Researcher correlates class status and colds · A4
SCITECH

To save the environment, save the pandas · A6
FORUM

Timeflies exictes at fall concert · B5
PILLBOX

THE TARTAN
Carnegie Mellon's student newspaper since 1906

thetartan.org
@thetartan

November 11, 2013
Volume 108, Issue 11

Ian Glasner steps into role as SBVP

NOËL UM
News Co-Editor

Spurred by a desire to make Carnegie Mellon life more enjoyable, junior electrical and computer engineering major Ian Glasner has filled the role of student body vice president after former vice president and junior philosophy major Peter Masters resigned from the position.

Glasner was nominated to student body vice president by Student Body President Lindsay MacGillivray two weeks ago, and his nomination was approved by Student Senate last Thursday. MacGillivray presented Glasner as her nominee to Senate and faced no objections.

MacGillivray and Glasner already have a history of positive collaboration: Glasner previously served on MacGillivray's advisory cabinet as residential life adviser. He currently serves as the community advisor for the Residence on Fifth. He is also on the executive committee of Sigma Alpha Epsilon's Pennsylvania Phi chapter and is a founder of CMU in Haiti, an organization that travels to and supports Haiti.

Although already engaged with various campus organizations, Glasner looks forward to the new responsibilities associated with his position as student body vice president.

"I think I can make a difference here and effect positive change on campus. It's all about representing the student body and helping make campus a better place and making students more happy and successful. I want to make this campus more fun," he said.

> **"I think I can make a difference here and effect positive change on campus."**
>
> *—Ian Glasner*
> Student Body Vice President

According to the student government website, the student body vice president assists the student body president in all areas of the job and is either elected alongside

See **SBVP**, *A3*

Wolpert sings his way to the top

Read The Tartan's interview with former Carnegie Mellon student James Wolpert on B8

Courtesy of James Wolpert

Suresh praises power of interdisciplinary collaboration

Courtesy of Tim Kaulen
President Suresh delivered his first inaugural lecture last Thursday.

JACQUELINE JAMES
Junior Staffwriter

Newly instated Carnegie Mellon President Subra Suresh gave his inaugural lecture last Thursday.

After an introduction by James Garrett, dean of the College of Engineering and Thomas Lord professor of civil and environmental engineering, Suresh was greeted with applause from the audience in the standing-room-only Rashid Auditorium.

"It is rare I get to be in the position of the professor, so let's get to it," Suresh said.

Suresh's passion and the bulk of his research involve studying red blood cells and their behavior when confronted with malaria, sickle cell anemia, and leukemia.

Suresh greatly emphasized how "transformative and disruptive" developments in different fields — along with his co-workers and students — made his work possible.

Suresh focused mostly on the devastating affect malaria has on the simple human red blood cell.

Red blood cells must stretch and squeeze to fit through the extremely thin vessels in our brains, This ability is vital for bringing oxygen to all parts of the brain. When they are infected, red blood cells quickly lose this flexibility as their outer shell hardens. These infected cells go on to cause major vessel blockages.

Suresh highlighted the importance of interdisciplinary approaches to such confounding problems.

Suresh himself has background in materials science, engineering, and medicine.

He paused several times throughout the lecture to make the point that though a physics expert might not be able to solve a problem pertaining to his or her field, an engineer could.

Suresh hopes that his work with blood diseases might eventually lead to some form of cure for malaria and sickle cell anemia, for a start. Despite cautioning that he is far from any true solution, he remains optimistic.

"With each small step we come closer to solving the problem," he said, and looked to students for help. "If any CMU students could solve this, you'd be very famous!"

"I found the lecture educational, definitely," said alumna and Carnegie Mellon technology support and assessment analyst Shruti Valjee, "and also very inspirational. I think it's a great way for him to start off as CMU president, not just as a president, but a researcher too."

Iris Yang, a biomedical engineering master's student, added, "I connected with his research and found it very interesting."

At the end of his lecture, which lasted over an hour, Suresh stayed to answer some questions. The lecture was the first of what Suresh hopes will be many.

As the ninth president of Carnegie Mellon, Suresh has gathered many academic lauds throughout his career, one being his recent election to the Institute of Medicine. In addition, Suresh has held a position on the National Academy of Sciences since 2012 and has been a member of the National Academy of Engineering since 2002.

Suresh is one of only 16 Americans to have the honor of holding a place in all three societies. Suresh will be inaugurated this Friday.

Nagin wins Stockholm criminology prize

BRIAN TRIMBOLI
News Co-Editor

Daniel Nagin, the Teresa and H. John Heinz III university professor of public policy and statistics, described the research that won him the 2014 Stockholm Prize for Criminology.

"I've been doing work which calls into question a lot of sentencing policy — the way we use imprisonment — in the United States," Nagin said.

The Stockholm Prize, awarded by the Swedish Ministry of Justice with contributions from the Torsten Söderberg Foundation, is "awarded annually for outstanding achievements in criminological research or for the application of research results by practitioners for the reduction of crime and the advancement of human rights," according to a university press release.

Nagin won the prize for his research on deterrence, the idea that the threat of punishment will prevent people from breaking the law.

> **"I'm more optimistic, in the future, that the political climate will be such that policymakers will actually pay attention to this research."**
>
> *—Daniel Nagin*
> Professor of public policy and statistics

According to Nagin, the research for which he received the award "specifically has to do with the impact of sending people to prison on their subsequent offenses."

Nagin made the distinction between specific and general deterrence. Specific deterrence focuses on an individual criminal, discouraging future criminal activities by punishing him or her, while general deterrence focuses on crime prevention on a larger scale by making examples of specific criminals.

An example of general deterrence, Nagin says, is when "the threat of knowing that there might be cops around the corner deters you from speeding."

Nagin studies how the experience of punishment affects recidivism, when criminals lapse back into their law-breaking ways after being punished. Nagin found that specific deterrence does not have the preventative effect people thought, but rather that "either the experience of punishment was perhaps exacerbating recidivism or having no effect — none of it was showing that it had that kind of chastening effect."

Nagin, who is originally from Pittsburgh, came to Carnegie Mellon for his undergraduate education in the early 1970s. After receiving a degree from what is now the Tepper School of Business, he came back to Carnegie Mellon for a master's degree, also in business.

Nagin continued his education at Carnegie Mellon with a Ph.D. from what is now Heinz College. He credits his interest in research to his time as an undergraduate. Nagin, hired as an undergraduate research assistant, had the chance to

See **NAGIN**, *A3*

Check out our calendar of President Suresh's inaugural events on ***A3***!

FEATURE PHOTO

Annual Benefits and Fitness Fair

Kate Groschner/Photo Editor

Carnegie Mellon held its annual Benefits and Fitness Fair last Wednesday in the University Center's Rangos Hall. At the fair, over 75 different health and fitness vendors answered questions, gave fitness advice, and distributed free samples of their respective products.

Campus Crime & Incident Reports

Underage Drinking
November 2, 2013

University Police cited a University of Pittsburgh student for underage drinking at the corner of Forbes Avenue and Beeler Street. A security guard noticed the intoxicated student and requested assistance. The male was transported to a hospital for further treatment after CMU EMS deemed transport necessary.

A University of Pittsburgh student was cited for underage drinking after she was found intoxicated and sleeping on top of the laundry table inside the Margaret Morrison Apartment laundry room. University Police and EMS were summoned to assist after a concerned individual found the female. The female was transported to a hospital for further treatment.

Bicycle Theft
November 2, 2013

A Carnegie Mellon student reported his bicycle stolen from the bike walk near the Purnell Center. The victim stated that he secured his Hunter brand bicycle outside of Purnell on Oct. 30, 2013 at noon. The victim stated that he returned to find the bike missing at 9:30 p.m. on Nov. 2. The victim stated that the cable lock, which was securing the bicycle, was also stolen.

Alcohol Amnesty
November 3, 2013

University Police and EMS were summoned to Mudge House and Scobell House in reference to two incidents with intoxicated students. Both students were transported to the hospital for further treatment. Both incidents met criteria for Alcohol Amnesty to be applied.

Hit and Run
November 3, 2013

A Carnegie Mellon student reported that his vehicle was struck in the parking lot behind 1091 Morewood Avenue in the Greek Quad. Police and the victim were unable to determine who struck the victim's vehicle.

Laptop Theft
November 6, 2013

University Police were summoned to Doherty Hall in reference to a theft report. The victim stated that they left their laptop unattended in a Doherty Hall 1200 corridor classroom from 1:30 p.m. until 10:30 p.m., when they realized the laptop was missing. This investigation is ongoing.

Defiant Trespass Citation
November 8, 2013

University Police responded to a call for a suspicious male harassing two Carnegie Mellon students. Police identified the man and confirmed that he was not affiliated with Carnegie Mellon and was previously trespassing in campus residence halls. The man was cited for defiant trespass and released from the scene.

NEWS IN BRIEF

Student awarded scholarship from (ISC)² Foundation

Carnegie Mellon is proud to announce that Pratibha Anjali Dohare is the recipient of a $40,000 cybersecurity scholarship from the International Information Systems Security Certification Consortium (ISC)² Foundation.

The scholarship will help Dohare with her studies in the masters of science in information technology-information security at Carnegie Mellon's Information Networking Institute.

"I intend to utilize this scholarship in enhancing my knowledge in the field of cybersecurity and forensics during my studies at CMU's INI, with an aim to merge the processes of prevention and investigation through development of an intrusion prevention and detection system. Cybersecurity is more than one individual step — it is a process built upon a cycle of key attributes: learning, monitoring, analyzing, deciding, and responding — before the whole cycle of learning begins again," said Dohare in the press release.

Cybersecurity attacks are becoming more frequent with the increasing usage of computer systems for both economic and social means. As young adults become more experienced with social media, experts believe many are participating in unsafe practices on the Web.

To be eligible for the scholarship, applicants must be at least undergraduate sophomores by August of the calendar year, when scholarships are awarded.

Students must also be academically eligible to continue at their educational institutions while pursuing their degrees.

CMU research shows inkblots improve password security

Computer scientists at Carnegie Mellon have created a password system that will use inkblots to provide extra protection when passwords are stolen from websites.

The Generating panOptic Turing Tests to Tell Computers and Humans Apart (GOTCHA) password system would be able to further protect important accounts.

A user first chooses a password, and a computer creates numerous multicolored inkblots. The user would then describe each inkblot with a text phrase that would be stored in random order with the password. In the future, upon signing in, a user would have to match phrases with their respective inkblots.

While this may sound like a simple security system, it is near impossible for a computer to solve. In a press release, Jeremiah Blocki, a Ph.D. computer science student who helped develop GOTCHA, said, "These are puzzles that are easy for a human to solve, but hard for a computer to solve, even if it has the random bits used to generate the puzzle."

Blocki developed GOTCHA along with Manuel Blum, professor of computer science, and Anupam Datta, associate director of computer science and electrical and computer engineering.

GOTCHA would be helpful with security breaches of websites from which millions of user passwords are stolen — a problem that has affected companies like LinkedIn, Sony, and Gawker. The system would ensure that a sophisticated computer program would be unable to crack an account.

Compiled by
ALVIN MATHEW

WEATHER

TUESDAY	WEDNESDAY	THURSDAY
High / Low	High / Low	High / Low
35 / 26	36 / 26	45 / 32

FRIDAY	SATURDAY	SUNDAY
High / Low	High / Low	High / Low
49 / 33	51 / 39	60 / 47

Source: *www.weather.com*

Corrections & Clarifications

The article "Center receives $4.6 million to improve transit app" in the Nov. 3 issues of The Tartan previously stated that the Port Authority tested their GPS system as part of the RERC on Accessible Public Transportation. A correction has been made to clarify that while the Port Authority did recently improve their GPS system, the RERC is not involved in the process or deployment of the new tracking system; it simply plans to use their data.

STUDENT SENATE MEETING MINUTES

Special Allocation: Game Creation Society

Senate voted to allocate $1,392.42 for the Game Creation Society in order to cover server costs charged by the School of Computer Science. Although the Game Creation Society has been paying the monthly fee of $22 for several years and has received Joint Funding Committee funding for it, an administrative error kept the organization from ever receiving the money.

Committee Update: Campus Life

Campus Life will be hosting a gallery crawl on Nov. 23 from 11 a.m.–5 p.m., with buses leaving periodically from the UC Turnaround. The buses will take students to venues around Pittsburgh, including the Mattress Factory, the Andy Warhol Museum, and the National Aviary.

Ex-Officio Report: Lieutenant Joseph Meyers

Lieutenant Joseph Meyers of University Police gave a presentation on Carnegie Mellon's shuttle system. Meyers said that this semester there has been a marked increase in the number of complaints University Police received about the shuttle system, which includes the escort shuttles as well as the fixed-route shuttles. Meyers asked Senate for suggestions on how to improve awareness and ease of use for the system; he focused on the usability of the shuttle system's website, which can be found at *www.cmu.edu/police/shuttleandescort.*

Student Body Vice President Appointment

Student Body President and senior biology and psychology major Lindsay MacGillivray announced the appointment of junior electrical and computer engineering major Ian Glasner to the position of student body vice president. Glasner replaces junior international relations and politics and philosophy double major Peter Masters, who resigned from the position two weeks ago. Glasner officially became student body vice president at Thursday's Senate meeting after no Senators objected to his appointment.

Compiled by
BRIAN TRIMBOLI

Glasner hopes to make campus a happier place

SBVP, *from A1*

Kate Groschner/Photo Editor

Glasner hopes to be an effective liaison between Carnegie Mellon and its students.

the SBP or appointed by the SBP after election.

"Lindsay has been my role model because I've followed her path, as she was the CA for the Rez while I was an RA, and then I filled her role as CA. She is someone that just has all of her stuff together. She really knows what she's doing, is very organized and has a ton of different initiatives that she's determined to achieve," he said.

"I think I'm similar to her in some of those ways in the sense that I know what I want and will do everything I can do to go and achieve those goals. But in the end, I'm just another person with different ideas," Glasner continued.

One initiative spearheaded by MacGillivray that Glasner will contribute to is the WTF@CMU website, which stands for "What to Fix at Carnegie Mellon."

The page is meant to address student concerns about campus issues.

"One of our primary initiatives is WTF@CMU, to figure out what people think is wrong on campus, so that we can address and fix it. Addressing student concerns and fixing them in a timely manner is definitely one of our goals," Glasner said.

For Glasner, it's the students and his love for the school that motivate him to be involved with student government and other organizations on campus.

"My favorite thing about Carnegie Mellon is the drive and passion that students have for what they do. When students on campus want to make a change, they then take steps to reach those goals that they want to fulfill."

In addition to fostering ideas for campus change, the student body vice president is integral to student-administration communication.

"The goal of student government here is to represent the students to the administration. We also have funds and students at our disposal to make change on our own, but a big part of it is being that liaison," he said.

"If we are involved and get to know as many students on campus, then we can do the best job of representing this school. And I think Lindsay and I are both great people to do that," Glasner added.

This year, student government has focused on their Enhancing Campus Culture (ECC) initiative, which includes mental health first aid training; a mindfulness room to help students de-stress; the random acts of kindness group, Project Smile; and a transition-to-college course, Thrive@CMU.

Glasner hopes that ECC and other ideas that he and student government have will help alleviate campus stress culture.

He also would like to see a restructured dining plan that could cater towards upperclassmen. "All these ideas are in the works, and nothing is official yet, but we're only eight or nine weeks into the semester, and things are still in the planning stage. Next semester will really be all about exacting these initiatives."

Glasner said that students should feel free to reach out to him via email.

Nagin pioneers death penalty and deterrence research

Courtesy of Daniel Nagin

Nagin has published numerous papers on criminology and sociology.

NAGIN, *from A1*

work with prominent Tepper faculty members, including several who would go on to win Nobel prizes, such as Robert Lucas — now at the University of Chicago — and Herbert A. Simon, the late Richard King Mellon university professor of computer science and psychology. His experience doing research as an undergraduate student showed Nagin that he did not want to work in the business world when he graduated. "Just being around these people and interacting with them got me interested in doing research, and not going into the business world," Nagin said.

In the United States of the 1970s, crime rates were rising. Nagin, a doctoral candidate at the time, wondered if there was a link between national demography — the baby boomers were just reaching their young adult years — and the swell in crime.

According to Nagin, a conversation with Alan Blumstein, J. Erik Jonsson university professor of urban systems, former dean of the Heinz School, and winner of the 2007 Stockholm Prize, drew him into the field of criminology. "At that time, we [baby boomers] were all [teenagers], and it was prime crime-committing age. So I asked Al [Blumstein], to what degree does this rise in crime rates have to do with demography, having a lot of young people — particularly young men — around. And he said, 'I don't know; let's do a research project on it.'"

This is not the first time that Nagin has been recognized for his work. Nagin is the incoming editor of *Criminology and Public Policy*, and has published over 140 peer-reviewed papers in various journals of criminology, sociology, statistics, demography, economics, psychiatry, and psychometrics.

Nagin is also an elected fellow of the American Society of Criminology, and received the organizations Edwin H. Sutherland Award for research contributions in 2006. He is also an elected fellow of the American Society for the Advancement of Science.

Because of his extensive research on deterrence, the U.S. National Research Council asked Nagin to lead its Committee on Deterrence and the Death Penalty in 2012. The committee produced a report detailing their finding; according to an adaptation of the report, "the committee conclude[d] that research to date is not informative about whether capital punishment decreases, increases, or has no effect on homicide rates. Therefore, these studies should not be used to inform deliberations requiring judgments about the effect of death penalty on homicide."

The work of Nagin and the committee garnered national attention. A 2012 editorial in *The New York Times* tied the committee's report to Connecticut governor Dannel Malloy's decision to sign a state law abolishing the death penalty.

Nagin thinks that his current research could have important policy applications in the future. "There is change afoot, changing attitudes among both liberals and conservatives. I'm more optimistic, in the future, that the political climate will be such that policymakers will actually pay attention to this research."

Indeed, crime rates in the United States peaked from 1970s to 1990s, and are now declining again. Nagin is sharing the 2014 Stockholm Prize in Criminology with Joan Petersilia of Stanford University. The researchers will be honored for their work at the 2014 Stockholm Criminology Symposium from June 9–14.

Anne-Sophie Kim/Layout Staff

Science & Technology

Researcher links class status with flu susceptibility

ROHAN VARMA
Staffwriter

You don't decide the circumstances of your birth, such as who your parents are, where you live, or your family's financial status. But according to the ongoing research of Sheldon Cohen, a professor of psychology at Carnegie Mellon, these uncontrollable factors greatly influence health and wellness.

Since 2004, Cohen has attempted to find a causal relationship between lower socioeconomic status and health. Studying subjects in the Pittsburgh area, his research group mapped the socioeconomic backgrounds of its volunteers and then exposed them to the common cold to find their susceptibility.

"There was a very linear relationship between the number of years in a lower socioeconomic status and whether they got sick: the more years without a home, the more likely to respond to the virus," Cohen said.

In psychological studies, home ownership is widely used as a marker for socioeconomic status. "It is considered a marker of income, wealth, and social status," Cohen said.

However, the results from the first study revealed that not just people in extreme poverty feel the effects. Cohen said, "It turns out that the association follows a gradient. The risk gradually decreases with more and more years with home ownership."

With these results in hand, it was clear that the relationship between poverty and health was not so black and white.

Cohen sought after other explanations, looking at common habits associated with low living standards such as increased alcohol consumption, smoking, and lack of exercise. However, none of these standards were able to prove the experimental results.

Last week, Cohen published groundbreaking research that could potentially solve this conundrum. He found a biological link between a lower socioeconomic status during childhood and a higher susceptibility to catching the common cold. According to his research, this relationship can be explained through telomeres.

Telomeres are essentially shields placed on the ends of DNA that protects it from degrading every time the cell replicates. However, telomeres slowly decrease in size over time; when they are no longer able to do their job, the cell is unable to replicate and dies.

In 2004, Cohen published research suggesting that a lower socioeconomic status in childhood could indicate a weaker resistance to infection. Consequently, Cohen said his latest research was driven by two fundamental questions: "Can we replicate the previous findings we had in 2004, and can we explain them through telomere length?" His research group was able to accomplish both goals.

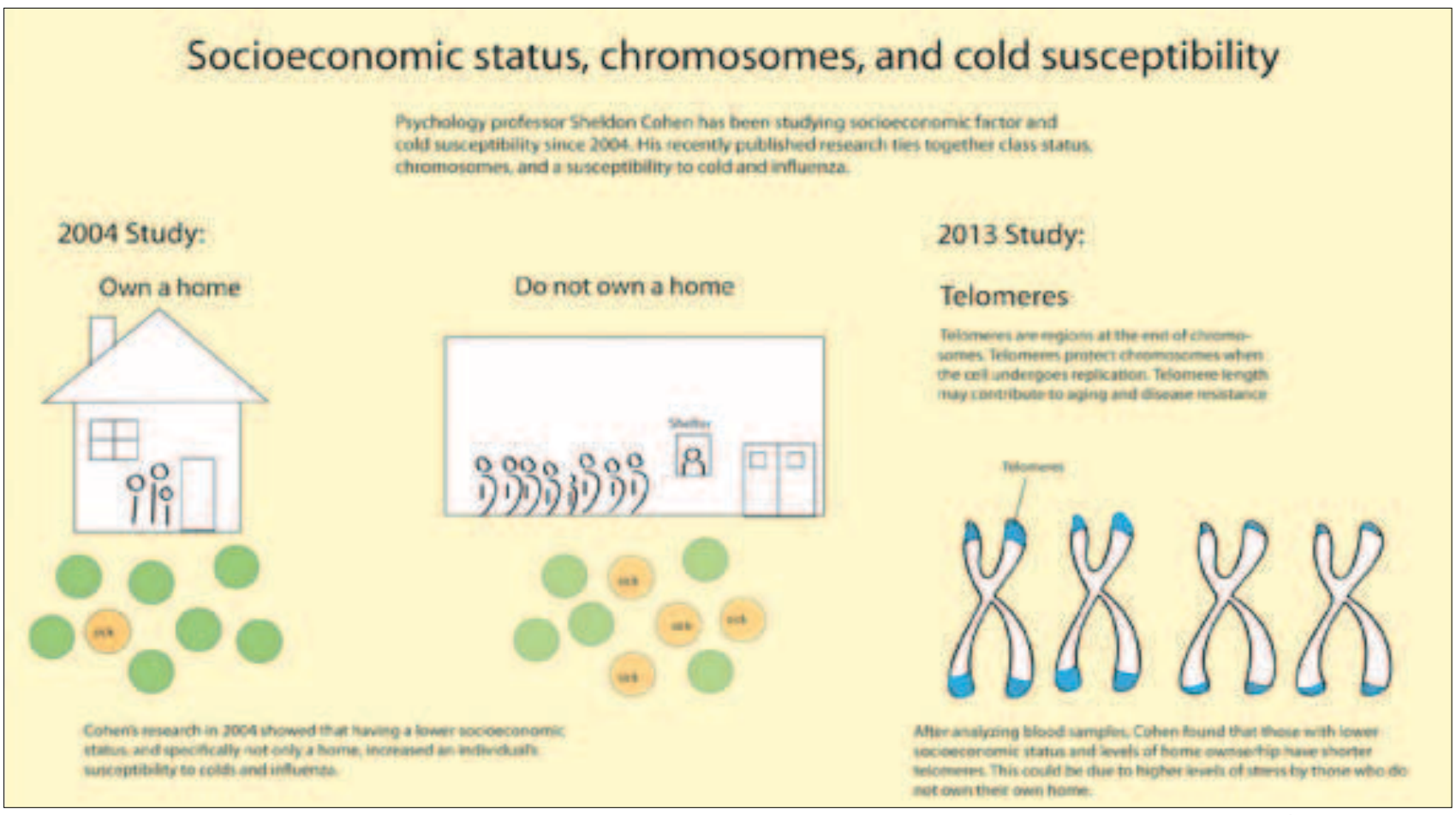
Not only did the study uphold the strong correlation between childhood living standards and the likelihood of receiving an infection, but it also found that volunteers with lower socioeconomic status consistently had shorter telomeres.

"This doesn't mean there is a direct causal relationship. However, the data is consistent. Statistically, 25 percent of susceptibility to the cold can be attributed to telomere length," Cohen said.

He also mentioned that one factor that holds a strong correlation with shortened telomeres is stress. This is one possible explanation for his results, because people growing up in unstable living situations are likely to experience much more stress in their early years.

Moving forward, Cohen is going to continue this line of research. His lab is beginning a large project that will determine whether or not a lower socioeconomic status causes a faster rate of telomere degradation. This study will be conducted with over 1,500 volunteers. Fifteen years ago, Cohen recorded the social and economic backgrounds of these individuals and extracted samples of their blood. He will now go back to the volunteers and take down the same recordings. He hypothesizes that the subjects from a lower social status have a higher telomere degradation rate.

Cohen believes his research is providing vital information on how living standards can have a direct biological impact on humans. While it has always been clear that it is important to allocate resources toward bringing people out of poverty, this research may suggest that it should not be just a goal, but a priority.



Michael Setzer/SciTech Editor

HOW THINGS WORK

Invisibility cloaks still distant from reality

SONIA KATHARANI-KHAN
Staffwriter

It is hard to imagine invisibility, popularized by science fiction and fantasy, becoming part of our world — but every day, science comes closer to making invisibility a reality. Although they're still experimenting, researchers have made significant progress in developing "invisibility cloaks." Though Harry Potter's mythical invisibility cloak is likely the first thing that comes to mind, these cloaks unfortunately won't have the ability to make humans disappear anytime soon. However, if fully developed, their applications could include masking boats, planes, or military tanks — and in the distant future, they could even render events in time invisible. In the past week, research by scientists at the University of Texas at Dallas has put the idea of invisibility devices in the spotlight. But how do these pieces of technology work?

The fundamental idea behind achieving invisibility is to prevent an object from absorbing, refracting, or reflecting light in any way. In other words, it must be able to bend light away from itself. There have been numerous attempts to achieve this effect, such as carbon nanotube cloaks, but the method closest to perfecting the effect uses metamaterials, manmade materials that have properties natural materials lack.

Most attempts at cloaking could bend light around an object, but could not stop light from reflecting off of it. Thus, much like water or glass, the object was nearly invisible, but reflected just enough light to be detectable. One recent metamaterial cloak, developed at Duke University under the leadership of professor David R. Smith, was able to minimize the reflection by altering the shape of the materials in the cloak.

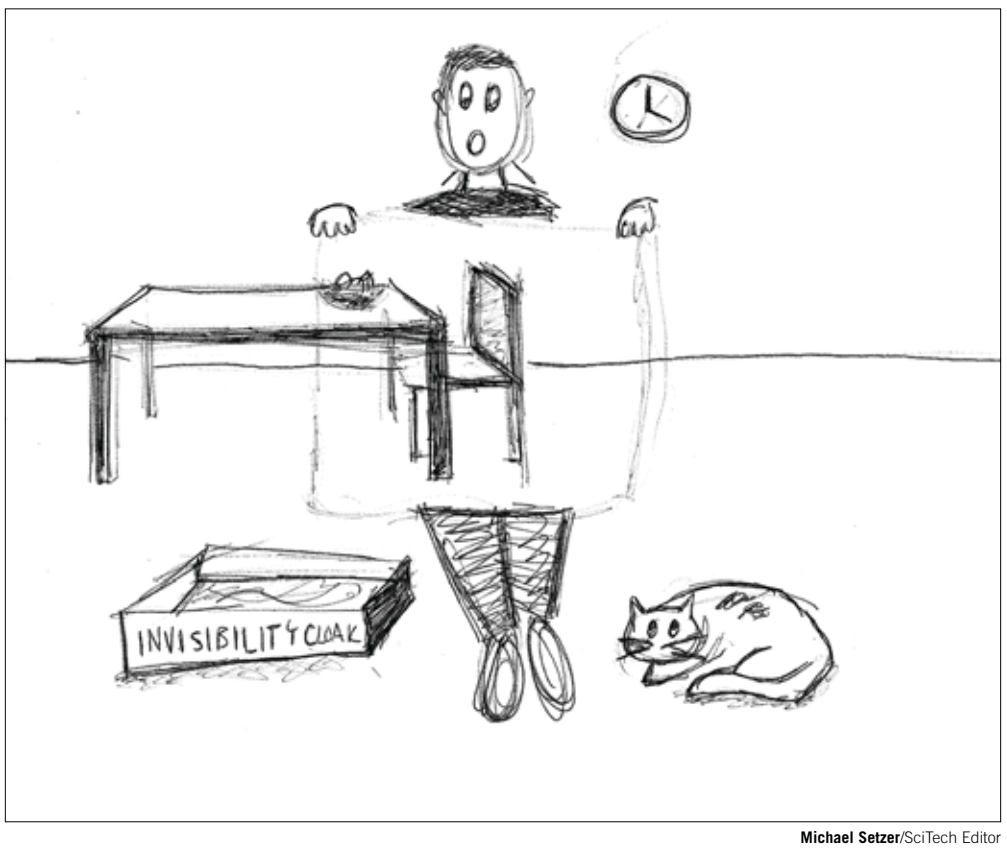
The cloak works by causing light waves to split, bend around it and reconverge once they pass the object. It resembles a square, with an inverted diamond protruding from the center, and divided into four quadrants, consisting of fiberglass etched with copper. The diamond-shaped center is empty, outlined by copper strips. The strips are designed such that each strip meets its mirror image at every interface. This stops the cloak from reflecting any light from its edges.

The cloak can perfectly hide a 3×0.4-inch (7.5×1cm) cylinder from microwave radiation, but not in the visible light spectrum. Unfortunately, the cloak can only mask small, stationary, two-dimensional items; it cannot hide objects from the human eye in all directions. So, how does invisibility at other wavelengths provide any practical use?

In answering this, it is important to recall that certain objects can be invisible to the human eye but still visible at other wavelengths. For example, while humans do not see at the microwave level, cell phones and radars do. Once fully developed, invisibility at the microwave level could make planes, boats, or tanks undetectable by radar, rendering them invisible. Thus, such invisibility has potential applications in the defense industry. Though it will still be at least a decade before invisibility is put to practical use, its potential application has received wide recognition, and research behind it has been funded by organizations such as DARPA and NASA.

On a more theoretical note, scientists at Cornell University took a step further by not only splitting light waves, but altering the speed at which each wave moved. The effect was achieved by shooting out a beam of light, and creating a time lens — a lens which splits light into temporal components — with other beams to split the light into two different parts that move at different speeds. The difference in speeds created a gap in time, which masked whatever event took place during that gap. The effect lasted no longer than a 40th of a second, and within a fiber thinner than human hair. Nonetheless, the experiment in effect "erased" a brief moment of history.

Though we won't be owning our own invisibility cloaks anytime soon, the ability to revolutionize the defense and communications industries, or to perhaps even render time invisible, is on the horizon. Considering that even Harry Potter could not hide time, we can take solace in the fact that though we cannot recreate science fiction, someday, we may just surpass it.



Michael Setzer/SciTech Editor

SCITECH BRIEFS

Biologists study single-cell reproduction

While almost all multicellular organisms have evolved to reproduce using single cells, such as eggs and sperm, why this method became so universal has long puzzled scientists. To study this trait, University of Minnesota postdoctoral fellow William Ratcliff and associate professor Michael Travisano have transformed a single-celled algae into a multicellular one that reproduces with single cells. Many scientists assumed that single-cell reproduction evolved much later than multicellularity, but their study yielded surprising results: Single-cell reproduction arose at the same time as multicellularity.

Source: *Science Daily*

Worldwide starfish deaths stump scientists

Starfish populations worldwide have fallen prey to the "seastar wasting syndrome," which causes starfish to lose their arms. This disease usually occurs if the starfish is wounded or becomes too dry, and it grows infected lesions that lead to its arms falling off. While this disease usually only occurs to one or two starfish within a population and is not often lethal, millions of starfish from populations around the world have not only contracted the disease, but are unable to recover from it. While unusually warm waters may be a cause, the real culprit of this outbreak is yet is to be discovered, and scientists are unsure how long it will last.

Source: *Time*

India launches maiden rocket to Mars

India launched its first rocket to Mars last Tuesday with the goal to complete the mission using less money than other nations have previously. Successful missions to Mars thus far have been completed by the United States, the European Union, and Russia; China attempted an unsuccessful mission two years ago. India's probe costs only 4.5 billion rupees ($73 million), which is a fraction of the cost of NASA's upcoming Mars Atmosphere and Volatile EvolutioN (MAVEN) mission. It has also been designed to orbit Earth six or seven times to build up momentum before being slingshotted to the red planet, in order to save fuel. The rocket is scheduled to enter Mars's orbit by next September.

Source: Reuters

Discovery of Higgs only brings more mysteries

Joseph Lykken, a theorist at the Fermi National Accelerator Laboratory, and Maria Spiropulu of the California Institute of Technology, conducted research that predicts that sometime in the distant future, a minuscule quantum fluctuation will cause the Higgs field to drop to a lower energy state. Since the Higgs field permeates all space, this seemingly small change would destroy reality as we know it in the blink of an eye. Fortunately, this is but one of many theories that have developed after the recent discovery of the Higgs Boson, which seems to have caused more mysteries than it's solved.

Source: *The New York Times*

Compiled By
BROOKE KUEI

Scientists create program to help model gene expression

RAGHUNANDAN AVULA
Staffwriter

In recent decades, scientists have taken an interdisciplinary approach that integrates computer science and biology to develop a deeper understanding of the intricate details that contribute to a healthy organism. Kriti Puniyani, a Ph.D. student in the School of Computer Science, working under the guidance of professor Eric Xing, developed GINI, a tool that analyzes images of biological organisms at the molecular level using *in situ* hybridization and determines the expression of mRNA to develop gene regulation networks. Scientists at Carnegie Mellon's School of Computer Science and the Lane Center for Computational Biology have been actively developing tools at the forefront of this revolution in biology.

President Subra Suresh mentioned in his lecture last week that the combination of biology and other disciplines of engineering, math, and computers — such as the modeling of blood flow through the heart — is not a novel advancement. Modern biological research, however, has focused on understanding biological complexity at the molecular level involving cells, DNA, and proteins. A new, growing field of research applies computational modeling and engineering to this analysis to help answer questions biologists have about the miniscule interactions inside a living organism.

In a multicellular organism, every cell contains the same exact copy of DNA. DNA is like a cookbook of genes that give the cell instructions on how to build a variety of proteins that perform different functions inside the cell. However, at any given time, each cell produces only a specific set of proteins that it needs. Different cell types, such as heart cells versus hair cells, produce a unique set of proteins that are specific toward the function of the cell.

A large portion of biological research involves understanding the functions of each protein and, more importantly, the interactions between proteins and other molecules such as DNA. Cells have a complex system by which one protein can regulate the expression of other proteins. Biologists want to model this system, but the task is challenging because the regulatory networks are very complex.

Modern computational techniques have attempted to address this issue by utilizing mRNA expression data. When building a protein, a cell converts the gene in the form of DNA into an intermediate molecule of mRNA that is directly used to build the protein. By measuring the specific mRNA present in a cell at a given time, scientists can get a good idea of the different proteins that are being expressed in that cell.

Based on this data, computational biologists can generate a graph or map known as a Markov model in where the nodes of the graph are proteins and the edges of the graph are connections that exist between proteins. Two proteins are connected if one impacts another's gene expression.

Previously, scientists favored microarray technology to determine mRNA expression of a specific gene in an organism and to generate a map similar to a gene regulatory network. However, there are limitations with this method.

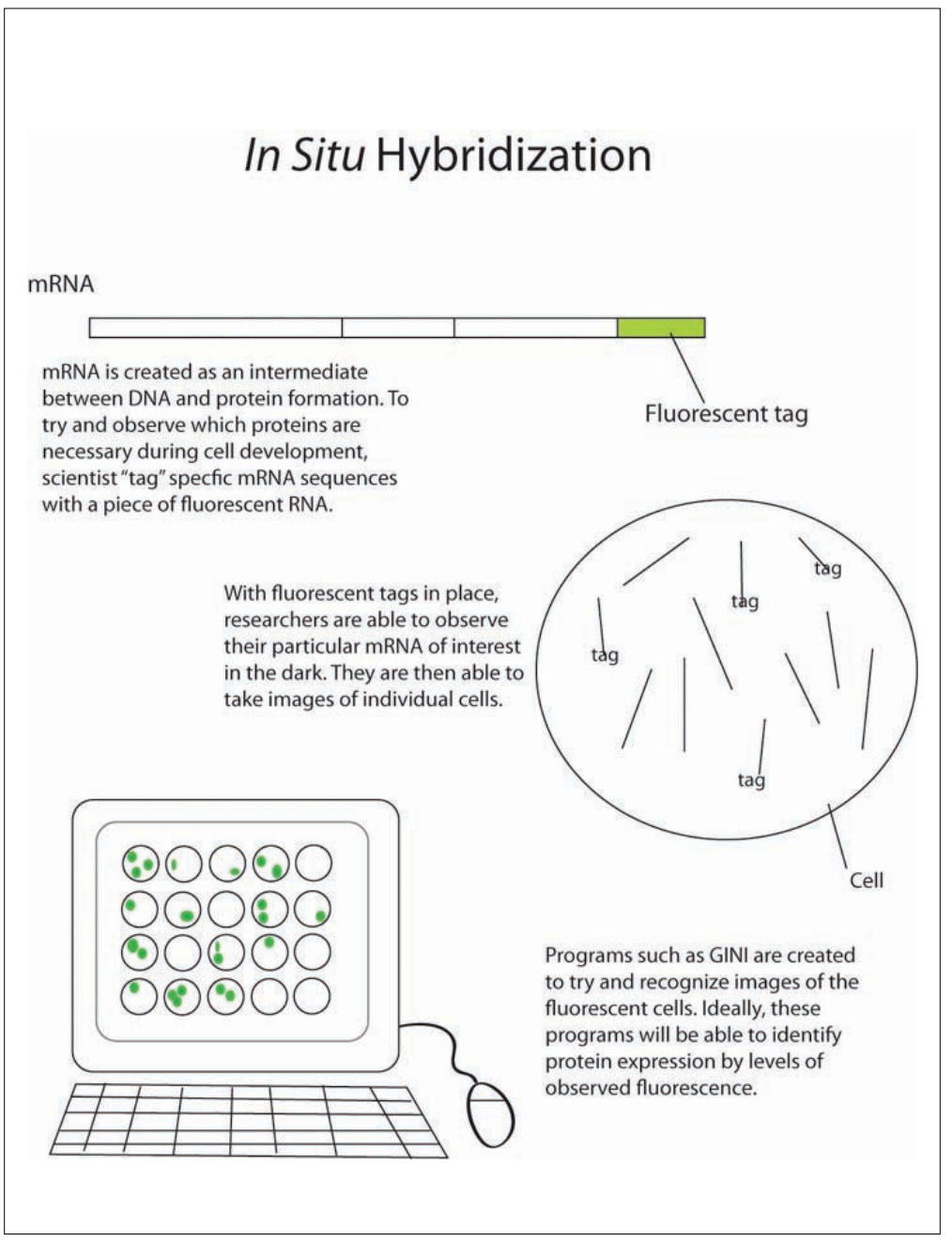
According to Puniyani, microarray data only present a binary, on-or-off status of a gene and is ill-suited for multicellular organisms because it only represents the average expression in a sample and can lead to severe information loss and inaccuracy in further experiments.

Puniyani explained ISH technology reveals a more holistic view of the activities and functions of genes. In this technique, fluorescent tags bind to a specific mRNA sequence in an organism. It can then be imaged as a microscope identifies where and how much mRNA is being expressed at a given time.

SPEX, a previously developed computer vision tool, analyzes the images and determines gene expression. With this data, scientists determine the collection of images or "bags" in which each gene appears and constructs a Markov random field graph structure. Unlike microarray data, which produces a unique value for each gene expression, this model is represented by a vector-valued spatial pattern. The program then determines similarity between bags and estimates a probable gene interaction network.

To test GINI, Puniyani and Xing produced a small artificial data set and found that their program generated a reasonable gene network.

The ability to understand gene networks is extremely useful in understanding how cells differentiate into distinct types. For example, multicellular organisms begin as a single cell. As the cell divides and the embryo grows, cells specialize and different proteins are expressed into different cells.



Michael Setzer/SciTech Editor

GINI can be applied to a variety of experiments and provides biologists with an efficient tool to build gene interaction networks. It surpasses many of the limitations of the previous microarray method.

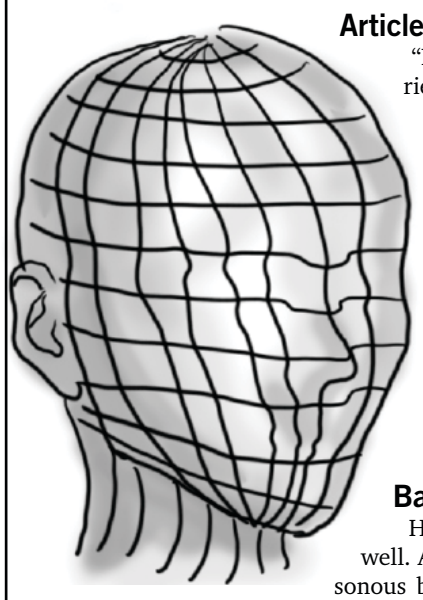
The uniqueness of protein expression results in some cells becoming part of the head of the fly while others become part of its posterior end, for example. As the embryo grows, cells differentiate into 14 segments of the adult fly and the gene interaction network changes as new genes are expressed in different cell types.

Puniyani found that the Berkeley Drosophila Genome Project had generated 110,000 ISH images of fruit fly embryos capturing patterns of 7,516 genes and provided an ideal data set to test the viability of GINI. Puniyani was glad to find that GINI returned a very probable network and displayed certain gene interactions that had already been mentioned in the literature.

GINI can be applied to a variety of experiments and provides biologists with an efficient tool to build gene interaction networks. It surpasses many of the limitations of the previous microarray method. Following the completion of their work, Puniyani and Xing's research was published in the October issue of *PLOS Computational Biology*.

Looking forward, Puniyani hopes to expand the tool to combine data from multiple states and have GINI produce a time varying Markov model. This idea has been successfully implemented with microarray data, but Puniyani added that it is much more difficult to implement with image data.

Research Roundup: Published papers by CMU faculty



Article:
"Fine-grained temporal coding of visually-similar categories in the ventral visual pathway and prefrontal cortex."

Published:
Frontiers in Psychology, October 2013

Who:
Researchers in the departments of machine learning, psychology, and statistics at Carnegie Mellon, as well as researchers in the Center for the Neural Basis of Cognition and United States Air Force Academy.

Background:
Humans can distinguish visually similar categories very well. A good example is the ability to distinguish between poisonous berries and ripe ones. Scientists refer to this phenomena as "subordinate-level categorization," which is a higher skill than "basic-level categorization," which is distinguishing between two obviously different objects, such as an airplane and a computer. If one becomes an expert in a particular subject, they perform subordinate-level categorization just as intuitively as basic-level categorization. An example the authors give is an expert bird-watcher who can tell bird species apart as easily as a layperson could tell a bird from a chair.

Hypothesis:
The scientists were aware of two regions in the brain associated with the process of categorization: the ventral visual pathway (VVP) and the prefrontal cortex (PFC). However, current understanding of the mechanisms behind categorization is poor. The researchers proposed using magnetoencephalography (MEG), an imaging technique that can track brain activity, to test two leading hypotheses.

The first hypothesis emphasizes the role of the PFC and states the role of the VVP as helpful to visual identification but not categorization. The other leading hypothesis states that the PFC and VVP play complementary and nearly equal roles in visual processing and categorization. The Carnegie Mellon team hypothesized that there are necessary contributions from both brain regions.

The Experiment:
The researchers created two similar "shape categories." They devised a unique series of blob-like shapes that were in one of two categories, designated "A" and "B." Although each blob was unique, blobs in categories A and B had distinguishing characteristics. The MEG monitored neural activity as the participants were trained in how to discriminate between the two categories. The MEG gave researchers a chance to observe what happens in the brain when participants discriminate between blob categories.

Results:
The research suggested that the VVP is integral to discriminating between two categories of similar-looking objects. Surprisingly, the researchers found no evidence to support the idea of explicit coding of information in the PFC. The researchers admit that they used a fairly small sample size, and that further research is needed. Future applications of similar research could help determine the mechanisms behind visual procession and learning.

Article:
"Source Water Changes and Energy Extraction Activities in the Monongahela River, 2009–2012."

Published:
Environmental Science and Technology, October 2013

Who:
Jeanne Van Briesen, professor of civil engineering at Carnegie Mellon, and Jessica Wilson of the department of civil and environmental engineering at Manhattan College.

Background:
The Monongahela River runs through southwestern Pennsylvania and north-central West Virginia. Over the course of the 20th century, the river has been exposed to drainage from abandoned coal mines and waste-water from conventional oil and gas production. In addition, unconventional methods of gas extraction has dramatically expanded, especially in the Marcellus Shale gas reserve. This is of interest as the Monongahela River is the source for 17 drinking water plants that serve over 1 million people.

Hypothesis:
The study looks at water properties pertinent to drinking quality between September 2009 and September 2012. The researchers aimed to determine if changes posed a threat to drinking quality and if the changes were due to seasonal variability or due to waste-water disposals of oil and gas.

The Experiment:
Water samples were taken from six drinking water treatment plants on the Monongahela River. The samples were analyzed for total dissolved solids, pH, sulfate, chloride, and bromide concentrations and analyzed within two weeks of collection. The samples were 500 milliliters in size. The researchers also collected data on the seasonal flow of the river. This was necessary as they needed to compare concentration levels relative to flow rate.

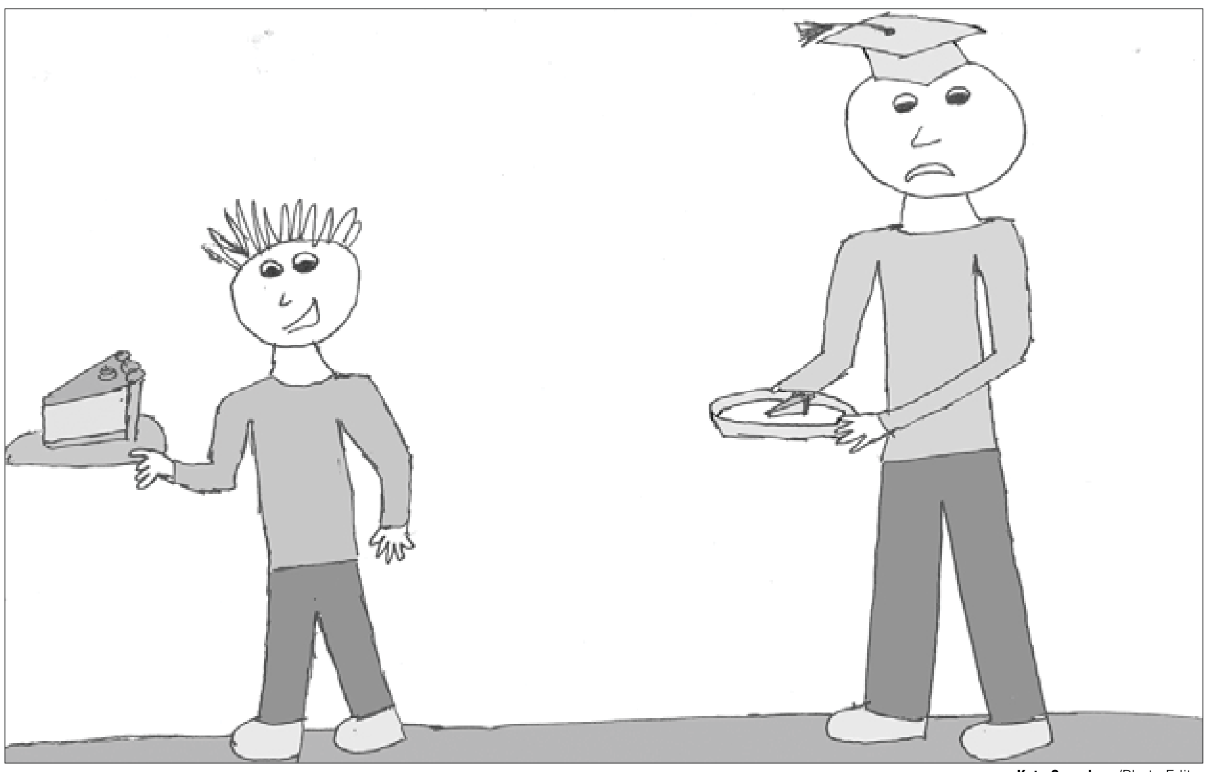
Results:
The researchers looked at both constituent loads, which are determined by multiplying concentrations of pollutants in the water by the flow, and constituent ratios, which compare concentration of pollutants to the flow. It was expected that the highest constituent loads would occur during periods of high flow and that similar constituent loads would occur during periods of similar flow.

Looking at constituent loads, they found that observed increases in bromide and chloride occurred during different time periods, indicating that the ions came from different sources. Accounting for the ratios, they found that overall bromide levels increased in May of 2010, and decreased in 2012. The researchers concluded that levels maintained at these concentrations would not pose a threat in drinking water. In terms of sources of ions, it would be nearly impossible to determine if ions came specifically from unconventional natural gas.

Compiled by
MICHAEL SETZER

Forum

FROM THE EDITORIAL BOARD



Kate Groschner/Photo Editor

CMU initiatives must include grad students

Last month's Healthy U survey was a unique opportunity for University Health Services to gauge campus health and well-being for both graduate and undergraduate students at Carnegie Mellon. Never before have graduate students been included in a campus health survey.

This fact is surprising for a school with such a large percentage of graduate students — 6,685 of the school's 12,991 students are master's or doctoral students, according to Carnegie Mellon Institutional Research and Analysis.

While the inclusion of graduate students in the survey is a step in the right direction, the administration and campus organizations should push for even greater recognition of graduate students in university-wide initiatives.

The needs and wants of undergraduates and graduate students aren't the same. While many of the graduate programs at the university are research-based, undergraduates generally adhere to the core curriculum of their programs. While the academic programs of each group are different, the university can focus on ensuring that undergraduates and graduate students receive equal attention and concern.

One opportunity for equal attention is to renew efforts for the Activities Fee so that it is distributed toward graduate students and undergraduates more evenly. Many student organizations and events are tailored more for undergraduates than graduate students. However, according to the Carnegie Mellon University Student Activities Fee policy, a portion of graduate students' activities fees goes to the Graduate Student Assembly. This allocation will hopefully go to more programs and activities geared for graduate students.

Concern over student life and well-being has been a prominent issue over the past year. The administration needs to make sure that in addressing concerns, a significant portion of the Carnegie Mellon community isn't overlooked. The inclusion of graduate students in the Healthy U survey is a nice gesture, but more needs to be done in order to truly improve the quality of life at Carnegie Mellon for all students, faculty, and staff.

Cuts in Farm Bill should not target the poor

The debate surrounding the United States Farm Bill is poised to have a devastating effect on the nation's poor. The Farm Bill provides subsidies and interventions in markets related to food consumption and agricultural production. As of Nov. 1, families receiving food stamps started to receive a five percent reduction in benefits, equating to a reduction of about $36 per month for a family of four, according to the *Washington Post*. This change results from recent action taken by Congress, which passed the Farm Bill containing provisions for reducing the quantity spent on food stamps.

Food stamps have traditionally been bundled as part of the Farm Bill, which is passed roughly every five years and funds crop subsidies, crop protection, and environmental programs in addition to food stamps. *The New York Times* estimates that the newest Farm Bill will cost almost $1 trillion over the next 10 years. Because of these projections, it is understandable that politicians are concerned about this magnitude of spending. However, cuts should not be made at the expense of our nation's poorest.

We live in a time of rising costs of living and uncertain employment prospects. Removing the safety net on which many Americans depend is neither a fair nor just way to trim government spending.

Of the subsidies within the Farm Bill, over 80 percent are flowing to farming families that are wealthier than the average American household, according to an editorial published by *U.S. News & World Report*. Additionally, the continued subsidizing of corn and other crop in the United States creates distortionary economic effects, and tampers with markets in dangerous ways.

Cutting spending is a definite concern facing our nation. However, we must not go about addressing it in a way that hurts the poorest people in the country.

Rhetoric of abortions shroud legal battles

The Supreme Court declined to hear an Oklahoma case on limiting chemical abortions on Monday. This decision means that Oklahoma's own Supreme Court ruling, which struck down the attempt to ban all chemical abortions, will stand. The Oklahoma ban proposed limits on virtually all kinds of chemical abortions, most notably the drugs mifepristone and misprostol, according to *The Huffington Post*. These drugs may be used in tandem during the first seven weeks of pregnancy.

According to news organization Al Jazeera America, this proposed ban is the most extreme of its kind in the U.S., as it essentially prevents all types of chemical abortions. While the scientific conversation surrounding chemical abortions is important and relevant, legal battles involving the use of these drugs often get bogged down in political rhetoric that has little to do with medical fact. The argument against chemical abortion focused on it being unsafe for women; however, this is untrue.

Chemically induced abortions, or medical abortions, involve changing the hormone levels in a woman's body to induce a miscarriage, according to Planned Parenthood. While taking an abortion pill has potential side effects, medical abortions are safe procedures, with limited risks for the women seeking them. Anti-abortion activists in this particular case are claiming that medical abortions hold medical risk for women, ignoring the fact that all medical procedures carry some element of risk, and those involved in medical abortions are no higher than other types of procedures. Over 1.4 million women have used these drugs to induce abortions; eight of them have died, which the state of Oklahoma argued constitutes an unacceptable risk to women. In the United States, 1 in 2,400 women die in natural childbirth per year, which means that chemical abortions of this nature are actually safer for women than natural childbirth.

Anti-abortion activists use rhetoric that is supposedly "pro-women" to control women's access to abortion and reproductive healthcare. For example, many anti-abortion activists fight to limit Planned Parenthood, claiming that its main purpose is to provide abortions. In 2011, Arizona Senator John Kyl claimed on the Senate floor that 90 percent of Planned Parenthood's services are abortions. According to Planned Parenthood, only three percent of its services focus on abortions. Kyl later retracted that statement, according to NPR, but its legacy remains in policy making today.

To save the environment, save the giant pandas

JUSTIN YAN

Timothy Lavin, an editorial board member of *Bloomberg*, published an article in late August titled, "Why I Hate Pandas and You Should Too." Having carried a panda cub in my youth in the Chengdu Research Base of Giant Panda Breeding and seen two cubs mature in Hong Kong's Ocean Park, I cannot help but to disagree with Lavin because his arguments and interpretations of declining panda populations and evolution are misled.

Lavin calls for pandas to be let go — for humans around the world to leave pandas alone to slowly die off. He states, "Darwinism isn't for crybabies," and points to their sluggish natural breeding habits as the main reason for their decline. To a certain extent, he is right. Pandas have trouble reproducing: The Washington Zoo had to resort to artificial insemination to get their pandas to produce offspring. Lavin then points to the biological structure of pandas, saying that eating bamboo all day is speeding their own demise. He also calls attention to the costliness of maintaining a panda. Canada spent $10 million last year on maintaining pandas and paying China to rent them, as all pandas are owned by China.

He then brings up and mocks China's efforts to reintroduce the species into the wild: "Researchers dress up in preposterous panda costumes ... hoping to fool cubs into thinking they're a relative."

First off, Levin's statements lay close to the topic of eugenics and all the atrocities that come along with that, but many of his facts are facts. Yes, the panda is ill-adapted. It has the body and teeth of a bear, yet it eats bamboo all day. This habit is where Lavin got his facts wrong. From a simple, cost-benefit analysis, it's clear that it is more efficient for a panda to lie around all day and grab bamboo — the fastest growing grass in the world — than for a panda to chase prey around a forest or claw at a river. Pandas, in some ways, are lazily efficient.

What about Lavin's fact about breeding? It's a little off as well. It is incredibly hard for researchers to understand the mechanics and general aura for animals to breed. Cheetahs do not breed well in captivity. Pandas don't either. It's a fallacy to blame pandas for not breeding well; it's just that humans haven't discovered the entire process and life cycle of the giant panda, as it is incredibly hard to find one in the wild. Why is it hard to find them in the wild?

Humans have disturbed habitats like no other organism. They have destroyed the colorful biodiversity all around them, and that's why pandas are stuck in captivity. It's the only option for them until humans take giant leaps in researching the life cycle of the giant panda. Extensive human incursions into the panda habitats in the Minshan Mountains in China have threatened around 40 percent of the population, according to *Conservation.org*. By saving the panda, we are also saving the biodiversity of the habitat around pandas.

It is imperative to protect biodiversity. Darwinism should not refer to animals dying off but to the incredibly diverse array of lifeforms on this planet. So no, Darwinism is not a harsh truth that we have to face, but something we're supposed to embrace. We must embrace pandas as a diverse species like no other. It would be an incredible waste if let the only species of giant panda die off. Furthermore, pandas survive in a rich, diverse environment. According to the World Wildlife Fund (WWF), by saving the panda, we are also saving the natural balance of the ecosystem. Pandas have disappeared from these environments, and their numbers are slowly on the decline. Researchers are racing to find out how to best reintroduce pandas into the wild and preserve this fragile balance.

The seas all around us are devolving because of humans. We have reached too far and fished too much, and nature is paying the price. Coral reefs now become green algae-infested murky depths, and entire food chains have been disrupted. Rainforests around the world have been devastated by deforestation. According to the WWF, 17 percent of the Amazon has been lost in the last 50 years. Deforestation leads to a loss of biodiversity and heavy erosion, which heavily changes water patterns within the landscape, and can heavily impact even more organisms. For pandas, there are so little left that the main habitat is the Minshan Mountains, which houses 45 percent of the wild panda population. That 45 percent represents around 720 pandas. We need to protect pandas because we have to protect what we as humans have left.

Justin Yan (jky@) *is a staffwriter for The Tartan.*

Braden Kelner/Forum Editor

Library of Congress ISSN: 0890-3107

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 are the opinions of their authors. Letters from within the University community take precedence. Letters intended for publication must be signed and include the author's address and telephone number for verification; letters must not exceed 350 words. Authors' names may be withheld from publication upon request. **The Tartan** reserves the right to condense or reject any letter. Letters must be submitted by 5 p.m. on the Wednesday before publication by mail or to *forum@thetartan.org*.

Office: University Center 314
Phone: (412) 268-2111
Fax: (412) 268-1596
Web: *www.thetartan.org*
E-mail: *contact@thetartan.org*

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

Obamacare will be easily broken

KYLE HENSON

Other than Obama's sound bite, "If you like your insurance, you will keep it," the most memorable quote from the Affordable Care Act — more commonly known as Obamacare — debate is, "insurance companies won't be able to deny you coverage or jack up your rate because of a pre-existing condition." This caveat will be Obamacare's undoing.

Because of this promise, one that Obamacare will actually keep, there are only four factors that can change the price that one pays for insurance in the individual market: your age, the state that you live in, whether or not you smoke cigarettes, and how comprehensive you want your coverage to be.

Because of this caveat, if you don't have health insurance and you get cancer, you can sign up for health insurance. Not only will insurance companies have to take you, they'll have to charge you the same rate as if you didn't have cancer, even though you are definitely going to cost a lot more as a patient.

Since the Supreme Court brilliantly, and subtly, limited the power of the government, it's still legal for me to not purchase health insurance. If I opt to remain uninsured, which I will, I pay a fine of $695 every year. This is much less than I will pay for health care coverage in a year if I don't get any subsidies, which I aspire to not be eligible for. If I get cancer, I'll simply sign up for health insurance.

To their credit, the law's designers aren't stupid, and they looked ahead and foresaw people like me. To safeguard against these people, Obamacare architects created what is called an open enrollment period, which lasts until March 31, 2014. If you want insurance for 2014, you need to sign up by then. That means that people looking to game the system, like me, are out of luck if we get hit by a bus on April 1. We have to wait until Jan. 1, 2015 until our coverage starts, leaving us with nine long months of out-of-pocket expenses that will bankrupt us.

Not so fast, Obamacare. Another provision of the law says that I can stay on my parents' insurance until I'm 26, provided my family gets a new insurance policy after Obamacare caused us to lose our plan. If I start working right after school, that leaves me with four years of being happily insured without a cent of out-of-pocket costs to me while I'm earning income.

Unfortunately for Obamacare, my grace period of earnings and savings, combined with guaranteed issue of insurance at a reasonable rate, destroys my incentive to buy insurance.

Even though it's possible that I might be struck with some catastrophic and costly illness immediately after enrollment ends, I'm confident enough that this won't happen, or if it does, that I'll be able to take on the costs personally until insurance kicks in. Unfortunately for the act's supporters, I think I will win against Obamacare.

Even worse for its supporters, Obamacare needs me — far more than I need it. Obamacare is designed to get people like me to pay for insurance that they don't need and won't use, so that they will pay more into the system than they cost the system. This surplus will then be used to pay for the cost of others who pay less than what they get out of the system.

Under Obamacare, I would be required to purchase the benefits of maternity care, pre-natal care, prescription drug benefits, and substance abuse care.

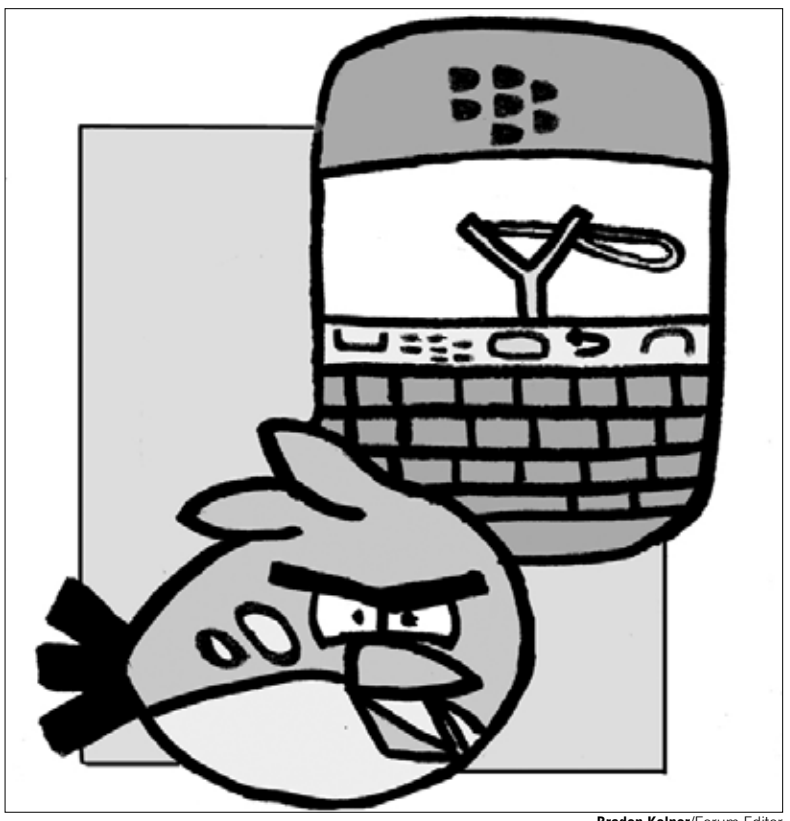
I anticipate needing none of these. Obamacare makes me buy these services that I'm unlikely to need so that I will pay more into the system and subsidize old people and poor people who are effectively winning under this system.

If people like me don't buy into this gross redistribution scheme, however, Obamacare will be overrun with sick people who pay less than the benefits they receive and will depend on people like me to cover their costs. If we don't buy into this system — which I certainly won't, because it's not in my interest — then Obamacare will fail and insurers will go out of business because they will cover more sick people than they can afford to cover.

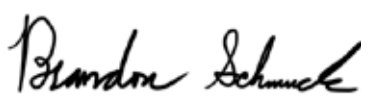
I will break Obamacare. I won't do this because I'm cruel or cynical. That's just what's honestly in my best interest.

Kyle Henson (kahenson@) *is a staffwriter for The Tartan.*

New CEO can make BlackBerry bold again



Braden Kelner/Forum Editor



BRANDON SCHMUCK

Is there any hope for a company that went from owning half of the cellular device market to less than four percent in just four years? That's the question revolving around BlackBerry Limited, the maker of a line of cellphones that was once essential to many business people. In a Nov. 4 press release, BlackBerry announced that John Chen would replace the ousted CEO Thorsten Heins. Chen is confident that he can bring this dying company around, but acknowledged in a phone interview with Reuters that it could take up to six quarters, or a year and a half, to do so.

Perhaps the largest problem that Chen will face in reviving the company is that BlackBerry is currently facing an identity crisis.

With devices like the BlackBerry Z10 and the BlackBerry Playbook, the company attempts to be something that it is not: a consumer-oriented company. It attempts to emulate Apple and Google instead of keeping its primary focus on enterprise.

BlackBerry thrived in a time before companies allowed employees to use their own devices on the job. BlackBerries were never meant to allow people to play Angry Birds, listen to music, or use applications. They were devices that separated personal lives from professional lives. BlackBerry phones were meant strictly for productivity and business, not for entertainment.

BlackBerry provides many unique benefits for enterprise, and it must use its resources to tout these benefits. Very few teenagers would be willing to trade in their colorful, playful iPhone 5Cs for dark, corporate-styled BlackBerry Z10s with a fraction of the applications. So why does BlackBerry attempt to target younger markets with its recently enlarged touchscreens and focus on personal media?

Based upon interviews conducted by CNN, there are three basic reasons why people love their BlackBerries: People are addicted to the physical keyboards, they like the red light that alerts them of new messages, and many use the device for work. These people are buying a cellular device strictly for productive communication, not to play Angry Birds or do anything that would require a large touchscreen.

If BlackBerry can distance itself from these mainstream applications, it may still have a chance to recover the audience that does not purchase phones for entertainment. BlackBerry must act swiftly to restore its company to its bold past. Chen stated that it would take a year and a half to turn the company around, but he may not even have that long. People still remember the old BlackBerry, and the brand continues to be reminiscent of a professional and sophisticated brand.

However, this becomes less true every year, as more customers are drawn to the likes of Apple and Android. A comScore report shows that Android and Apple now control 51.8 and 40.6 percent of the smartphone market, respectively, while BlackBerry has a dwindling marketshare of 3.8 percent.

While it will be difficult, Chen is the perfect choice of CEO to attempt to bring a company back to its former glory. He is not new to the idea of taking a dying company and bringing it back from the dead: He managed to save database company Sybase when he took the company over in 1998 and cut $100 million in costs. He ensured that Sybase did not compete directly with large software giants like Oracle and managed to sell it for $5.8 billion in 2010.

With his past experience, Chen will be able to cut costs inside BlackBerry, curtail it into a specialized market away from direct competition with Apple and Android, and perhaps even turn BlackBerry back into the company that businesspeople once admired.

Brandon Schmuck (bschmuck@) *is a staffwriter for The Tartan.*

Rethink technology in classrooms

ARIEL HOFFMAIER

The connection between the classroom and technology has become ubiquitous and inexorable. A study by the University of Nebraska-Lincoln published in the October issue of the *Journal of Media Education* reported that American college students check their phones an average of 11 times a day while in class — a statistic that should not be surprising to college students of the modern age. Additionally, while 91 percent of students were opposed to a total ban of digital devices in class, 80 percent believed those same devices were a distraction that interfered with learning.

This disparity is baffling on the surface. If students agree that laptops and smartphones are distracting — both to themselves and others around them — why is there virtual consensus that a ban, which would surely solve the problem, is not an option?

It's complicated. Even though it would logically make sense to force students to stow away their laptops and turn their phones in at the start of class, technology has become so integral to the lives of young people that the loss of their devices would be akin to identity theft or a missing limb.

The irritation felt by a student toward another student playing Candy Crush in class, along with the knowledge that they are also prone to mindless Internet surfing, does not seem to matter. College students balk at the seemingly extreme prospect of a total ban, indignant that professors might respect their self-control so little.

Though they may hesitate to admit it, students might be wary of the absence of this constant source of entertainment and communication. Smartphones have become shields, protecting people from boredom and awkwardness, but also keeping them from actively engaging with the outside world.

Phone-checking has become an almost arbitrary reflex, so how does one begin to work against such a reflex?

Additionally, it must be questioned whether or not the damage of a society driven by technology has already been done. Attention spans are shorter than ever — or at least, teachers seem to think so.

According to a 2012 study conducted by the Pew Research Center, 87 percent of teachers believe that digital technology is creating a generation with shorter attention spans, and 64 percent say that these technologies distract students more than they help them learn.

Teachers may feel pressured to adjust their methods — to do a song and dance, so to speak — in an attempt to match even the base level of excitement and entertainment that kids have grown used to with televisions and the Internet. Perhaps taking away laptops and phones will do nothing to improve student focus, and will leave professors in worse places than where they started. Can old-fashioned focus be relearned, or is it inevitable that only professors with multimedia-based, animated spunk are able to capture and keep their students' attentions?

Either way, it has been proven time and again that technology can be utilized to great effect in classrooms. The possibilities for educational enhancement through integration of technology are endless. Research skills, innovation, and globalization can all be advanced in curricula fused with technology. If it is true that attention spans can never return to what they once were, then it is crucial for schools to meet students halfway.

Is there an ideal compromise? Students already use technology outside of the classroom — it would be impossible to monitor email, type an essay, or suffer through WebAssign without it.

Therefore, where it is relevant and engaging, professors must bring technology into the classroom by allowing students to use phones and laptops to enhance lessons in new and innovative ways. More than possible, this possibility is the future.

In return, students' ability — and desire — to resist the draw of the Internet will grow.

Ariel Hoffmaier (ahoffmai@) *is a staffwriter for The Tartan.*

A PERSON'S OPINION

Compiled by Kate Groschner and Braden Kelner

The Tartan is excited to have prospective students on campus this week. So we asked,

What are your first impressions of Carnegie Mellon?

Emily Stewart
Nashville, Tennessee

"It's a really pretty campus and it seems like there are really interesting programs."

Zach Pendley
Wilmington, Delaware

"Everybody seems really friendly. Everyone was smiling when I walked in."

Morgan Reynolds
Springfield, Ohio

"I really like all the old buildings. I think they're really pretty. People are very personable."

Colin King
Towson, Maryland

"It's a beautiful campus. There's a lot of beautiful architecture."

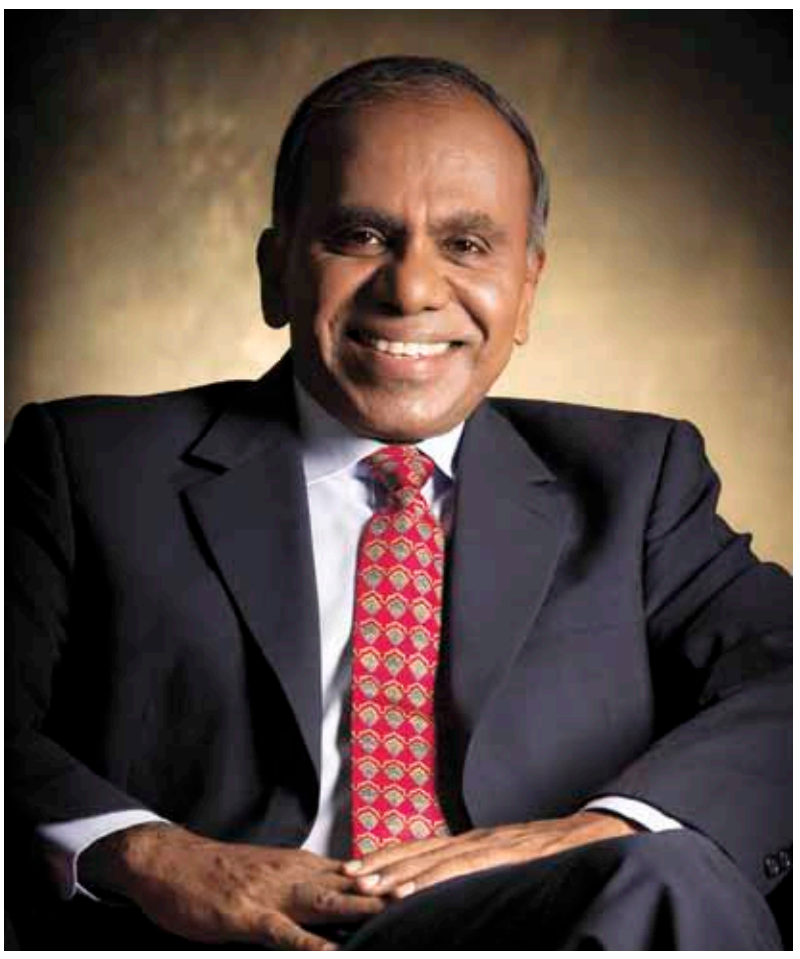
Megan Hoppe
Seattle, Washington

"Impressive. It seems really strong."

Inauguration

CROSSING BOUNDARIES
TRANSFORMING LIVES

The Inauguration of Dr. Subra Suresh as the Ninth President of Carnegie Mellon University



Join the Celebration
November 14 – 15

www.cmu.edu/suresh-inauguration

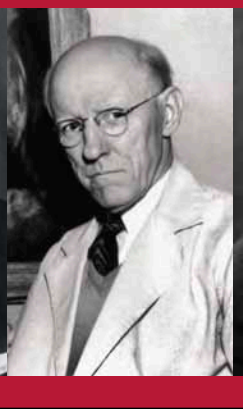
#CMUsuresh

Past Presidents

Arthur A. Hamerschlag
1903 – 1922

Thomas S. Baker
1922 – 1935

Robert E. Doherty
1936 – 1950



John Christian Warner
1950 – 1965

H. Guyford Stever
1965 – 1972

Richard M. Cyert
1972 – 1990

Robert Mehrabian
1990 – 1997

Jared L. Cohon
1997 – 2013

SPORTS COMMENTARY

The most surprising teams in the NFL

WILLIAM PARK
Sports Editor

With the NFL season more than halfway over, it can so far be defined as one of surprises. Here are the biggest surprise teams.

Kansas City Chiefs

After holding the worst record last season, the Chiefs, at 9–0, currently hold the best record in the NFL. While their success may be attributed to the steady hand of quarterback Alex Smith, the Chiefs' main strength has been their defense.

Defensive tackle Tamba Hali and outside linebacker Justin Houston, with 9 and 11 sacks respectively, have led the Kansas City defense that allows a league-best 12.3 points per game. With two games remaining against the formidable Denver Broncos led by Peyton Manning, the second half of the Chiefs' schedule will show whether the Chiefs are legitimate contenders.

But with an offense that is overly reliant on running back Jamaal Charles, it is difficult to predict whether the Chiefs can score enough points to win against more offensively potent teams.

New York Giants

The 2012 Super Bowl winners got off to a terrible start, losing their first six games in ugly fashion. Quarterback Eli Manning caught the interception bug, with 15 for the season, and has a pedestrian 55.7 completion percentage.

Not all of the blame falls on Manning, however. His offensive line has been shaky, and the running game has been very weak. Wide receiver Hakeem Nicks has also dropped too many passes.

On the defensive side, the former strength of the team has weakened. Defensive lineman Jason Pierre-Paul has only one sack, while captain Justin Tuck only has 1.5.

The offensive line needs retooling, but more importantly, if key contributors can't rediscover their game, the Giants will be in serious trouble.

New York Jets

Before the season, ESPN predicted the Jets to be the worst team in the league. But with a 5–4 record and victories against the New England Patriots and New Orleans Saints, the Jets look like playoff contenders.

Defensive end Muhammad Wilkerson and tackle Damon Harrison have teamed up with rookie Sheldon Richardson to lead a formidable defensive front line that is consistent in stuffing opponent's rushing attack.

The Jets have very few offensive playmakers, which makes their mediocre offensive production actually seem quite impressive. Running back Chris Ivory has emerged as the leading workhorse, while rookie quarterback Geno Smith is slowly cutting down on his turnover rate.

With a strong defense and an offense that does just enough, the Jets can sneak into the playoffs.

Pittsburgh Steelers

The Steelers have long been known as a team with a suffocating defense and a power running attack.

This year, however, their defense has allowed 131.3 rushing yards per game, which is second worst in the league. Their own rushing attack hasn't been much better, averaging a meager 73.6 yards per game.

Safety Troy Polamalu has been a step slower this season, and nobody has stepped up as the defensive leader. Quarterback Ben Roethlisberger has been under constant pressure and has no one to throw to, with the exception of receiver Antonio Brown.

After years of dominating the AFC North, the Steelers are on the decline.

Cleveland Browns

After trading away former first-round pick Trent Richardson, the Browns were expected to tank.

Instead, they are 4–5, with impressive wins against the Cincinnati Bengals and Baltimore Ravens, and just one game out of the second wild card spot.

On defense, they have quality starters in the secondary, linebackers, and defensive line positions.

They have offensive playmakers in tight end Jordan Cameron and wide receiver Josh Gordon, but have no one to throw to them. The Browns have had three different starting quarterbacks who have all had varying levels of success.

The Browns won't make the playoffs this season, but have proven they are no longer the laughing stock of the league. A decent quarterback can take them to the next level.

Atlanta Falcons

Quarterback Matt Ryan signed a $103.75 million contract extension in the off-season after leading the Falcons to the NFC Championships last year.

While he is on pace to throw 20 interceptions this year, the numbers don't tell the entire story. Ryan lost his favorite receiver Julio Jones to a season-ending injury in week five and has a porous offensive line in front of him.

With no rushing attack, the Atlanta offense is too dependent on their passing game. Running back Steven Jackson has been beset by injuries as well as wide receiver Roddy White.

They can still score points, but opposing teams have scored more on their weak defense, which allows 27.3 points per game.

The Falcons are out of the playoff picture this season and will be so for the foreseeable future unless they can revamp their defense and offensive line.

Soccer teams finish conference play

WILLIAM PARK
Sports Editor

File photo by **Maryyann Landlord**/Staff Photographer
Junior midfielder Colin Shaffer had one shot against Emory. The team outshot Emory 29-12.

In their final regular season games, both the men's and women's soccer teams found disappointment in Atlanta, Ga.

The men's team drew 0–0 in double overtime against Emory University, and the women's side lost 3–0.

A win would have guaranteed the men's side at least a first-place tie in the University Athletic Association (UAA) Conference. Instead, they finish tied with Emory for second place.

"We're pretty disappointed," senior defender Ben Bryant said. "Since our first UAA game, we went undefeated in UAA. I think we deserved a share of the title."

The men's team was inches away from a win. In the last minute of the second overtime, senior forward Chris Wysocki's shot deflected off a defender and bounced to senior forward Max Tassano at the top of the penalty box.

Tassano turned past the defender and got a shot on a goal that bounced off the crossbar. There were four seconds left in the game.

Sophomore midfielder Connor Webb delivered a standout performance, coming off the bench and using creative touches to get past defenders and generate scoring chances.

"It came down to some bad luck, and we need to work on our finishing a little bit," Bryant said.

Having lost to Emory in the quarterfinals of the NCAA tournament last year on penalty kicks, the women's team had hoped to get revenge on Emory's Senior Day.

"It's always hard to play on someone else's field, but it's even more difficult when it's their Senior Day," graduate student goalkeeper Anna Albi said.

The Tartans had two opportunities to score first. Senior forward Alex Venegas had a shot on goal saved in the fourth minute, and senior defender Rachel Contopoulos hit the post in the 17th minute.

After the two early chances, Emory controlled the rest of the game.

Emory scored first in the 20th minute and did not stop the pressure. They scored two more goals in the second half and outshot the Tartans 27-6.

"They're a really great team, and they were excited for their seniors. It was hard to overcome their skill plus their emotions," Albi said.

The road loss continues the team's struggles on the road. In the four road UAA games, they are 1–3.

"We have a very hard travel schedule.... It's kind of hard mentally and physically to balance Carnegie Mellon academics on the road. I think it just gets the better of us sometimes," Albi said.

The loss ends their season with 3–3–1 conference record, good for fourth place in the UAA.

Both the men's and women's team will find out today if they will be playing in the NCAA tournament.

Volleyball team finishes third in UAA

WILLIAM PARK
Sports Editor

File photo by **Jason Chen**/Staff Photographer
The women's volleyball team finished the regular season with a 25–9 record. At third place in the UAA Conference, the team has a good chance of earning an at-large bid into the NCAA tournament.

The women's volleyball team had had enough.

Over the previous three seasons, the Tartans were 0–5 against Washington University in St. Louis, their opponent in Saturday's third-place game of the University Athletic Association (UAA) Championships.

"Wash. U. is our biggest rival and always has been," said senior and team co-captain Ali Nichols. "Saturday morning, all the seniors got together and realized how awesome it would be to finally beat Wash. U."

Leading the game 2–1 and up 24–23 in the fourth set, Washington University appeared on the verge of another win over the Tartans.

Washington had the opportunity to win the game and instead committed a service error. A kill by senior outside hitter Senna Parsa and another Washington error allowed the Tartans to take the pivotal fourth set.

"When it came down to it, our consistency and — more than anything — our drive to win were the reasons we were able to take the fourth set," Nichols said.

The Tartans carried their momentum into the fifth set, which they won 15–9 to take the game 3–2 and secured a third-place in the UAA Championships.

The victory was spearheaded by junior and co-captain Ali Celentano's 18 kills and Parsa's 14 kills.

Washington University wasn't the only rival the Tartans had to beat.

The Tartans opened the tournament against New York University, who had earlier defeated Carnegie Mellon in straight sets in the second UAA round robin.

Coming into the tournament, the Tartans were also tied with New York University for fourth place in the UAA Conference.

"Going into the season, we knew we had to beat NYU for a shot at going to the NCAA tournament," Nichols said. "That was looming over our heads the past month during practice, and we have worked a lot harder to specifically beat NYU."

On Friday against NYU, the Tartans dropped the first set 19–25 and came back to win the second set 25–20 and a tough third set 31–29. The Tartans won the fourth set at a comfortable margin of 25–18 to advance to the next round.

A 3–0 loss against the University of Chicago set them up to play No. 8 Wash. U. for third place.

The Tartans finished the regular season with a 25–9 record, an impressive improvement over their 12–22 record from three seasons ago.

More than that, the Tartans have a good chance of earning an at-large bid into the NCAA tournament. Their last NCAA bid was in 2008.

With a strong UAA Conference record, the Tartans believe they have played well enough to deserve a bid. "I really think we have. Hopefully, that win over Wash. U. guarantees us a spot," Nichols said.

The senior class, which include Nichols, Parsa, outside hitter Mary Stadelman, and outside hitter Rachel Miller, has played a major role in rebuilding Carnegie Mellon's volleyball program.

Regardless of whether the volleyball team will play in the NCAA tournament, the future is bright. First-year middle blockers Jackie Gibbons and Casey Salandra and first-year opposite hitter and setter Emily Newton have all emerged as consistent starters.

"The freshmen that we have this year are really strong, and I really see the program taking off from here," Nichols said.

Sports

SPORTS COMMENTARY

David Price headlines short list of MLB off-season targets

CARL GLAZER
Senior Staffwriter

Baseball is a unique sport because of its ridiculously long season. With the season lasting from the end of March through the end of October, there isn't much time for a true off-season. Add in the beginning of spring training in late February, and there are only three months for all of the off-season player movement, in the form of both free agency and trades.

With the winter meetings, where all of the MLB teams meet to discuss changes to the rules, less than a month away, free agency is about to kick into high gear. Since all of the general managers are in one place, most of the major off-season trades happen during the meetings, but that doesn't mean teams aren't already planning their major moves.

The most talented name in this year's trade market is Tampa Bay's ace David Price. The Rays have a long history of trading away their talented pitchers before they hit free agency. The Rays have always had a low budget and have had to be selective in whom they can sign to expensive, long-term contracts.

In the last off-season, the Rays traded James Shields to the Kansas City Royals for top-level prospect Wil Myers. The season before, Matt Garza was traded to the Chicago Cubs for top pitching prospect Chris Archer and a host of other less promising young players.

Now it is Price's turn to bring the Rays back a bounty of young players to reload their minor league system and to allow them to continue contending with cheaper players on their small budget.

Current rumors have named the Texas Rangers, St. Louis Cardinals, Los Angeles Dodgers, and Los Angeles Angels as possible trade destinations, but another team may come from out of the blue with a better offer. Regardless of the destination, expect the Rays to move Price before the off-season ends.

The other major piece of the off-season is free agency. MLB changed the rules governing the complicated free agent process before last off-season, and their effects can already be seen, most notably in the Milwaukee Brewers' signing of Kyle Lohse. To help keep players with the team that drafted them, teams that lose top-level players in free agency now gain a compensatory draft pick between the first and second rounds in the MLB draft.

On the other hand, the team signing another team's free agent will forfeit their first-round pick unless it's a top 10 pick, in which case they forfeit their second round pick. That forfeited pick disappears and all teams behind that draft slot move up.

In order for a player to qualify for this compensatory system, two criteria must be met. First, his current team must make the player a qualifying offer. This offer must, at a one-year contract's worth, be at least the average yearly salary of the top 125 free agents from the previous off-season, which is around $14 million this year.

Second, the free-agent-to-be must have been with the current team for at least one full season. The purpose of this clause is to prevent teams from acquiring a player in the last year of his contract at the July 31 trade deadline, and then receiving compensation when he leaves two months later.

This year, 13 players were given qualifying offers. Two of them, pitchers Ervin Santana and Ubaldo Jiménez, are eerily similar to Lohse in terms of recent performance. The only major difference is age, with Lohse entering the free agent market at 34 and Jiménez and Santana being 30 and 31, respectively.

There is another band of power hitting free agents who carry their own risks, but are still likely to receive great offers given the absence of available sluggers on the market. Veteran outfielder Carlos Beltrán played lights out for the St. Louis Cardinals in the post season, but health concerns and his advancing age have given many teams doubt about his potential.

Nelson Cruz was having a great year for the Texas Rangers before he got caught up in the biogenesis scandal and was suspended for the last 50 games of the season for human growth hormone usage. Kendrys Morales and Mike Napoli are both defensive liabilities and would be best suited as designated hitters, but could be used as first baseman in a pinch.

Shortstop Stephen Drew is the position player most likely to feel the pain of the qualifying offer with his terrible offensive performance during the Red Sox postseason run. His agent, Scott Boras, has a history of not accepting the one-year qualifying offer out of principle, and thus, Drew could be left high and dry with few suitors.

Boras also represents the two centerfielders that represent the top of this year's free agent class, Jacoby Ellsbury and Shin-Soo Choo.

It may take a while for either of these players to sign, but that will not be due to lack of interest. Boras is notorious for holding out and playing teams against each other. Some speculate that Boras will make sure Choo signs first, and later demand that Ellsbury receive an offer more lucrative than the one Choo receives.

While this may not be the most exciting free agent or trade market class, there will still be plenty of story lines as teams try to get the most bang for their buck.

UAA Sports Standings

Men's Soccer

Univ.	Conf.	W	L	T
Rochester	5–1–1	13	2	2
CMU	4–1–2	11	2	3
Emory	4–1–2	11	5	2
Wash. U.	3–2–2	10	4	3
Brandeis	3–3–1	14	4	1
Chicago	3–4–0	9	6	2
CWRU	1–5–1	6	7	4
NYU	0–6–1	6	8	3

Football

Univ.	Conf.	W	L
Wash. U	2–0	7	2
Chicago	1–1	6	3
CWRU	1–1	4	4
CMU	0–2	3	6

Volleyball

Univ.	Conf.	W	L
Chicago	6–1	26	10
Emory	5–2	30	4
CMU	4–3	25	9
Wash. U.	6–1	26	7
NYU	4–3	27	7
CWRU	2–5	16	17
Rochester	0–7	9	27
Brandeis	1–6	10	25

Women's Soccer

Univ.	Conf	W	L	T
Wash. U.	7–0–0	17	1	0
Emory	6–1–0	14	3	1
Chicago	3–2–2	11	4	3
CMU	3–3–1	9	4	2
Brandeis	2–3–2	10	6	2
Rochester	1–3–3	6	6	5
NYU	0–5–2	8	9	2
CWRU	0–5–2	7	8	3

Upcoming Schedule

Football
Nov. 16
Case Western Reserve University at Carnegie Mellon, 6 p.m.

Cross Country
Nov. 16
NCAA Regionals, Muhlenberg College, 11 a.m.
Nov. 23
NCAA Championships, Hanover College, 11 a.m.

Swimming/Diving
Nov. 16
Tri Meet with Washington and Lee University and Allegheny College at Carnegie Mellon, 11:30 a.m.
Nov. 22
Carnegie Mellon Diving Invite, 6 p.m.

Women's Basketball
Nov. 15
Geneva College at Carnegie Mellon, 6 p.m.
Nov. 16
Franciscan University at Carnegie Mellon, 1 p.m.
Nov. 19
Carnegie Mellon at Grove City College, 6 p.m.

Men's Basketball
Nov. 18
Geneva College at Carnegie Mellon, 7:30 p.m.
Nov. 23
University of Pittsburgh-Greensburg at Carnegie Mellon, 3 p.m.

FEATURE PHOTOS

Carnegie Mellon Ultimate teams host Steel City Showdown

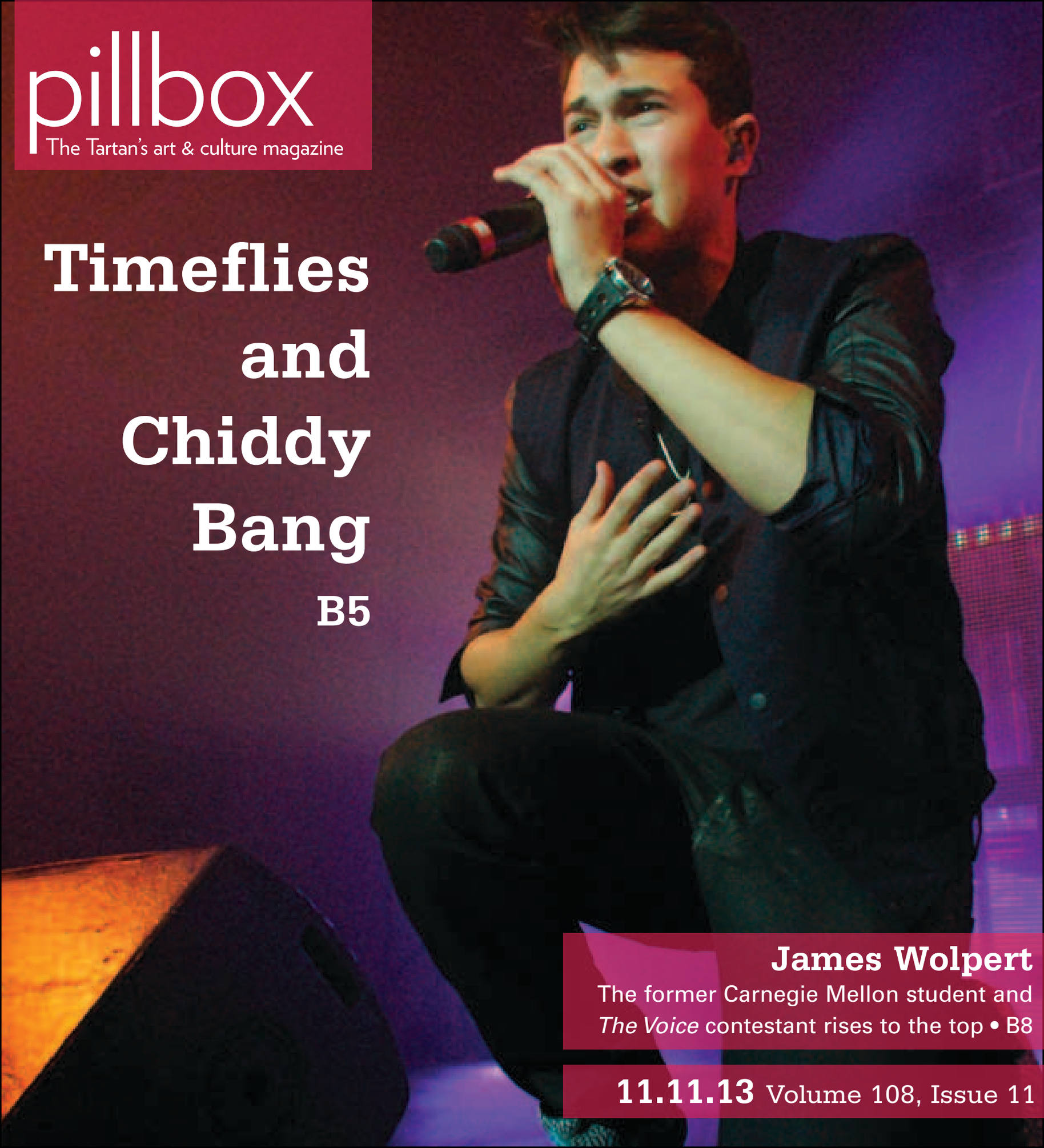
Jonathan Leung/Assistant Photo Editor

The Carnegie Mellon men's Ultimate team Mr. Yuk hosted an exhibition game between the University of Pittsburgh and Penn State University on Friday night in Gesling Stadium. The game preceeded the two-day tournament that took place on Saturday at the CONSOL Energy Sports Complex in North Huntingdon, Pa. Mr. Yuk finished 0–3 in the tournament, which the University of Cincinnati eventually won. Money Mellons, Carnegie Mellon's women's team, finished second in the women's side.

pillbox
The Tartan's art & culture magazine

Timeflies and Chiddy Bang

B5



James Wolpert

The former Carnegie Mellon student and *The Voice* contestant rises to the top • B8

11.11.13 Volume 108, Issue 11

...this week only

regulars...

...diversions

PUBLISHER Jennifer Coloma **EDITOR-IN-CHIEF** Josh Smith
PILLBOX EDITOR Rachel Cohen **ASSISTANT PILLBOX EDITOR** Joey Peiser
COMICS EDITOR Kairavi Chahal **PHOTO EDITOR** Kate Groschner
COPY MANAGER Evan Kahn **COVER** Kelsey Erin Scott

Wilson starts freestyle project

30 Gold project sees rapper trying out new styles

New York rapper and noisemaker Raykeea Angel Wilson, better known as Angel Haze, has been releasing a slew of new material as part of her *30 Gold* project.

The Detroit native, often compared to fellow female up-and-comer Azealia Banks — with whom Haze has had an extensive Twitter altercation — will release a new freestyle rap roughly every day for 30 days. So far, the project has yielded some of the greatest hip-hop released this year, commercial or otherwise. All material can be found on Angel Haze's SoundCloud account, *https://soundcloud.com/angelhazeym*.

Wilson is one of the fiercest wordsmiths in hip-hop music today. An open pansexual and outspoken victim of sexual abuse, she first gained widespread attention with her 2012 track "Cleaning Out My Closet," a song that borrowed the Eminem beat of the same name and turned it into an exorcism of her own childhood demons. The song, which details the sexual abuse she endured during her childhood and the extensive emotional scarring it caused, is impossible to listen to without wincing.

The material released thus far ranges from freestyles over some of the biggest hip-hop beats of the year to a soft acoustic cover of Miley Cyrus's "Wrecking Ball." The sheer range of styles that Wilson has explored over the course of this project is a testament to her great talent and a sign of what we can expect from this fantastic artist.

In addition to her engaging lyrical content, Wilson has high technical skill. Her flow on Kendrick Lamar's "Backseat Freestyle" never misses a step and exhibits a kind of energy not usually heard from hip-hop's ruling class.

Courtesy of Wikimedia Commons

The *30 Gold* project shows Angel Haze's willingness to experiment.

Courtesy of Murakami_Reader via Flickr

Rapper Angel Haze has been releasing a steady stream of new material as part of her *30 Gold* project.

When she revisits one of her own songs on the snap-and-clap-filled "New York Remix," her rapid-fire delivery gives boasts like "313 but I run New York" — the kind of credence not often felt in rap music.

Of all the music released as part of the *30 Gold* project, the best instance is her take on the Macklemore and Ryan Lewis hit "Same Love." While the original song shows Macklemore, a straight white male, trying to identify with the gay rights cause and rally his listeners to join the cause, Wilson's is so powerful because it comes from someone who actually has a stake in the fight.

She opens the song with the story of coming out to her mother at age 13 and being told, "You'll burn in hell or probably die of AIDS," and closes it with the declaration that, despite orientation, "We all feel the same love." It's an incredibly moving song, and one that could only be written by someone who is on the receiving end of societal inequality.

The *30 Gold* project, if nothing else, proves that Angel Haze is one of the most gifted chameleons in hip-hop today. Check *https://soundcloud.com/angelhazeym* for all of her *30 Gold* releases, as well as the rest of her music.

Joey Peiser | Assistant Pillbox Editor

Advice for awkward people

About inaugurations and that pesky last class

Hey Ryan & Matt,
I've been getting all these spam emails about some important faculty member getting appointed to all these national academic committees. I got one a few weeks ago about his appointment to the Institute of Medicine. Big deal — so the guy is a doctor. Why does all of Carnegie Mellon need to know about every award he collects?

Sincerely,
I Loathe Loading Mail About Nobodies, Need Education Regarding Elected Despots

Well ILL-MANNERED,
The individual collecting all of these awards is none other than Carnegie Mellon's new president, Subra Suresh. As we read from his Wikipedia page, he is one of only 16 Americans — and the only current president of a university —to be a member of the big three national academies: the Institute of Medicine, the National Academy of Sciences, and the National Academy of Engineering. If you are interested in learning more about this man, we hear his inauguration has scheduled a campus-wide celebration for this Thursday, with an invite-only dinner to follow at the Omni William Penn Hotel in Downtown. If you crash, you'll find out exactly what his policy regarding pesky students entails.

Bring us back some punch,
Matt & Ryan

Dear Matt & Ryan,
I'm a senior, hoping to graduate this spring. Unfortunately, there is one class that I just cannot seem to pass for the life of me. I've taken it every semester, and every time the final comes around I totally bomb it. I only go to, like, one of the classes anyway but I pass all the quizzes! I just don't understand what's going on. This is the last class I need to pass to graduate!

Sincerely,
Cursing A Terrible Class, Missing Inconsequential-Seeming Marks, Yet Bound And Needing End

Dear CATCMISMYBANE,
Dude. Come on. You've got this. If the class is really all based on one final test, then just study like hell the day before. And if you've really taken this class every year, you should have this in the bag! Our guess is that you're either not putting forth the effort required, or you secretly want to stay here another year. Or two. Or indefinitely. But if you want to get out of here then knuckle under and do it. Or make a portal to a different dimension where you don't need this one class to graduate. But then you might cause catastrophic results throughout the multiverse, so be careful. Also, you should double check if your credits will transfer.

Worst-case scenario, escape to Canada,
Ryan & Matt

Need advice? Send queries to *advice@thetartan.org*.

Spoken word poet makes her voice heard

Sarah Kay performs to an enthusiastic audience of Carnegie Mellon students

A large crowd gathered in McConomy Auditorium last Tuesday afternoon to listen to spoken word poet and Project V.O.I.C.E. founder Sarah Kay. Kay's performance of spoken verse rhythmic poetry was both personal and universal, focusing on themes of love, family, and learning.

Taking us on a journey of her own life, she began with her childhood family vacations and her little brother, before diving into first loves, long-distance relationships, mothers, and feminism, ending with a poem dedicated to teachers.

She captured a world of love and lost souls, full of both romantic lust and the cold truth of reality. That said, there was no trace of a Shakespearean imagined reality; rather, there were clear references to the modern world, where planes and phones connect people better than ever. An expert in crafting imagery, Kay created an environment that seemed fluid and full of emotional angst, yet also intricately detailed with specific imagery: "The years have spread us like dandelion seeds," and "Cell phones that buzz as if it's your hand." Her performance was one of well-rehearsed spontaneity, complete with symbolic gestures and dramatic pauses that, rather than coming off as over the top and silly, felt like genuine reflections of her words.

In between poems, Kay caught her breath and became a "real" person again, with anecdotal remarks and stories that complemented her composed poetry. She seemed eager to connect with the crowd, asking questions to feel out her audience and bring up the energy.

Kay also referred to the work she does in addition to being a writer and performer. As founder of Project V.O.I.C.E., Kay works in schools nationally and internationally to teach poetry workshops to elementary and middle school students. She shared a story of using an analogy of pooping to communicate to middle school students that the hardest part about writing poetry is being able to both push through frustrations and be ready when inspiration strikes.

She also referred to the vast range of experiences she's had even as a young woman in her 20s, from teaching in India to traveling in Nepal. These references added immensely to her work, expanding her sources of inspiration and helping her avoid cliché.

Part poet, part performer, part storyteller, and full comedian, Kay and her ability to bring life to words earned a standing ovation from enthralled Carnegie Mellon students. Her ability to articulate the struggles of growing up, being a woman, and figuring out what love is — offset by her no-fuss humor and attitude — connected with an audience struggling with many of the same issues. Perhaps most importantly, her candid chat with the audience prevented a common pitfall of poetry — the feeling as if the poet is attempting to leave us confused or mesmerized.

Kay's first collection of poetry will be published in March. To learn more about Sarah Kay and Project V.O.I.C.E., visit *kaysarahsera.com*.

Sarah Moss-Horwitz | Junior Staffwriter

Michelle Wan | Junior Photographer

Michelle Wan | Junior Photographer

Michelle Wan | Junior Photographer

Spoken word poet and Project V.O.I.C.E founder Sarah Kay performed for a large crowd in McConomy Auditorium.

Fall concert rocks Wiegand Gymnasium

Timeflies and Chiddy Bang headline an energetic night of pop-rap hits

Pop/rap duo Timeflies and Philadelphia rapper Chiddy Bang gave rousing performances at Carnegie Mellon's Wiegand Gymnasium for this year's fall concert. Timeflies is known for catchy beats, quick rap verses, and freestyles, along with its widely followed "Timeflies Tuesdays" YouTube videos, and is currently on tour to promote the duo's latest EP, *Warning Signs*.

The concert kicked off at 7 p.m. with an opening performance by junior mechanical engineering major Gianfranco Colombi and sophomore mechanical engineering major Bernardo Campos Almendárez, who played mixes of various electropop and EDM hits for the crowd that was pouring in.

After the half-hour-long opening performance, Chiddy Bang came on, much to the excitement of the crowd. Rapper Chidera "Chiddy" Anamege and former Chiddy Bang member Noah "Xaphoon Jones" Beresin are known for their clever usage of samples from artists such as MGMT and Ellie Goulding in their songs. They engaged the crowd throughout their set and received an enthusiastic reaction when they asked the audience if they were having a good time. They gave an extremely energetic performance in which they played many of their well-known hits such as "Ray Charles," "Bad Day," "Talking to Myself," "Handclaps and Guitars," "Breakfast," and "All Things Go."

Chiddy Bang closed off the performance with hit singles "Opposite of Adults" — which featured a sample from MGMT's "Kids" — and "Mind Your Manners," for which the rapper collaborated with Swedish duo Icona Pop. The crowd contained many people who were familiar with their music, but people who were introduced to their music in this concert also seemed to enjoy themselves. Their set lasted around 45 minutes, after which they were followed by Timeflies's highly anticipated performance.

Timeflies performed many of their smash hits, including a crowd-pleasing performance of "Turn It Up" and fast renditions of "Lose My Mind," "Detonate," "I Believe," "Ride," and "Swoon." Their performance had the audience screaming and clamoring for more.

Timeflies was extremely engaging and interactive with the crowd for the entirety of their performance. The duo had the crowd singing along, jumping up and down, and waving their hands for every song. The crowd was more than happy to dance along with them.

The highlight of their set, amongst many other stellar performances, was their "Timeflies Tuesdays"-style, Carnegie Mellon-themed freestyle rap. Much to the crowd's delight, lead vocalist Cal Shapiro rapped about all things quintessentially Carnegie Mellon, including the "Walking to the Sky" statue, brunch at Pamela's Diner, and 15-251. This particular performance had Carnegie Mellon students talking long after the performance was over.

Timeflies closed their set with their hit single "I Choose U," which had the crowd jumping and screaming the words of their song. After this performance, the duo walked offstage, but the crowd immediately started yelling for an encore. Timeflies was more than willing to oblige, as they came back on to perform a rousing rendition of yet another hit.

The audience for the concert also contained a large number of students from the University of Pittsburgh, who also appeared excited about seeing big names like Timeflies and Chiddy Bang come to Pittsburgh. All in all, it was a successful concert, with exciting visual and lighting effects headed by two excellent artists.

Nandini Ramakrishnan | Junior Staffwriter

Kelsey Erin Scott | Operations Manager

Timeflies energized the crowd at its headlining concert in Wiegand Gym last Friday.

Jonathan Leung | Assistant Photo Editor

Left: Junior Gianfranco Colombi (left) and sophomore Bernardo Campos Almendárez (right) opened the night with a selection of EDM hits.

Kelsey Erin Scott | Operations Manager

Center: Pop-rap duo Timeflies peformed a number of crowd pleasers as well as an exclusive Carnegie Mellon-themed freestyle.

Jonathan Leung | Assistant Photo Editor

Right: Rap group Chiddy Bang performed many of their hits, including "Opposite of Adults" and "Mind Your Manners."

Documentary delves deep into killer whale captivity

Blackfish depicts the harsh lives of SeaWorld performers after the show is over

Millions of people visit SeaWorld every day without thinking about the lives of the animals behind the scenes. Why would they worry? SeaWorld does everything it can to convince the general public that the animals in its parks are happy and well-cared for. If that were true, however, why would Tilikum, a 12,000-pound killer whale, brutally attack and kill Dawn Brancheau, the head trainer at SeaWorld Orlando? The documentary *Blackfish* was created precisely because director Gabriela Cowperthwaite asked herself this question after hearing of Brancheau's death.

Blackfish, which recently began screening in the U.S., relates the history of killer whale captivity, using this backstory to lead up to and explain Tilikum's attack on Brancheau. In a story with CNN, Cowperthwaite said she started her investigation into the issue not as an anti-captivity activist, but "as a mother (who had just taken her kids to SeaWorld) and as a documentary filmmaker."

The film starts by explaining how killer whales were rounded up from the wild — the young ones separated from their families — and taken to parks to perform. One of the men who helped to round up young Tilikum speaks in the documentary, saying that because of the whales' reactions, it was "the worst thing I've ever done." Until this point of the film, it might seem that the people protesting killer whale captivity are overreacting, and the whales at SeaWorld are happy. However, the footage of the young whale in the net crying out to his family is devastating enough to make viewers question their views and reach for a tissue.

The story only gets worse as the film continues, following Tilikum from Sealand of the Pacific — a subpar version of SeaWorld in British Columbia, Canada, which had to be shut down after Tilikum's first attack on a trainer — to his current home in SeaWorld Orlando. Cowperthwaite uses similar first-hand sources to dig into the dark past and present truths of the industry. Testimonies from eyewitnesses of Tilikum's first attack, relatives of people who have been attacked by killer whales in other theme parks, and people who previously worked as trainers at SeaWorld itself add credibility to the film and make it hard to argue with its claims.

Experts who have researched killer whales for years say that the animals have no history of attacking humans in the wild, but the film presents raw footage of trainer after trainer being attacked by whales. As a result, it's hard to argue that the attacks were not caused by frustrated and psychologically unstable whales.

Blackfish presents the whales as extremely intelligent and emotionally complex creatures whose lives are centered on social interactions with their families. It reiterates that these are not dumb brutes forced to perform for an audience's momentary pleasure and an industry's hungry bank account; these animals are mentally and emotionally equivalent to humans and completely conscious of what is happening to them. By the time the film shows footage of mother whales separated from their calves in the parks because they weren't performing well together, viewers are ready to fly to Orlando and free the whales themselves. *Blackfish* is effective in eliciting an emotional response from the audience because it juxtaposes humanizing facts about whales with the awful circumstances they face every day.

The film has already elicited a vivid response from audiences. According to an article on *digitaljournal.com*, SeaWorld has been battered by public response to the documentary. Celebrities such as Stephen Fry, Olivia Wilde, and Ewan McGregor have tweeted endorsements for the film and joined a website called *backblackfish.com*. The SeaWorld San Diego Facebook page was forced to disable comments, and many concerned viewers have called and written letters to SeaWorld to express their disgust. Even Pixar has caught wind of the controversy surrounding the film and altered the ending to the upcoming *Finding Dory* in response, according to *The Huffington Post*.

While the general public certainly has not been shy about voicing its opinion on the subject, SeaWorld has been anything but vocal. SeaWorld declined to be interviewed for the original documentary or appear on CNN since it aired and issued only a brief statement about the film, calling it one-sided and unfair.

According to a recent article on *marketwatch.com* of *The Wall Street Journal*, SeaWorld's stock has dropped 25 percent since the release of the film and sales are down by $4 million since June (months before the film was aired on CNN). In addition, ticket prices have recently decreased, though the park insists the change has nothing to do with public response to *Blackfish*.

To learn more about the documentary, visit *www.blackfishmovie.com*.

Jenna Bodnar | Junior Staffwriter

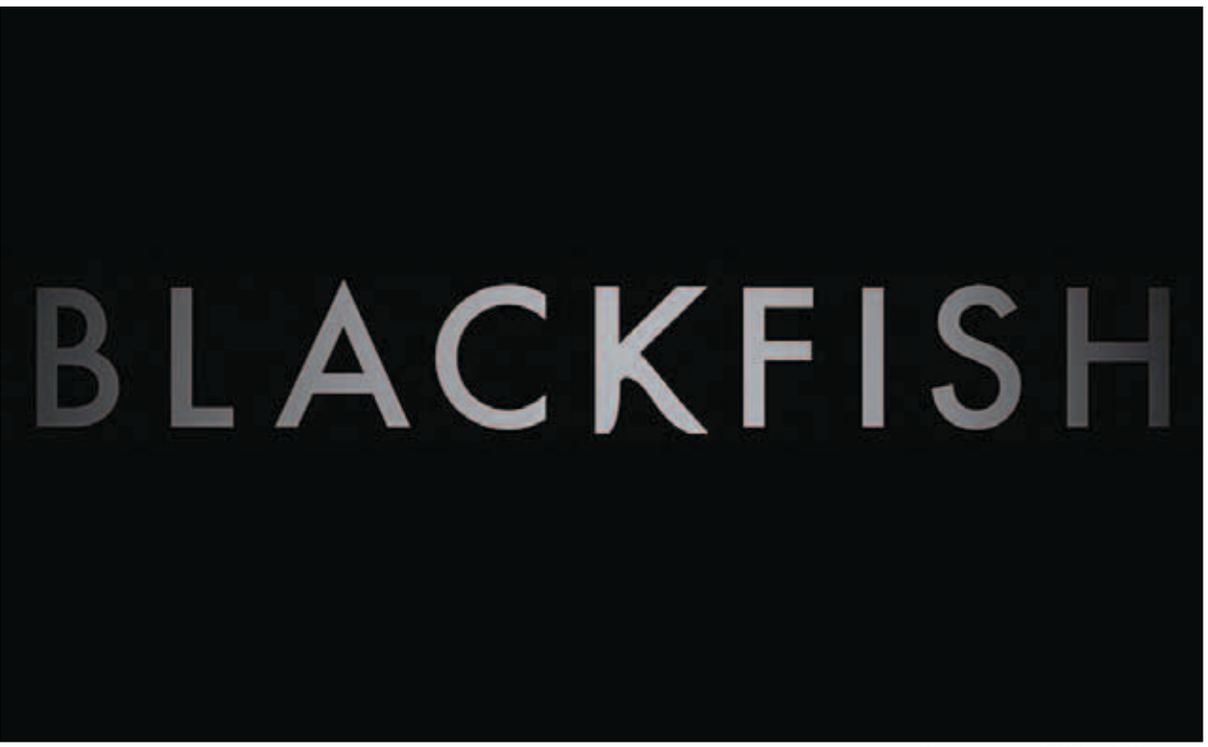


Photo courtesy of Wikimedia Commons

The documentary *Blackfish* skillfully investigates the devastating realities of killer whale captivity.

Netflix seals deal with Disney's Marvel

New material will expand Netflix original content with extensive series and miniseries event

Get ready to renew your Netflix subscription, because the video streaming service has just inked a deal with Disney's Marvel to create an epic series event. The content, which will consist of four 13-episode series and a miniseries, was announced in a press release on Thursday.

The event will begin with a series focusing on comic book hero Daredevil, followed by separate series each focusing on fellow Hell's Kitchen residents Jessica Jones, Iron Fist, and Luke Cage.

Slated to begin in 2015, the serialized epic will be released over a few years, and will lead up to one defining miniseries, *The Defenders*, described in the release as an attempt to "reimagine a dream team of self-sacrificing, heroic characters."

The announcement comes on the heels of the ABC premiere of *Marvel's Agents of S.H.I.E.L.D.* and the widely hailed success of Netflix original series *House of Cards* and *Orange is the New Black*. There's no word yet as to whether this new epic will be part of the *Avengers* universe, established by the latest Marvel films and continued in *Agents of S.H.I.E.L.D.*

Original content is still new territory for Netflix. The service's first major release was *House of Cards*, followed by the highly anticipated fourth season of *Arrested Development*. This original content has a lot of potential, since Netflix isn't beholden to advertising to pay for content, as traditional networks are. As a result, content can be molded to already-present viewers — not the demographics prized by traditional TV executives.

So far, critics and viewers alike have approved of Neflix original content, and *House of Cards* recently took home three Primetime Emmy Awards. The show received nine of the 14 total nominations for Netflix programming.

However, that same freedom can also hamper the creation of high-quality content. The fourth series of *Arrested Development* never quite achieved the success of previous seasons, all released on FOX before the show's untimely cancellation.

The most interesting thing to note about this announcement is how the content will be issued. The individual series will be released separately, on a staggered schedule, but each series will be released in its entirety at one time. So you'll be able to binge-watch all 13 Daredevil episodes whenever you like — but you'll have to wait to start on Jessica Jones.

This announcement also comes amidst a flurry of superhero content hitting the market. Marvel's sequel *Thor: The Dark World* was released in the U.S. last weekend, *Agents of S.H.I.E.L.D.* is currently airing its first season on ABC, and *Arrow*, a show based on DC comic book hero the Green Arrow, is airing its second season on The CW.

The viewer makeup will be especially interesting. Will Netflix try to appeal to and gain viewership from the younger demos sought after by traditional programming, or will there be a more evenly distributed age range? The epic event is sure to draw current fans of both the Marvel comics and the feature films, but Netflix will need to distinguish its superheroes from the rest in the entertainment world to attract viewers outside its already-present fan base.

Mairéad Pettit | Staffwriter

McConomy Auditorium, University Center

Andie Park | Staffwriter

The World's End

Friday, Nov. 15
7:30, 10

Director Edgar Wright teams up with actors Simon Pegg and Nick Frost to complete the final installment of the *Three Flavours Cornetto* trilogy. In one of the best movies this year, five friends reunite 20 years after failing to finish the "Golden Mile" pub crawl, spanning 12 pubs in their hometown of Newtown Haven. Although the glory days are over, ringleader Gary King (played by Pegg) gathers the group to reach the final pub — The World's End. As the friends return to their hometown, they realize it's a little different from what they remember — thanks to an alien invasion. As the final film of the trilogy, *The World's End* is filled with a hilariously chaotic sense of childlike enthusiasm with its amazing fight sequences and characters, but at its core, it's a heartwarming film that deals with growing up and moving on from the golden years of one's youth.

Kick-Ass 2

Saturday, Nov. 16
7:30, 10

Kick-Ass is back with a vengeance. In the sequel to the splashy film about an inexperienced crime-fighting teen, *Kick-Ass 2* returns with the same energetic chaos as its titular hero tries to defeat his ally-turned-enemy Red Mist. After initially retiring from the crime-fighting business, Dave Lizewski (a.k.a. Kick-Ass) trains to be a proper hero and joins Justice Forever, headed by Colonel Stars and Stripes (played by Jim Carrey, if you can even imagine). *Kick-Ass 2* is action-packed and full of raunchy humor that will make you want to put on a mask and fight some crime on the streets of the 'Burgh.

The Rocky Horror Picture Show

Sunday, Nov. 17
8, 11:59

This cult horror film returns once again to Carnegie Mellon. *The Rocky Horror Picture Show*, the classic cinematic force that rocked pop culture, is one of the most entertaining and interactive films that has lived through generations. When a young couple, Brad Majors (Barry Bostwick) and Janet Weiss (Susan Sarandon), comes across the mansion of Dr. Frank-N-Furter, they find themselves in a slew of Frankensteinian misadventures infused with pop-rock ballads, mad scientists, and transvestites in lingerie. Come to the midnight showing with Scotch'n'Soda's shadowcast for a one-of-a-kind experience.

Wolpert makes a soulful entrance on *The Voice*

Former CMU student's rendition of Joni Mitchell's "A Case of You" climbs to No. 3 on iTunes

[by **Noël Um** | News Co-Editor]

Sporting signature '50s frames and carrying a hauntingly clear and soulful voice, former Carnegie Mellon student James Wolpert glided into the top 12 of NBC's reality television competition *The Voice* with his performance of Joni Mitchell's "A Case of You" last Tuesday.

Wolpert's stripped-down version of the Mitchell hit left his mentor, Maroon 5 bandleader Adam Levine, wide-eyed and stunned. "You came back and did something incredibly bold. You had so much control, and it was so elegant. I could not be more proud of you," Levine said.

Levine was not the only one floored by Wolpert's performance. His "A Case of You" single subsequently lurched to No. 3 on the iTunes sales chart before settling comfortably around No. 4 on Tuesday night.

Tonight, Wolpert will perform in *The Voice*'s live show against the top 12 at 8 p.m. "Man, I just feel like this is exactly the position I want to be in right now, and there's literally nothing more that I could ask for. This is the most incredible thing that's ever happened to me," Wolpert said.

Surprisingly, Wolpert's powerful voice and music style — which falls somewhere between classics Jack White and Queen — was not enough to gain him an acceptance from Carnegie Mellon's vocal performance program back in 2009. "I auditioned for their voice program, but I didn't get in, and I just wanted to go to the school so badly that I went for my second-best choice, which was art," he said.

After two challenging years as an art major — "I was a terrible student, but I really enjoyed my classes" — the 22-year-old Lancaster, Pa., native dropped out of Carnegie Mellon and began working at the Apple Store in Shadyside.

"What kind of art did I specialize in? Hmm… Bad art," Wolpert chuckled. "But I'll never forget my time at CMU. It was an incredibly important, pivotal experience in my life. I also just had a lot of fun in the fine arts program."

Wolpert said, "I dropped out because I felt called to a different path. I would love to finish up at some point in my life though. You know, go back and get the ol' college degree."

The choice to leave college has certainly paid off, but Wolpert warns that it's not the path for everybody. "I certainly hope I'm not encouraging anybody to drop out," he said. "All of the lessons that I learned at CMU and the nuggets of wisdom I acquired during my two years there kind of nestled themselves into place as my life moved forward — and then it all came together and the dots all connected."

Although it was tough to balance music and work during his two years as an Apple employee — "I was working full-time and I was making barely enough to pay rent" — Wolpert stuck around Pittsburgh and continued to perform with Carnegie Mellon's a cappella group Soundbytes, while recording and writing on his own.

"Soundbytes shows were the majority of what I've been doing for the past seven months, besides *The Voice*. My solo performances kind of went by the wayside because I was having so much fun with Soundbytes; they're some of the best friends I've ever met and I will cherish them for my entire life," Wolpert said.

Sophie Wirt, a junior professional writing major and member of Soundbytes, said, "James was an integral part of Soundbytes, both musically and as a friend to everyone in the group. Though we're all incredibly excited for him, I don't think anyone's surprised that his talent is taking him places."

Wolpert, who had many solos during his time with Soundbytes, did not expect to experience stage fright before he went on the show, but a case of nerves kicked in right before his first appearance in front of *The Voice*'s 13 million viewers last month.

"For my blind audition, I almost collapsed before they opened the stage doors for me. It's something that I had never experienced before because I always thought I was a comfortable performer on stage; it's where I feel the most at home. But I think the sheer scale of it all is something that you just have to get used to," he said.

The audience would have never been able to tell. Wolpert stormed the stage, nailing his rendition of music-inspiration Jack White's "Love Interruption" with grit and verve. All four judges — Christina Aguilera, Cee Lo Green, Adam Levine, and Blake Shelton — spun their chairs around to fight over Wolpert before he eventually settled on Levine as his mentor.

Screenshot courtesy of *The Voice* via YouTube

Former Carnegie Mellon student, and now top 12 contestant on NBC's *The Voice,* James Wolpert performed a stripped-down version of Joni Mitchell's "A Case of You" to secure his place amongst the best on the reality series.

Quickly, Wolpert developed a reputation as the top dog of Levine's team. Zayda Rivera wrote in the *New York Daily News*, "I still strongly feel Levine's squad is the most powerful with vocalists like James Wolpert…. It's hard not to watch Wolpert, who Levine previously described as a 'stockbroker who could sing.' He's passionate and fun."

Wolpert feels strongly about promoting and supporting the other contestants through his Twitter and Facebook, even voting for his competitors through *The Voice*'s voting app.

"I consider myself honored to be counted among the [contestants] at all. It might be counterintuitive, but I think the key to success on the show, or music at all, is putting aside the things that people say — good or bad — and just investing yourself in the music," he said. "I know that sounds pretty corny, but it's the truth. I've found that that's the most harmonious way to approach this whole thing."

Interestingly, *The Voice* hasn't been Wolpert's first exposure to reality television. In 2008, he was featured in five episodes of the ABC television series *High School Musical: Get In the Picture*.

Wolpert's other acting experience includes a lead role in Yulin Kuang's (DC '13) short film "The Perils of Growing Up Flat-Chested," which won an award for Best Narrative Short at the San Diego Asian Film Festival last Saturday.

"I love acting. It's really fun. In a university with such a prestigious acting school, I would never compare myself to anybody there or claim that I am going to make my big foray into acting anytime soon, but it's definitely on the table because I have a great time doing it and people seem to enjoy it and it gives me another outlet," he said. "I love having as many creative outlets as I possibly can."

Screenshot courtesy of *The Voice* via YouTube

Screenshot courtesy of *The Voice* via YouTube

Fans at home love that Wolpert encompasses the very essence of the stereotypical Carnegie Mellon student — quietly passionate, slightly nerdy, and always humble.

"I just feel really proud of him. It's a great feeling when a fellow Tartan is successful; I feel like we all share each other's triumphs," sophomore professional writing and creative writing double major Sarah Hodgson said. "Based on his style and his passion, he seems to pretty much embody CMU, which is why it's so amazing that we get to have this talented, stylish, down-to-earth guy representing our school."

"I was completely taken aback by the support," Wolpert said. "I am humbled by the response and I know I wouldn't be here without the support of my family, my friends and my beautiful girlfriend Nadia [Sheen], who also went to Carnegie Mellon."

Wolpert says that currently, Sheen (MCS '13) and other Carnegie Mellon alumni have formed a community out in Los Angeles. "CMU has this little satellite community out here in L.A.; we just hang out and get together pretty often," Wolpert said.

Keeping in touch with Carnegie Mellon alumni and friends helps Wolpert feel connected to the Pittsburgh community that he still very much considers home. "I'm so nostalgic about my time at CMU; it's hilarious. All this pain-pleasure memory is flooding back to me right now."

"What I don't miss though, was being trapped in Scobell my freshman year," Wolpert laughed.

According to his Twitter feed, Wolpert's favorite Pittsburgh eats include some classic Carnegie Mellon student go-tos: Union Grill, Steel Cactus, and Spice Island. "I love hanging out in Shadyside — there are great bars around there. I love hanging out at the Apple Store because I'm a nerd. I love going to the Strip on Market Days. My favorite restaurant to go to is Tamari," he said in an interview with WPXI.

As for the fame and the buzz, Wolpert said, "It's impossible not to read the stuff online, because this is kind of the first thing of this type that's ever happened to me. It's a whole new way of seeing yourself, I guess. I don't necessarily think it's a good idea to read comments and articles about me online, but I succumb to it anyways."

Wolpert said, "It's been a roller coaster ride, I have to say. And that's kind of the way I like it. I like bouncing back and forth between different places and different situations. I like all sorts of crazy situations, and that's just me."

Top right: James Wolpert has repeatedly wowed judges and the audience at *The Voice* with his soulful style.
Bottom left: Until recently, Wolpert performed with Carnegie Mellon co-ed a cappella group Soundbytes.

Pittsburgh Symphony plays to its strengths

The orchestra presents a tried-and-true but no less compelling recipe for musical success

Standard formulas can get tired very quickly, especially in the realm of arts and entertainment. Movies that follow traditional arcs too closely can be stale and predictable. But formulas exist for a reason, and if executed well, they can be highly effective.

The Pittsburgh Symphony Orchestra has one of those formulas — unchanging but well performed nearly every time. Last Saturday night, the orchestra presented yet another variation of its usual recipe in a program featuring acclaimed violin soloist Arabella Steinbacher and Nikolai Rimsky-Korsakov's *Scheherazade*.

Aside from Steinbacher, a special spotlight fell on guest conductor Rafael Frühbeck de Burgos, who has worked with the orchestra for 42 years and just celebrated his 80th birthday. Frühbeck de Burgos walked confidently to the podium to a round of thunderous applause.

For this concert, the orchestra presented one of its standard three-part programs: an edgier, more contemporary piece, a standout solo performance, and finally a symphonic classic that shows off the orchestra's prowess.

This time, the program opened with the U.S. premiere of Leonardo Balada's Symphony No. 6, *Symphony of Sorrows* — a dissonant, high-drama piece characterized by chirping strings, a theme building in the brass, and a dark tremor in the percussion. The piece showcased both the group and individual talent: The staccato passages in the strings were impressively synchronized, while principal cellist Anne Martindale Williams gave a mesmerizing solo. The symphony also has local flavor; Balada is a professor of composition at Carnegie Mellon.

Although the orchestra brought its own soloists to the forefront, Steinbacher was the star of the evening. Steinbacher's bold fashion choice drew as much attention as her violin; she walked onstage in a bright fuschia gown.

Her actual performance, however, was quite understated. Steinbacher offered a muted yet fluid sound, and while her solo was quiet, the orchestra did well to avoid overpowering her.

Despite her softer tone, Steinbacher's passion was no less for it; she was capable of a surprising amount of vigor, driving into the more technically difficult passages without hesitation. Sergei Prokofiev's Concerto No. 1 in D major for Violin and Orchestra is a virtuoso piece and features very technically difficult passages. Steinbacher deftly alternated between choppy, halting notes and blindingly fast runs. The concerto ended on a heart-wrenchingly sweet note, with Steinbacher wringing every ounce of vibrato out of her fingers.

After Steinbacher left the stage, the orchestra launched into Nikolai Rimsky-Korsakov's hypnotizing *Scheherazade*. This piece was the exception to the orchestra's otherwise technically impeccable performance; a few of the entrances were unintentionally staggered, and when the orchestra dropped down to a nearly inaudible pizzacato, the musicians sounded a little unsure. That said, the orchestra gave a sweeping performance overall — bewitching and halting in all the right places.

The indisputable highlight of *Scheherazade* was concertmaster Noah Bendix-Balgley's enchanting rendition of the classic solo. As the orchestra faded out, Bendix-Balgley's violin took over and held the audience in rapt attention, offering a beautiful vibrato and refreshingly pure tone that was surely as enchanting as any of Scheherazade's tales.

In combination, the three distinct performances made for another successful interpretation of the Pittsburgh Symphony Orchestra recipe. The formula may be familiar, but it has yet to cause classical music lovers to lose interest.

Rachel Cohen | Pillbox Editor

Courtesy of Wikimedia Commons

The Pittsburgh Symphony Orchestra regularly puts on formulaic but well-executed programs, such as last Saturday's performance of *Scheherazade* with Arabella Steinbacher.

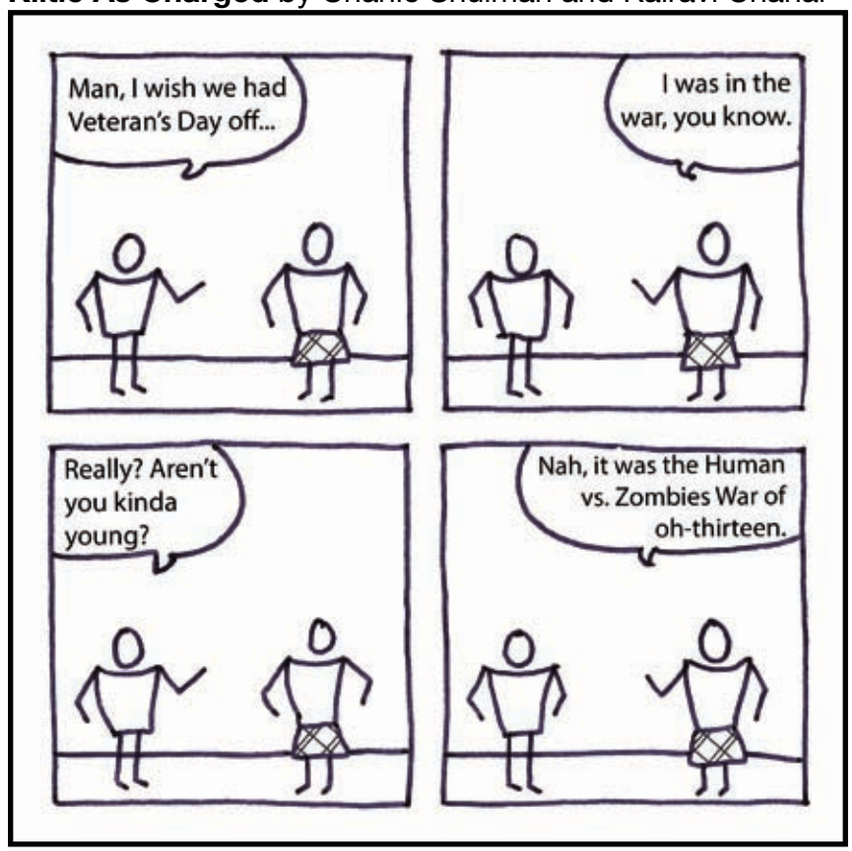
Piled Higher and Deeper by Jorge Cham

jorge@phdcomics.com phdcomics.com

Poorly Drawn Lines by Reza Farazmand

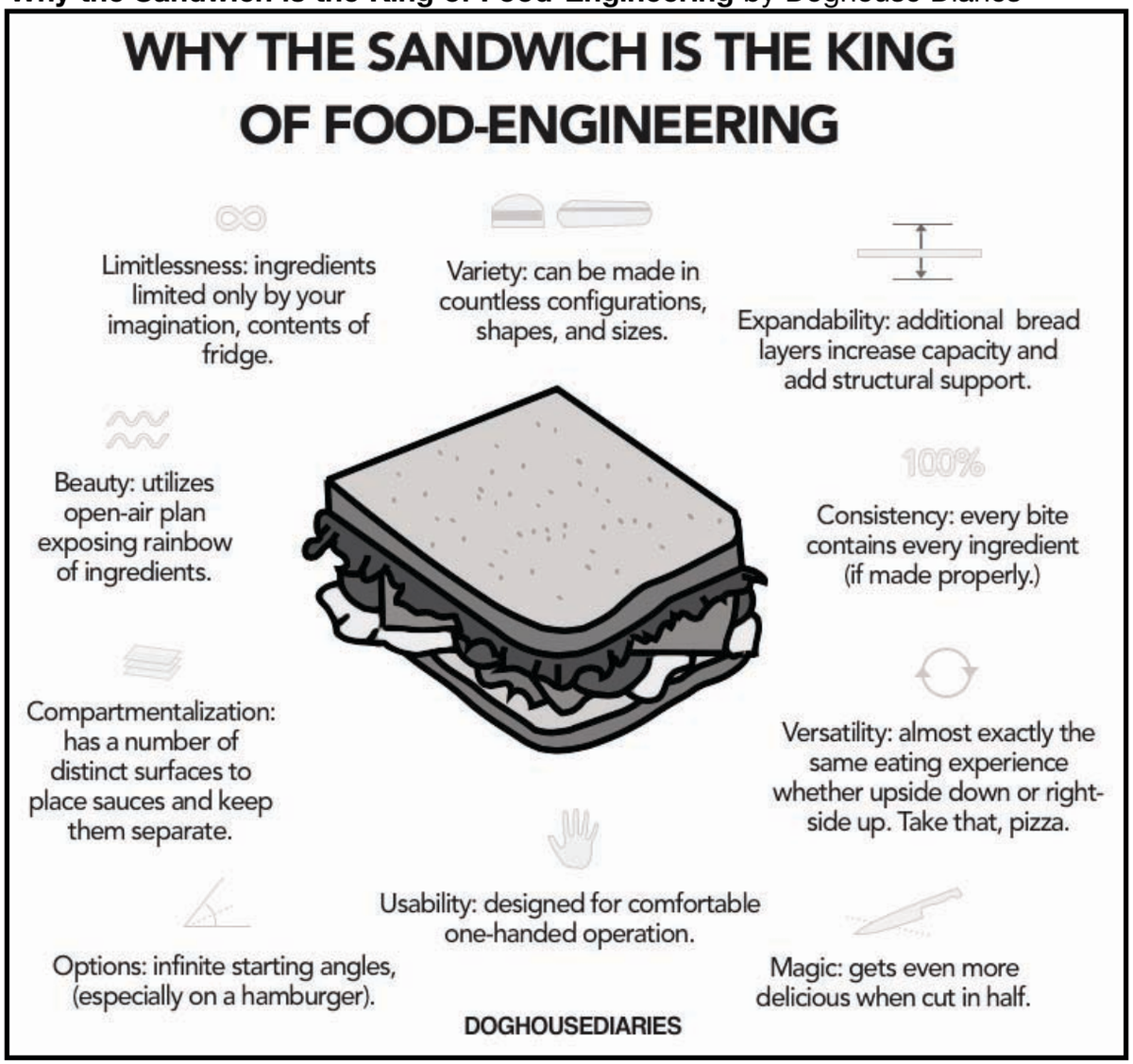
poorlydrawnlines@gmail.com poorlydrawnlines.com

Kiltie As Charged by Charlie Shulman and Kairavi Chahal



cshulman@andrew.cmu.edu

Why the Sandwich is the King of Food-Engineering by Doghouse Diaries



doghousediaries@gmail.com thedoghousediaries.com

Hark, A Vagrant by Kate Beaton

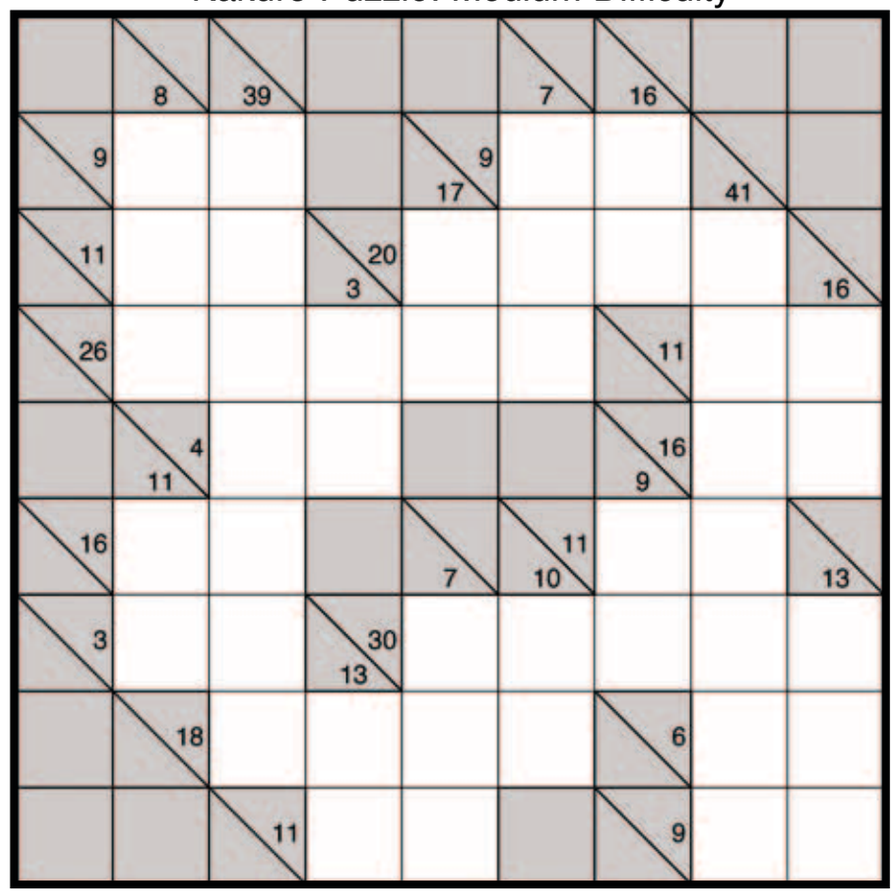
kathrynmoira@gmail.com harkavagrant.com

Sudoku Puzzle: Hard Difficulty

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

Sudoku courtesy of *www.KrazyDad.com*

Kakuro Puzzle: Medium Difficulty



Kakuro courtesy of *www.KrazyDad.com*

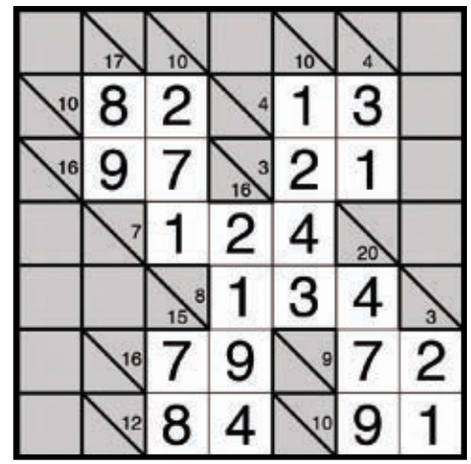
Fill all empty squares using numbers 1 to 9 so the sum of each row equals the clue on its left, and the sum of each column equals the clue above it. No number may be used in the same row or column more than once.

Solutions from Nov. 4

Crossword

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

Medium Difficulty



Easy Difficulty

Horoscopes

aries
march 21–april 19

Ignorance is bliss, but I guess you wouldn't know that.

taurus
april 20–may 20

Act on what you feel, not what you think you should feel.

gemini
may 21–june 21

Hesitate, and the opportunity will be gone forever.

cancer
june 22–july 22

Just let someone else worry about it for once.

leo
july 23–aug. 22

It's better to be slightly arrogant than to have no confidence at all.

virgo
aug. 23–sept. 22

You will realize that some things can't be perfect, no matter how much time you spend on them.

libra
sept. 23–oct. 22

Good things take time, so just stick to your plan and you'll get there.

scorpio
oct. 23–nov. 21

It's easier for people to cooperate with you when you tell them what you are doing.

sagittarius
nov. 22–dec. 21

You deserve praise, but you aren't always going to get it.

capricorn
dec. 22–jan. 19

You want to forgive, but your pride is in the way.

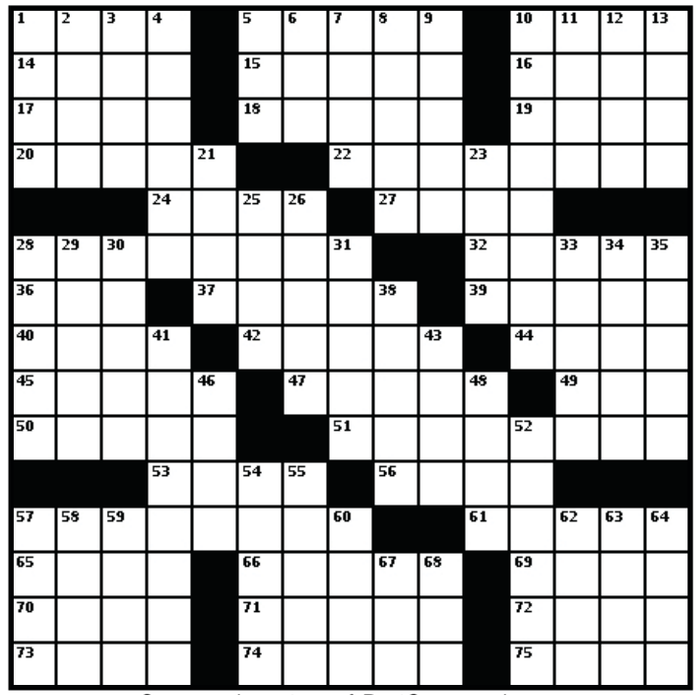
aquarius
jan. 20–feb. 18

There are some difficult steps that you will have to take, but why not put them off as long as possible?

pisces
feb. 19–march 20

At this point, the only thing to do is wait for it all to blow over.

Kairavi Chahal | Comics Editor



Crossword courtesy of *BestCrosswords.com*

Across

1. Declines
5. Unexpected victory
10. RR stops
14. Structure for storing grain
15. Bobby of the Black Panthers
16. Price paid
17. Long time
18. Subsequently
19. Caucus state
20. Living in a city
22. Ominous
24. Spanish appetizer
27. Stains
28. Ancient military engine
32. Chopper topper
36. Half and half
37. World book
39. Blot out
40. Kind of prof.
42. Mother of Isaac
44. Word that can succeed building, web, or burial
45. Salsa singer Cruz
47. High public esteem
49. Actor Beatty
50. Stretch of land
51. Hand woven pictorial design
53. Seaweed
56. On the ocean
57. Kerosene source
61. Cutting instrument
65. Anklebones
66. Antipasto morsel
69. Hydroxyl compound
70. Archer of myth
71. Passover feast
72. Short stocking
73. Old German helmet
74. City on the Ruhr
75. Speaker of baseball

Down

1. Son of Isaac and Rebekah
2. Coffin support
3. Amoeba-like alien: The _____
4. Musical composition
5. Battleship letters
6. Architect I.M.
7. Without
8. Spanish hero
9. Itty-bitty
10. Cutting instrument for paper
11. Horn sound
12. Even ___ speak...
13. Celestial body
21. The ___ Valley is a Californian wineland
23. Able was ___...
25. Places
26. God of Islam
28. Do something together
29. Goose genus
30. Inventor Nikola
31. Fortune-telling cards
33. Spoil
34. Blender brand
35. Like marshes
38. Capital of Yemen
41. Touchy
43. Jumps on one leg
46. To ___ (perfectly)
48. Stink
52. Most reasonable
54. Unfettered
55. Heaps
57. Word that can succeed dance, foot and door
58. Mata ___
59. Immensely
60. Covers
62. Are you ___ out?
63. Central points
64. Lodge members
67. Neckline shape
68. East ender?

MONDAY11.11.13

Toad the Wet Sprocket. Altar Bar (1620 Penn Ave.). 7:30 p.m.
The alternative rock band — comprised of vocalist and guitarist Glen Phillips, guitarist Todd Nichols, bassist Dean Dinning, and drummer Randy Guss — will perform at the Altar Bar. Tickets range $30–32, and the event is open to all ages.

TUESDAY11.12.13

Creative Writing New Faculty Reading.
Danforth Lounge (University Center) 4:30 p.m.
The Carnegie Mellon English department will introduce its new faculty members, assistant English professor Kevin Gonzalez and adjunct English professor Lauren Shapiro, with a special reading.

Artist Talk: Transformazium in Conversation with Paul Ramirez Jonas. Carnegie Lecture Hall. 6:30 p.m.
Braddock-based artist collaborative Transformazium and artist Paul Ramirez Jonas will come together to discuss the initiative's series of community-based creative engagement activities. The talk is free and open to the public.

WEDNESDAY11.13.13

Selective Engagement After Unipolarity: Robert Art.
Baker Hall 136A. 4:30 p.m.
The Center for International Relations and Politics features a talk by Robert Art, the Christian A. Herter Professor of International Relations at Brandeis University. Art will discuss the grand strategy and national interest changes the U.S. must make in order to protect itself from overstepping its resources.

Andy McKee. Rex Theater (1602 E. Carson St.). 8 p.m.
The fingerstyle acoustic guitarist will bring his YouTube-famous compositions to Pittsburgh. Tickets are $25.

THURSDAY11.14.13

Inauguration of Dr. Subra Suresh. University Center. All-day event.
The Carnegie Mellon community is invited to join the festivities as Suresh is inaugurated as the ninth president of Carnegie Mellon. The celebration will continue on Friday.

The Treblemakers. Skibo Café. 7:30 p.m.
Carnegie Mellon's newest coed a cappella group will perform as part of an event hosted by AB Skibo.

ONGOING

14th International Exhibition of Botanical Art & Illustration. Hunt Institute for Botanical Documentation (Hunt Library, Fifth Floor). Through Dec. 19.
The exhibition will include 41 pieces of artwork by 41 artists from 10 countries. The Institute established the International series in 1964 with the hope of supporting and encouraging contemporary botanical artists. Every three years, the International series features the works of talented botanical artists from around the world.

Yasumasa Morimura: Theater of the Self.
The Andy Warhol Museum. Through Jan. 12.
In this retrospective exhibit presented by the Andy Warhol Museum, Japanese artist Yasumasa Morimura plays with images of well-known cultural icons, placing his own face over portraits of figures like Marilyn Monroe and Mao Zedong. For more information, visit *warhol.org*.

Alien She. Miller Gallery (Purnell Center for the Arts). Through Feb. 16.
This exhibit examines the influence of Riot Grrrl, an underground feminist punk rock movement that surfaced in the '90s, on artists and cultural producers today. For more information, visit *millergallery.cfa.cmu.edu*.

2013 Carnegie International. Carnegie Museum of Art. Through March 16.
The biennial Carnegie International brings the world art scene to Pittsburgh in a large exhibition of diverse works. This year's exhibition features 35 artists and represents 19 countries. For more information, visit *cmoa.org*.

Compiled by **Rachel Cohen** | Pillbox Editor

Want your event here?
Email *calendar@thetartan.org*.

u.s. royalty.

Jason Chen | Staff Photographer

AB Underground hosted Washington, D.C.-based indie rock band U.S. Royalty last Wednesday in The Underground. The four-piece band played songs from their debut album *MIRRORS* as well as their forthcoming album *Blue Sunshine.*