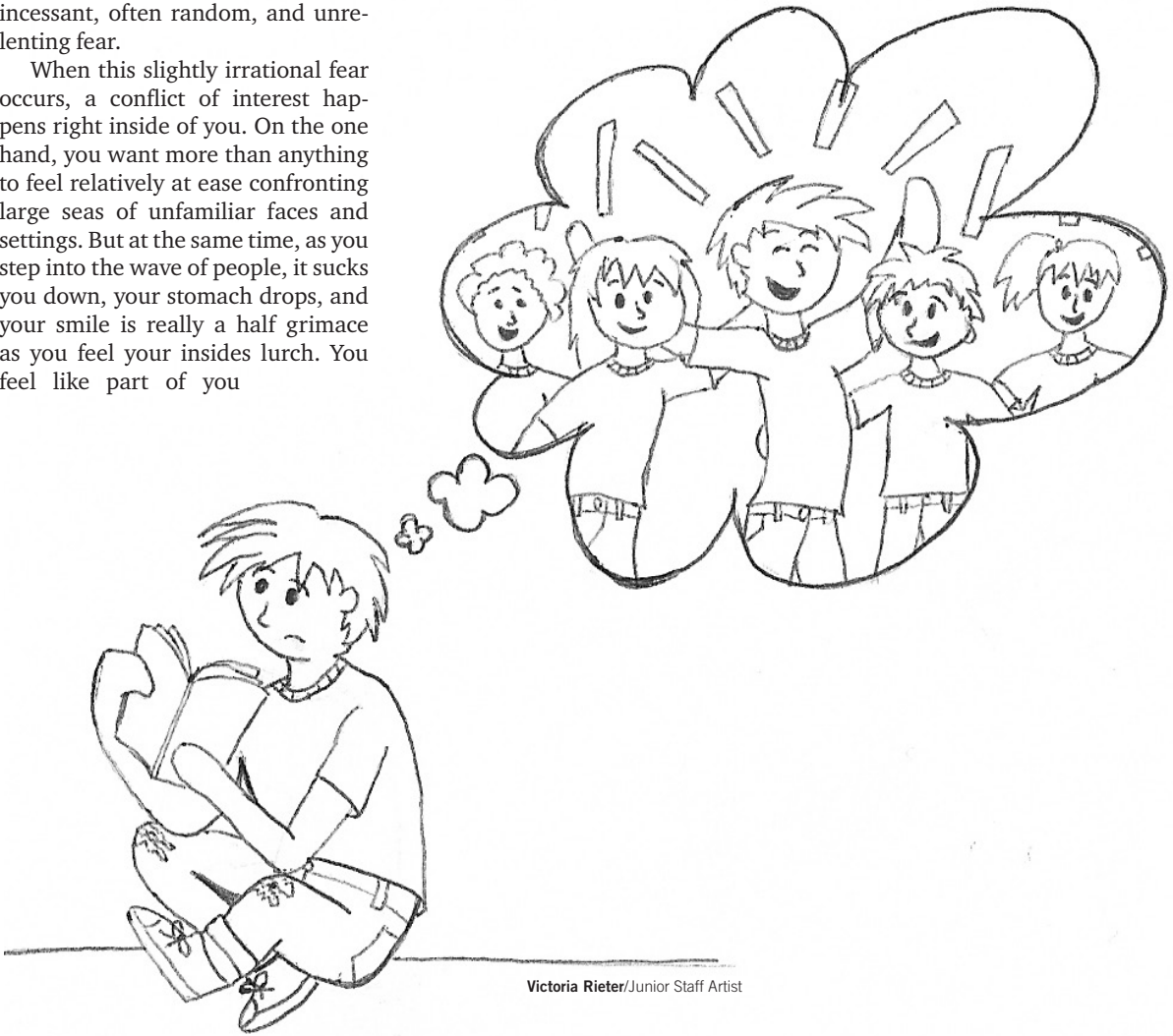
Shyness is complex and often misunderstood. As largely social creatures, humans may perceive the act of drawing away from other fellow human beings can be perceived as unnatural. In our brilliant age of a technological revolution, it has become even easier, increasingly so, to then isolate yourself, succumbing to the tendency to draw away and fare on one’s own. But retreating is not a remedy and only further contributes to the issue, pulling you further from the possibilities of the world.

Perhaps there was a point long ago where shyness wasn’t such a bad thing — maybe it was to a Neanderthal’s benefit to err on the

more timid side and avoid grunting brawls. Maybe the shy ones lived a little bit longer. But the times are no longer prehistoric and now, if you want to ever make it to the history books, you have to be able to put yourself out there, network, make connections, and talk to people — it’s a large and hungry power game. But if you’re hungry, even if you’re starving, and you don’t bring the right utensils (read: life skills) or etiquette (read: people skills), you can’t have a piece of the cake.

Social structures are not accommodating for the shy. But in order to succeed in our “go-go-go” world of today, it is a barrier that must be surmounted. I’ve adapted to encompass the “fake it till you make it” mantra as a successful strategy. When faced with gut-wrenching unfamiliarity, I envision the persona of a successful and charming character that I would aspire to be in the certain context. In molding myself into the personality I would like to exude, life becomes an acting exercise, almost enjoyable, and I proceed under false confidence that slowly solidifies into a tangible one. Things become more approachable and opportunities stop slipping past my reach as I break forward and take the push to firmly, and somewhat confidently, grasp them.

That is not to say that shyness is entirely negative. There are varying degrees and shades of reservation and various elements at play. You just have to make sure shyness does not begin to govern and dictate your life.



# ‘Mentally ill’ does not describe Trump

  
CASSANDRA SCANLON

The 2016 election was anything but normal and has left the United States in a state of heightened tensions. When the president who wins an election loses the popular vote, political polarization runs rampant and scrutiny is microscopic. Donald Trump has the lowest approval ratings of any recent president. While criticism for Trump arises from a variety of actions and statements, the criticism that paints news headlines is that he is mentally unfit to be President of the United States. Not only is this claim false, but it insults the mentally ill and further stigmatizes mental illness.

A number of psychologists and psychiatrists have spoken out against Trump, stating that he is a narcissist and mentally unfit for office. A number have even signed a *Change.org* petition, that has garnered over 35,000 signatures calling for the diagnosis of Trump. Thirty-five mental health professionals then took it a step further, and published an article in *The New York Times* declaring that Trump is emotionally unfit to be president of the United States without being personally examined by them.

The declaration of these mental health professionals violates the Goldwater Rule. The Goldwater Rule does not allow psychiatrists to speak publicly about the mental health of person of media attention unless

they have examined this person and have received permission to release a statement. This rule does not technically apply to psychologists, but they should also practice it to avoid further stigmatization of mental illness.

If these psychologists were actually concerned with President Trump’s well-being and were not politically motivated, they would have attempted to contact to President Trump for an examination. Or, had they felt that had sufficient evidence already to diagnose him, they would have contacted his office regarding his diagnosis. They would have offered steps on how to lessen the effects of his condition. But instead, they published a letter in *The New York Times*, diagnosing him with a mental illness that even the psychologist who helped create the criteria for diagnosing narcissism does not think Trump has. Allen Frances, who helped categorize narcissism, notes that “he may be a world-class narcissist, but this doesn’t make him mentally ill because he does not suffer from the stress and impairment required to diagnose mental disorder.” Simply put, he is selfish, but he’s not mentally ill.

Labeling Trump as mentally ill is a lame attempt to delegitimize the president. He is not mentally ill, and mental health professionals need to refrain from giving ill informed opinions on politicians. There are a fair amount of valid criticisms — from not allowing certain news organizations into press briefings to the expensive, illogical wall — that there is no need to resort to lowness of call-

ing President Trump mentally unstable. Even if his policies were not seriously flawed, mental illness is not something to hold against someone you disagree with.

Statistics from the National Alliance on Mental Illness show that one in five Americans suffer from mental illness, and less than half receive help. Mental health professionals know this, so the fact that they still label Trump as mentally unstable only adds to the damage. People need to be encouraged to seek help, and these insults only make it more difficult for those suffering to reach out.

Trump has his own history of ostracizing those who he disagrees with (let’s not forget he championed the birther movement against President Obama), but that does not mean anyone should stoop to this level. Mental illness is a real issue in America, and a group many of those who are against President Trump have vowed to protect. Labeling the President of the United States mentally ill, when he is clearly not, directly contradicts this. Americans seem to forget that while we all have difference in opinion, at the end of the day, we all want what is best for this great country. Let’s leave the name-calling and played-out insults outside of political discussions, and instead focus on the issues at stake under President Trump: immigration, healthcare, education, and most importantly, free speech.

Cassie Scanlon (@cscanlon) is a Staffwriter for The Tartan.

# Moving to Canada will not fix America’s issues

MADELINE KIM  
Junior Staffwriter

Wednesday, Nov. 9, 2016 was a day people from all over the world will remember as the day Donald Trump was announced as the 45th President of the United States. Of course, a sizable proportion of the nation was relieved to have averted a Clinton administration, but the majority felt waves of panic. Canada’s immigration website crashed due to “a higher than normal level of traffic.” Sure, the website may be available again, and the idea of crossing the border is tempting for many, but that does not mean moving to Canada is a good idea if one’s incentive lies in leaving the swamp that has consumed the White House.

Of course, “I’m moving to Canada” is not a sentiment that is unique to the 2016 presidential election. As Prime Minister Justin Trudeau pointed out to Elizabeth Plank of Vox News, this idea of moving to Canada has been a somewhat reoccurring theme, at least for the past few elections. However, the number of people from the U.S. immigrating to Canada do not necessarily line up to the results of the elections held in the twenty-first century. This trend, though, was broken with the election of President Donald Trump. Exact numbers are not known yet, but it has been estimated that about 139 people crossed through Emerson, Manitoba to seek asylum and a spike of people have crossed through Hemmingford, Quebec.

Canada seems appealing for many reasons: the lack of President Trump, affordable healthcare, and the charismatic Trudeau, to list a few. Our neighbor’s history shows that it is not the utopia that the stereotypes make it out to be. It is, however, a nation with a history we can learn from.

Prior to Trudeau, Canada was led by a conservative PM, Stephen Harper, for almost ten years. Some of the policies he implemented were at odds with many Canadians’ beliefs, such as the Zero Tolerance for Barbaric Cultural Practices Act — which banned polygamy, a practice that was already illegal — and the appeal to ban women from wearing the niqab. Although Canada had more progressive aspects such as marriage equality and single-payer healthcare, Harper undeniably went against the wishes of many Canadians throughout his administration.

On Wednesday, Oct. 20, 2015, Canada prevented Harper from completing his tenth year as PM by replacing him with Trudeau. Since then, the Canadian government has made many progressive strides such as dropping the appeal of the controversial niqab ban, making the Canadian cabinet more representative with an equal number of men and women, and opening Canada’s arms to welcome refugees.

As appealing as it is to cross the border, it is time to reflect on ourselves, look at what our neighbor has done, and create a course of action to make the upcoming years of a Trump administration the best they can be. Yes, as former President Barack Obama said, the sun will rise in the morning, but merely relying on our planet’s orbit around the sun is not going to miraculously implement political change. Instead of

envying the fruits of our neighbor, it is far more constructive to see how the fruits were harvested and try to plan out how to implement these lessons in our future.

What made the 2015 election in Canada so momentous was the voter turnout. Each province saw an increase and the overall nation saw a voter turnout of 68.49 percent — the highest it has been since 1993. On the other hand, the U.S. saw the lowest voter turnout since 1996. Approximately 55 percent of eligible voters actually casted their ballots. Many factors may have contributed to this low turnout, including ambivalence towards the results or inflexibility of workers’ schedules, but regardless, this demonstrates the importance of voting.

Had Canadians given up hope in not having the same PM in office, perhaps their government would have continued in the trajectory it was headed, but they realized that they had some degree of power over their government and changed their political route. This was not a fool-proof plan by any means, but the people did their part in participating in a democratic society.

America is a nation that prides itself in fair and free elections. But there is still work for us to do. Staying abreast with current events is another critical factor. However, instead of solely expressing discontent within our echoic chambers, respond to injustice by calling senators and representatives accordingly. The elections that deserve our attention are not simply limited to the presidential elections. We must go out and participate in our congressional elections and our state elections just the same. As influential as our president is, he is but one man, and thus we must ensure he has a strong team to guide our nation. This is the beauty of a democracy. We all have voices, but this gift shows its significance only if we use it.

As in many other instances, running away from a problem is significantly easier in the short-run. However, the consequences that we evade can conglomerate into something of grander proportions later on. As we have seen in our previous election, downplaying the chance of a Trump administration arguably led us to where we, as a nation, are today. Instead of packing our bags and leaving for a country that appears to be prospering and progressing in ways we appear to struggle, let us remind ourselves where the U.S. and Canada were approximately a year and a half ago — the U.S. had Democrat Barack Obama; Canada had Conservative Prime Minister Stephen Harper. Perhaps there have been some Canadians who were tempted to cross the border to leave a government that they did not approve of or found “cruel and unusual.”

Despite this adversity, they fought a peaceful political battle by banding together and voting for a PM who advocated for “real change now” throughout the campaign trail. Decreasing potential votes cannot help a democracy or a situation; in fact, it can exacerbate both. Let us allow Canada to be an example of how to stay calm and progress as a democratic society rather than a resort to which we can flee if things do not go our way.

# Democrats continue to resist serious changes

DNC CHAIRMAN from A4

ly fine in terms of his policy positions and ideas for the Democratic Party, he represents a brand of political thought that simply has not served Democrats well. Already, Republicans have branded Perez a “D.C. Insider,” promoting the 2016 election narrative that Democrats are out-of-touch and elite. After Perez’s victory, Trump tweeted, “Congratulations to Thomas Perez, who has just been named Chairman of the DNC. I could not be happier for him, or for the Republican Party!” Though Perez and Ellison were really pretty similar, voting for Perez silences the already disgruntled progressives within the Democratic Party and sends a loud and clear signal that the Democratic Party is not at all interested in listening to the American people or learning from its mistakes.

Albert Einstein is often attributed as defining insanity as trying the same thing again and again

but expecting a different result. Between 2008 and 2016, the Democratic Party installed establishment leaders like Debbie Wasserman-Schultz, who led the party to stunning and embarrassing electoral defeats across the country. In 2016, Democrats backed an establishment candidate for president who squandered the safest and easiest presidential race in memory. Democrats have started 2017 by once again allowing the inertia of the status quo to overwhelm the energy within their party at the grassroots and within the progressive wing. Until Democrats embrace the progressive elements within their party, boldly message why their agenda serves the American people, and soberly assess their shortcomings on policy, messaging, and organization, they will continue to lose.

Emmett Eldred (@eeldred) is a Staffwriter for The Tartan.  
Icon by Qingyi Dong, Staff Artist.



# Science & Technology

## Rally held in Boston to oppose Trump’s “anti-science” rhetoric

JOSH ANDAH  
*SciTech Editor*

Hundreds of scientists congregated to protest President Trump’s “anti-science” rhetoric on Sunday, Feb. 19. They demanded that he begin tackling climate change instead of ignoring it and overturn his gag-orders on the Environment Protection Agency (EPA). Others were present to protest Trump’s selection of Scott Pruitt to head of the EPA. Pruitt has previously been publicly opposed to the EPA and environmental protection. The rally was held at Copley Square in Boston, just outside the American Association for the Advancement of Science’s annual meeting.

Protesters held signs that read serious messages such as “Science Matters” and “Scientists Pursuing Truth, Saving the World,” and some with comical phrases like “Make America Smart Again.” One protester, Geoffrey Supran, said “We’re really trying to send a message today to Mr. Trump that America runs on science — it is the



Protesters come together at Copley Square in Boston, MA to oppose Trump’s policies concerning science and the environment.

backbone of our prosperity and progress.” This science rally comes amidst several demographics, including women, Democrats, the LGBTQ community, and the latino community protesting

some aspect of the Trump administration and its policies. One of Trump’s first actions as president was to place a gag-order on the EPA, preventing it from communicating with the public. This falls in

line with Trump’s views, as he has stated he believes global warming is a hoax invented by the Chinese to weaken the American economy. The Trump administration seems to care little for

the environment. This is evident in its decision to allow construction of the controversial Dakota Access Pipeline — the Obama administration had rejected its construction. Furthermore,

the appointment of ExxonMobil CEO Rex Tillerson as secretary of state confirms the new government’s rejection of clean energy initiatives. It is generally accepted that this presidential term will be a challenge for the science community. For the first time in eight years, environmentalists will have to fight their government to protect the environment effectively. Governmental science organizations, such as NASA, can expect their budgets to be tremendously slashed, as Trump funds his other initiatives like the estimated \$25 billion border wall and a costly mass deportation force. The government has steadily reduced its scientific and technological research budget since the space race. NASA, for example, receives 0.5 percent of the federal budget at the moment. This trend will continue under Trump, squeezing researchers even more into the corner. Despite the seemingly gloomy next four years for science, it has much to look forward to.

### PUGWASH

## Ranking the world’s most pressing issues poses dilemmas

RAY YE  
*Special to The Tartan*

This week at Student Pugwash, the science, technology, and society discussion club undertook one of the most difficult exercises under our jurisdiction: listing and ordering all the problems humanity needs to face. A daunting task for even the most stable of governments, the challenge was taken head on by our team and we delivered a final ranking of all the issues we thought were important. By the end of the meeting, we had a definitive list — sort of. Initially, we intended to make a short list of specific problems such as climate change, superbugs, and political extremism. However, in the first hour alone, we had produced up to 30 issues.

Therefore, it was necessary to view the task through a different lens. In an attempt to organize our list, we started categorizing the individual items, as many had overlapping root causes with potentially overlapping solutions. For example, the first category was concerned with ideological problems, such as extremism and xenophobia. Then, we moved on to another category: social issues, which includes problems like aging populations. Eventually, our list was reduced to six unordered issues that could be categorized easily. They were ideological, economic, social, public health, technological, and environmental issues. Next, we undertook the slightly less daunting task of

ranking these six groups. To lessen the potential for major disagreements, we began from the bottom with sixth most pressing issue almost unanimously agreed to be ideological in nature. This is because there is one major difference that ideological problems have from the rest, in that the solutions are less definitive and somewhat ambiguous. Questions of what constitutes a good ideology have plagued philosophers and politicians for centuries, and even now there is no clear way to solve these problems without some level of ethical breaching. Therefore, it was accepted that ideology would be something not easily solvable, and so it was placed sixth. The next to be put on the list was technology. Like

ideology, we also had the unified opinion to place it second to last, since there seemed to be fewer pressing issues within the category than in others. Furthermore, most of those under the technology umbrella were also in other categories as well. The fourth was health, which generated much discussion. This is because Pugwash recently covered the concerns over superbugs, which hinge on fears of a global epidemic without an effective cure. Unfortunately, even though fear of superbugs is a very legitimate concern, the lack of possible pathogens that could annihilate all humanity subtracted from the topic’s relative importance. Disease and disability also seemed to be more of an economic conundrum, with

some treatment applications correlating with personal wealth and social standing. We were then faced with the task of ordering the final three categories, namely economics, social, and environmental. Unfortunately, we never completed the ranking, as it became clear that these three generated the most controversy over rankings. In the end, we agreed to rank them all as first. The underlying connections between these three topics made isolating them challenging. Furthermore, varying time frames for their potential dangers and solutions confounded the ability to rank them. The arguments for the ordering of these final three topics were impassioned and insightful, digging into the

complexities of what exactly it means for one catastrophe to be more pressing than the next. Others began to reject the established ordering of the fourth, fifth, and sixth topics as well. By the end of the meeting, we certainly had not compiled the definitive, ordered list of our planet’s most dire needs. In fact, there are hundreds of extinction-level events that are more than possible of occurring. We accomplished far more meaningful goals along the way. We explored the structure, complexities and relationships between the trials of humanity. By categorizing and considering these topics, the unfathomable challenges of the 21st century seemed more, if only by a bit more, understandable.

### SCITECH BRIEFS

#### Seven Earth-sized planets found at nearby dwarf-star

Seven Earth-like planets have been found orbiting a dwarf-star called TRAPPIST-1, 40 light-years away. The planets possibly contain oceans of water, meaning they could host extra-terrestrial life. The planets were discovered by an international team of astronomers, led by Michael Gillon of the University of Liege in Belgium, that studied the star for extended periods. Astronomers have a series of techniques for discovering exo-planets (i.e. planets outside the solar system). They can observe how the luminosity of a star drops when a planet passes in front of it. However, this requires the Earth, the planet, and the host star to be on the same plane. Another methods involves observing the tug planets exert on their sun, which causes the star to wobble. Information about the mass and distance of the planets can then be deduced. The latter method, however, only works for large planets, such as gas giants (like Jupiter). Finding smaller planets, such as Earth-sized ones, is much harder and an astounding feat.

Source: *New York Times*



#### Sexual harassment and sexist culture at Uber is exposed

Former Uber software developer Susan Fowler wrote in a blog post about the sexual harassment she encountered while working at the ride-sharing company. Uber has faced many controversies since its launch in 2011, from incessant cases of sexual assault by its drivers to taxi driver protests and blockage from operation in some cities. This latest news break only continues the theme and shows how far the company still has to go to improve conditions for its customers and employees. Uber’s CEO Travis Kalanick has since apologized for the the company’s work culture issues after the blog post raised concerns. Reports of sexist working conditions for women in tech have sprung up continuously. In September 2016, an Apple employee revealed the sexist working conditions at the company, which included rape jokes, misogyny, and sexual harassment. In the rest of her blog post, Fowler chronicles how human resources (HR) at Uber ignored her reports of sexism.

Source: *Bloomberg*



#### 5G will be a central topic at the Mobile World Congress

TelCom companies are about to take the next step after 4G. By about 2020, 5G will be the next data communication standard, and it will be blindingly quick. It’s about more than mobile phone networks, though. 5G will be the backbone of faster wi-fi networks in homes, drones, self-driven cars, virtual reality, and the internet of things. Speeds of up to 10 Gbps (Gigabits per second) will be commonplace, allowing users to download the largest files (think *Lord of the Rings* film trilogy) in seconds. At the Mobile World Congress in Barcelona next week, 5G is expected to be a central topic. Mobile companies are already testing new infrastructure that will support the faster bandwidth. 5G will operate in the high-frequency 30 GHz and 300 GHz bandwidths, known as the millimeter wave spectrum. Even though high frequency waves come with faster data transfer, they also have issues bending around obstacles and traveling as far as the lower frequencies used for 4G LTE. 5G thus has long way to go.

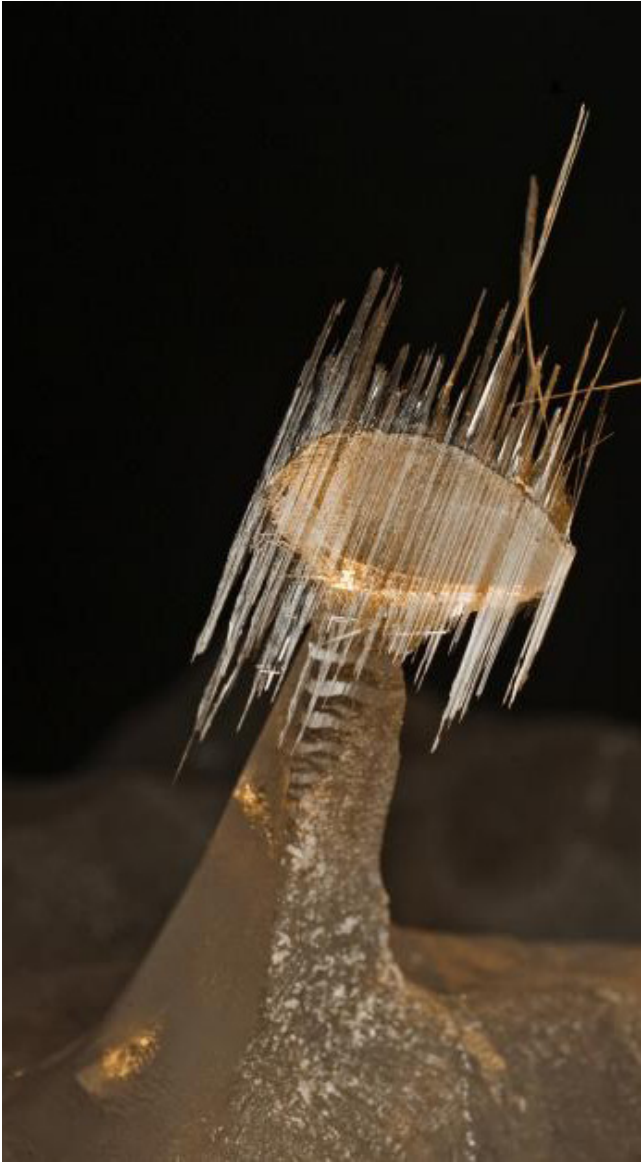
Source: *Wired*



#### Microbes survived inside cave crystals for 50,000 years

Microbes that live off iron and sulfur were found live in pockets of fluid within the crystals of a cave in Mexico. The researchers who found the microbes say they are still alive after a 50,000 year hibernation. This discovery continues the trend of microscopic life on Earth managing to survive in the harshest environments. “This has profound effects on how we try to understand the evolution of microbial life on Earth,” says Penelope Boston, the director of the NASA Astrobiology Institute. Boston’s teams collected samples of the dormant microbes in 2008, awakened them and grew cultures. The microbes were distinct from any forms of microscopic life on Earth at the present. The resilience of these microbes may present a problem for the search for extraterrestrial life. If they are present on space exploration equipment and survive the journey, they could contaminate other worlds upon contact. The durability of the microbes will undergo more studies.

Source: *National Geographic*



A gypsum crystal filled with microbes reflects light inside explored cave.

Compiled by  
JOSH ANDAH





HOW THINGS WORK

# SpaceX’s reusable rockets make space travel much cheaper

EMMA FLICKINGER  
Staffwriter

Launching things into space is expensive — really expensive. A rocket costs more than a commercial jet. But unlike jets that make thousands of trips before being retired, rockets are used only once because of the extreme stress and temperatures involved in leaving and re-entering the atmosphere.

SpaceX wants to change that. Founder Elon Musk believes that reusable rockets will eliminate the prohibitive cost of space travel and allow space travel to become commonplace.

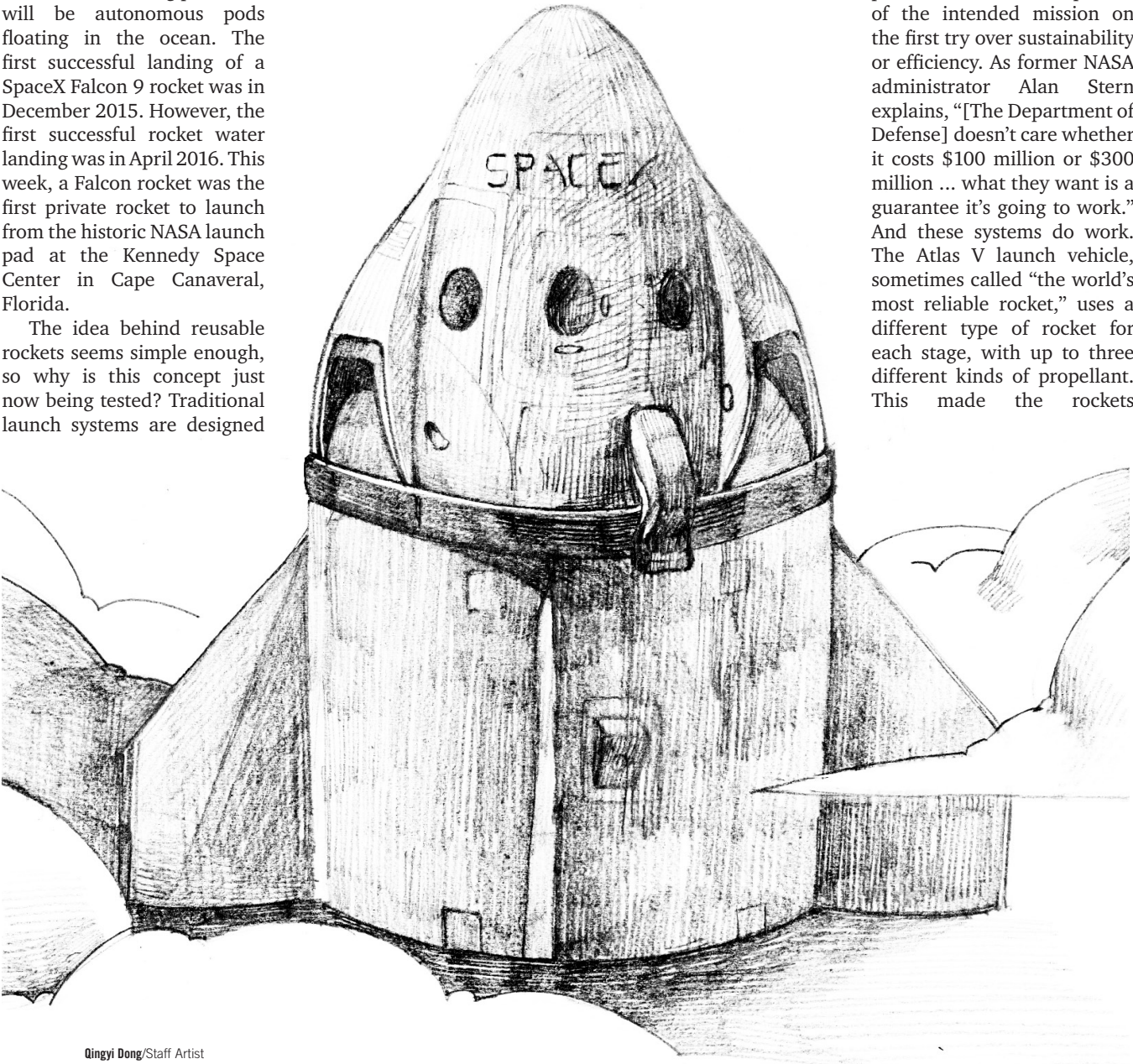
Most modern rockets are multi-stage, built of multiple parts that each have their own engines and fuel. When each stage runs out of fuel, it falls back to Earth, and the next stage begins burning its propellant. The lighter mass makes it easier to accelerate the payload to escape velocity.

This system works well for getting things into space, but isn’t very efficient or cost-effective. The jettisoned rocket stages essentially become trash, cluttering Earth’s orbit or polluting its oceans. New rockets are then constructed for tens of millions of dollars.

SpaceX’s rockets don’t operate this way. After separating from the payload, instead of falling back to Earth, the first stage rocket decelerates itself with bursts of fuel and uses fins to steer onto a landing platform. When

reusable rockets become commonplace and are more widely adopted, according to Musk, these landing platforms will be autonomous pods floating in the ocean. The first successful landing of a SpaceX Falcon 9 rocket was in December 2015. However, the first successful rocket water landing was in April 2016. This week, a Falcon rocket was the first private rocket to launch from the historic NASA launch pad at the Kennedy Space Center in Cape Canaveral, Florida.

The idea behind reusable rockets seems simple enough, so why is this concept just now being tested? Traditional launch systems are designed



Qingyi Dong/Staff Artist

to maximize performance and reliability. Government designers and engineers prioritize the safe completion of the intended mission on the first try over sustainability or efficiency. As former NASA administrator Alan Stern explains, “[The Department of Defense] doesn’t care whether it costs \$100 million or \$300 million ... what they want is a guarantee it’s going to work.” And these systems do work. The Atlas V launch vehicle, sometimes called “the world’s most reliable rocket,” uses a different type of rocket for each stage, with up to three different kinds of propellant. This made the rockets

extremely powerful and precise, but largely expensive to manufacture and fuel.

The Falcon rocket is designed to minimize cost — a liberty SpaceX can take as a private company. All its engines are the same kind, running on liquid oxygen and RP1, a fuel made from refined kerosene.

The Falcon’s two stages are the same diameter and made from an aluminum-lithium alloy. The use of the same material for each stage reduces manufacturing costs.

SpaceX also keeps costs down by manufacturing its own engines in-house. The Merlin engines designed for the Falcon use a needle-like device called a pintle to inject propellant to the combustion chamber.

According to Tom Mueller, SpaceX propulsion chief, it’s cheaper than typical rocket engines, which use a spray instead, and also less likely to cause explosions or other combustion-related accidents. The company also developed its own reusable, cost-effective heat shield technology, PICA-X, with help from NASA.

PICA-X, Merlin engines, and every other component of the Falcon rockets are designed to be as durable as possible to withstand reuse for trips back to Earth, journeys to the moon, and travel beyond. Musk’s ultimate goal is to use his rockets to settle humans on Mars by 2030. This will only be a possibility with quick innovation.

RESEARCH SPOTLIGHT

# Terrorism research at Carnegie Mellon focuses on objectivity

JULIA NAPOLITANO  
Staffwriter

Defining terrorism is often difficult and vague, especially because people consider it to mean different things. One man’s terrorist is another’s freedom fighter, after all. Oftentimes, it is even more difficult to separate fact from political agenda. Terrorism is generally thought to be the unlawful use of violence and intimidation, especially against civilians, in the pursuit of political aims.

In an article, titled “Challenges in researching terrorism from the field,” published in *Science Policy Forum* last month, experts from different fields explored

several different aspects of research into terrorism.

These researchers include Carnegie Mellon University’s Baruch Fischhoff, a decision scientist and Howard Heinz University professor in the Institute for Politics and Strategy, and Department of Engineering and Public Policy; Scott Atran, an anthropologist at Paris’ Centre National de la Recherche Scientifique and cofounder of ARTIS International; Robert Axelrod, a University of Michigan political scientist; and Richard Davis, a former White House policy advisor now at the University of Oxford.

Acknowledging that there are fundamental aspects of terrorism that remain unclear,

they asked the questions, “What identifies terrorists before they act? How do they radicalize? What motivates their violence? When do they act? What countermeasures are most effective?”

They attribute the lack of answers to these questions to flaws in how terrorism is currently researched. The scientists propose an alternative design to researching terrorism, one driven by theoretically informed field research integrated with policy-making. They aim to use field data to better inform and test hypotheses related to terrorism.

“Bridging theory and practice is always challenging, and particularly when diverse

forms of expertise are needed, and the people who have it lack opportunities, and perhaps incentives, for collaboration,” said Fischhoff in a university press release. “Research that overcomes these barriers is a hallmark of Carnegie Mellon and of the projects featured in our article. It is essential if the social sciences are to make their essential contributions to the fundamentally human problems that terrorism reflects and represents.”

More advanced research into how terrorists think may be the key to preventing future tragedies. Ensuring the legal and ethical standing of terrorism research through national review boards will also legitimize


the information, as opposed to obtaining information through unreliable means such as torture.

“To be more successful in combating terrorism, governments should look at how they can build research capacity that is properly funded, independent of governmental interference, and grounded in systematic data collection, checking and analyses that is devoid of politics,” said Atran in a university press release.

Terrorism is a recurring topic in today’s political climate. Many have seen the havoc terrorist organizations can reek in countries far from the war-torn areas. The memory of Sep. 11, 2001 is fresh

on many Americans’ minds. Unfortunately, politicians play on the electorate’s fears and strong emotions. Such subjectivity cannot make its way into research.

Interestingly, researchers have found that terrorism is one of the worst methods of achieving a political goal. In a book called *Why Civil Resistance Works: The Strategic Logic of Nonviolent Conflict* authored by Erica Chenoweth, a political scientist at Columbia University, and Maria Stephan, a senior fellow at the U.S. Institute of Peace, it is revealed that terrorism achieves its political aims only about 25 percent of the time, yet nonviolent methods are successful half the time.



**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. 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.

Applicants should have finished their sophomore year by the start of the program. 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. 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**

**Housing is included (in the PGSS dorm) as well as a food allowance.**

**TA/Counselor duties begin Wednesday, June 28, 2017, end Sunday, August 6, 2017.**

Applications are available from the PGSS Office in DH A301 or may be downloaded (pdf format) from the PGSS web site: <http://sciences.pa-gov-schools.org/>

Contact the PGSS Program Office at (412) 268-6669 or e-mail [pgss@cmu.edu](mailto:pgss@cmu.edu)

**Application Deadline: March 31, 2017**  
(Applications may be accepted after the deadline until all positions are filled.)



**FALL 2017  
INTERNSHIP**

**Research and create an exhibit**

**Apply by April 10, 11:59 pm**

More information at [www.cmu.edu/posner-center/internship](http://www.cmu.edu/posner-center/internship)



**\$3,000, option for credit  
15 hours/week for 15 weeks**



# Synthetic nanoparticles achieve complexity level of proteins

**JOSH ANDAH**  
*SciTech Editor*

Researchers at Carnegie Mellon University showed that nanoparticles can achieve similar complexity to that of protein molecules. This potentially opens the window to the production of more robust medical drugs, computer processor chips, and materials. Rongchao

Jin, a chemistry professor, conducted the study in his lab where the complex nanoparticle structures were made. Nanoparticles are one to one hundred nanometers in size and can be manually ordered to create molecule-sized structures such as incredibly thin tubes. In nanotechnology, a nanoparticle is defined as a group of particles that

behaves as a unit in terms of its transport and properties. Researchers noticed self-forming patterns in some nanoparticles made from Au-133 and Au-246 — gold isotopes. The experimentation thus aimed to discover the cause of these specific patterns, especially those that resemble natural patterns. The study revealed that the nanoparticles bond by

maximizing interactions between atoms. The particles then match to others with symmetric crystal surface patterns. This process repeats until a high-complexity structure is formed — one that resembles the complexity of protein molecules. Nanoparticles have several uses. They can be used for drug and gene delivery systems, tissue engineering, detection

of proteins, probing of DNA structure, and the creation of fluorescent biological labels in disease research. One use of nanoparticles that excited researchers most is in targeted treatment of diseases. By ordering a specific matrix of nanoparticle structure, drug manufacturers could create drugs that are less destructive to healthy tissue and reduce side effects, yet attack toxic

cells and viruses more effectively. The study was funded by the Air Force Office of Scientific Research and the Camille Dreyfus Teacher-Scholar Awards Program. Other authors of the study include Carnegie Mellon graduate student Yuxiang Chen, University of Toledo's Kristin Kirschbaum, and Kelly J. Lambricht.

# Write for SciTech

*scitech@thetartan.org*

*photo by ciat*



## Carnegie Mellon University



# Annual Update with President Subra Suresh

**MARCH 2, 2017**

12:30 – 1:30 p.m. | **Remarks**  
1:30 – 2 p.m. | **Light Reception**

Rangos 1 and 2  
Cohon University Center

President Suresh invites the Carnegie Mellon community to hear the university’s many recent achievements and milestones as we work together to enhance the CMU Experience for students, faculty and staff.

[www.cmu.edu/leadership](http://www.cmu.edu/leadership)



Carnegie Mellon University

College of Engineering

FALL 2016 DEAN’S LIST

FIRST-YEARS

Phillip Ahn	Kenan Danon	Samuel A. Henry	Haoyue Liang	Nina Prakash	Deanyone Su
Luca G. Amblard	Cyrus Bomi Daruwala	Aidan J. Honnold	Sitong Lin	William Kaiyin Qian	Wendy C. Summer
Zixi An	Lavonca L. Davis	Jeffrey S. Huang	Crystal T. Lin	Maxwell Rae Chu	Richard Tang
Gage W. Anderson	Lisanne M. De Groot	Ze Ming Benjami Huang	Emmalyn M. Lindsey	Abinaya Rajesh	Noah H. Thompson
Frank Andujar	Xiaoyan Dong	Michael Jacobs	Liming Liu	Udit A. Ranasaria	Ian R. Tilton
Jiayu Bai	Qingyi Dong	Tara Jawahar	Kristie A. Lord	Arabella V. Reece	Alana M. Toy
Alexander S. Baikovitz	Henry Du	Yoo Won Jeun	Tianyuan Lu	Rachel L. Reolfi	Justin H. Tunis
Joseph J. Brauch	Brandon N. Dubner	Maxwell S. Johnson	Kai Yuan Lung	Andrew J. Rosenfeld	Isabella J. Vendetti
Patricia L. Brosseau	Rohini Pratyusha Duvvuri	Michelle Jamie Karabin	Eugene Y. Luo	Arka Roy	Timothy Daniel Violino
Molly J. Browning	Alexis N. Elliott	Anthony M. Kennon	Maxwell J. Lutwak	Linden E. Runels	Kai Wen Wang
Dhruva J. Byrapatna	Abby Fedus	Mia N. Keyser	Avishi Malaviya	Chandler Sabourin	Xingsheng Wang
Jingxi Cai	Ziyi Feng	Ahmet Y. Kilinc	Ramachandra Mannava	Jack M. Sampiere	Tessa S. Weeden
Nicholas J. Calzolano	Michael F. Fernandez	Min Gun Kim	Eric W. Maynard	Kylee T. Santos	Fan Yan
Tomas F. Campos	Nikolai Alexander Flowers	Ashika K. Koganti	Joel G. Miller	Tara M. Sengupta	Siqing Yang
Therese Chan	Xining Gao	Keith Kozlosky	Scott A. Mionis	Ishan D. Shah	David Z. Yang
Kexin Chen	Christopher M. George	Carolyn J. Ku	Renee A. Morton	Tanvi J. Shah	Yuneil Yeo
Yuanzhe Chen	Jacob G. Gobbo	David M. Landi	Christopher Y. Ng	Yuyi Shen	Michael C. You
Katherine Choy	Adriana Goodman	Hye Rim Lee	Angela N. Nguyen	Katie Y. Shi	Shu You
Hojeong Chun	Manu Gopakumar	Joshua H. Lee	Gillian M. Nolan	Shivani R. Shukla	Elizabeth Lyn Young Li Wen
Bryant J. Chung	Oshadha V. Gunasekara	Sojeong Lee	Malia E. Okamura	Rachel R. Sneeringer	Spencer W. Yu
Connor B. Clayton	Vrinda Gupta	Shanley F. Lenart	Chakara Owarang	Talia J. Solomon	Xinran Yuan
Howard C. Coffin	Samuel A. Hawke	Jeremy P. Leung	Aarohi Palkar	John L. Solomon	Chun Ming Jeffr Zhang
Eliana B. Cohen	Bowen He	Serris N. Lew	Emily G. Parks	Kye V. Stapleton-Gray	Joe Y. Zhao
Andrew C. Conduff	Sharika J. Hegde	Xinye Li	Dominique Petach	James P. Stumpf	Xun Zhou

SOPHOMORES

Eliana A. Abbas	Tianbo Chen	Yue Han	Kimberly Jinxia Lim	Christina H. Ou	Yufan Wang
Da Young Ahn	Perry W. Cheng	George A. Harter	Hailang Liou	Doria Pei	Samantha J. Wong
Zejie Ai	Isabelle Chevallier	Seongkweon Hong	Christopher J. Littrell	Adithya Raghuraman	Eli L. Workman
Manini P. Amin	Wai Sing Ching	Terence Y. Huang	Beichen Liu	Aditya Ranade	Linda Xia
Fabian Aristizabal	Regine I. Choi	Calvin R. Hubbard	Zhichu Lu	Hannah E. Ray	Zhongmin Xie
Michelle A. Bai	Theodore Chou	Ariela H. Immordino	Charlie W. Ma	Christopher A. Reed	Yiqin Xu
Gaurav Balakrishnan	Christopher D. Cortez	Shuli Jiang	Yuqing Ma	Evelyn Reuss	Derek Y. Yan
Gabriel B. Bamforth	Brian M. Davis	Sunjeev J. Kale	Zachary P. Masciopinto	Jack M. Ronayne	Qian Yang
Ronit Banerjee	Kevin M. Devincentis	Kevin D. Kaufman	Nicole B. Matis	Berk Sahin	Yi Lun Yu
Gabriel M. Bay	Anyi Diao	Madison E. Kratzer	Thomas P. Matson	Sribhuvan Sajja	Boyao Yu
Sanjna Bhartiya	Dalu Ding	James W. Kromka	John M. Mccambridge	Simone Schneeberg	Sihao Yu
Aayush Bhasin	Yilin Dong	Matthew S. Kubala	Michael C. Messersmith	Haowen Shi	Justine A. Zeller
Aayush Bhutani	Xiong-Fei Du	Kimberly K. Lamberti	Jeannie E. Michaels	Xiang Shi	Stanley Z. Zhang
Yutong Bi	Max B. Farfel	Jacky Lao	Gregory P. Miller	Adeline Shin	James H. Zhang
Katja S. Brackelmanns-Puig	Shannon N. Finnerty	Chung S. Lee	Xuanyu Min	Daveanand M. Singh	James H. Zhang
Victoria R. Britcher	Jack A. Forman	Christopher Lee	Syed R. Mohideen	Madison R. Stiefbold	Guodong Zhao
Mari-Therese S. Burton	Katherine J. Forrester	Yujun Lee	Mark D. Moody	Eric H. Sun	Yifan Zhao
Teddy X. Cai	Raymond H. Galeza	G Ping Lee	Evan L. Myers	Yuyan Sun	Tian Zhao
Qilin Cao	Angela F. Gao	John N. Lenney	Amukta P. Nayak	Kaizad F. Taraporevala	Zhen Zhou
Christie Chang	Evan J. Glaser	Nathan M. Levin	Anne Noonan	Jacob A. Vries	
Wenting T. Chang	Raunak Sanjay Gupta	Siliang Li	Alexander A. Noring	Liam J. Walsh	
Junye Chen	Young Jean Han	Jasmine Lim	Natsuha Omori	Di Wang	

JUNIORS

Vasu Agrawal	Ian J. Donovan	Emmett D. Horton	Hunter D. Lawrence	Jae Gang Oh	Ellie Shin	Cindy Weng
Edward S. Ahn	Edward J. Escandon	Luyao Hou	Ji Yoon Lee	Raymond J. Paetz	Leo Sifringer	Samuel T. Westenberg
Fatema Almeshqab	Haocheng Fang	Lee Hsu	Andrew S. Lee	Matthew J. Palmer	David A. Simon	Richard C. Willison
William F. Anstett	Yuanyuan Fu	Danielle Hu	Zesheng Li	Aakash J. Parekh	Mehar Singh	Sarah E. Winget
Katherine Z. Au	Steven K. Fu	Felix Huang	Evan K. Li	Genevieve L. Parker	Natha Singhasaneh	Joschka Winz
Michael S. Auda	Varun M. Gadh	Rundong Jiang	Jun Yang Li	Yushuan Peng	Cameron M. Smith	Roxana B. Wolfson
Bryant J. Backus	Keval Gala	Lingbo Jin	Ai Li	Rohit R. Pillai	Joshua M. Solarek	Michelle J. Wu
Jiyeon Bae	Avishek Ganguli	Nikhil Jog	Jiaying Li	Kai Ying Pong	Samantha Nicole Speer	Xiang Xu
Palak Bajaj	Eileen Ge	Taigyu Joo	Pedro L. Lima	Ruben Puebla Gutierrez	Anirudh Sridhar	Yilin Yang
Rahul Bhardwaj	Calvin Giroud	Suji Kang	Yu Chuan Lin	Kira M. Pusch	Mario J. Srouji	Po-Yu Yang
Anil Bilgin	Joshua B. Goldstein	Anand A. Kapadia	Bowei Liu	Danielle K. Quan	Daniel A. Stiffler	Can Yang
Kyle J. Brittain	Felicity Gong	Neha Kapate	Reid E. Long	Rohan P. Reddy	Jeremy T. Summers	Benjamin V. Yates
Emily M. Carvalho	Raghav Goyal	Sarah A. Karp	Jennifer N. Lott	Eric P. Reeder	Yuzhe Sun	Jonathan S. Ying
Gaurav Chatterjee	Sean C. Graff	Zeleena G. Kearney	Jing Mao	Hunter T. Rideout	Indorica Sutradhar	Alexander Yu
Justin Y. Cheng	Ning Guan	Omkar U. Kelkar	Catherine Markuson	Renee T. Rios	Hwee Min Tan	David Yuan
Benjamin Chin	Devin E. Gund	Allan R. Khariton	Matthew Landon	Scott M. Rohrer	Emily C. Tencza	Adam Z. Zeloof
Mark Cho	Tushita Gupta	Christine H. Kim	Martone	Isabel A. Roscoe	Ethan F. Tseng	Kevin L. Zhang
Nikhil Choudhary	Cari N. Hartigan	Joseph J. Kim	Nicholas G. Medich	Ian S. Rosenberg	Kelly C. Underwood	Jeffrey H. Zhao
Timothy R. Cote	Zecheng He	Justin T. Kim	Benjamin J. Mersman	Rodrigo Royo	Alexandra C. Vendetti	Biqi Zhao
Nicholas Desmornes	Edward W. Healy	Jae Yeon Kim	Sarah M. Miholer	Roshan S. Sajjad	Niclas Voedisch	Kevin Zheng
Alexandre Andre	Kai J. Hernandez	Yikyoom Kim	Alexandra C. Moy	Nicholas Scherl	Nathan J. Walko	Yingtian Zhu
Devienne	Sebastian Hernandez	Morgan J. Kontor	Namrita P. Murali	Cameron C. Selby	Rongzhi Wan	Kezheng Zhu
Michael R. Dibacco	Edward R. Holthaus	Joshua Korn	Amolak Nagi	Naveen Setlur	Bethany T. Wang	Aron Zingler
Zihao Ding	Natalie E. Hong	Anthony A. Kuntz	Clara J. Nelson	Vikram R. Shanker	Jia Xing Wang	

SENIORS

Samer Abdelmoty	Neil M. Carleton	Jacqueline H. Gibbons	Kimberly A. Klausing	Luke L. Nealley	Christine M. Rooney	Julia L. Tucker
Justin R. Abel	Alexandra J. Cerny	Katrina B. Gualtieri	Natalie K. Kronfli	Owen J. Norley	Alexander J. Russell	John J. Urbanek
Penelope E. Ackerman	Bill Chang	Nickolas R. Halbedl	Yae Sun Kwak	Ximena Olivares	Samuel A. Rylowicz	Jose L. Veintimilla
Vishal V. Ahuja	Paul Chao	Evans M. Hauser	Scott T. Landes	Oluwafemi A. Olukoya	Brandon K. Schmuck	Shiv Wadwani
Roberto E. Andaya	Andrew J. Chellman	Wentao He	Kyung Min Lee	Kyle S. O'Rourke	Marissa C. Schwartz	Alexander W. Walenczyk
Ashrith V. Balakumar	Alex Y. Chen	Hannah M. Hoffert	Jun Yi Edmund Lee	David A. Ott	Nikita D. Sharma	Allan Wang
Anna C. Bandecca	Chi Chen	Maya M. Holay	Dianna Li	Gordon T. Pace	Christopher J. Shkil	Kevin Y. Wang
Jaeho Bang	Kevin N. Chiu	Erin C. Hsi	Brian J. Li	Karthic A. Palaniappan	Samantha J. Shoemaker	Julia Wang
Timothy Barber	Raisa N. Chowdhury	Susie Hwang	Sabrina Meili Liu	Paul Y. Pan	Miles L. Smith	Jamei T. Wang
Jacob D. Bartel	Gustavo Antonio Costa	Neil K. Jassal	Joel Loo	Kyung Ho Park	Margaret A. Smith	Yifan Wang
Debomita Basu	Gillian B. Crews	Sara N. Johnson	Jordyn N. Lopez	Ryan M. Pearce	Daniel Sogunro	Christopher J. Wei
Kate J. Beittenmiller	Hope Dorothy Dohner	Jennifer G. Jung	Hsuan Ma	Aaron J. Perley	Rebecca K. Stokes	June E. Williams
Frank A. Bello IV	Jonathan C. Dyer	Christopher D. Kaffine	Rinko L. Maeshima	Jonathan B. Perry	Andrew Sun	Evan A. Wood
Austin J. Berg	Jason L. Dynes	Lumumba S. Kamguia	Isaac J. Manjarres	Alexander J. Peterson	Shubhangam Tekriwal	Alexander G. Woodward
Anirudh M. Birla	Melyssa A. Eigen	Doo Won Kang	Pragna Mannam	Zachary N. Piscitelli	Maxwell R. Telmer	Sang Xu
Zachary M. Blonder	Batuhan Erturk	Alexander M. Kearns	Robert L. Maratos	Anand Prasanna	Rachael E. Thomas	Elizabeth M. Yan
Heather G. Bowman	Jessica M. Fagundo	Ahmad J. Khanzada	John A. Mascaro	Aishwarya Prem Renu	Nathaniel B. Thompson	Yuxuan Yang
Kyle Scott Branigan	Andreas M. Fatschel	Yash V. Khullar	Kiran S. Matharu	Carol Qu	Aaron Tian	Patrick H. Yang
Jacob L. Brooks	Nadia P. Florman	Sunghoon Kim	Alyssa L. Meyer	Paul J. Ramirez	Rebecca L. Tien	Grace M. Yee
Nikita Budwal	Joshua D. Fuhrman	Julie J. Kim	Cecilia G. Morales	Lauren M. Relyea	Stephanie C. Tjan	Aziz Yousif
Nicole A. Bustos	Turga Ganapathy	Allison K. Kirkby	Rudina Morina	Justin P. Rodenburg	Nicole R. Tom	Anna M. Zhang
Stephanie F. Cantos	Claire A. Gianakas	Kiril Stoyanov Kirkov	Kincaid C. Murray	Mariana E. Rodriguez	Hannah N. Tomio	Zhaodong Zheng
						Tangrui Zuo







SPORTS BRIEFS

Women’s Basketball

A 22-point fourth quarter helped the Carnegie Mellon women’s basketball team rally from a seven-point deficit to top Case Western Reserve University (CWRU) 72–65 in University Athletic Association (UAA) road actions Saturday afternoon.

In the win, senior center and forward Lisa Murphy tied the UAA record for rebounds with 24 and set a new offensive rebounding record with 12.

The Tartans finished the season 18–7 overall and 7–7 in the UAA.

Murphy’s record rebounding afternoon included 34 points, 12 of which she scored in the fourth quarter during the Tartans’ rally. The senior finished the afternoon making 13 of 15 from the field and 8 of 10 from the free throw line to finish the UAA season with a record 77.2 percent effort from the field in the 14

league games. Joining Murphy in double figures for the day was a pair of first-years with 11 points each; forward Katharine Higgins and guard Makayla Filiere.

The Tartans held a 16–12 lead at the end of the first quarter after scoring the last five in the final 18 seconds on a baseline jumper by first-year guard Dominique Petach and a three-pointer by Filiere at the buzzer. The Tartans spread the ball around assisting on six of their seven baskets and did work on the glass hauling down 15 boards to eight for CWRU. Murphy led with 10 rebounds.

The Spartans took back the lead 21–20 with a jumper and a three-pointer on the next possessions, closing a 9–0 run for the home team and giving CWRU their largest lead of the game at 24–20 with 4:15 to play in the half.

The Tartans tied it at 24–24 with a string of free throws, but CWRU answered with a

shot from behind the arc and led by five before Filiere hit a jumper to cut the deficit to 33–30 heading into the locker room.

The Spartans made 5 of 11 from long range in the second quarter and eight for the half while the Tartans cooled down from the field in the second quarter to finish the half shooting 37.5 percent compared to 43.8 percent through the first 10 minutes.

A 10–2 run by the Spartans to open the third quarter pushed the home team’s lead to 43–32 with 2:11 gone by. An 8–1 run sparked by senior guard Jackie Hudepohl’s three-pointer pulled the Tartans within three, 46–43, but another three-pointer was the answer for the Spartans.

The Spartans held the lead until 3:19 to go in the game when Murphy put in her 10th point of the quarter to give Carnegie Mellon a 64–63 lead. After a Spartans layup, Murphy scored again to give

the Tartans the lead for good as they hit 6 of 8 from the free throw line in the last minute to earn the comeback win.

The Tartans cruised to a 54–26 dominance on the glass which included 18 on the offensive end for 23 second-chance points.

The Tartans also finished the game shooting 40.7 percent to 36.4 percent for the Spartans.

The Tartans’ postseason fate is now in the hands of the NCAA selection committee as they’ll wait to see if they receive an at-large bid for the second straight season. The announcement will be made Monday afternoon.

**Men’s Basketball**

A 23–12 game-closing run by the Carnegie Mellon men’s basketball team led the Tartans to a 79–69 victory at CWRU on Saturday evening to finish out the season. Senior forward Jack Serbin led the

Tartans, now 14–11 overall and 8–6 in the UAA, with 28 points and 19 rebounds. The Spartans finished the year at 8–17 overall and 3–11 in the UAA.

Joining Serbin in double digits for the Tartans were senior center Chris Shkil and junior guard Ryan Maha with 12 points apiece. Serbin also led the team in assists with four while Maha and first-year guard Colin McNeil each dished out three assists.

Serbin had the hot hand early for the Tartans making 5 of 7 from the field to tie the game at 18–18 with just less than 10 minutes to play in the half. After the Spartans had a 10–2 run, the Tartans answered to take their first lead since the 12:48 mark, 30–28, behind eight points from Serbin.

The teams traded baskets for the final four minutes with a Spartans three-pointer at the buzzer, giving CWRU a 36–34 advantage at the break.

Serbin led all scorers with 19 points at halftime on 8 of 12 shooting from the field, as the Tartans shot 42.4 percent and the Spartans 37.1 percent.

The second half was another back-and-forth affair until first-year David Huber drained a three-pointer to give the Tartans a 59–57 lead with 8:57 to go. Huber knocked down another trey on the next possession for the Tartans, who held the lead the rest of the way, pushing it to as many as 12 on back-to-back layups by Shkil with 2:36 to go.

The Tartans were even better from the field in the second half, making 14 of 28, to finish the game shooting 45.9 percent.

The three-point arc was huge for the Tartans in the second frame, as the Cardinal and Gray made 5 of 9 from long range to finish with six made for the game.

Compiled by  
IAN TANAYA

FEATURE PHOTO



**Top:** Senior center and forward Lisa Murphy prepares a shot in a record breaking day for offensive rebounds.  
**Bottom:** Senior forward Jack Serbin has some fun on the court in one of his last games playing for the Tartans.

# PARTICIPANTS WANTED: PSYCHOLOGY RESEARCH STUDY

Earn \$25

2-hour study

ELIGIBILITY:

18-30 yrs. old

In good health

Fluent in English

Perform behavioral tasks while we examine your heart rate and blood pressure

For more information, call:

The Behavioral Health Research Lab (412-268-3029)

Note: Unfortunately, our lab is not wheelchair accessible.



# Sports

## Tartans find success at UAA Indoor Track Championships

IAN TANAYA  
Sports Editor

The Carnegie Mellon men’s and women’s track and field teams took part in the 2017 University Athletic Association (UAA) Indoor Track and Field Championships on Saturday and Sunday. The Tartan men finished in first place and claimed their second ever UAA championship, while the women finished in fifth.

The teams competed against Brandeis University, Case Western Reserve University, Emory University, New York University, the University of Chicago, and Washington University in St. Louis. The competition was hosted at Brandeis University.

The men’s team led the pack after the first day of competition with 39.33 points.

Junior Jacob Schofel was crowned the UAA Champion in the weight throw with a toss of 15.59 meters. Sophomore Kenny Sladick placed second in the weight throw after recording a career-best toss of 15.30 meters.

Three Tartans recorded points in the high jump. Sophomore Reed Farber cleared the bar at 1.89 meters to place second while junior Cameron Smith and senior Don Boyer both cleared the bar at 1.84 meters. Smith was awarded fourth place and Boyer sixth on a judges decision.

Senior Curtis Watro, sophomore Cam Wilkerson, sophomore Isaac Mills, and senior Owen Norley raced to a second-place finish in the distance medley relay with a time of 10:07.18.

Senior Ryan Archer earned

points for the Tartans on Saturday on the track after placing fifth in the 5,000-meter run. Archer crossed with an indoor career-best time of 15:05.61.

On Sunday, the Tartans finished the meet with 116.33 points. Junior Tommy Mansfield broke the school record in pole vaulting after clearing the bar at 4.56 meters and placing third.

Two individuals joined Schofel as UAA champions on Sunday following Schofel’s victory in the weight throw on Saturday.

Norley won the mile with a career-best indoor time of 4:13.24 and Watro was victorious in the 3,000-meter run crossing in a career-best 8:28.01. First-year Evan Yukevich ran the mile and placed fourth also with a career-best time of 4:17.65 while sophomore Jared Moore ran to a sixth place finish with a career-best time of 8:37.70 in the 3,000-meter run.

In the 800-meter run, Mills and junior Evan Larrick finished second and third respectively, with times of 1:54.75 and 1:55.12. Senior Don Boyer placed fifth in the 55-meter hurdles after crossing with a career-best time of 7.99.

The 4x400-meter relay team of senior Brady Wilson, Wilkerson, Mills and Norley placed third with a time of 3:25.03.

Junior Eloy Fernandez took third in the triple jump with a career-best mark of 13.22 meters while first-year Fred Dauphin leapt a career-best of 13.20 meters and finished fourth.

In the shot put, Sladick had a toss of 14.42 meters to

place second and junior David Trzcinski finished third with a mark of 13.86 meters.

On the first day of competition, the women’s team was tied for third place, having amassed 26 points on the first day of competition.

For the second straight week and fourth time this season, senior Grace Yee set the school record in the pole vault. She cleared the bar on Saturday at 3.77 meters to place second on a judges decision and topped her height of 3.71 meters set last weekend.

In the weight throw, junior Kiersten Chuc earned a career-best toss of 14.90 meters and placed fourth. Sophomores Autumn Hair and Debarati Bhanja earned team points in the long jump, as Hair placed fourth and Bhanja fifth. Hair leapt 5.07 meters while Bhanja jumped 5.06 meters.

Junior Aparna Alavilli ran the 5,000-meter run in a career-best time of 18:08.52 to finish fourth. Also on the track, the distance medley relay team of first-year Rachel Reolfi, junior Sarah Cook, sophomore Rose Ciriello, and first-year Kate Reilly ran to a fourth-place finish with a time of 12:37.92.

The team of Bhanja, junior Jerilyn James, senior Ariel Tian, and Cook turned in a school record time in the 4x400 meter relay to earn All-UAA by placing third.

In the high jump, sophomore Tessa Allen cleared 1.59 meters to also earn All-UAA status with a third-place finish. Allen turned in a career-best performance in the triple jump when she placed sixth with a mark of 10.68 meters.

First-year Julianne



**Top:** The men’s track and field team celebrates their first-place finish at the UAA Indoor Track Championships. **Bottom:** Junior Sarah Cook closes out a school record run in the 4x400-meter relay as the Tartans placed third.

Igbokwe led the Tartans in the shot put as she finished fourth with a throw of 11.21 meters.

Alavilli just missed scoring a point for the Tartans in the

3,000-meter run when she finished seventh in 10:23.31. The sixth-place finisher crossed the line in 10:23.16.

Both the men’s and wom-

en’s teams will open the outdoor season on March 17 at the Washington and Lee University Track and Field Carnival.

## Kaku, Bamforth headline Tartans at diving championship



**Left:** Senior Machika Kaku dove her way into the NCAA Swimming and Diving Championships for the third straight year in a row. **Right:** Sophomore Gabe Bamforth dives into the pool as the sole representative for the Tartan men.

IAN TANAYA  
Sports Editor

The Carnegie Mellon women’s and men’s swimming and diving teams fielded competitors in the NCAA Division III Region 4 Diving Champion-

ship at Ithaca College on Friday, Feb. 24, and Saturday, Feb. 25.

For the third straight year, senior Machika Kaku earned her way to the NCAA Swimming and Diving Championships with her finishes at the

event, held at the Ithaca Athletics & Event Center.

Kaku dove to a second-place finish on the 1-meter diving board Friday after scoring 452.85 points.

On Saturday, she placed 13th on the 3-meter board

with 402.95 points.

Also diving at the regional was senior Mallory Evanoff. Evanoff placed 24th on the 3-meter board with 336.40 points. She finished 29th on the 1-meter board with 309.00 points.

Sophomore Gabe Bamforth competed in the event as the lone representative for the Tartan men.

In the 1-meter event on Friday, Bamforth finished fifth overall with a score of 460.05 points.

On Saturday in the 3-meter event, Bamforth placed eighth after recording 465.10 points.

Both the men’s and women’s teams are looking ahead to the 2017 NCAA Swimming and Diving Championships March 15–18.



Courtesy of CMU Athletics

## Jameis Winston reignites concerns over sexist remarks

MARIKA YANG  
Assistant Sports Editor

Last Wednesday, Feb. 22, Tampa Bay Buccaneers quarterback Jameis Winston visited a class of elementary school students in the Tampa Bay area to give a speech with the intention of lifting up and encouraging the younger generation, a common way many local athletes give back to the community during the off-season. However, this photo-op quickly turned into a PR nightmare as Winston proceeded to put his foot in his mouth.

When the students appeared inattentive and bored, he tried to rile up the students, but apparently forgot that the group included girls, saying, according to the *Tampa Bay Times*:

“All my young boys, stand up. The ladies, sit down,” he said. “But all my boys, stand

up. We strong, right? We strong! We strong, right? All my boys, tell me one time: I can do anything I put my mind to. Now a lot of boys aren’t supposed to be soft-spoken. You know what I’m saying? One day, y’all are going to have a very deep voice like this. One day, you’ll have a very, very deep voice.

“But the ladies, they’re supposed to be silent, polite, gentle. My men, my men [are] supposed to be strong. I want y’all to tell me what the third rule of life is: I can do anything I put my mind to. Scream it!”

The franchise quarterback of an NFL team did indeed tell a group of third- through fifth-graders that boys are to be strong, with very deep voices, and girls are to be silent, polite, and gentle, to sit down and sit pretty. Immediately Winston’s comments were slammed, widely covered by The Huffington Post, *The New*

*York Post*, and *The Washington Post*, with many people responding. Winston later clarified his statements, saying he was trying to motivate a young male student in the audience but used “poor word choice.”

Winston has worked hard to mend his image since his college days at Florida State University. An alleged rape case involving Winston from Dec. 7, 2012 was reopened in Nov. 2013. Despite this, he went on to win the Heisman Trophy a month later. The two federal lawsuits with the woman who accused him of rape were not settled until Dec. 2016.

Other controversies included stealing crab legs and making obscene comments, the latter of which led to a half game suspension. Still, he was drafted first overall by the Buccaneers in the 2015 NFL Draft. Since then, Winston has managed to avoid controver-

sies, and this past season led the team to its first winning season since 2010.

Though he may have had good intentions, Winston’s recent sexist comments have only reinvigorated questions about his character that had quieted down for nearly two years. There is no problem with encouraging boys, but why exclude girls? Why not ask both boys and girls to stand up, to be strong, to speak out? The fact that a popular, public figure, one many kids in the Tampa Bay area look up to, is sending this message is troubling.

Winston neglected his responsibility to the community and forgot his place, one that has power and influence. Or perhaps he wholeheartedly believes that women are to simply be displayed like a vase of flowers and ordered around like maids. That is even more disturbing.



Courtesy of Don Juan Moore via Outkick the Coverage  
Jameis Winston’s rally drew controversy due to sexists remarks he made.

However, no matter how wrong his comments were, it is not Winston who is the root of the problem. He is simply a result of a society that cages women to these expectations and social norms of submission, inequality, and silence. Winston is a man who lives in a society, our society, in which some people believe that women are lesser and weaker. Sexism is not one man — it is an institution that will not go

away by simply denouncing him. It is something both men and women have combated for centuries, from women’s suffrage in 1920 to the recent Women’s March.

Women are strong. Women are not required to be polite or gentle, nor to stand aside and allow the next generation of men and women to believe the sentiments Winston expressed. Women will not be silent.



# pillbox

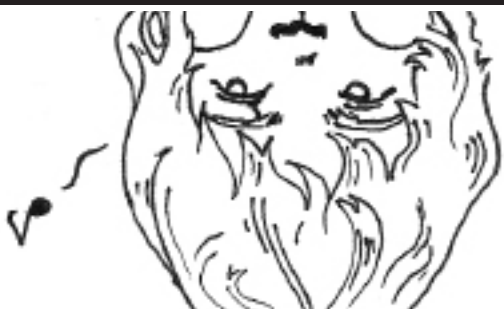
The Tartan's Art & Culture Magazine

02.27.17 • B4 Motel Shot • B6 Scotch'n'Soda • B8 Bloodlines



# table of contents

4



*Motel Shot*

6



*Rosencrantz and Guildenstern are Dead*

8



*Bloodlines*

3

Advice for Awkward People: On buying sensitive items

3

Bar Buddies: Hidden Harbor

10

Defining Soundscape Music

11

Comics: Reviews, big red buttons, and noise

12

Puzzles: Your weekly mental warmup

14

Horoscopes: Quotes to inspire you to action

**Publisher** Jade Crockem **Editor-In-Chief** India Price

**Pillbox Editors** Apeksha Atal and Sinead Foley **Comics Editor** Julie Sanscartier

**Visual Editors** Aisha Han and Theodore Teichman **Layout Manager** Abhishek Tayal

**Copy Manager** Ruth Scherr **Cover Photo** Zichen Liu **Cover Work** Firelei Baez, *Bloodlines*



# Advice for Awkward People

Shanley Lenart | Staffwriter

On buying sensitive items

Dear Shanley,  
Hello. I am writing because I realized that I am not what one would call a social butterfly. In fact, I would call myself a social caterpillar still in its cocoon. But anyway, I noticed today that they were selling, uh, condoms at Entropy+. And as a person who would like to get more involved in this type of lifestyle, I thought that maybe I would need condoms in case I ever met a fancy lady at a party.

However, the condoms ... er... "those products" in Entropy+ are located BEHIND the counter. So does that mean I have to ask the cashier to get me the condoms? I would hate for the cashier to give me weird looks. What would happen if one of my friends saw me? I would be humiliated! I could never have friends again. My reputation would be shattered into little bits and pieces.

Anyway, my question is how do I properly ask the cashier at Entropy+ to get the condoms for me?

Should I be formal about the conversation? Should I act cool about the situation? I am just such an awkward lad, I hoped you would understand. I am just trying to stay calm about the situation...

Sincerely,  
Slightly Horny Youth

Dear SHY,  
Hey! I hope that you are doing well in what I would call the "social scene!" It's good to branch out and meet new people everyday, because they will be there to support you when times are tough! But anyway, after reading about your situation at Entropy+ I have one main piece of advice: DON'T STRESS. Do not worry about the situation! I know you think that buying condoms is a huge and embarrassing act to do, but maybe look at it this way — all you are doing is buying an item at the store. Everyone does it. It's really not that big of deal when you take a closer look at it.

I completely understand how it's a good idea to want have protection accessible! I think it's a smart way to know you are always prepared in the future.

But as far as actually asking the cashier, all you have to do is just be casual and not worry about it. No one is going to judge you in the line, and no one is going to call you out on it. Just be calm and straightforward when you talk. And hey, look at it on the bright side: you can use DineX to pay for them too! I think that's a win-win situation. But if the awkwardness outweighs the benefit of using DineX for you, then you can go to CVS and use the self checkout option to avoid the whole experience.

Well. Good luck with your endeavors!

Sincerely,  
Shanley

## Bar Buddies: Hidden Harbor

An adventure in tacky swank

Zeke Rosenberg | Contributing Editor  
Ariel Hoffmaier | Staffwriter

After an ominously balmy Friday, Zeke and I enjoyed much more seasonally appropriate weather for our Saturday trip to Squirrel Hill's premiere tiki bar: Hidden Harbor. It may have been freezing outside, but the second we walked through the doors of this improbable neighborhood haven we were transported to a wonderful vacation in Hawaii (or a very culturally inaccurate version of it).

**The location:** The "hidden" in the title is no joke. I've lived in Squirrel Hill for almost a year, and never had I stumbled across or even heard of this bar. It's on Forbes and Shady (easy ride on a 61A or B), around the corner from the Dunkin' Donuts, which was further in that particular direction than I'd ever dared to go. With how "hoppin'" (Zeke unsuccessfully tried to save you from this bit of needlessly quoted slang) it turned out to be, Hidden Harbor seems less like a regular destination for the locals and more like a popular spot for a 30th birthday, bachelorette party, or special outing for hardcore fans of 10-ingredient cocktails in novelty glasses.

**The drinks:** This place is all about the drinks — if by "drinks" you mean something you probably couldn't afford to make yourself. Hidden Harbor's cocktail menu is impressive. It brushes right past

your usual margaritas and daiquiris into the territory of your more accomplished, creative tropical bartender. Honestly, the ingredients list got so complicated I gave up on reading and just ordered something with a funny name and two shark tails. More potent drinks are marked with a shark tail, and two shark tails signal a drink that will really mess you up. If you're feeling especially festive, drinks that can be made frozen are marked with a snowflake, which felt like the wrong symbol given the aesthetic of tropical paradise. I got a drink with "Zombie" in the title, while Zeke's was called "Toucan Tango." Our drinks came in normal glasses (sadly, the novelty cups cost extra), but they were decked out with theme-appropriate garnishes, including dried fruits, actual flowers, and a toucan bendy straw. Guess which two out of three Zeke tried to eat. (Zeke wants you to know he did not try to eat a bendy straw.) Hidden Harbor is not the place to go for cheap drinks — ours ran about 12 bucks each — but it's great for whimsical cocktails that taste good and don't skimp on the liquor. They've also got drinks for two, at least one of which comes in a light-up anime shark mug, as well as beer and wine (but who are we kidding).

**The vibe:** Hidden Harbor is the faux Hawaiian version of swank. Decor highlights include pink

salt candle holders, a wide variety of framed art related to Hawaii in only the loosest way, and the giant tiki head I made Zeke take a selfie with me in front of. The overall effect is exotic fun in an "adventurous white people" way. They've got an actual bar as well as tables of various sizes that would work well for either groups or dates. The waiters were friendly and attentive. You could order food (i.e. tacos and nachos), but at midnight everyone seemed to be there for cocktails and conversation. The music left a little to be desired, especially when they played John Denver's "Take Me Home Country Roads." There's no real intermingling here, but the noise level is low enough that your friends will actually hear your jokes about the decor and cocktails and music. This is a once-in-a-while kind of bar. Go for the experience and you'll definitely have fun.

**Lit or Nah:** Hidden Harbor is definitely lit, if you like the people you came with and you're willing to maim your wallet. It's popular on the weekends but not so overcrowded you won't get a seat and have your own space. The bar's also only open until 1 a.m. at the latest, so make sure to make it an event rather than a place you just end up at. In the middle of a Pittsburgh winter, though, Hidden Harbor is definitely a breath of salt and rum-scented air.

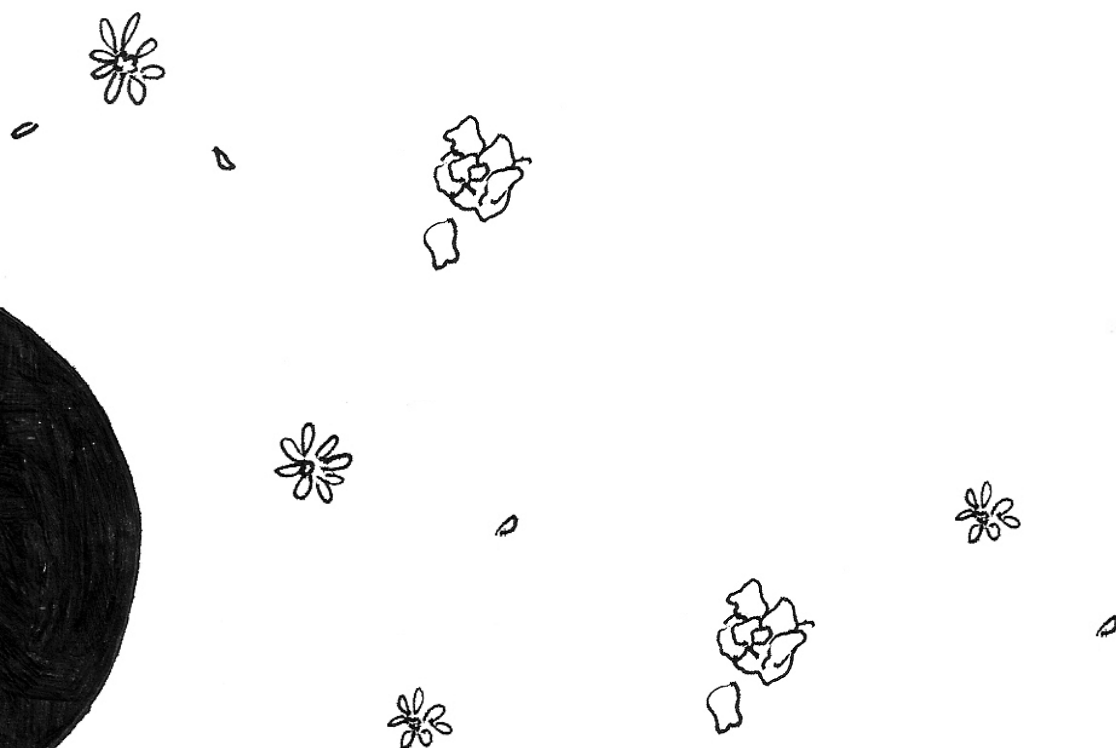
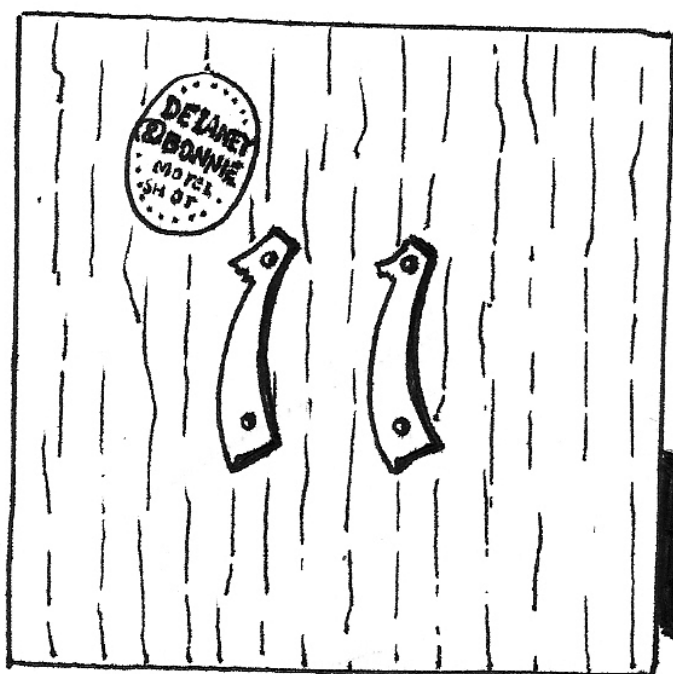


# Motel Shot



Delaney & Bonnie's album paints a vivid snapshot of the '70s

Some 20 years before Eric Clapton recorded his 1992 smash album *Unplugged*, his friends and musical influences Delaney & Bonnie (Bramlett) recorded a laid-back, acoustic rock record called *Motel Shot* in 1971. The Real Gone Music label just released the out-of-print album for the first time ever on CD, except for a limited Japanese release from years ago. The album aims to give the sonic equivalent of a cinéma vérité "shot" of musicians' life on the road, a lifestyle characterized by spontaneous jams with acoustic instruments when complex sound equipment like amps were not easily accessible. In so doing, Delaney & Bonnie bring down-home warmth to the cold, impersonal uniformity presented by motel rooms on the road.





Delaney & Bonnie were frequently promoted with the added suffix “and Friends”. The first time an album was credited to Delaney & Bonnie and Friends was on the 1970 live record *On Tour with Eric Clapton*. The follow up to *On Tour* was *Motel Shot*, for which the cast of friends did not include Clapton, but a number of other notables like Duane Allman, Joe Cocker, Leon Russell, Buddy Miles, Bobby Whitlock, and Gram Parsons. The contributions of those artists are heard on chorus vocals or improvised percussion for the most part, except for Russell’s piano and Allman’s slide guitar, which lead on a few tracks such as the cover of Robert Johnson’s blues standard, “Come On in My Kitchen.”

No, *Motel Shot* was not actually recorded in a motel room. The concept just happened to give the album its ethos. The original release of the album on the Atlantic label in 1971 featured sessions recorded live-in-the-studio, but how the album came into fruition was actually much more complicated than just those sessions. The concept for *Motel Shot* was developed before Delaney & Bonnie were on Atlantic when they were still signed to the Elektra label, the home of The Doors at the time. The Doors’ producer, Bruce Botnick, had Delaney & Bonnie and Friends over to his house and recorded what was to be an Elektra album in the intimate setting of his living room. Before the release on Elektra could come out, though, Delaney had a falling out with the label owner, Jac Holzman, when he called up Holzman on the phone and threatened him with physical violence because his record, *Accept No Substitute* (1969), was not available in his father’s small town. The original Botnick living room sessions were lost to history until the new Real Gone Music release, which features eight tracks from those original sessions in addition to the 1971 Atlantic album.

Delaney & Bonnie’s move to Atlantic was motivated out of more than Delaney’s friction with Holzman as it was also opportune stylistically for the duo. The label was home to some of their biggest influences including Aretha Franklin, Wilson Pickett, and Solomon Burke. By signing to Atlantic, the duo would get to work with producers who recorded their heroes, such as Jerry Wexler and Tom Dowd. *Motel Shot* might seem out of place among the brass and electric instrument based R&B/soul that typifies Atlantic’s catalogue since it is an acoustic album. However, anyone questioning Delaney & Bonnie’s soul credentials ought to consider that Bonnie was the first white Ikette to sing backup for Ike & Tina Turner, and the duo is backed on their debut album *Home* (1969) by the illustrious Booker T. & the M.G.’s on one of the very few recordings by white artists released on the iconic Stax soul label. With no ifs, ands, or buts, *Motel Shot* is a soul album, just in the form of soul’s roots as opposed to the complex production on efforts commonly associated with the genre.



But what are these roots from which sprang soul? In 1954, the Atlantic label released Ray Charles’ “I Got a Woman,” considered by many to be the first soul song, since it put secular lyrics onto gospel styled singing and music. *Motel Shot* opens with “Where the Soul Never Dies,” a traditional gospel song whose title aptly sets the mood for an album of such unrelenting soulfulness. The first track kicks off the laid-back feel of the album by opening with a few seconds of chatter and tuning, before swooping into a gospel chorus styled vocal chant.

Being that Delaney & Bonnie are progenitors of what would come to be called “roots music”, *Motel Shot* is not just filled with gospel but also the closely related genres of country music, blues, and even some original songs that fit in astonishingly well with the much older traditional songs and standards. In fact, the duo’s highest charting song on the Billboard Hot 100 was the number 13 hit “Never Ending Song of Love,” a Delaney & Bonnie original pulled from the album. The song has a campfire quality about it that makes for a catchy tune, but the recording is so non-commercial in its instrumentation that it seems just right that it would be the biggest hit of a decidedly non-commercial group (although Delaney & Bonnie certainly did not decide so) who never came close to the fame of friends like George Harrison.

The earlier sessions that Botnick recorded in his living room and the later Atlantic studio sessions will inevitably draw comparisons to one another and assertions that one or the other is better. The earlier sessions were undeniably recorded in a more relaxed setting and rudimentary manner in terms of microphone placement, but are still approximately the same in terms of sonic quality to the later sessions. The earlier recordings that Real Gone Music has uncovered are really the first time that Delaney & Bonnie put the idea of “motel shot” to tape. They might be rawer in that sense, but that is not to diminish the rawness of the later sessions which produced the first release of *Motel Shot*. Frankly, the original 1971 Atlantic release composed of the later sessions is just about as raw as anything that has been released as an official studio album by any act ever. Rather than get into the superiority or authenticity of the two distinct sessions that are included on the new expanded edition of *Motel Shot*, it is probably best to commend the inclusion of newly discovered historically significant sessions alongside out of print previously released recordings from the immediate vicinity of time. *Motel Shot* in either distillation is a satisfying perusal of the soulful music of the American South.

Jeremy Goldstein | Junior Staffwriter  
art by Paola Mathus | Staff Artist



# Rosencrantz and Guildenstern Are Dead

Scotch'n'Soda delivers a relevant message wrapped in absurdity

Izzy Sio | Staffwriter  
photos by Zichen Liu | Photo Editor

Times constantly change, but Shakespeare never does. Or does he? Scotch'n'Soda Theatre performed *Rosencrantz and Guildenstern are Dead* on Friday, Feb. 17 at 6:30 and 11 p.m., and Saturday, Feb. 18 at 2 and 6:30 p.m. at the Cohon Center Black Box Theater. The troupe took on Tom Stoppard's classic play that focuses on the background characters of *Hamlet* and gives them a completely different purpose, turning it into a cautionary tale for a new generation.

Cited as an "inside out *Hamlet*" by director, senior English major Mackenzie Nicholson and assistant director, junior computer science and arts major Charlotte-Alyss Weissglass, the Tony Award-winning *Rosencrantz and Guildenstern are Dead* focuses on Hamlet's two friends rather than Hamlet himself. In their own mental and physical quest to find out who they are and what their purpose is, the two rope themselves up in the king of Denmark, Claudius', schemes to decipher Hamlet's lunacy and, ultimately, meet their own deaths. Stoppard's play tells a powerful message about fate, which the directors take to emphasize a "warning about the dangers of passivity" in their tragicomic production of the 1968 Tony Award winner for Best Play.

Shakespeare's classic style of verse is adapted perfectly by Stoppard in his absurdist dialogue on the nature of reality, death, and purpose. The actors behind the eponymous duo perfectly carry out the vision of Stoppard's play with their every gesture. First-year Dietrich College student Alex Gist's hyperactive yet purposeful portrayal of Rosencrantz constantly brought a smile through his musings about death.

"He reminds me a lot of Don Quixote in that most of the time he's a complete idiot but sometimes he gives the audience brilliant and philosophical spiels that tend to be some of the most profound musings in the show," Gist said.

Gist's first show with Scotch'n'Soda was a great experience both on and off the stage, quickly adapting into the kinship and close bond of the Scotch'n'Soda community. "The best part of working on this was, of course, the people," he said. "The actors, the tech, paint, costumes,





everyone, was just awesome. That and all the scars that I got from those barrels."

Gist's portrayal of Rosencrantz was a perfect foil to sophomore music major Jordan Speranzo's hopeful, calculated, and thoughtful Guildenstern. Their chemistry throughout the show was the driving anchor of the production and one of the most memorable parts about Scotch'n'Soda's play.

Another stand-out character of the production was the Player, leader of the Tragedians in Denmark. Sophomore psychology and decision sciences double major Heather Graci brought extravagant charisma and character to her performance, yet also showcased a deeper layer of emotion behind the Player's schemes. The ensemble of five tragedians, a company of travelling impoverished actors, were also a delightful surprise, balancing out the Player's dramatic personality and actions with their comedic antics.

The traditional characters of the show, such as Hamlet and the rest of the royal court, provided a great balance to the unhinged side of the production. In particular, first-year statistics and machine learning major Kevin Wang's performance as Hamlet straddled between both sides of the play, fitting into the typical plot of *Hamlet* with his madness yet also using it to meld with the craziness that is *Rosencrantz and Guildenstern are Dead*.

Throughout the play, all the actors embraced the show's absurdist nature, letting the chaotic essence of the show dictate its plot and motion. At the same time, however, each actor or actress made something out of the show's insanity to create a great performance onstage. In a play where all the plot points seem to be set in stone, each character — especially Rosencrantz and Guildenstern themselves — fights to express their own individual voice amidst the exciting play and thus inspiring those onstage with him or her to rise to the occasion. Through the performances and the story of the play, the directors hope that this collision of talents inspires others to take charge of their own pirate ship when it seems like they are headed towards certain death, and steer it out of its collision course instead of following the path it seemingly has charted for them.





# Bloodlines

New show at the Warhol museum paints a complex picture of identity

Sinead Foley | Pillbox Editor

Gowri Sunder | Staff Artist

photos by Zichen Liu | Photo Editor

Walking into the newest special exhibition at the Andy Warhol Museum, painted by artist Firelei Baez and titled *Bloodlines*, is like walking into a magical garden. Gorgeous, powerful women gaze out at the viewer from every wall, surrounded by intricate textures and floral designs. Contrary to what a lot of people think of when they hear the words “contemporary art,” the show is accessible, pulling the viewer in with delicate flowers, fine hair textures, and curvaceous female forms running throughout the work in rich, dramatic colors. A wall stretching the length of the gallery was painted a soft blue and completely covered in floral medallions and elaborate patterns, and my first thought upon seeing it was, “I wish this was what my room looked like.” The show is running through May 21, and is worth seeing even if just for the aesthetics.

But after the initial wave of wonder at the beauty of the space, the viewer begins to notice the complexity of the work. The woman brought to life in vivid reds with the stunningly beautiful headdress is actually wearing a tignon, a head covering required for free women of color in antebellum Louisiana to make them less attractive to white men. The women forced to wear tignons threw the attempted mark of inferiority back in the face of their oppressors and turned them into a fashion statement. The floral medallions on the installation contain the Black Panther symbol and the Black Power fist. Running throughout the whole exhibit is a complex interplay of symbols of race, repression, and resistance. Born to Haitian and Dominican parents, Baez creates

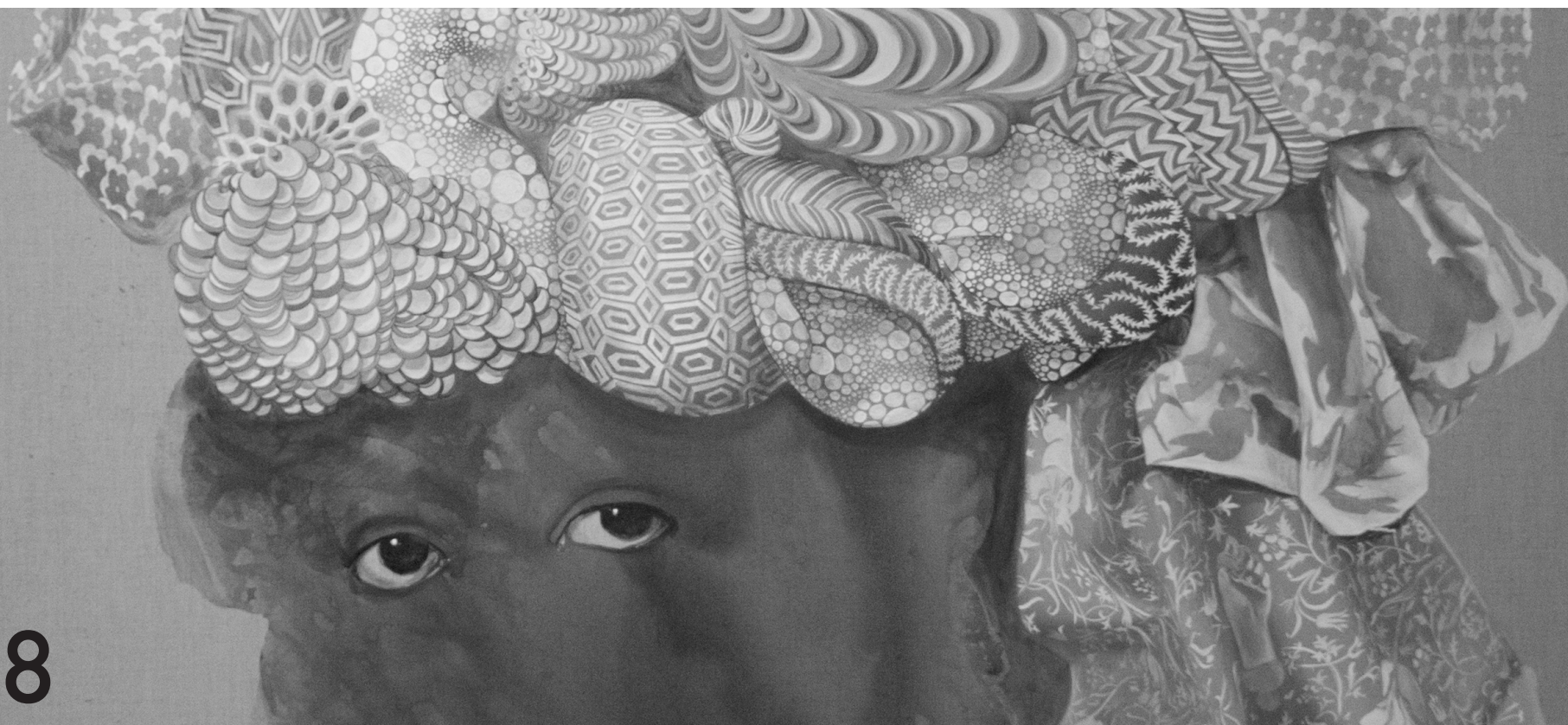
work that references the complexities of cultural diaspora from both a personal and global perspective but is ultimately an exquisite celebration of beauty in history and the individual.

Baez is a Dominican woman based in New York. *Bloodlines* is her first solo show and is an impressive discussion of womanhood, globalism, and cultural traditions. At first, Baez’s paintings, with their emphasis on laborious detail and personal honesty, may seem like an odd choice for the Warhol. Warhol, with his quick and relatively easy screen prints and affectless persona, seems at odds with Baez. However, both artists work with cultural icons. Just as Andy Warhol’s work was a playful commentary on commercial icons, working with the construction of what defines an American identity, Baez works with the narrative of history of woman of color. The way we — immigrants, refugees, or people in countries who have experienced recent changes in political structure — understand history is blurry and incomplete. We understand it through an amalgamation of material cultural, aesthetics, and key stories.

Rather than in screenprints and photography, the media that brought fame to Warhol, Baez uses more traditional materials. Her exhibit consists of enormous paintings with the most delicate, precise brushwork. The use of acrylic, ink, and yupa paper in large scale gives the work a sense of nostalgia and of love and care that allows you to feel the artist infusing herself into the narrative

One of the most interesting things about the show is the way Baez uses repeated symbols and motifs to build meaning. The floral motifs on the walls appear in some of her paintings. Indigo and china patterns, colonial era crafts that came with famine and exploitation, bubble up in different parts of the room. And everywhere, there are references to textiles from different cultures.

Textiles’ aesthetics are interesting for a number of reasons. Primarily, textiles evoke a sense of body and the history of women. They allude to complex stories of cultural exchange and oppression, which the audience and even the subject does not fully understand because of the scale and subjectivity of these narratives. For example, the painting of the tignon explores a complex relationship with the textile, painting the tignon in beautiful, rich patterns but also making it dominate the painting, simplifying the wearer to bright colors and removing all her facial features but her eyes, which stare emotively at the viewer, full of power. The Japanese brush painting and Indian block print patterns that reappear in multiple works reference not only the cultures they come from but also the commercializations of their aesthetics. The viewer is asked to consider the textiles involved in conventional, Western stores. Clothes and textiles are tools of oppression and empowerment — they are ways of controlling how others see you. They capture the social expectations of the time, but in every painting the woman is made the subject of an image to tell her own story. So, as much as Baez’s work focuses on historical





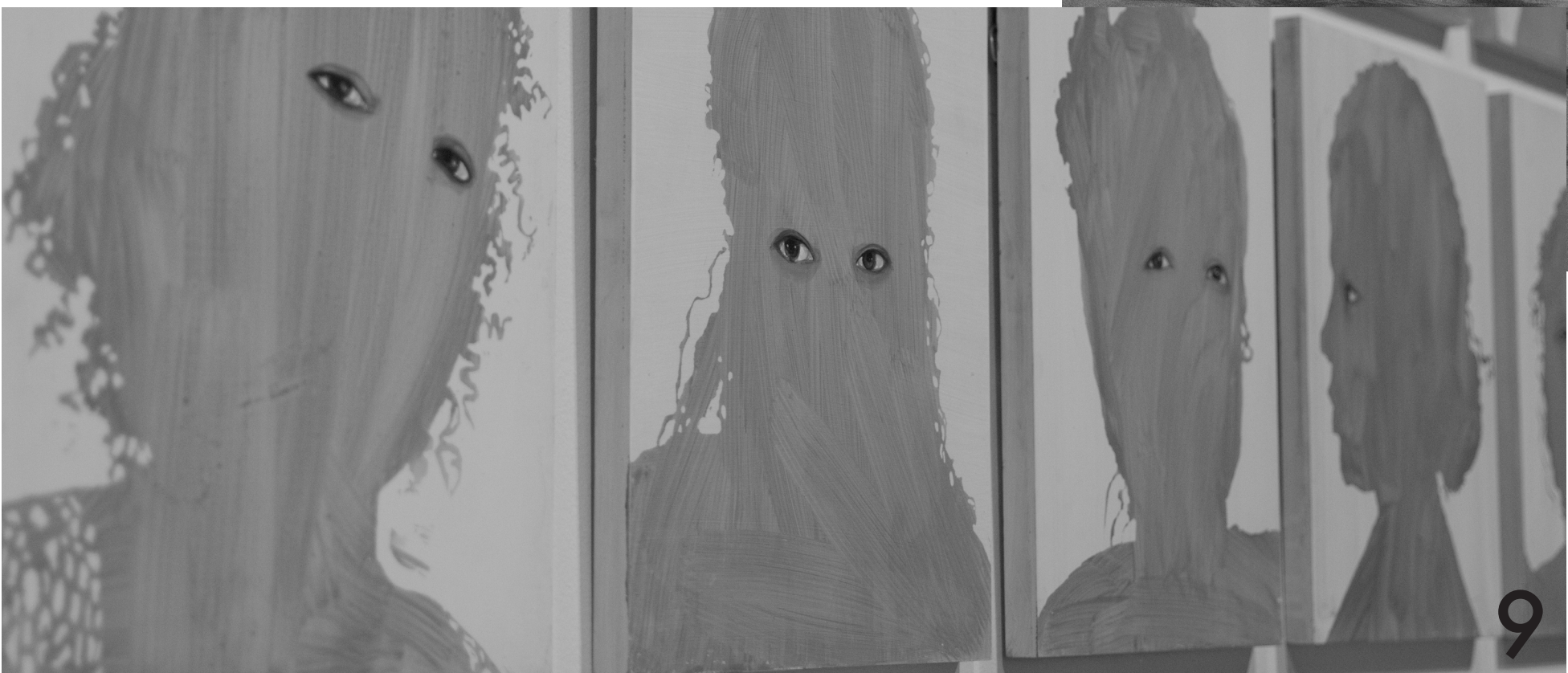
narrative, it brings power to the women by placing control of the narrative in their presence.

Another repeated motif in the exhibit is, clearly, the female body and hair. They are used as symbolic tools to primarily to discuss gender and race. Her work references laws surrounding natural hair and the Brown Paper Bag Test — laws devised to define and control race in Caribbean society — challenging the viewer to categorize the multicultural, uncategorizable women and before them, but it also alludes to legends and imagery from both Caribbean and western culture involving women as seductresses or monsters. Baez's incredible ability to create beautiful textures of hair or fur in tiny brush work breaks away from classic Rubenesque figures, intended for aesthetics and titillation. Her figures claim their presence in a style of art that recalls anthropological drawing. They hold their own, forcing the viewer to see them as individuals and not ephemeral sexual objects or a stand-in for a larger culture.

Perhaps, though, the most impactful motif in the show is the grounding of the work in portraiture. The eyes, the body forms, and the references to real world people and objects all make it so that the work is about people rather than general concepts. For centuries, artists have used eyes as a way of drawing the reader into a more psychological painting, and reading into their expression allows one to know the artist and their subject. The eyes in Baez's work reflect power and pride. Self-portraiture is an element that Baez often comes back to in her work.

This is such an important part of her work because vague references to historical narratives and aesthetic traditions on their own aren't enough to connect with an audience, most of whom are likely not from the cultures being discussed. Because the self-portraiture allows her to lay claim to part of these stories, to say this is where she belongs and a part of who she is, we get a heightened level of intimacy with her work that makes it tenfold more impactful. It implies meaning beyond textiles, war, and colonialism — it gives us a peek into her own story and the love she gives to her subject matter.

The sensuality of form combined with the seriousness of subject matter in the show creates layers of stories that are difficult to untangle. The flowing forms from the acrylics and ink serve to further blur (literally and metaphorically) the intention of the symbolism in Baez's work. It leaves us with a question: Where does her work fall in the world of activism and resistance? Artistic traditions tell us that there is power in representation — the Chicana art movement, for instance, worked with imagery of religion, womanhood, and industrialization to discuss social injustices, but what perhaps is most powerful in Baez's work is that, in obfuscating meaning and central references through contradictions in symbolism and layers of narrative, it suggests there is power in moving beyond identity politics. That there is something universal about working to unravel who we are and where we come from, and that in moving beyond the hard lines of identity beyond easy communication we can share something more intimate and real.





# Defining Soundscape Music

Sometimes you find songs that can seem like movies in how they can pack so many different ideas into one five-minute piece. I've always liked to group those kinds of songs into what I call "soundscape" music. With this sort of music, you can come back to a song time and again and learn something new every couple of times. You start out soaking in the general vibe of the song, letting your fingers groove – not quite dance – just groove with the song. The next thing you know, you're picking out the complex arrangements, trying to make sense of what instruments make these unusual sounds. And the lyrics, once you finally get to them, are nothing short of poetry. So find a comfy place to sit and really listen, put on a pair of nice headphones, close your eyes, and start your journey with these five gems:

## "High Hopes" by Pink Floyd:

Released by Pink Floyd as part of their 1994 album, *The Division Bell*, "High Hopes" is one of the bands underrated gems. In spite of, or perhaps because it never received the same name recognition as "Time" or "Shine on You Crazy Diamond," it is my opinion that "High Hopes" is definitely one of their most interesting, if not one of their greatest, ever.

The song's broadest interpretation centers on the band's early days, and the seeds of discord planted between lead vocalist Roger Waters and guitarist Dave Gilmour following the demise of their legendary early bassist Syd Barret. The most distinctive feature of "Hopes" is the three-and-a-half-minute slide guitar solo that makes an appearance halfway through and leads the song's grand crescendo. Gilmour's guitar seems to part the clouds of conflict brewing throughout the song – an exclamation of pure, unadulterated indulgence that perfectly contrasts the constrained stiffness up until that point. Organized and pure, yet angry and tense, this song is what the soundtrack to an army of marching angels might be like.

## "Strobe" by Deadmau5:

"Dude, when I hear this song, I imagine the end of a wild night out. It's 6 a.m., things are winding down, the sun is starting to rise, and this is the last song that comes on at the club." "Really? When I hear this I see the birth of the universe." Most Deadmau5 fans will tell you that the day they heard "Strobe" is the day he went from being a fine DJ to a fine artist in their minds. I want to add to that: the more I've heard this gem of a song over the years, the more I've come to appreciate it as sheer genius.

The last track off of 2010's *For Lack of a Better Name* is also the coolest. There's a smoothness to it. A buildup so gradual and subtly interesting it captivates – which is amazing when one considers its all made from analog synths. And when the drop comes, and it comes late, almost six minutes in, it feels like catharsis, even though it's really just a simple 4/4 if you think about it.

## "Maula e Kull" by Abida Parveen:

Released last year as a part of *Coke Studio Pakistan, Season 9*, "Maula e Kull" is prayer in song form – devotional and loving.

Even when there is no bass or rhythm, this is one of the most searingly powerful songs I have heard. What carries this song through is the voice of Abida Parveen, the queen of Sufi music. In South Asia, a voice like this will be described as "bulandh," or incredibly majestic. Comparable to the greatest contralto singers, Parveen wields her voice like a weapon, forcing you to feel the emotion that she imbues each word with. Halfway through, the song turns on its head. Transitioning from a heartfelt prayer into a rock ballad, "Maula e Kull" flaunts the deft chemistry between Parveen and her backup band, Strings. It is a testament to this chemistry that this sudden flip surprises the listener and yet retains the soul of a Sufi prayer.

For those not comfortable with Urdu, the YouTube video features an English translation, an English port of the Urdu words, and the native Urdu in which the song was written. Listen to this song and soar with Parveen, who is busy calling the voice, the name, the power, and the light that we are destined to follow, if unknowingly at times.

## "Reverie" by Illenium:

Track number four off of 2016's *Ashes*, "Reverie" is the rare song that can completely indulge its genre stereotypes while sounding like nothing you've ever heard before. The song has every ingredient you'd expect in a deep house/melodic bass song – the smooth, heavily reverbed female vocals, the atmospheric arrangements, and of course, a humongous drop. And yet, there's something about the way these seemingly familiar ingredients come together that make this song much more meaningful than your average rave playlist track. What is it that makes this song special? Is it the way the eastern sounding synth melody dances over a mountain of bass? Is it the keys and tribal drums that precede that massive drop? Or is it the simple, powerful lyrics that speak of overcoming one's fears and about companionship? This song has a way of seeming heavy and light, fun and heavy, all at the same time.

## "Devi" by Parra for Cuva

Parra for Cuva has an uncanny knack for the dynamism of a large ensemble, even though he's just one guy. And nowhere is this clearer than in "Devi", the opening track to his 2015 effort, *Majouré*. The song begins the entire record with the tinkling of a harp, followed by what sounds like pitch shifted water droplet samples, before gradually sliding permutations of cool, light layers on and off, always flirting with the idea of becoming a heavier song. It does get heavier, but not how you might expect. About halfway through the song, little-known rapper Nieve delivers one of the most unusual verses: his delivery is delicate and light-footed, but his lyrics are beautifully layered. They almost beg to be pulled up and read with the song. Here's a sample:

"It was written in the starry sky  
That the universe belongs to the starry eyed  
Childlike is the mind, that be burning bright  
Still they label us naive and they wanna fight."

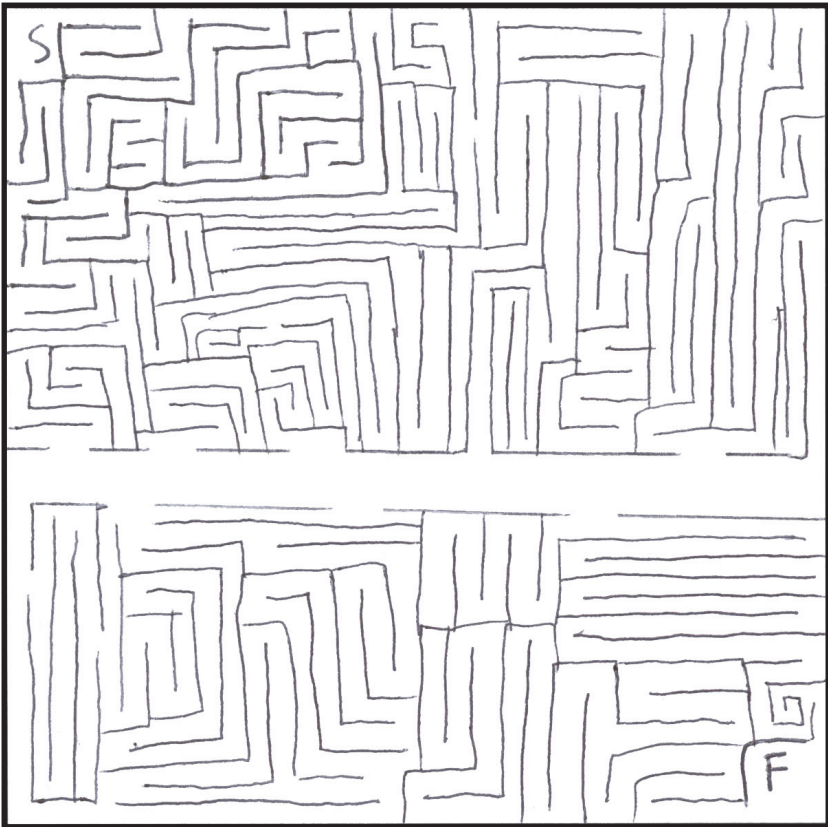


sudoku

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

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

maze

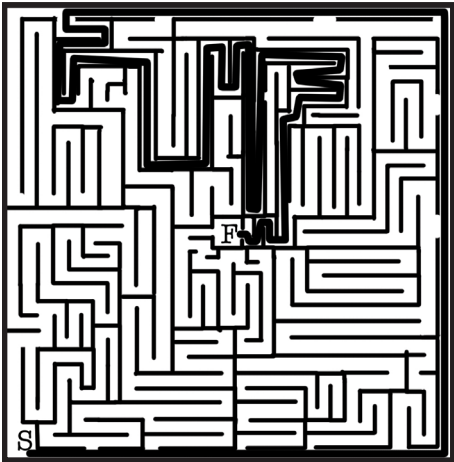


Dylan Hyun | Comics Artist

Solutions from Feb. 20

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

sudoku



maze

1	2	3	4	5	6	7	8	9	10	11	12	13									
S	L	A	P	S		E	C	H	O		S	K	Y	S							
14	L	I	L	L	E		15	E	L	E	V		16	C	R	O	C				
17	I	N	T	E	R		18	R	A	R	E		19	A	I	D	A				
20	M	A	I	N	T		21	A	I	N		22	23								
						24	T	A	L	E		25	26	27	28	29	30				
26	S	A	N	E	S	T						29	E	T	E	S					
30	E	L	L	O			31	O	B	S	T	E	T	R	I	C	S				
37	T	O	R	U	S		38		39	E	S	E		40	S	E	R	A	I		
41	S	U	B	S	I	D	I	A	R	Y		43		44	S	A	R	A			
							45	L	O	G	Y		46		47	E	S	T	E	E	M
48	M	E	T	H	A	N	E					52		53	A	N	T	A			
53	A	T	R	I	S	K			54	A	B	S	O		55	S	O	R	B	E	D
58	S	H	E	D			59		60	E	S	S	O		61	O	T	E	R	O	
62	S	E	V	E			63	Y	E	A	R			64	G	E	N	I	E		
65	E	R	I	S			66	S	E	N	T			67	E	D	E	N	S		

crossword



Reviews

by xkcd



CANYON RIVER NUCLEAR  
LAUNCH FACILITY

REVIEWS (22)

★★★★★

GREATEST COUNTRY ON EARTH

★★★☆☆

LOOKS COOL BUT YOU CAN'T GET IN

★★★☆☆

WHAT IS THIS STORE

★★★★★

MY COUSIN WORKED HERE

★★★☆☆

WAITSTAFF HEAVILY ARMED AND  
VERY RUDE

★★★☆☆

STOP DOING CHEMTRAILS

★★★☆☆

THIS PLACE IS A SYMPTOM OF THE  
MILITARY-INDUSTRIAL COMPLEX  
STRANGING OUR DEMOCRACY  
AND... (READ FULL REVIEW-1184 WORDS)

★★★★★

ANYONE ELSE NOTICE THE HOLE  
IN THE WEST FENCE?

★★★★★

WHOA, MISSILES!

★★★★☆

GOOD IDEA BUT CONFUSING WEB  
SITE. HOW DO I PREORDER?

★★★☆☆

PLEASE DON'T LAUNCH THESE

I LOVE FINDING REVIEWS OF PLACES THAT  
REALLY DON'T NEED TO HAVE REVIEWS.

xkcd@gmail.com

xkcd.com

Noisy Toys

by Brian Gordon

WHAT I SAY TO  
PEOPLE WHO GIVE  
MY KIDS NOISY TOYS

OH, HEY, THANKS.  
I BET THEY'LL BE  
PLAYING WITH THIS  
NONSTOP...

WEE-000-WEE-  
000-WEE-000!



WHAT I WANT TO SAY  
TO PEOPLE WHO GIVE  
MY KIDS NOISY TOYS

OH, HEY,  
FUCK YOU, TOO.

WEE-000-WEE-  
000-WEE-000!



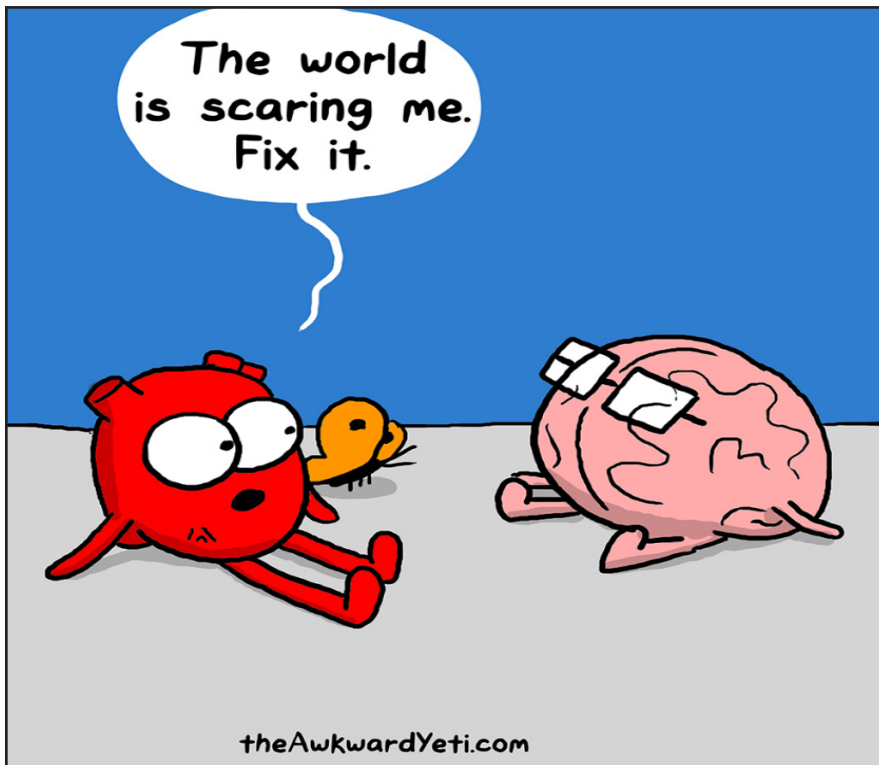
FowlLanguageComics.com

©Brian Gordon

fowllanguage.com

12





theAwkwardYeti@gmail.com

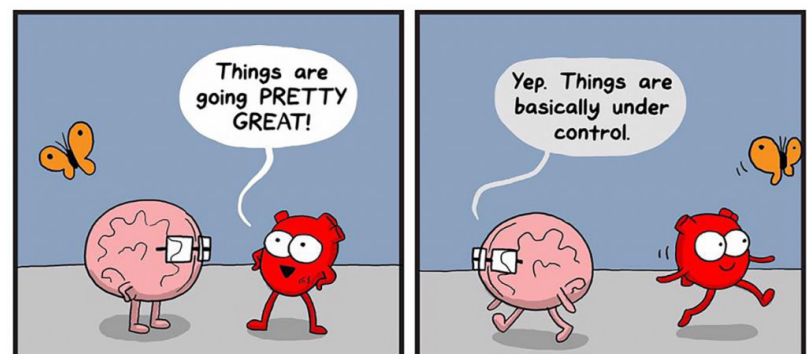
theAwkwardYeti.com

## World in Turmoil

by Nick Seluk

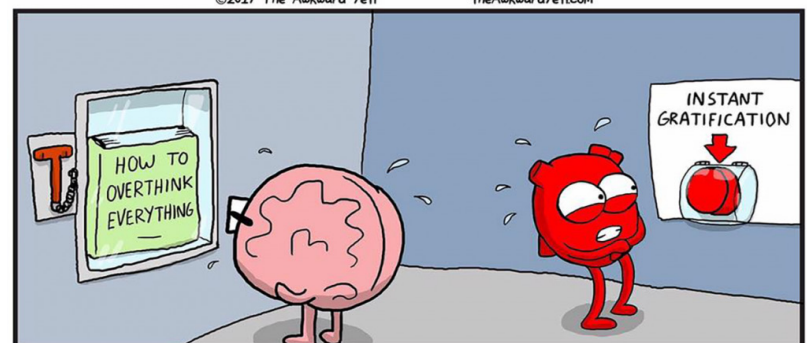
## Big Red Button

by Nick Seluk



©2017 The Awkward Yeti

theAwkwardYeti.com



theAwkwardYeti@gmail.com

theAwkwardYeti.com



horoscopes: Black History Month quotes to inspire you to act

Aries

march 21–april 19

“A man dies when he refuses to stand up for that which is right.” — Martin Luther King Jr.

Taurus

april 20–may 20

“I can be changed by what happens to me, but I refuse to be reduced by it.” — Maya Angelou

Gemini

may 21–june 20

“All you need in the world is love and laughter. That’s all anybody needs. To have love in one hand and laughter in the other.” — August Wilson

Cancer

june 21–july 19

“I am invisible, understand, simply because people refuse to see me.” — Ralph Ellison

Leo

july 20–aug. 22

“Nothing can be changed until it is faced.” — James Baldwin

Virgo

aug. 23–sept. 20

“You wanna fly, you got to give up the s\*\*\* that weighs you down.” — Toni Morrison

Libra

sept. 21–oct.19

“Nobody is as powerful as we make them out to be.” — Alice Walker

Scorpio

oct. 20–nov. 20

“When I dare to be powerful... it becomes less and less important whether I am afraid.” — Audre Lorde

Sagittarius

nov. 21–dec. 20

“There is always something left to love” — Lorraine Hansberry

Capricorn

dec. 21–jan. 19

“We are the ones we’ve been waiting for. We are the change that we seek.” — Barack Obama

Aquarius

jan. 20–feb. 20

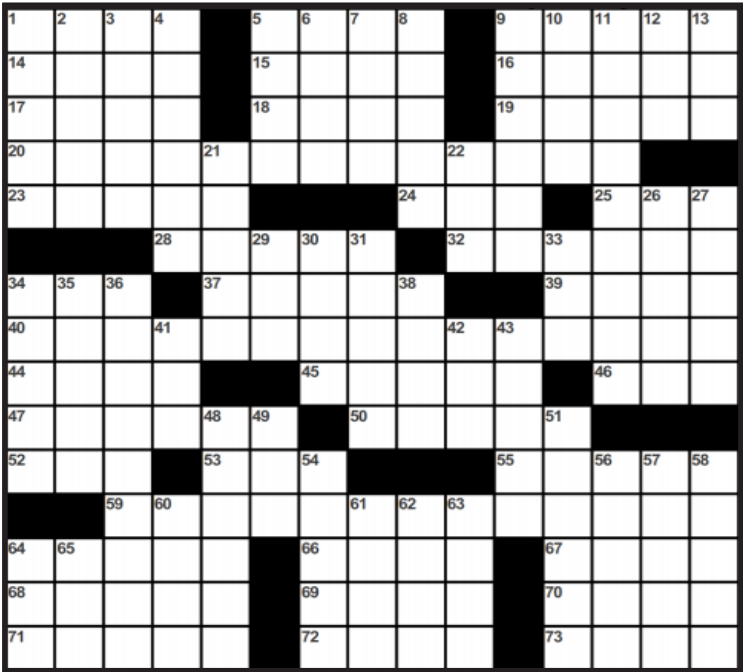
“People are trapped in history, and history is trapped in them.” — James Baldwin

Pisces

feb. 21–march 20

“My humanity is bound up in yours, for we can only be human together.” — Desmond Tutu

crossword



Crossword courtesy of [FreeDailyCrosswords.com](http://FreeDailyCrosswords.com)

across

- 1. English dude
- 5. Instrument with some heft
- 9. Not a heavyweight
- 14. Frau’s partner
- 15. Got dirty going home?
- 16. Blotto
- 17. Jason’s ship
- 18. Title character with the King of Siam
- 19. Battery terminal
- 20. Dilly-dalliers activities
- 23. “Come in!”
- 24. “... and you know the rest.”
- 25. Spigot
- 28. Perform incorrectly
- 32. Force out of office
- 34. Word with “photo” or “black”
- 37. Extremely long films
- 39. Voice in the choir
- 40. The art of putting things off for tomorrow
- 44. Member of Jackson 5
- 45. Glitterati member, briefly
- 46. Bawl
- 47. Acted badly
- 50. Like illegally parked cars, often
- 52. Don’ts partners
- 53. “Much \_\_\_\_ About Nothing”
- 55. Come to mind
- 59. Delays leading to rescheduling
- 64. Bloodhound’s guide
- 66. Material in a gym
- 67. Mine entrance
- 68. At a good clip, in poetry
- 69. Pre-owned
- 70. 5,280 feet
- 71. Word with “film” or “home”
- 72. Cushiony forest growth
- 73. Fortune-teller, supposedly

down

- 1. Make sore by rubbing
- 2. “Great white” bird
- 3. Slanguage
- 4. For the time being
- 5. The last one was Nicholas II
- 6. Arm bone
- 7. Type of cherry
- 8. “Love is blind,” e.g.
- 9. Batting position
- 10. Type of valuable vase
- 11. Relating to the Pope
- 12. Hallucinogenic drug
- 13. Caustic drain opener
- 21. Less humid
- 22. “ \_\_\_\_ be an honor.”
- 26. Mary of “The Maltese Falcon”
- 27. Indiana’s state flower
- 29. Where to get a muddy face
- 30. LP or CD, e.g.
- 31. Santa’s reindeer, collectively
- 33. Butter unit
- 34. Made a choice
- 35. First-rate, slangily
- 36. In a way
- 38. Fodder holder on a farm
- 41. Bunk
- 42. Not yet unwrapped
- 43. Crosswise, on deck
- 48. Resurrection Day
- 49. Banned bug killer
- 51. Enters REM sleep
- 54. Codeine source
- 56. Low-budget film, often
- 57. Attendance counter
- 58. Banana oil, for one
- 60. Fairy tale opener
- 61. About
- 62. Words of denial
- 63. Concludes
- 64. First name on “Cheers”
- 65. Bean counter, for short



## tuesday

02.28.17

**State of the University:  
Race at CMU**  
4:30–6:30 p.m.  
Porter Hall 100

In today's political climate, forums such as this are crucial to bring the campus community closer together. This forum invites students, staff, and faculty to come together to speak about the implications of race issues within our campus community.

## wednesday

03.01.17

**Panic! At the Disco & Misterwives**  
7–10 p.m.  
Peterson Event Center  
3719 Terrace St, Pittsburgh, PA 15260  
Tickets: [www.ticketmaster.com](http://www.ticketmaster.com)

Come watch an ever-evolving group perform their Grammy-nominated album along with their other classics, this Tuesday night. The performance will feature special guest Misterwives, an indie band from New York City.

## wednesday to friday

03.01.17–03.03.17

**Gruesome Playground Injuries**  
8–10 p.m.  
Purnell Center for the Arts  
Tickets: [drama.cmu.edu](http://drama.cmu.edu)

Explore the nuances of injury from both the physical and emotional perspective through the eyes of Doug and Kayleen. This story, as told by Rajiv Joseph, takes us through an unusual love connection, based on some of the more gruesome aspects of live, rather than the clichéd rom-coms that we've grown accustomed to.

## thursday

03.02.17

**We the Kings in the Club at Stage AE**  
7–11 p.m.  
Stage AE  
400 N Shore Dr, Pittsburgh, PA 15212  
Tickets at: [www.ticketmaster.com](http://www.ticketmaster.com)

We The Kings is taking the stage this Thursday night with tickets available both at the door and in advanced. Get into the mood with their throwback hits such as "Heaven Can Wait" and "Check Yes Juliet," and prepare for the night that your middle school self will thank you for.

## friday

03.03.17

**Mayur Show: 50 Shades of Brown**  
7:30–9:30 p.m.  
Rangos, Cohon Center  
Tickets: \$5 presale, \$7 at the door

Bring out your inner South Asian fanatic with a night of performances and drama with Mayur's 50 Shades of Brown. The night will feature performances from CMU Sahara, CMU Bhangra, Saans, CMU Jiya, Deewane, and many more. Tickets will be sold at tables throughout the week and will also be available at the door.

## saturday

03.04.17

**ICCA Central Quarterfinals**  
7–11 p.m.  
Soldiers and Sailors Hall  
41451 Fifth Ave, Pittsburgh, PA 15213  
Tickets: [www.freshtix.com](http://www.freshtix.com)

The International Championship of Collegiate A Cappella's Central Region Quarterfinals are happening in Pittsburgh and will feature four of Carnegie Mellon's very own a cappella teams. Come support C#, Counterpoint, Soundbytes, and Treblemakers, and check out groups from the University of Pittsburgh and California University of Pennsylvania.





# DRY WEATHER

On Friday, Feb. 24, sophomore humanities and the arts major Grace Huddleston and sophomore science and the arts major Becky Groves opened their exhibition *Dry Weather* at the Frame Gallery. According to their event description, Huddleston and Groves aim to use color as a way to invoke a sense of home and comfort. To that end, they hope to create a new environment of inclusivity rather than fighting for space in the current environment.

**Rosemary Haynes** | Staff Photographer  
compiled by **Sarah Gutekunst** |  
Contributing Editor