





# Statistically Speaking

This past week, Syrians were cut off from phone and internet access as a result of outages allegedly orchestrated by the government to control rebel forces. Here are some facts on the incident and Syrian conflict:

**2**  
The number of days Syrian citizens were without internet access.

**1982**  
The year in which the Syrian government's attack on the city of Hama was preceded by internet outages.

**0**  
The level to which traffic from Akamai Technologies Inc., an internet content distributor to Syrian users, dropped on Thursday.

**15**  
The number of people killed on Thursday after heavy fighting between rebels and regime troops in the northern Idlib province and in Aleppo.

**40,000**  
The estimated number of people killed since the start of the conflict in Syria.

Sources: *usatoday.com* and *news.cnet.com*  
Compiled by **NOËL UM**

## Wing departs for Microsoft position

**WING**, from *A1*

Between 2007 and 2010, Wing briefly left Carnegie Mellon to serve as the assistant director of the computer and information science and engineering directorate at the National Science Foundation (NSF).

When Wing came back, Bryant said, she used what she had learned at the NSF to “try and bring in some new faculty members who would be doing work in areas different than what we were doing.” As an example of this, Bryant pointed to the hiring of Emma Brunskill, currently an assistant professor of computer science.

Frank Pfenning, a professor of computer science and a colleague of Wing's, agrees with Bryant on the pleasures of working with her: “There are many attributes that make it exciting to work with her; I think one of her strongest attributes is her dedication, her energy and her enthusiasm and, in scientific terms, her total commitment.”

Pfenning, too, has worked with Wing for many years. As department head, Pfenning said, Wing was adept at gauging the department's needs and allocating resources. “She has a complete sort of sense for what the department needs and what we need as we're moving forward. She's very good at setting priorities and making sure these priorities are put

into practice,” he said.

Generations of Wing's students have known her as the “dragon lady,” based on a photo of her performing a Chinese sword dance that she learned in Xi'an, China. As department head, Wing is still interacting as much as she can with students.

This semester, she co-taught 15-150, Principles of Functional Programming. Wing said she enjoys the class because of her long-standing interest in functional programming. “It got me into computer science. I love the material; I just want to convey my own passion for this material to the students.”

When asked what advice she would give rising computer science students at Carnegie Mellon, Wing said, “Follow your passion. Find something that you're really interested in and go for it. Believe in yourself. The students are smart here; there should be no lack of confidence.”

Pfenning and Bryant say Wing will be sorely missed. “Of course it's a big loss to CMU. It's impossible to replace her, that's for sure,” Pfenning said.

“I think she's been very inspirational to people; we're really sad to see her go,” Bryant said.

Wing is sad to go, but excited to take on the challenges Microsoft will offer her. “I will always love Carnegie Mellon. Carnegie Mellon is my family,” she said.

**Corrections & Clarifications**

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

### CAMPUS NEWS IN BRIEF

## Professors named as AAAS fellows for their research

Justine Cassell, director of the Human-Computer Interaction Institute, and Chien Ho, biological sciences alumni professor, have both been named fellows of the American Association for the Advancement of Science (AAAS).

Cassell received the honor “for her distinguished contributions to the field of computer science, particularly for new computational models of human behavior and resulting technologies, including the Embodied Conversational Agent (ECA),” according to a university press release.

Cassell developed the ECA, a virtual human being capable of interacting with humans, to help children with autism in 2008. Her research has focused on computational systems that can help supplement language skills of disabled individuals through the use of conversation and storytelling. According to a university press release, Ho is being recognized “for pioneering the use of magnetic resonance to unravel allosteric mechanisms of hemoglobin, and to develop a noninvasive method to monitor immune responses in vivo.”

This year's class of 702 fellows will be recognized during the AAAS Fellows Forum held in February at the AAAS Annual Meeting in Boston. Twenty-seven Carnegie Mellon faculty members and alumni have been named AAAS Fellows in the past.

## Students lead new plan for shale chemicals production

Chemical engineering seniors at Carnegie Mellon are creating blueprints for a plan to transform valuable hydrocarbons from the gas in Marcellus shale deposits into chemicals and polymers.

Chemical engineering professors Ignacio Grossmann and Jeff Sirola will lead teams of four and five students in finding a new source for chemical production. The students will convert hydrocarbons from shale deposits into chemicals, which are used in the manufacturing products such as plastics and dyes. Previously, these products have been created from crude oil.

According to a university press release, the student discovered that the production of aromatics from ethane is not only technically feasible, but also economically very profitable.

Grossmann said in a university press release, “This means that U.S. companies like Bayer Corp in Pittsburgh could have advantaged access to low cost aromatics.”

Sirola said in the same release, “Aside from promoting the rebirth of the traditional petrochemical industry in the U.S. which has been in decline for some time, the various components of gas in shale deposits offer the possibility of producing many chemicals with new alternative pathways and processes.”

Compiled by **NOËL UM**

### FEATURE PHOTO

## University observes World AIDS Day








Jonathan Carreon/Photo Editor

A campus event recognized World AIDS day last Saturday, featuring a speaker and panelists who spoke about HIV/AIDS and answered audience questions. Held annually on Dec. 1, World AIDS day aims to bring attention to AIDS as a health and public issue.

## Campus Crime & Incident Reports

<b>Theft</b> Nov. 26, 2012 A Mudge House resident summoned police officers to file a theft report. The student stated that his room was unsecured from Nov. 25 to 10:30 a.m. the following morning. In this time frame, his PNC debit card was taken from his wallet, which was on his desk. This investigation is ongoing.	<b>Theft</b> Nov. 26, 2012 University Police were summoned to Stever House for a theft of a bicycle. The Trek mountain bike was parked and secured at the Stever House bike rack on Nov. 21 at 9 a.m. The victim noticed the bike missing last Monday at approximately 7:20 p.m.	<b>DUI Arrest</b> Nov. 29, 2012 University Police conducted a traffic stop on a vehicle with expired registration. After police made contact with the driver, they determined that he had been drinking alcohol. The male was placed under arrest for driving under the influence of alcohol and will be charged. He also received multiple traffic violations.	<b>Theft</b> Nov. 30, 2012 University Police were summoned to Schatz Dining Room in the University Center for a laptop theft. The victim stated that her laptop and cell phone were taken from the second-floor area of the University Center. Multiple people were interviewed, but none was able to identify a suspect.
<b>Theft</b> Nov. 26, 2012 University Police were summoned to take a report of a theft of an iPad. The iPad was stolen from an office on the first floor of Smith Hall between 11 a.m. and 1 p.m. The office was said to be open and unlocked during this time.	<b>Underage Drinking</b> Nov. 27, 2012 University Police responded to the fourth floor of Stever House to a report of underage drinking. Officers talked with multiple individuals who admitted to drinking at an off-campus location and were visibly intoxicated. Two students were issued citations for underage drinking.	<b>Disorderly Conduct</b> Nov. 29, 2012 University Police were summoned to Hunt Library for a report of a disorderly female at the information desk. Upon their arrival, the female had exited the building. Officers searched the area attempting to find the female, but were unsuccessful.	<b>Theft</b> Nov. 30, 2012 University Police responded to the University Center for a retail theft that occurred at Entropy+. They were unsuccessful in locating the three females who unlawfully took multiple items.

### WEATHER

				
<b>TUESDAY</b> High / Low 64 / 34	<b>WEDNESDAY</b> High / Low 41 / 25	<b>THURSDAY</b> High / Low 49 / 35	<b>FRIDAY</b> High / Low 52 / 42	<b>SATURDAY</b> High / Low 50 / 35

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



Cohon outlines future plans

Language opportunities on rise

**COHON**, *from A1*

With regard to the university's financial outlook, Cohon said, "We're in very good position." But he expressed fears about the effect of the national fiscal cliff on research funding that would be available to the university.

"Our endowment continues to be small," Cohon said, but he said that it is getting better due to fundraising such as the Dietrich gift, whose "contribution to the endowment hasn't been felt yet."

On the subject, Jennifer Keating-Miller, the Associate Director of Undergraduate Research and National Fellowships, inquired about continued investment in existing Pittsburgh programs in contrast to the university's expansion. "We're in a better position to meet [funding requests], but that's relative; we've never had enough discretionary funds," Cohon responded.

The forum was sponsored by Staff Council. Jeffrey Harris, the chair of Staff Council, said, "Staff Council sponsors this event as an opportunity for the Carnegie Mellon community and President Cohon to speak candidly."

**LANGUAGE**, *from A1*

Polanski illustrated how Chinese language studies have expanded. At Carnegie Mellon, there were five students studying Mandarin Chinese in 1992. Polanski said, "Initially we hired a tutor, and the courses were taught through distance learning. Today, over 300 students fill 23 sections of Chinese language courses at Carnegie Mellon."

Mark Dyehouse, a sophomore Chinese and physics double major, had the opportunity to take three years of Chinese in high school. Unlike many students who take Chinese language classes, Dyehouse has no Chinese heritage.

"I began to find the many facets of the language, culture, and history fascinating," he said. "I visited China and Hong Kong for a few weeks last summer, which intensified the hold that the language had on me." He would like to become fluent and to potentially use his Chinese language skills to conduct research in physics.

Many Pittsburghers' roots are Slavic, so it makes sense that Pitt's department of Slavic languages and literature offers Russian, Polish, Slovak, Ukrainian, Bosnian/Croatian/Serbian, Czech, and Bulgarian. Those languages are also taught during the summer, with Hungarian and Turkish added to the mix.

"In addition," said Christine Metil, director of the Summer Language Institute, "for the next three years, Pitt will host the Baltic Studies Summer Internship, the only program in the country to offer Estonian, Latvian, and Lithuanian."

The U.S. government is always looking for speakers of "critical languages," a constantly-changing list tied to areas of conflict in the world.

the moment, the list includes Farsi, Swahili (the only truly African language taught at Pitt), American Sign Language (ASL), Arabic, Modern Greek, Hindi, Hungarian, Irish Gaelic, Swedish, Icelandic, Turkish, Vietnamese, and Quechua (a language spoken in the Andes).

Of all of the languages in which the center provides instruction to undergraduates, Arabic has had the highest gain in percentage of students since 2002.

"In the fall of 2001," Mauk said, "Arabic was fourth as far as student enrollments. It was behind ASL, Irish Gaelic, and Swahili. By spring of 2002, the number of Arabic student enrollments doubled. In 2009 the number of students enrolled was 352, up from 75 in 2002. And this was after Carnegie Mellon started their own Arabic language courses." If not for budget cuts, it would likely be much higher.

The field of careers for critical language speakers is growing. Do you speak Ibo/Igbo (spoken in Nigeria)? How about Assamese (spoken in northeast India)? If you do, the U.S. government has translator job openings right now.

The scholarships cover all costs, including travel between the student's home city and program location, orientation costs, visa fees, and room and board.

"Critical languages" are often not taught in college language programs. Claude Mauk, the director of Pitt's Less-Commonly-Taught Languages Center, knows all about that: "This center, which is part of the Linguistics Department, began in the 1960s, mostly for graduate students to help with their research. Now it's mostly undergraduate."

The assortment of languages offered through the center changes often, but at the moment, the list includes Farsi, Swahili (the only truly African language taught at Pitt), American Sign Language (ASL), Arabic, Modern Greek, Hindi, Hungarian, Irish Gaelic, Swedish, Icelandic, Turkish, Vietnamese, and Quechua (a language spoken in the Andes).

Of all of the languages in which the center provides instruction to undergraduates, Arabic has had the highest gain in percentage of students since 2002.

"In the fall of 2001," Mauk said, "Arabic was fourth as far as student enrollments. It was behind ASL, Irish Gaelic, and Swahili. By spring of 2002, the number of Arabic student enrollments doubled. In 2009 the number of students enrolled was 352, up from 75 in 2002. And this was after Carnegie Mellon started their own Arabic language courses." If not for budget cuts, it would likely be much higher.

The field of careers for critical language speakers is growing. Do you speak Ibo/Igbo (spoken in Nigeria)? How about Assamese (spoken in northeast India)? If you do, the U.S. government has translator job openings right now. Becoming a translator generally requires more than an undergraduate language degree, but even a passing knowledge of another language can be useful for travel or perhaps as the basis for a completely different career.

Erin Taylor is a junior math and linguistics double major. She is fluent in French and Spanish, and studies Italian at Carnegie Mellon. "I'm looking into a minor in language technology. I'd like to use my knowledge of the structure of languages to work in artificial intelligence, perhaps in code breaking." And someday she'd like to learn Tagalog, one of the predominant languages spoken in the Philippines.

Trejos gives trade perspective



Former Minister of Foreign Trade for Costa Rica Alberto Trejos spoke at Heinz College on Friday.

**TREJOS**, *from A1*

an all-or-nothing approach, so that nations are forced to make concessions. The problem with this system, he explained, is unanimity — with more than 100 parties being involved in trade talks, it is difficult to make progress by having all of the parties in agreement.

Instead, he said nations pretend they're moving forward in trade discussions, when in reality, an agreement among nations has not been reached since 2003, almost a decade ago.

Trejos feels rules that were created 20 years ago haven't been changed, and countries are now exhausting money, effort, and time into bilateral agreements when they should focus on the larger picture by agreeing to multilateral agreements and reforming previous rules. With international powers like the U.S. and the European Union dominating over smaller nations like Costa Rica, Trejos claimed that smaller countries have "unfairly been put into a corner" in recent negotiations and that these larger nations should not be allowed to exploit others.

An example he provided described a wealthy individual who is only willing to pay \$6 for a task to another individual who wanted \$10 for its completion. Although \$6 is not the amount that the other person desired, he would have to accept it instead of being stuck with no payment at all. Analogous to the bullying of weaker nations, Trejos felt that this practice should be ended.

Students who attended the talk enjoyed the alternative perspective that Trejos provided on international issues.

Umer Humayun, a first-year public policy and management master's student, agreed, "It was great. Hearing different point of views from other countries was really interesting — not just from the United States, but also countries like Costa Rica."



NEW YORK UNIVERSITY

Behind every great concept, moving image, visualization, or interactive experience

There is an innovative digital artist.



M.S. in Advanced Digital Applications

With the explosion of emerging technology and data-driven design, there is an increasing demand for artists who possess technical production skills and the intuition to use them most effectively for a broad array of projects. To compete and succeed, a deep understanding of digital media that includes the command of animated 2D graphics, 3D modeling and animation, visual effects integration with live-action footage, as well as hands-on experience with coding and mobile technologies, is required.

The **M.S. in Advanced Digital Applications** offered by the NYU School of Continuing and Professional Studies Center for Advanced Digital Applications (CADA) prepares artists for the new digital frontier. Project collaborations, lectures by leading industry professionals, and internships at top production studios provide the basis for successful careers in digital visualization of data content that encompasses both new and traditional markets.

To learn more about this program, visit us at:  
**scps.nyu.edu/msada1c** or call **212-998-7100**

To request information and to apply: **scps.nyu.edu/gradinfo18c**

NYU SCPS

SCHOOL OF CONTINUING AND PROFESSIONAL STUDIES

New York University is an affirmative action/equal opportunity institution. ©2012 New York University School of Continuing and Professional Studies.



# Science & Technology

## SCITECH BRIEFS

### New computer simulation mimics brain’s process

The computer simulation SPAUN — Semantic Pointer Architecture Unified Network — has been programmed to think in a similar manner to the human brain. What sets SPAUN apart from other simulations is its ability to inform the user of its thought process: After answering a question, it prints out how it reached that answer.

Input is given in the form of a written question, with SPAUN “seeing” the query; the information sorts through the system until SPAUN decides what to do with it. Eventually, it prints detailed instructions on how to solve the problem.

While the creators of SPAUN believe it is a breakthrough that will help scientists understand the brain, some of its obvious limitations — like not being able to learn new information — come to the attention of its critics. “It is not a brain model,” said Henry Markram of the Swiss Federal Institute of Technology in Lausanne.

Source: [www.sciencenews.org](http://www.sciencenews.org)

### Europe observatory discovers biggest black hole blast

Astronomers at the European Southern Observatory have observed one of the largest black hole explosions ever known. The blasts, known as quasars, are very bright galactic centers powered by supermassive black holes. The newly discovered quasar, approximately 1,000 light-years away, is at least five times more powerful than the one previously observed to be the largest.

Some scientists believe that these quasars can help them understand the enigmas of the universe, such as the lack of large galaxies and how a galaxy’s mass is related to the mass of its central black hole.

Nahum Arav, an astronomer from Virginia Tech, stated, “I’ve been looking for something like this for a decade, so it’s thrilling to finally find one of the monster outflows that have been predicted!”

Source: *Astronomy* magazine

### Music theory helps develop synthetic materials’ strength

Experiments led by researchers at the Massachusetts Institute of Technology, Tufts University, and Boston University revealed that knowledge from music theory can strengthen spider silk, one of the strongest known materials in the natural world.

The research team — consisting of mathematicians, music composers, and engineers — constructed detailed computer models of the underlying protein structures that make the silk so flexible and strong. After studying patterns within the structures, the team found that the structure of silk could be described in a similar manner of a musical piece: by range, pitch, dynamics, and tempo.

The researchers are now working to design biosynthesized materials by piecing the proteins together as a musical composition might be pieced together. This method of synthesizing materials could signal the building blocks for tissue engineering and could ultimately lead to replacement organs, skin, or new materials for civil engineering.

Source: *Science Daily*



### 2012 rates among hottest years in past 160 years

This year ranks as one of the nine hottest years in 160 years, confirming the trend toward a warmer planet. According to the World Meteorological Organization, average temperatures between January and October were 0.45°C above the average from 1961 — 90. A rise of 1°C is enough to increase the frequency of extreme weather, according to some scientists.

The rate at which the Arctic ice melted last summer was higher than that of any previous year. In September, the ice area shrank to just over half its size from the previous year, the smallest it has been since records began. In addition, recent unusual weather events show links to global warming.

Michel Jarraud, head of the World Meteorological Organization, cited the extreme heat wave that occurred in Russia in 2010, and stated that “without climate change, this episode would have been extremely unlikely.”

Source: *The New York Times*

### SARS-like virus in Mideast kills two Jordanian men

Experts with the World Health Organization (WHO) reported that a new SARS-like coronavirus has killed two people in Jordan. The deaths make a total of nine confirmed cases of the virus, with five fatalities, since it was initially contracted by a Saudi Arabian man. Cases have occurred so far in Saudi Arabia, Qatar, and Jordan.

Scientists are looking into the possibility of the virus being communicable, although the virus is probably not nearly as deadly as SARS. “Even if the cases in Jordan were human-to-human spread — and we don’t know that — it wasn’t sustained,” said WHO spokesman Gregory Hartl. Two clusters of the diseases lead some to believe it is contagious, and medical and public health workers are being told to stay vigilant to unexplained cases of pneumonia as possible links to the new virus.

Source: NPR

### Health problems rise in aftermath of Sandy in New York

As New York City faces the aftermath of Hurricane Sandy, residents struggle with increased health problems. Although a majority of the city has power and heating restored, there are still over 12,000 residents in unheated homes. As a result, the rate at which people contract hypothermia is three times the normal rate of previous years. During the week of the storm, the carbon monoxide exposure rate was 10 times higher than expected. There were six times as many cases as usual the next week.

Lack of heating could lead to other health problems such as depression, anxiety, and the worsening of heart and lung problems. Officials worry over the approaching winter, as long periods of exposure to environments below room temperature could be fatal. Officials recommend that residents without heat should avoid using gas or ovens to protect themselves from carbon monoxide, and should wear loose-fitting, dry layers of clothing.

Source: *The New York Times*

Compiled by  
**SONIA KATHARANI-KHAN**  
**MICHAEL SETZER**

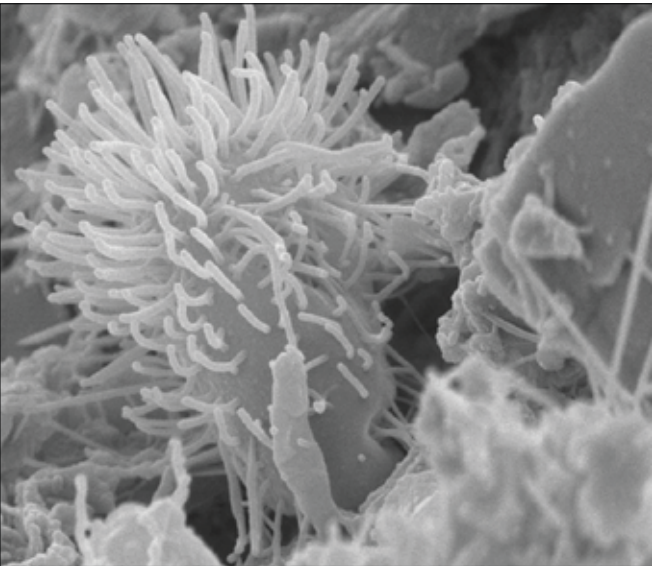
**BENJAMIN MADUEME**  
*Staffwriter*

A group of Carnegie Mellon researchers have made huge strides in examining the exact effects of silver nanoparticles on bacteria living in gelatinous biofilms. The results of their research indicate that the nanoparticles are less toxic on biofilms than was previously suspected, a finding that has positive implications for the effects of these nanoparticles on the environment, as biofilms are the most common form of life on Earth.

The research team involved is composed of Stacy Wirth, a Ph.D. student in the department of chemical engineering; Robert Tilton, a professor of chemical and biomedical engineering; and Gregory Lowry, a professor of civil and environmental engineering. The three are members of the Center for the Environmental Implications of Nanotechnology (CEINT), a five-year old multi-university initiative among Carnegie Mellon, Duke University, Howard University, Virginia Tech, Stanford University, and the University of Kentucky.

CEINT (pronounced like “saint”) specializes in identifying the effects of humanity’s increased usage of nanomaterials on the environment, specifically on microbial and single-celled lifeforms whose size make them the best candidates to be directly affected by these tiny nanoparticles.

“The focus of all the work we do in our group is the behavior of engineered nanopar-



Courtesy of adonofrio via Flickr  
Biofilms, like the one above, are harmed less by silver nanoparticles than previously thought, according to new Carnegie Mellon research.

ticles in environmental systems,” said Wirth, who led the team’s research.

According to *Science Daily*, a nanoparticle is a microscopic particle with at least one dimension less than 100 nanometers in size. When chemical compounds are shrunk down to this size, their physical and chemical properties often change in unprecedented ways. Recent chemical engineering breakthroughs have allowed manufacturers to leverage these properties to enhance many everyday products.

Nanoparticles are used in scratch-proof eyeglasses, stain-repellent fabrics, and self-cleaning windows. In computer engineering, carbon nanotubes are being explored to create nanoscale circuitry and even bendable electronics.

Silver nanoparticles —

**Despite their usage in consumer products, there has been some recent concern over how easily silver nanoparticles can leak into the environment, where their hazardous effects on bacteria may damage an area’s ecology.**

**DESIREE XU**  
*Junior Staffwriter*

While the press may focus on research published by Ph.D.’s, undergraduate research at Carnegie Mellon is alive and well. Kevin Schaefer, a sophomore information systems major who is conducting research for the Human-Computer Interaction Institute (HCII), is one example.

He became involved in his current project when he was searching for something to occupy his time over the summer. His friend Quintin Carlson, a junior decision science major, introduced a project he was working on for the HCII.

Schaefer, consequently, landed an undergraduate research role under Anind Dey, an associate professor of human-computer interaction, and Gabi Marcu, a Ph.D. student in human-computer interaction.

Part of his job is to work with faculty members and teachers who analyze and collect a massive amount of data on autistic students at nearby special education schools. Unlike conventional schools — which gauge their students’ progress based on assignments, tests, and quizzes — the special education schools require that their teachers collect data on each student manually.

As a result, each teacher is assigned to one student and he or she has to mark down the student’s behavior and learning progress by hand. The data collected varies dramatically. Schaefer and his teammates deal with finding a method to transition manual collection and storage to a digital version. This way



the ones the research team worked with — are popular for their antimicrobial properties, so they are used in items like athletic clothing, food packaging materials, and even some brands of toothpaste. Though they are commonly used in these and other consumer products, there has been some recent concern over how easily silver nanoparticles can leak into the environment, where their hazardous effects on bacteria may damage an area’s ecology.

“Let’s say you have [silver nanoparticles] on a toothpaste,” Tilton said. “You brush your teeth [and] it goes into the water, which ends up in a waste water treatment plant. The sludge — the end product of waste water treatment — is actually very rich in organic compounds. It’s often used as fertilizer.... Now you’ve just realized that there’s a route for it to go from your socks to the sludge to a farm field, possibly being taken immediately into the roots of crops. It’s not unreasonable to think that there’s a risk here.”

A substantial amount of work has already been done to show that silver nanoparticles are harmful to free-roaming bacteria. A less-explored aspect involves their reactions

with biofilms, or thin films on surfaces (like rocks), with a high density of bacteria protected by a gelatinous polysaccharide substance they produce. It was a study of silver nanoparticles in this environment that yielded the research team’s result.

“When the bacteria are in a biofilm, silver nanoparticles are still toxic, but much less toxic than they are to bacteria swimming around freely in water,” Tilton said. “It’s a difference of five orders of magnitude.... What we think a big part of [this] is that the gelatinous matrix they’re growing in prevents the particles from getting in and actually making direct contact with the bacteria.”

To determine the toxicity of silver nanoparticles, the researchers cultured various biofilms in vitro and then exposed them to different levels of nanoparticles. The toxicity of each level was determined via viability assays, where fluorescent dyes are injected into the biofilm containers.

If the liquid surrounding the bacteria turned a certain color (like green), then that indicated that the bacteria was still alive and the nanoparticle levels they were exposed to was not toxic, whereas a different color (like red) indicated the opposite result.

This process was also used to ascertain that the ions left behind when silver nanoparticles dissolve are more toxic than the actual nanoparticles themselves.

“We’ve been able to show that a large fraction of the toxicity of silver nanoparticles is actually due to the silver ions that they release when they dissolve,” Tilton said. “We believe that the polysaccharides in that [gelatinous] matrix can bind to the silver ions, and if the silver ions are bound up in that matrix, they’re not going to get to the bacteria. It’s sort of like it’s behaving like a sink or a sponge for the silver ions.”



Jennifer Coloma/Operations Manager

Sophomore information systems major Kevin Schaefer conducts research in the Human-Computer Interaction Institute. His project involves improving data collection techniques for teachers of autistic students.

the teachers can spend less of their time just observing and collecting data, and more time instructing and interacting with each student.

“Discovering a way to transition data collection and storage makes the teachers’ jobs more efficient,” Schaefer said, “because recording data virtually allows them to manipulate information and analyze patterns easily, as opposed to the process being more tedious on hand-written surfaces.”

This advancement could also benefit the students, as it has been shown that education quality is improved if each teacher allocates more time, effort, and attention to their students. In order to carry out this research, Schaefer and his teammates have to answer the question: “Why is the process happening on paper



instead of a virtual interface?” Part of their objective is to find a technological solution to the teachers’ inconvenience.

Schaefer said that it was his personal objective to find practical, applied human-computer interaction methods, such as conducting studies and interviewing participants.

“Without research, I wouldn’t have gotten these skills until senior year, but it is beneficial to acquire them at a younger age,” he said. He also claims that his favorite part about doing research is that most undergraduates do not focus solely on the research aspect of the job, and instead treat it as an opportunity to practice practical skills in human-computer interaction. Schaefer enjoys the comfort and safety of being under the guidance of his professor and

advisors as he works to obtain valuable skills.

As a researcher, Schaefer has been described as detail-oriented and design-centric. “He is passionate about what he works on in terms of user experience,” Carlson said.

“I’m proud to say I go to the same school and am in the same program as him,” said Julia Teitelbaum, a junior information systems and human-computer interaction double major.

Outside of being a researcher, Schaefer is just like any other college student. “He’s extremely friendly, intelligent, and caring,” Carlson said. He has a variety of interests, including the new Windows 8 phone and his Volkswagen Jetta. “People get into fights about his Jetta, and he is protective of it,” Carlson explained.





# Researchers create GPNAs to supress tumor growth

**MICHAEL SETZER**  
*Acting SciTech Editor*

Cancer: A brief mention of the ubiquitous killer conjures up unpleasant images of the painful consequences that sometimes result from a diagnosis. According to the American Cancer Society, there were over 500,000 estimated deaths from cancer in the U.S. this year.

While cancer is the result of a myriad of different causes, fast-paced advancements in genetics have allowed physicians and scientists to discover multiple biological receptors critical for tumor growth. Researchers at Carnegie Mellon have explored alternative forms of treatment that inactivate the genes behind these receptors and stop the progression of tumors common in neck and spinal cancer.

Chemistry professors Danith Ly and Bruce Armitage, chemistry post-doctoral researcher Srinivas Rapireddy, and chem-

istry graduate student Raman Bahal teamed up with multiple researchers at the University of Pittsburgh to look into the prospect of using peptide nucleic acids as an alternative to current treatments that target the growth of a tumor at the molecular level.

The team included specialists in chemistry, oncology, pharmacology, and biostatistics. Their research was published in the journal *ACS Chemical Biology*.

The source of the research is the treatment for infectious disease. Due to a growing number of resistant strains of bacteria, researchers have searched for alternative sources of treatment for infectious diseases. A recently emerged method of treatment utilizes oligonucleotides — small molecules of DNA that can turn off genes that contribute to tumor production.

While the motivation for the use of oligonucleotides stems from infectious diseas-

es, the research team believed they could use the same type of treatment to target certain cancers as well.

Like antibiotics, many cancer drugs can lose their effectiveness within weeks due to resistance. But because oligonucleotides are made up of a combination of the same four base pairs that make up DNA, scientists can tailor them to fight any mutated gene or strain. “With oligonucleotides, the advantage in usage is that you can change the sequence to match anything that can emerge,” Ly explained. “[It’s] similar to using different bullets depending on what the targets are.”

Oligonucleotides are rarely used in clinical treatment, however, due to their sensitivity to degradation and poor cellular uptake. In other words, the flimsiness of oligonucleotides makes it difficult for them to even get to the cell intact. And even if it arrives, it is a challenge for it to latch

onto the cancerous cell due to its size and permeability.

In an attempt to make a stronger and better oligonucleotide, the team focused their attention on guanidine-based peptide nucleic acids (GPNAs). PNAs are analogous to DNA and RNA, but are much more stable; the added base pair guanidine — the G — is necessary for cellular uptake. The researchers surmised that the combination of these attributes would overcome the issues currently hindering oligonucleotides.

The researchers tested their synthetic oligonucleotide on a receptor involved in tumors called the epidermal growth factor receptor (EGFR), which is associated with advanced-stage, large tumors that typically have a poor prognosis. The idea was that the GPNA would be able to block the synthesis of key proteins that lead to growth of the tumor.

The effects of the study on mice indicated that the GPNA,

which was injected in the stomach, began having an impact on head and neck tumor growth within one week; this was a two-week improvement over current oligonucleotide treatments. This accomplishment was even more significant because the treatment didn’t have to be directly injected into the tumor, or even close to the tumor.

This development could prove beneficial to those whose cancer has metastasized. “That was sort of the ultimate goal of the research,” Ly said.

Next, the researchers ran trials comparing their GPNA to erlotinib and cetuximab, two different medications that also target EGFR. The GPNA had comparable effects on tumor suppression to the FDA-approved drugs.

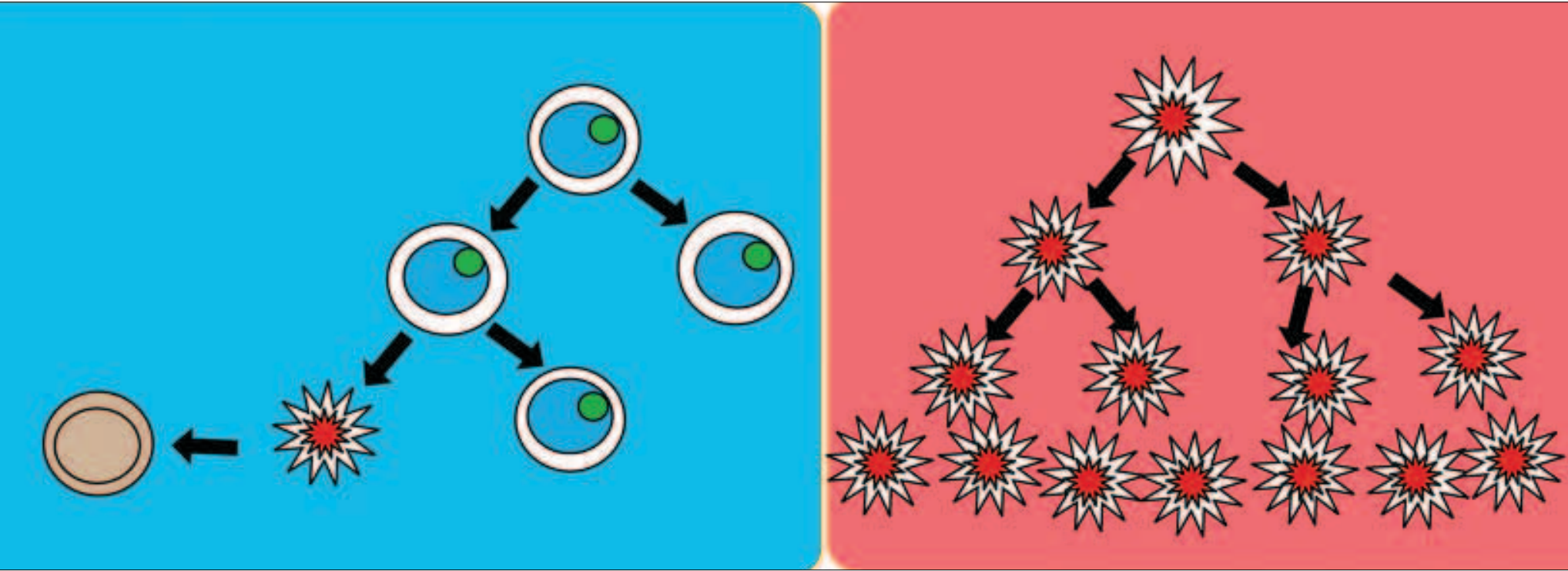
Even more remarkably, the GPNA was also successful at delaying the growth of a tumor of a mutated, resistant strain of EGFR. It’s this

result that is groundbreaking, Ly said, as patients with this strain would normally have no further treatment options.

The team has plenty of work to do for the future, however. An actual form of medication utilizing this mechanism wouldn’t be available for years, and that’s only if every step of the research process goes perfectly. The study also looked at a very small number of mice, so it’s still possible that the oligonucleotide could pose unforeseen health risks. Ly is optimistic about the future, but is proceeding cautiously in this fight against cancerous tumors.

“We don’t want to publish for the sake of publishing papers,” he added.

Bahal, however, doesn’t hide his excitement. “This is a great step forward toward GPNA-based gene therapy and will serve as platform for targeting many other genes accountable for different kinds of cancer,” he said via email.



The two images represent healthy (left) and cancerous (right) cell division. In healthy cell division, a healthy cell will terminate a damaged cell through a process called apoptosis, or programmed cell death. A cancerous cell may have a mutation in the gene that regulates apoptosis. Without it, damaged cells will continue to divide and may lead to the growth of a cancerous tumor.

## HOW THINGS WORK

# Why a clear sky looks blue

**BROOKE KUEI**  
*Staffwriter*

Imagine a world in which the sky wasn't blue, but say, orange. The sky has been blue for as long as you’ve lived. But was it always this color?

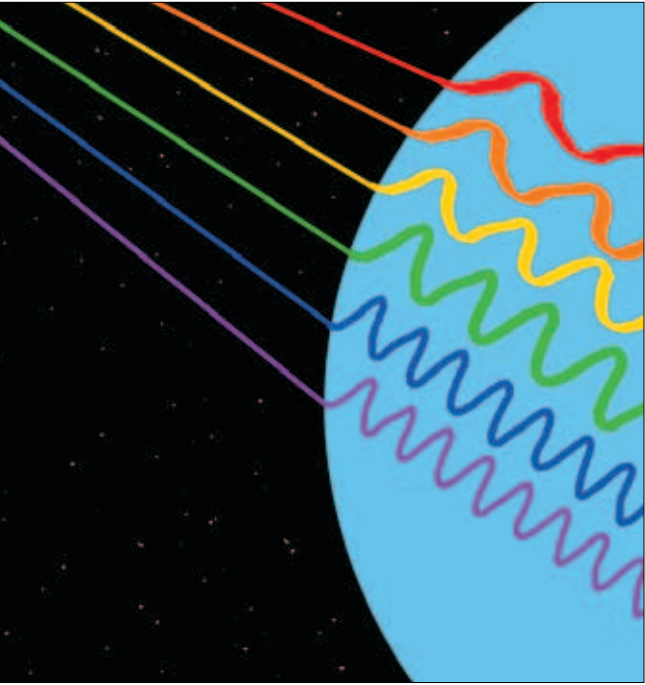
To answer this question, we must understand what the Earth’s atmosphere is composed of and the properties of light.

The atmosphere of our planet is composed of a mixture of gases and a few other materials. According to space news site *Universe Today*, 78 percent of the atmosphere is made of nitrogen and 21 percent is made of oxygen. Other components include argon gas, water vapor, dust, and pollen. The atmosphere surrounds the entire planet, so sunlight has to pass through these gas particles on its way to Earth.

This is where the properties of light come into play. Light is energy that travels in waves moving at 300 million meters per second. The energy of radiation is dependent upon two characteristics of light: wavelength and frequency. Wavelength is the distance between the crests of a wave; frequency is the number of waves that pass by each second. Wavelength and frequency are inverses of each other.

Light from the sun appears to be white, but it is actually composed of all colors. This can be demonstrated by observing how light is split into a rainbow spectrum when it passes through a crystal prism. The colors in this rainbow all have different wavelengths, frequencies, and energies; red having the longest wavelength (lowest frequency) and violet having the shortest (highest frequency).

So what happens when sunlight passes through the atmosphere? The National Aeronautics and Space Administration’s website ex-



The sun emits white light that holds the wavelength of all colors. Once the light travels through the Earth’s atmosphere, it bounces through dust and water particles until it is absorbed by gaseous molecules. Because blue light has the shortest wavelength, it is the one most often absorbed and re-emitted by the gas molecules.

plains that light travels in a straight path unless something is in its way. When sunlight passes through the atmosphere, it is interrupted by the various particles. When light hits relatively large particles — such as water, dust, or pollen — it simply bounces off in different directions. However, when it hits gas molecules, which are smaller than the wavelength of light, it gets absorbed by the molecule. The molecule later radiates the same color that was absorbed.

According to NASA, although all wavelengths (colors) of light can be absorbed, shorter wavelengths (blue) are absorbed more frequently than longer wavelengths (red) because they travel in shorter waves. As a result, blue is scattered more than any other color, which is why the sky appears blue most of the time.

As the sun goes down, its light has to travel through more of the atmosphere before it reaches the planet. This

means that by the time you see it, more of the blue light is already scattered, leaving the red and yellow light visible. This is why sunrises and sunsets are red.

But if shorter wavelengths are scattered more than longer wavelengths and violet light has a shorter wavelength than blue light, why doesn’t the sky appear purple? The answer, according to researchers at the University of California, Riverside, is that the physiology of the human eye makes us more sensitive to blue light than to purple light.

To return to the original question of whether or not the sky was always blue, recall that the blue color of the sky is a result of the sunlight’s interactions with the molecules in the atmosphere. This means that during a different period in our planet’s lifetime, when the atmosphere was composed of different gases, the sky may not have been the blue sky we see today.

MMI

UofT

Master of Management of Innovation

The Master of Management of Innovation is an accelerated 12 month (8 months course based & a 4 month experiential term in industry) professional management degree. Leading researchers in direct contact with students through a very small & selective class provide a focused learning experience in economic analysis, technology management, strategy, finance, accounting, marketing & policy.

MMI IS AN EXCELLENT COMPLEMENT TO YOUR SCIENCE OR ENGINEERING DEGREE.

[www.utm.utoronto.ca/mmi](http://www.utm.utoronto.ca/mmi)

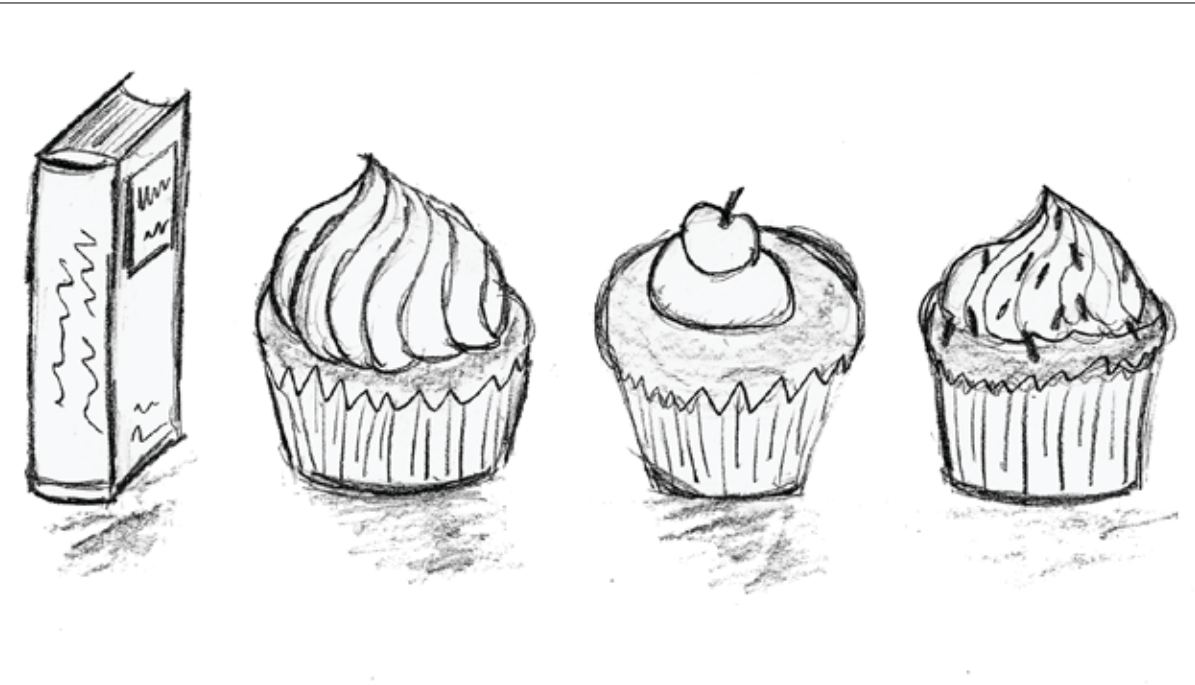
UNIVERSITY OF TORONTO  
UNIVERSITY OF TORONTO

Institute of Health Policy, Management & Evaluation  
UNIVERSITY OF TORONTO



# Forum

FROM THE EDITORIAL BOARD



Josh Smith/Forum Editor

## Hunt Library’s efforts to raise awareness are sweet

To thank the student population for enduring the construction in Hunt Library over the semester, University Libraries and Undergraduate Marketing Organization gave out 1,000 cupcakes on Thursday to students in the library.

In addition to the free food, there were trivia questions about the library’s many resources. Students had the chance to win a Google tablet if they answered these questions correctly.

The cupcakes came as a welcome gift at a point in the semester where most students spend too much time holed up in Hunt worrying about their finals. The pastries were certainly popular: Although the library

staff advertised that the cupcakes would be available between 10 a.m. and 6 p.m., they ran out of cupcakes well before six.

But beyond offering free sugar, staff at the event tried to inform students about the library’s resources, both in Hunt and online. The trivia questions challenged students to learn more about the online databases on the library’s website and the different roles that the librarians play. The library staff was on hand to answer whatever questions students had about the library and its recent changes.

As students, we spend plenty of time in “Club Hunt,” but the library is more than just a study space. The

librarians are ready and willing to teach students how to best utilize the myriad of resources available, but too often students do not use them. Our tuition money goes toward getting access to hundreds of online journals, research databases, printed materials, and the librarians who are there to help us; we might as well put that money to good use.

So, if you grabbed a cupcake on Thursday and didn’t know the answers to the trivia questions, why not take the time to find out? Those resources might make studying for exams or writing your final papers a lot easier. The librarians would, of course, be more than happy to help you start using them.

## Parties must solve financial crisis before it’s too late

When Congress passed the Budget Control Act of 2011, it established a conundrum known as the “fiscal cliff,” which ensured that by January the government would finally address U.S. debt and budget concerns with a comprehensive, long-term solution.

The notion of the fiscal cliff relies on recognizing that the combined effects of across-the-board tax increases and dramatic spending cuts could throw the economy back into a recession. This threat would provide enough incentive for Republicans and Democrats to put aside unnecessary partisan agendas and reach a compromise. This type of guarantee was, by design, intended to increase long-term stability in the U.S. economy.

However, with less than a month remaining before the January deadline, and with Republicans and Democrats locked in a congressional stalemate, the fiscal cliff has lost its

original intent.

The American people are growing more uncertain as to whether or not a deal can be reached. The longer Congress waits to come to an agreement, and the closer we get to the fiscal cliff, the more their uncertainty will rise.

As lawmakers recognized back in 2011, uncertainty among the American public takes its toll on the economy and Gross Domestic Product (GDP), and the fiscal cliff has exacerbated these effects rather than alleviated them.

In the U.S. stock market, investors are aggressively selling off shares to record as much income as possible before any tax increase is implemented. In October, the Commerce Department reported that while personal income levels have stayed the same, consumer spending decreased by 0.2 percent — the first decline in spending since May.

Many organizations that receive

government funding, such as government contractors and nonprofits, are announcing budget and hiring freezes in anticipation of government spending cuts. Since Carnegie Mellon in particular has a relatively small endowment, it depends on funding from granting agencies like the National Science Foundation and the National Institute of Health. At a recent town hall meeting, University President Jared Cohon anticipated that fiscal cliff cuts to these agencies would limit Carnegie Mellon’s research and activities funding.

While we at The Tartan trust that our government will eventually come to an agreement before the deadline, although an agreement may be reached at the last minute as with the Budget Control Act, we urge lawmakers on both sides to balance their party-specific agendas with the consequences of letting the American people grow increasingly uncertain about the fiscal cliff.

## Dining areas should visibly promote green practices

Dining on Carnegie Mellon’s campus has been steadily improving this semester, as a board editorial observed in the Sept. 24 issue of The Tartan.

There is a wider variety of eatery options on campus, and the food quality has improved this semester. But efforts by Carnegie Mellon Housing and Dining Services on campus to promote sustainability may be the most delicious change on campus yet.

Signs that discourage rampant food waste have appeared at multiple campus dining locations, such as Tazza D’Oro and The Underground. One sign, located in The Underground, reads, “20 million people could live off the food WE waste. LOVE FOOD hate waste.”

Promoting sustainability is a noble cause, and one that students can really get behind. Locations like Schatz Dining Room have had separate receptacles for compost for some time now, and having these signs located at campus dining locations serves to further remind students and faculty to consider the ramifications of wasting food.

This move toward sustainable practices is a state of mind that the entire university is adopting. The construction of Scott Hall, future home to the Wilton E. Scott Institute for Energy Innovation, is a great indicator of the measures our university is taking to address the energy and sustainability needs of the 21st century.

However, sustainable practices

may not be enough to discourage students and faculty from retaining harmful dining practices. While signs at campus dining locations are a great step, Housing and Dining Services should make further efforts to discourage their customers from wasting food and energy. These efforts also need to be made highly visible to influence the campus community to take their own that environmentally-conscious measures.

Housing and Dining Services, and Carnegie Mellon as a whole, should be commended for their efforts to encourage, research, and promote sustainable practices. Hopefully this trend and mindset will continue to guide the actions of the administration and the members of the campus community.

## ’Tis the season for a persecution complex

*Luke & Masa*

LUKE MASA

“Happy Holidays.”

It baffles me to no end how anyone could view this greeting — an attempt to be inclusive — as an attack, yet during this time of year we are once again subjected to cries of a so-called “War on Christmas.” I for one am getting sick of hardcore Christians complaining that secular Americans are trying to somehow destroy Christmas or otherwise impinge upon the rights of whomever wishes to celebrate it.

Even the nonreligious get annoyed when groups, such as the Freedom from Religion Foundation, attempt to get nativity scenes removed from publicly owned land; they don’t see such scenes as hurting anyone. Now, that might very well be the case, but it misses the point entirely.

Groups like the Freedom from Religion Foundation aren’t bitter grinchers trying to ruin everyone’s good time; they’re merely pointing out the Establishment Clause of the Constitution, which states, “Congress shall make no law regarding the establishment of religion or prohibiting the free exercise thereof.”

It is technically illegal for the government, or at the very least the federal government, to promote any one religion over another — or any religion at all.

Certain religious groups try to twist this to their advantage by claiming that secularism tries to limit their free exercise, but this is absurd. Secularism, in fact, promotes the only fair possibility: The public sphere is not explicitly irreligious, but rather areligious. It is not, say, the endorsement of atheism any more than it is the endorsement of Catholicism or Gnosticism.

This is why it becomes very confusing when Christians find it unfair that government buildings have nondenominational holiday trees instead of Christmas trees, as happened in Rhode Island when Governor Lincoln Chafee decided to hold a “holiday tree” lighting ceremony rather than a “Christmas tree” lighting ceremony.

That being said, Christmas is (for better or worse) actually a national holiday, and nowadays it is pretty much secular anyway. Anyone from Christians to Buddhists can watch Frosty and Rudolph, then rush into a consumerist frenzy — all while

enjoying eggnog and candy canes. Those who claim “Jesus is the reason for the season” ought to brush up on their history, just as those who implore us to “keep the Christ in Christmas” are unlikely to “keep the Thor in Thursday.”

Not only were holidays such as Saturnalia, Yule, and Hanukkah — from which we derive most of the noncommercial aspects of modern tradition — celebrated long before Christ’s alleged birth, the Church decided that the Nativity would be celebrated on Dec. 25 as a way to convert pagans who already had rituals associated with that day. This means that, if anything, the season is the reason for Jesus’ “birthday party” being when it is.

With these facts being ever more apparent now, coupled with our increasingly pluralistic society, it should only make sense that people would want to be more inclusive. Yet, as *The Daily Show* host Jon Stewart put it, some Christians have taken the idea of no establishment as persecution because they feel entitled not to equal status, but to greater status.

They realize that equal consideration for other viewpoints spells the end of the approximately 1,700-year privileged status of their own position.

I would have no real problem if every holiday got equal time in the public sphere, because then the government couldn’t be accused of special treatment. However, considering that there will likely always be a group that feels it isn’t being fairly represented, it is much easier to just set up something like a holiday tree and leave it at that.

The sheer fact that New Years is celebrated within a week of Christmas makes the phrase “Happy Holidays” a necessity even to Christians. What’s more, no one is really saying that Christians shouldn’t be allowed to wish whoever they want a “Merry Christmas.” It’s just that the rest of us should be allowed to retort with a “Happy Festivus.”

It all boils down to what seems to me to be the human need for a year-end festival, a light in the winter darkness. However you want to express that need is your prerogative, provided it doesn’t infringe on others in any way. Thus, I’d like to take this opportunity as a Christmas-celebrating secular humanist agnostic atheist to wish you and yours a happy “whatever doesn’t offend you,” or more simply, “Happy Holidays.”

*Luke Masa (lmasa@) is a staffwriter for The Tartan.*



Adelaide Cole/Art Editor

### Editorial Board

**CHRISTA HESTER \***  
*Publisher*

**EMILY DOBLER \***  
*Editor-in-Chief*

**JOSH SMITH**  
*Forum Editor*

**EVAN KAHN**  
*Copy Manager*

**JACKSON LANE**  
*Senior Staffwriter*

**ANNA WALSH \***  
*Personnel Manager*

**BRENT HEARD**  
*Asst. News Editor*

### Editorial Staff

**JENNIFER COLOMA \***  
*Operations Manager*

**MADELYN GLYMOUR**  
*News Editor*

**MICHAEL SETZER**  
*Acting SciTech Editor*

**ALEX TAPAK**  
*Sports Co-Editor*

**ADAM GRUBER**  
*Sports Co-Editor*

**RACHEL COHEN**  
*Pillbox Editor*

**NICOLE HAMILTON**  
*Comics Editor*

**JONATHAN CARREON**  
*Photo Editor*

**ADELAIDE COLE**  
*Art Editor*

**ALEX CRICHTON**  
*Systems Manager*

**KATHY CHEN**  
*Advertising Manager*

**KENNETH WONG**  
*Business Manager*

**JUSTIN MCGOWN**  
*Online Editor*

**NOËL UM**  
*Asst. News Editor*

**ABBY SMITH**  
*Asst. Sports Editor*

**LAURA SCHERB**  
*Asst. Pillbox Editor*

**KELLY HARRINGTON**  
*Asst. Systems Manager*

**WILL CRICHTON**  
*Asst. Systems Manager*

**BONITA LEUNG**  
*Asst. Copy Manager*

**HANNAH DELLABELLA**  
*Asst. Copy Manager*

**CHLOE THOMPSON**  
*Asst. Personnel Manager*

**ALLISON COSBY \***  
*Staffwriter*

\* Denotes executive committee member

### Staff

**SENIOR STAFF**  
Stephanie Blotner, Stacey Chin, Greg Hanneman, Alan Vangpat

**LAYOUT**  
Chloe Chia, Edward Wojciechowski

**COPY**  
Swathi Anand, Manali Banerjee, Sawsan Boutemine, Kairavi Chahal, Connie Chan, Nivedita Chopra, Braden Kelnor, Sage Po, Taylor Rawley, Stephanie Stern, Julia Yang

**ADVERTISING**  
Grace Chung, Seo Young Hwang

## 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](mailto:forum@thetartan.org).

Office: University Center 314  
Phone: (412) 268-2111  
Fax: (412) 268-1596  
Web: [www.thetartan.org](http://www.thetartan.org)  
E-mail: [contact@thetartan.org](mailto:contact@thetartan.org)

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

© 2012 The **Tartan**, all rights reserved.  
Library of Congress ISSN: 0890-3107



# Three changes could fix fiscal cliff



Josh Smith/Forum Editor

*Kyle Henson*  
**KYLE HENSON**

For those of you who don't know, the U.S. is currently facing what the Congressional Budget Office has determined to be a 1.3 percent Gross Domestic Product (GDP) contraction for the first half of 2013 as a result of the so called "fiscal cliff," a combination of tax increases and spending cuts designed to reduce the deficit.

This contraction would be the textbook definition of a recession (six months of negative GDP growth) and would do a number on our stagnating economy. Republicans and Democrats alike agree that we should avoid driving off the fiscal cliff so these negative effects are avoided, but disagree strongly on how to do it. Here is a three-step solution to avoiding the fiscal cliff and making government make sense.

First, pass further legislation for a fair tax. The fair tax essentially scraps all existing taxes, the IRS, and the 16th Amendment, which allows income taxation. It replaces these taxes with a two-part system for progressive revenue generation that raises the same amount of cash for the government as the current tax system in zero economic growth scenarios.

First, it levies a 23 percent sales tax on all goods sold in the U.S. Second, at the beginning of every month, each U.S. household receives a check in the mail for an advance rebate of all taxes on purchases up to the poverty level.

This means that if you make the poverty level for the size of your family — \$30,260 for a family of four — and spent all of your income, you would get an advance rebate on those taxes paid. This is designed to make the tax progressive, meaning the rich pay more and the poor pay less. According to a report by the Beacon Hill Institute, the fair tax is more progressive, in fact, than the current tax code.

In addition to having innumerable benefits that make government fairer, simpler, more transparent, and just better in nearly every way, it gives Democrats and Republicans their wishes.

Democrats want a more progres-

sive tax system. If the fair tax proved not to be progressive enough, the rate just has to be raised. This increase will make the rebate go up and more taxes will be collected on what is spent. As income rises, the rebate shrinks as a proportion of earnings, making the effective tax rate closer to the actual sales tax rate for the wealthy.

Similarly, conservatives don't want to raise taxes, and they want tax reform. The fair tax broadens the tax base, putting more income in play for taxation. This allows the fair tax to have a relatively low tax rate while still being more progressive than our current tax system. Similarly, it takes away the government's ability to create loopholes that many of the wealthy exploit to pay a lower effective rate than they should.

**Republicans and Democrats alike agree that we should avoid driving off the fiscal cliff so these negative effects are avoided, but disagree strongly on how to do it.**

Most importantly, however, the fair tax will create economic growth that will increase tax revenue by putting more money in motion and by creating a more business friendly environment. According to the National Bureau of Economic Research, GDP would increase by 10.5 percent the year after the fair tax legislation was passed.

While catapulting the nation out of recession, the fair tax would raise tremendous amounts of money for the government, achieving the desired deficit reduction effects in a way that satisfies the basic wants of both parties.

Second, we need to fix the way government approaches healthcare. While Medicare and Medicaid have fantastic intentions, they cost a lot of money. According to a report by the Organization for Economic Cooperation and Development, healthcare spending accounts for close to 18

percent of GDP and is growing markedly faster than the economy is.

This means that health spending programs are increasing rapidly in cost as well. Realistically, someone needs to pay this increased cost every year.

Representative Paul Ryan's (R-Wis.) budget block grants a set amount of money to each Medicare recipient and also grants Medicaid funding to states. The amount that is given rises each year, but not at the unsustainable rate that it has been rising.

While Republicans wanting seniors and the poor to pay more for their healthcare is an easy talking point for Democrats to exploit, the reality is, it makes sense that those receiving the services should help pay.

This would help reduce the deficit by capping our healthcare spending over time. This would allow the finite cost of programs like Medicare and Medicaid to be known well in advance and accounted for. This is also a gradual change that wouldn't have the immediate negative effect on GDP that the fiscal cliff would.

The last part of the fiscal cliff involves discretionary spending cuts. Often talked about but rarely acted upon, discretionary spending is not that large of a portion of total government spending and cutting it wouldn't have a very significant impact on the economy. Cutting these programs is necessary if we want to meaningfully reduce the deficit.

These are not mandated spending like social security is, but things like PBS, the Postal Service, and numerous other small projects. Cutting them doesn't have to mean eliminating them, but just making sure they run efficiently and optimally.

This is already a part of the fiscal cliff, but it could be stretched out to last a few years rather than a few months, and wouldn't significantly impact GDP.

These ideas are probably not going to be put into place anytime soon, but they show how, with a little creativity and the right attitude, Democrats and Republicans could easily work together and come up with some really innovative ideas that reduce the deficit without delivering the economy a fatal blow.

*Kyle Henson (kahenson@) is a staff-writer for The Tartan.*

# Don't panic too much over impending finals

*Will*  
**WILLIAM PARK**

Finals are finally here. For most of the semester, it's that inevitable week that raises little concern because it feels so far away; it seems insignificant in comparison to the daily grind of assignments and basic survival that make time move so slowly. The days add up, and before you know it, Thanksgiving comes and goes.

Suddenly, there is only one week left. Only now do you realize that those paper and project due dates — both announced and forgotten the first day of classes — all somehow fall within just three days. Panic ensues, and there's no way the work will ever stop. The Mayans were wrong in predicting the apocalypse. It's not Dec. 21: It's finals week.

Eventually, the projects and papers get finished, but only after procrastination pushes you to the last moment when you induce a caffeineated-adrenaline wave and ride it until the hour most people wake up. Now, the only obstacle left between you and the 28X is the final exam.

This is the test to rule them all — literally. Half of your grade depends on this three-hour exam. The 10 assignments that took away many a night's sleep? Worthless. Forget to read that one chapter covered on the exam, and an entire semester of hard work can be thrown down the drain.

Wait a minute — calm down, breathe. Take comfort in the natural tendency for the worst assumptions to be proven untrue. In my experience, exams are never as terrible as expected. Finals for classes I was breezing through were no more difficult than previous assessments I had already mastered.

On the other hand, the finals for classes I was just barely surviving were no more torturous than the homework assignments I was only capable of half-doing. Grades aren't significantly changed on the very last day; they were determined the

very day you decided how much effort you were willing to put into a course.

So you've been doing well in a course. You feel good, and you're confident that this final will be a pleasant joke. Great, be confident, but please study. The final will only be a joke if you maintain the work ethic that got you there. On the other hand, if you're barely floating and just want a dreaded course done with, study to guarantee passing. Don't let apathy lead you to repeating the course.

Now the great worry becomes, "How do I study all the material presented in the semester?" Simply, you don't. It's impossible to study the entire syllabus just as it's impossible for the exam to cover every single potential topic. Don't read the entire textbook. Focus mainly on the latter material that has not yet been tested on. If there's time, review early lectures. Time is precious and must be used efficiently.

What's more is that finals week is actually quite relaxing. There are no more due dates to worry about and no more morning classes to wake up for. Yes, there's the dreaded morning final, but usually the schedule balances out so there's at least one day to sleep in. If not, there's always reading day. Take advantage of the opportunity to wake up late. Sleep tastes better than caffeine and, more importantly, helps consolidate short-term memory.

In my mind, finals are the relatively easy part. The projects, papers, and homework crammed into the last week of classes are the real stressful parts. Studying someone else's notes is not nearly as demanding as sketching portfolios or writing programs from scratch. So knock down those projects and the hardest part is over. But, whatever you do, don't lose focus. Keep up what you're doing and you'll get the grade you deserve.

Stay sharp, but relax. You're almost there. Soon, you'll enjoy the best part of finals — when they're finally over.

*William Park (wkp@) is a staffwriter for The Tartan.*



Annette Ko/Junior Artist

## LEADERSHIP PERSPECTIVE

# Student government execs outline accomplishments of semester

As the semester winds to a close, we'd like to review some of our accomplishments and put an eye forward to the next semester. To start, we'd really like to thank all of you for being so engaged in many of our initiatives this semester. We've been very pleased with the turnout and the response of the community to our efforts.

We've been very event focused this semester, with the largest successes being the beginning-of-the-year barbecue, our first debate-watching party, our town hall, the football whiteout, and our election-results party. We hope that these events have brought the campus a bit closer together and have offered meaningful outlets to get engaged in our community.

We were involved in the election and the buildup to it. Initially we were planning to carry out a large-scale registration campaign, but instead we found that many third parties on campus had greater resources as far as manpower than we did. In light of this, we worked with those groups, looking to provide them with information to make sure they were correctly registering students. To supplement their efforts, we focused on informing students with our de-

bate-watching event and voting-day guide.

On the more policy side, we worked throughout the semester to assist Vice President for Finance Jon Mark in creating his referendum to increase the student activities fee, and we are very happy to have seen the campus turnout and the student support to help us make this change. We've also met with several heads of different campus services to audit their feedback processes and will be reporting these findings in our end-of-the-semester report.

We've worked on various other committees; Board of Directors had successful collaboration, especially through the start of the semester with the barbecue and our elections events. For instance, Will represented the student body on a committee that is revising the university policy on sexual harassment and assault.

To collect feedback we have utilized our office hours and our town hall. We have seen positive responses to these events, and we thank you for turning out to share your opinions. Many of the ideas we've been presented with have been passed on to Senate members, as they are more suited to handle many of the issues that have been presented to us. Our

slate was very full this semester, so we admittedly pushed off some of the feedback we received, which will be addressed next semester.

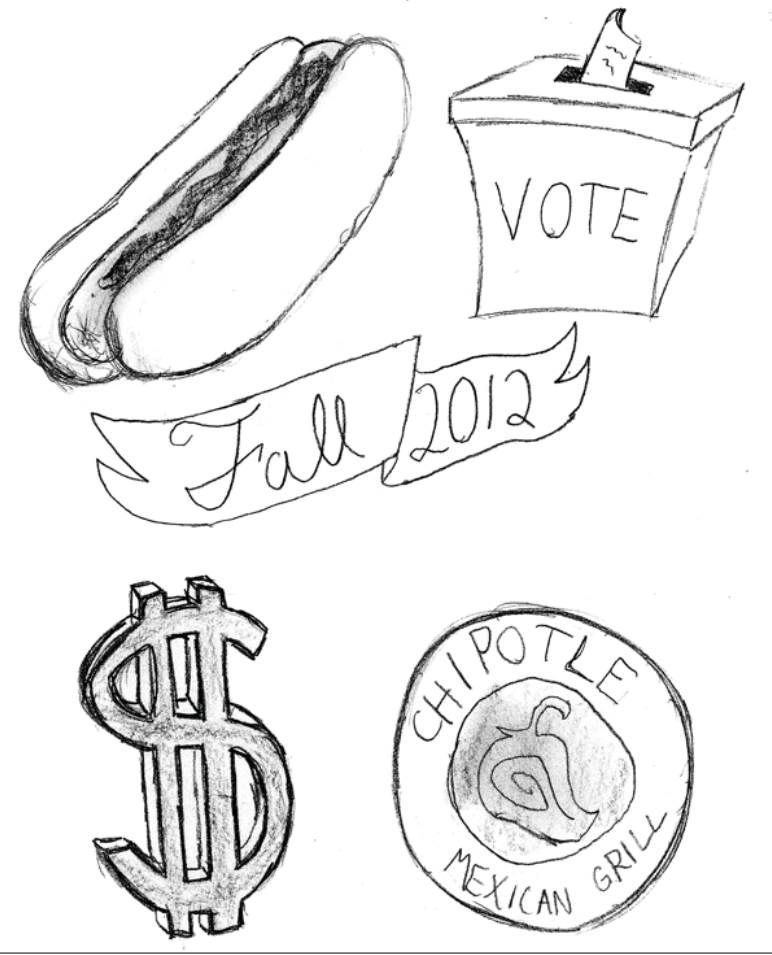
We've been happy with our public relations efforts, both digital and with posters. Through some unexpected complications, the release of our new logo and blog were delayed, but both will be fully utilized and distributed at the start of next semester.

We'll detail these initiatives further in our end-of-the-semester report, which will be posted on our Facebook page by the end of finals week. This will go in detail into the pros and cons of the semester, plans for next semester, and details from our meetings with campus services.

Once more, thank you for all your feedback and support this semester. We are looking forward to continuing to serve you next semester. Please send us ideas for how we can better represent you via email at [sbp@andrew.cmu.edu](mailto:sbp@andrew.cmu.edu) and [sbvp@andrew.cmu.edu](mailto:sbvp@andrew.cmu.edu) or on our Facebook at [facebook.com/cmusbp](https://www.facebook.com/cmusbp).

Have a great finals week everyone!

*Will Weiner and Meela Dudley  
Student Body President and Vice President*



Josh Smith/Forum Editor



# In the age of smartphones, privacy reform for tech is necessary

*Chloe E Thompson*

CHLOE THOMPSON

The question of electronic privacy is a big issue these days. What with our personal lives splattered all over Facebook and Twitter, maintaining privacy while participating in the on-line world can be difficult.

But even if you don't use social networking sites, a good chunk of personal information is probably stored in your cell phone. And this doesn't only apply to smartphones — every cell phone has text messages, contacts, and other private data.

As more and more information ends up stored in our technological devices, the question arises: How safe is that information? Or, perhaps more importantly, how much should

we protect that information?

These questions are being hotly debated in legislatures all over the country, especially when it comes to cell phones. Some, such as the Supreme Court of California, argue that finding a cell phone on a suspect grants police the right to search it. Others, such as the Supreme Court of Ohio, argue that cell phones contains highly personal information, and can only be searched with a warrant.

Of course, having easy access to the information in cell phones would be a godsend to police when it comes to finding criminals. In 2009, the accidental search of a cell phone led to solving a child's murder, according to an article in *The New York Times*.

Trisha Oliver, mother of six-year-old Marco Nieves, called 911 to report that her son was unconscious. An officer arrived at her apartment after the ambulance, and Oliver let him inside before following her son

to the hospital. While she was gone, the officer heard a cell phone go off — it belonged to Oliver's boyfriend, Michael Patino, who lived in the apartment as well. The text message, from Oliver, reportedly said, "Wat if I got 2 take him 2 da hospital wat do I say and dos marks on his neck omg."

Nieves eventually died from blunt force trauma to the abdomen, and Patino was arrested for murder. However, Rhode Island Superior Court Associate Justice Judith Savage eventually overturned those charges, ruling that the information that played a significant role in Patino's conviction was unlawfully obtained.

The issue of electronic privacy came to a head this past Thursday, when a Senate committee discussed changes to the Electronic Communications Privacy Act (ECPA). Police now need a search warrant to access email or any type of electronic communication (such as data stored with

Facebook or Google). The changes proposed do not discuss cell phones specifically, leaving mobile devices on murky legal ground.

Although these changes definitely clarify the status of electronic information in America's legal system, let's take a moment to consider this: When do you think the ECPA was originally written? If you guessed 1986, you're right on the money.

Until last Thursday, an act that had a sizable impact on the way our legal system dealt with electronic information had not been revised in over 20 years. The technology we use every day did not even exist 20 years ago. Having technology laws that are obviously outdated is a dangerous situation.

Of course, the courts cannot keep up with every technological change, but this gap in reform is ridiculous. Cell phones in 1986 were essentially bricks you could talk to people on.

Cell phones today are little boxes of wizardry; you can call people, of course, but with a smartphone you can also book a plane flight, locate every Starbucks in a five-mile radius, and play Angry Birds.

Cell phones stopped functioning as only phones a long time ago. They are tiny personalized computers, with a whole lot of sensitive and private data that we just happen to carry everywhere in our pockets.

The police should not be able to search cell phones without warrants, even though that information can be extraordinarily useful sometimes. In Nieves' case, that information proved invaluable in finding his killer, and Patino should be brought to justice.

But cell phones are a new frontier in private information — a frontier that must be protected.

*Chloe Thompson (cet@) is a staff-writer for The Tartan.*

## A PERSON'S OPINION

Compiled by Jonathan Carreon and Jennifer Coloma

As fun as the season is, some people don't enjoy the holidays. So we asked,  
**What holiday would you get rid of?**



**Chad Trice**  
Math  
First-year

*"St. Patrick's Day."*



**Remy Behl**  
CivE  
Junior

*"Valentine's Day."*



**Seun Aremu**  
CivE  
Master's student

*"Earth Day."*



**Jamie Rupert**  
Policy & Management  
Sophomore

*"Labor Day."*



**Chan Teng**  
ChemE  
Junior

*"Fall break — it's only one day."*

# THE TARTAN



congratulates its newly elected  
**2013 EDITORIAL STAFF**

**JENNIFER COLOMA**  
*Publisher*

**JOSH SMITH**  
*Editor-in-Chief*

**KELSEY SCOTT**  
*Operations Manager*

**BRADEN KELNER**  
*Forum Editor*

**KATE GROSCHNER**  
*Photo Editor*

**BRENT HEARD**  
*News Co-Editor*

**ABBY SMITH**  
*Sports Co-Editor*

**ANNETTE KO**  
*Art Editor*

**NOËL UM**  
*News Co-Editor*

**GABRIELLE WEST**  
*Sports Co-Editor*

**JUSTIN MCGOWN**  
*Online Editor*

**MICHAEL SETZER**  
*SciTech Editor*

**RACHEL COHEN**  
*Pillbox Editor*

**KAIRAVI CHAHAL**  
*Comics Editor*



# Men’s basketball can’t find winning formula



Kate Groschner/Staff Photographer  
First-year Jason Sebak is playing 15 minutes a game, getting quality experience in his first season.

**GABRIELLE WEST**  
*Staffwriter*

The Tartans were defeated by the Juniata College Eagles and the Adrian College Bulldogs this week, leaving their record 1–6. Carnegie Mellon played the Eagles Tuesday in a constant battle for the lead. After the first four minutes of the game, the Tartans lagged behind in scoring, until senior guard Andre Moore was fouled a 15-foot fade-away jumper which he was able to connect on. This shot tied the game with less than a second to go. He missed the and-one attempt at the free-throw line, though, and the Tartans played an additional five minutes in overtime. The Tartans were unable to score until there was 1:58 left on the clock after the Eagles

went on an 8–0 run, which was ended by junior forward Rob Mohen’s jump shot. Due to their intense defense, the Tartans were able to cut the Eagles’ lead down to six, but they fell short of the win with a final score of 76–70. Four of the Tartans finished with double-digit points: Junior forward Sean Brophy had 10 while sophomore forward Matt Loebakka, Moore, and Mohen finished with 12 points each. After their loss to Juniata, the Tartans faced the undefeated Adrian College. The lead went back and forth until the 11-minute mark when the Bulldogs went on a 10–0 run. The Bulldogs’ run stopped short when first-year Blake Chasen made a jump shot off of senior guard Asad Meghani’s assist.

The first half ended with the Tartans trailing by eight. The second half was a tough one for the Tartans. Adrian College players were able to increase their lead by 29 points with five minutes left of play. The Tartans and their defense were able to decrease the deficit to 10 but were not able to achieve the win, with a final score of 62–51. The Tartans’ next opponent is Catholic College, which they will play at home at 2 p.m. on Saturday. “We made the stops on defense that we needed to in the first half, but our own shots were not falling,” sophomore guard Seth Cordts said. “We have been preparing by focusing on the little things so that when the Catholic comes we will be shooting better and have better ball control.”

# Women’s basketball finds stifling defense in victories

**ADAM GRUBER**  
*Sports Co-Editor*

Women’s basketball had a busy week, playing three games in six days. The Tartans won two of those games and lost one. In both victories, the Tartans held their opponents under 30 points, beating Pennsylvania State University Altoona, 88–27, and Hiram College, 61–29. The loss came at the hands of John Carroll University by a score of 70–54. The Tartans now sit at 5–2 on this young season. On Monday, the Tartans faced the Penn State Altoona Nittany Lions on the road. With four players scoring in double figures, the Tartans absolutely dominated the Nittany Lions. Sophomore forward Gabrielle West came off the bench to lead the team in scoring with 16 points on a nearly perfect shooting night, going six for seven from the field. First-year forward Mathea Tenwalde, also coming off the bench, added 15 points. The last two double-figure scorers were first-year guard Lindsay Poss and first-year forward Liza Otto, with

13 points and 10 points, respectively. While the Tartans were able to rain baskets on the Nittany Lions’ defense, their defense was just as dominating. The Tartans held Penn State Altoona to an ice-cold 17.7 percent shooting and outrebounded the Nittany Lions 45–23. On Wednesday, the Hiram College Terriers came to Pittsburgh to face the Tartans. In similar fashion to the game against Penn State Altoona, the Tartans’ defense was suffocating. The Terriers only scored nine points in the second half and the Tartans forced 28 turnovers, scoring 22 points off those turnovers. Senior forward Emily Peel led the way with 17 points on five for 11 shooting. Peel pulled down seven rebounds as well. Otto contributed a double-double, scoring 11 points and grabbing 11 rebounds. “The defensive strategy is always about attacking and being aggressive in order to create opportunities offensively,” Poss said. “Our plan was to execute the defense in such a way that maximized turnovers for the

other teams,” she added. The Tartans played at home again on Saturday, this time coming up short and ending their four-game winning streak at the hands of the John Carroll University Lobos. Despite Peel’s 12 points on six for nine shooting and junior guard Jacquie Shaw’s well-rounded game — she contributed seven rebounds and four assists — the Tartan’s poor shooting limited any chance at a victory. The team’s 31 percent shooting could not match up against the 43.3 percent shooting of the Lobos. The Lobos were able to shoot a high percentage because of easy baskets, scoring 10 fastbreak points to the Tartans’ two. Additionally, 24 Tartan turnovers led to 26 Lobo points-off turnovers. “The loss is a combination of factors, but can mostly be attributed to a lack of rebounding and frantic, unorganized defensive pressure,” Poss said. On Tuesday, the Tartans will take on Allegheny College at home. Tipoff is at 6 p.m.

*Editor’s note: Gabrielle West is a staffwriter for The Tartan.*



Jennifer Coloma/Operations Manager  
Sophomore guard Chandler Caufield has started in all seven games this season.

# \$100,000

THE WORLD IS WAITING -- DO YOU HAVE WHAT IT TAKES TO MAKE LIFE RADICALLY BETTER THROUGH INNOVATIVE IDEAS? WE THINK YOU DO.

# 2 Years

BUILD SOMETHING AMAZING WITH THE *20 UNDER 20* THIEL FELLOWSHIP

# No Limits

APPLY BY DECEMBER 31, 2012  
THIELFELLOWSHIP.ORG

SCIENCE | TECHNOLOGY | SOCIAL INNOVATION | NONPROFITS | STARTUPS | COLLABORATION | MENTORSHIP



# Sports

SPORTS COMMENTARY

## Viagra providing athletes a head up

CARL GLAZER  
Staffwriter

Professional athletes are always trying to find a way to stay ahead of the curve, to gain a competitive advantage on the field. This has manifested itself through the use of steroids, amphetamines, human growth hormones, and other substances not commonly used by the general public.

But with recent advancements in drug testing capabilities, along with stricter testing policies in each league, players are turning more toward drugs that are used by a large part of the population, since they are generally less restricted and more explainable during random drug tests.

Adderall and Viagra have both been in the news recently as uncommon performance enhancing drugs (PEDs). Chicago Bears wide receiver Brandon Marshall said in an interview with ESPN that he knew of many teammates that used Viagra before games for its blood-thinning properties.

Viagra was the focus of a recent medical investigation into the possible enhancement effects of common medication, but no strong conclusions could be made. Subsequently, Viagra was still allowed in the most recent collective bargaining agreement.

Adderall, while banned by the NFL, carries much less public stigma than traditional PEDs because of its common use as both a prescription ADHD medication and as a common illicit drug on college campuses to help students gain extra energy for all-nighters.

In the last six weeks, the NFL has had six players suspended, or subject to suspension, for failing drug tests; Seattle Seahawks starting cornerbacks Brandon Brown and Richard Sherman are currently in the process of appealing their four-game bans. Because of the privacy rules established in the latest collective bargaining agreement, neither the NFL nor the NFL Player's Association can disclose what a player tested positive for.

All six of these players have publicly claimed that they failed the drug tests due to the presence of Adderall in their systems.

NFL players have been known to use Adderall during training camp. This helps keep up their energy both during practices to study their playbooks, schemes, and formations, as well as during games. It gives them an additional focus and energy boost.

Adderall is also allowed by the leagues if players can prove they have legitimate prescriptions. Both the NFL and MLB have independent boards of physicians who check players' request for a waiver to use Adderall if they have ADHD. This review process is quite tedious, given the ease with which players can falsely obtain both prescriptions and diagnoses.

While it is conceivable that all of these players were taking Adderall and were oblivious enough to fail their drug tests, one has to question if some of these players are jumping on the Adderall bandwagon to hide other PED use.

This year, highly suspected PED users Barry Bonds, Sammy Sosa, and Roger Clemens are eligible for the Baseball Hall of Fame for the first time. While their stats and play alone are clearly among the best in the history of the sport, their candidacy is in doubt due to the 'asterisk' most associate with their performances.

If we allow players to hide behind the screen of less stigmatized drugs, like Adderall or Viagra, we will never truly know if their talents are their own, or those of a drug.

The NFL's inability to currently disclose which substances players test positive for also forces the league to use the same punishments for all PEDs, regardless of severity. Adderall should not come with the same ban as human growth hormone or steroids due to the large discrepancy in their enhancement effects.

PEDs will always be a part of professional sports, since the same competitive drive that got players to the top will also drive them to find any means necessary to stay there. By allowing players to hide behind a veil of privacy, we have stopped holding them accountable in the court of public opinion.

While sports have succeeded in holding players more accountable for their actions, the public is still left in the dark.

## Tartans swim in final meet of 2012

ALEX TAPAK  
Sports Co-Editor

The Tartan swimming and diving team took a few days off school to travel to Gambier, Ohio, to compete in the Total Performance Invitational hosted by Kenyon College.

Carnegie Mellon faced the University of Pennsylvania, Kenyon College, Davidson College, and Grove City College, as well as Lake Erie College for the men, and University of Findlay for the women. The men's team finished in third place with 523 points, and the women's team finished in fourth with 461 points.

The men's team qualified for the championship finals in many events. In the 200-yard butterfly, senior Brandon Yee placed seventh with a time of 1:55.59. First-year Philip Farr got a sixth-place finish in the 100-yard breaststroke with a

time of 58.43. Lastly, sophomore David Campbell took sixth place in the 400-yard relay medley.

"This past weekend was another long weekend, and as a team I think we did great," sophomore Cole Um said. "No matter how frustrating it was, we continued to compete."

The women's team also had some strong finishes in the championship finals. In the 100-yard breaststroke, junior Tatiana Duchak finished fourth with a time of 1:06.37. Junior Soleil Phan finished in fourth place in the 400-yard relay medley in the championship finals with a time of 4:30.53, and sophomore Kelley Sheehan finished seventh with a time of 4:37.11.

Phan also finished fifth in the 100-yard butterfly with a time of 56.83, and senior Price Kinney finished sixth in the 200-yard butterfly with a time of 2:26.30.



Jonathan Leung/Staff Photographer  
The Tartans push off from the blocks to begin the backstroke event.

The Tartans are finished swimming for the semester, but get back in the water hosting Westminster University and the State University of New York at Geneseo on Jan. 19 at home in the University Center.

## Ultimate team defeats Pitt in tourney

ELIZABETH MARTIN  
Junior Staffwriter

Carnegie Mellon's Ultimate team Mr. Yuk hosted the Steel City Showdown and won two out of three games on Nov. 19.

"The home tournament was a great atmosphere. We had a nice turnout," senior Benjamin McGrath said. "The other teams were great guests, and it was a nice final tune-up before the regular season begins in the spring semester."

In the first game, Carnegie Mellon battled neighbor University of Pittsburgh and won

in a closely contested game. The team began with a rough start, but became more disciplined soon after and tied the game at 6-6. Mr. Yuk dominated the game, defeating the University of Pittsburgh Panthers 13-9.

"Mr. Yuk has shown discipline, talent, and growth over these last few months," said first-year B-team captain Vinay Viswanathan.

The team then played Ohio State University, and Yuk broke on the second point so that Carnegie Mellon went up 2-0. The game was soon

tied at 4-all, but Mr. Yuk increased its lead to 7-4. Ohio State fought back again, but not hard enough, as Carnegie Mellon pulled out another 13-9 victory.

The next game against Ohio University did not go as well as the two others. Carnegie Mellon quickly took the lead, going up 4-2. After a key mistake by Carnegie Mellon, Ohio University took the lead and continued controlling the game.

"That was a really disappointing loss. Ohio's a great team and top 20 in the coun-

try," McGrath said. "So I have to give them credit, but that's a game we have to win, we didn't force enough turnovers, and we didn't make life difficult for Ohio."

The final result was not in Carnegie Mellon's favor, as Yuk lost 12-15. The conference will continue to get harder as a result of an improving program in Cincinnati and Pennsylvania State University's continuing effort. In the spring season, though, the Carnegie Mellon Ultimate team hopes to continue its dominance.



Courtesy of Jeremy Kanter  
Senior Dave Matlack lays out to intercept the disk.



Courtesy of Jeremy Kanter  
First-year Ross Ellison skies over two University of Pittsburgh players.

ATHLETE PROFILE

## Anna Albi reflects on Tartan's 'Elite Eight' finish this season

ABBY SMITH  
Staffwriter

Eager and enthusiastic junior goalkeeper Anna Albi helped to lead the Carnegie Mellon women's soccer team to a historic season.

The Tartans had a groundbreaking season this year, making the "Elite Eight" in the NCAA Division-III Tournament and finishing with a remarkable 14-1-5 record. The team also boasts many individual and coaching awards.

The winning record is a significant improvement from previous years, as the Tartans set a school record with 14 wins this season. When Albi was a first-year, the team was ranked last in the conference.

"When we talked about our goals, we always would say it would be nice if we got there, but it was a dream come true when we were actually in it," Albi said. "We worked hard and finally got there."

"Anna was a crucial member of the team, an anchor, and we wouldn't have gotten as far without her," said senior captain Stephanie Hare. Albi was named the University Athletic Association's Women's Soccer Defensive Player of the Week three times this past season to add to her list of accolades from previous seasons. Albi earned the award for her performance in the third round and quarterfinal of the NCAA tournament.

In the team's tie against Emory University,

Albi recorded her ninth shutout of the season and set a new school record for 14 in her career. Albi also made five saves over Wheaton College and five in the tie against Emory. She finished the season giving up just eight goals and recorded an average of .41, which is the second best in Carnegie Mellon history.

"The 300 fans that were there were chanting my name. It was simply incredible," Albi said.

"It was nice to get the [ U A A ] recognition also," Albi said. But always putting her teammates first, she said, "it also reflected a lot on the great defensive players we have."

Hailing from Cincinnati, Ohio, Albi is a veteran of the sport of soccer, having played on

teams since she was three years old. "I've been playing since they would tell us that the goal box was a mouth and the ball was a gumball that needed to go into the mouth," she said. "Soccer is an incredible sport. I just love the team and that rush when I make a great catch."

Albi said that Carnegie Mellon's soccer program is "a perfect fit." For Albi, it offers "the best of both worlds," combining a challenging academic environment with a very competitive Division-III soccer program.

Albi is currently a creative writing and professional writing double major who wants to graduate early and attend graduate school at Carnegie Mellon. She would

have the opportunity to compete for another year.

"Assuming that I'll be on the team another year, then our goal would most definitely be to make it back to the Elite Eight," Albi said. "It will be challenging because we are losing a bunch of our starters, but I believe we can do it again."

Albi emphasized the unity of the team as the key factor in the team's success. "We were united under one goal and one drive. Everyone worked their butts off together," she said.

From meals before home games to traveling across the country, the common theme for Albi is consistently "team."

"Our coach describes our team to recruits that come visit as a 'family,' and that's exactly what we are," Albi said.

Her teammates believe that Albi was a key factor in the team's unity, bringing people together with her leadership qualities. "One of our main goals was to become more of a team, and I think that Anna really helped us unify through her positive attitude, spirit, and personality," Hare said.

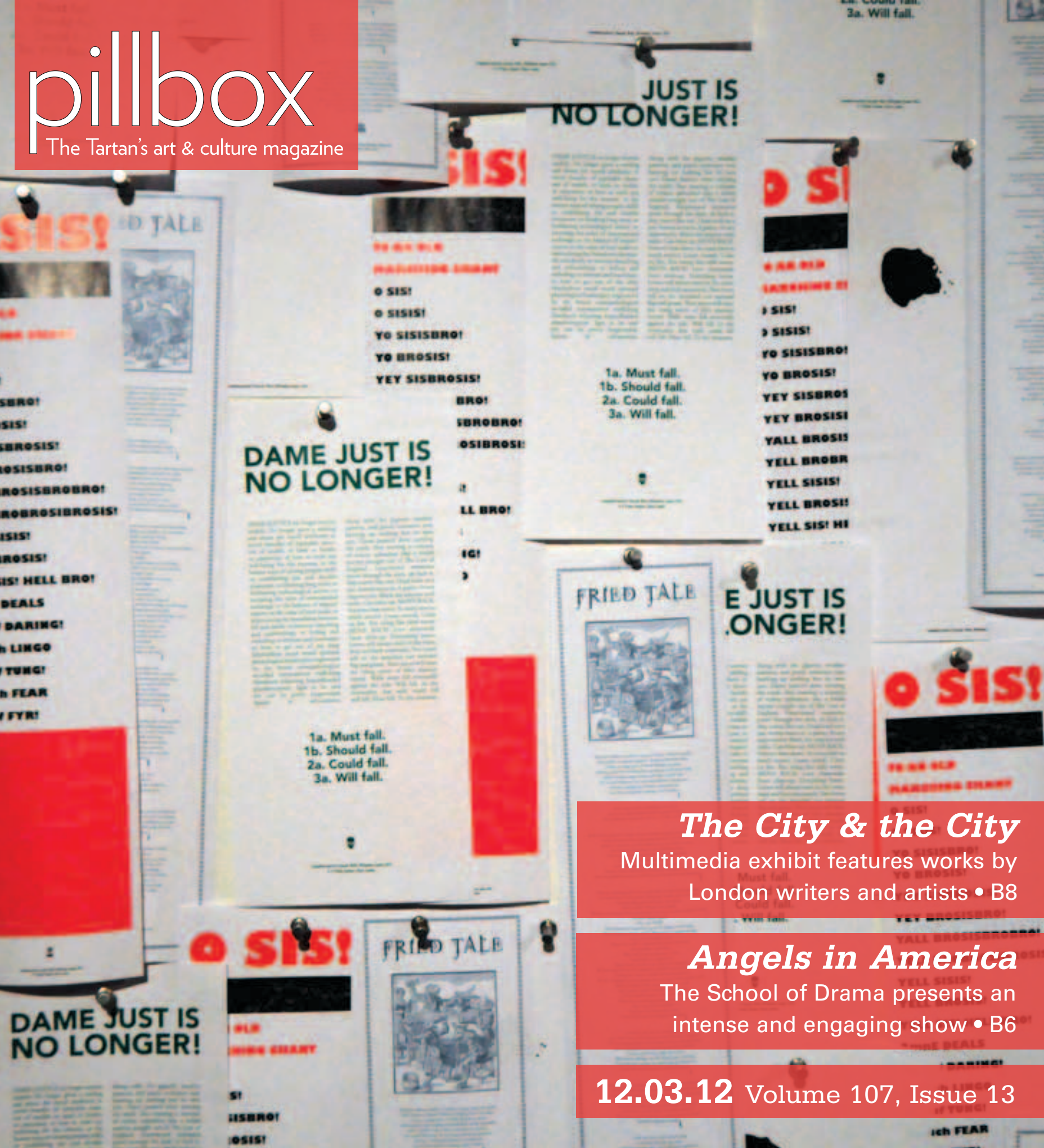
Albi recalls the team's trip to New York City to compete against New York University, where Coach Yon Struble had the "family" play a trivia game where the winner received an envelope that had tickets to the Broadway musical *Wicked* in it. Needless to say, screams and excitement ensued.

"Out of millions of memories, that would



Jonathan Carreon/Photo Editor





## ***The City & the City***

Multimedia exhibit features works by  
London writers and artists • B8

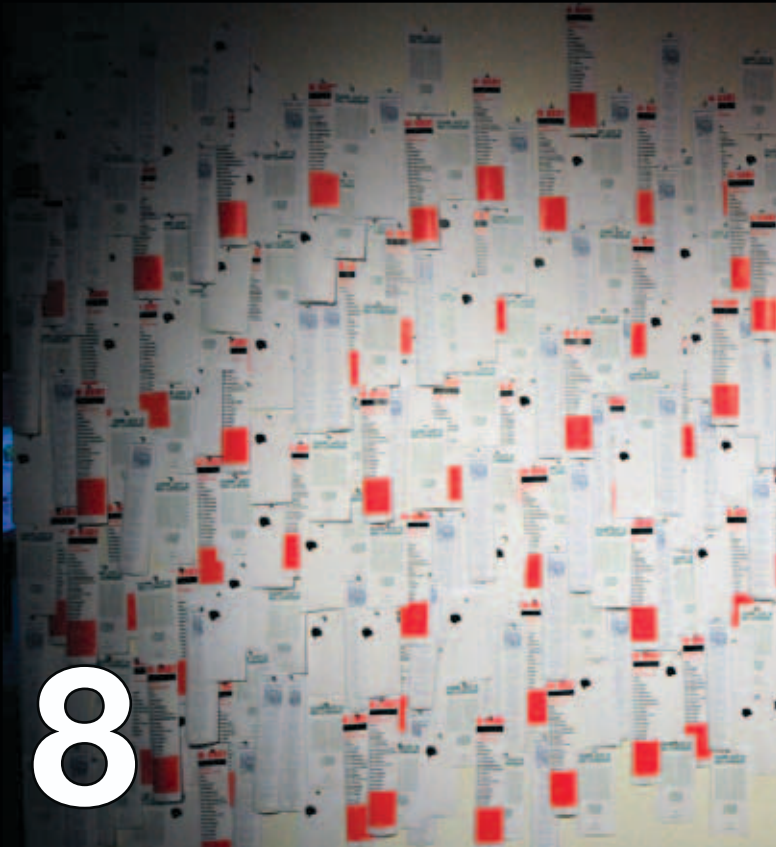
## ***Angels in America***

The School of Drama presents an  
intense and engaging show • B6

**12.03.12** Volume 107, Issue 13



# ...this week only



## 3 Hashtag Fashion

Find solutions to fashion woes for people of every shape and size.

## 4 Scotch'n'Soda

*Moon Over Buffalo* was a charming, sweet, and crazy ride through show biz.

## 5 *Killing Them Softly*

This violence-heavy crime drama transitions sloppily from page to screen.

## 6 *Angels in America*

The latest production from the School of Drama is intense and engaging.

## 7 The Weeknd

*Trilogy*, the latest album from The Weeknd, is a sexy new take on older material.

## 8 *The City & the City*

The Wood Street Galleries exhibit features a collection of London-themed pieces.

## 10 *Breaking Dawn*

The final *Twilight* installment satisfies fans despite subpar acting performances.



## regulars...

### 3 Advice

Everything you need to know about foreign travels and satisfying pizza cravings.

### 10 Did You Know?

Did you know that 25 years ago, over 150 students were arrested at parties on campus?

## ...diversions

### 11 Puzzles

Your brain is soft from preparing for finals. Toughen it up with this week's puzzles.

### 12 Comics

See what adventures lurk in the depths of the sea or try to escape the octo-kitty.

### 14 Horoscopes

The sky is too cloudy to consult the stars; read Horoscopes to find your future.

### 15 Calendar

Find out what's happening on campus and around Pittsburgh this week.

**PUBLISHER** Christa Hester **EDITOR-IN-CHIEF** Emily Dobler  
**PILLBOX EDITOR** Rachel Cohen **ASSISTANT PILLBOX EDITOR** Laura Scherb **COMICS EDITOR** Nicole Hamilton  
**ART EDITOR** Adelaide Cole **PHOTO EDITOR** Jonathan Carreon  
**COPY MANAGER** Evan Kahn **COVER** Chloe Lula



# Boost your self-esteem

Discover fashion solutions specific to your body type

Self-esteem is a double-edged sword when it comes to the fashion world. You need to have enough confidence to wear certain things, but it's almost impossible to have self-esteem when you're not the "right" shape or size. Below are solutions to problems for girls of a variety of body types.

**My pants are too long, but the size is perfect. Help! #shortgirlproblems**

Rolling the cuffs is both a practical and a stylish solution. If your pants are so long that you need the cuffs rolled more than twice, hem the pant legs. You may be shorter than most, but you deserve pants that fit.

**My shirt is too long for my torso, but it's super cute! #shortgirlproblems**

Your solution is to wear crop tops: They'll actually look like normal tops on you. Another option is to cut your normal-length tops. If you don't trust yourself with scissors, get a friend to help you out.

**My skirt is always perceived as being too short, even though it's a normal length. What do I do? #tallgirlproblems**

Wear bandage skirts: These skirts hug your body so tightly, it'll be clear exactly how long or short they really are. Alternately, depending on your personality type, high-low skirts are wonderful for appearing modest without looking like a nun. And if two of your favorite things are long skirts and not looking like a nun, flowy maxi skirts or dresses are the way to go.

**The inseam of my pants is too short. How do I fix this? #tallgirlproblems**

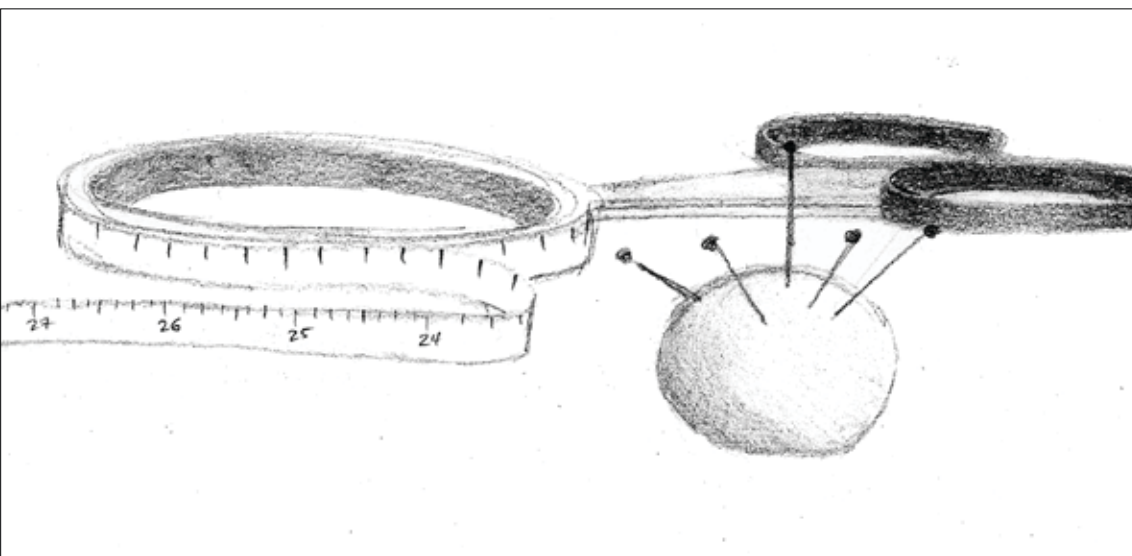
You want taller shoes, and by taller, I don't mean higher: The shaft of the shoe should go past your ankles, because that way, the short pants will look stylish. Other options include rolling the hem once to make the length look intentional, or just hiding the hems under tall boots.

**I'm short, but not thin. In fact, I'm pretty thick. How do I find anything that fits me? #shortthickgirlproblems**

It helps to know your measurements before going to a store. Also, some cuts and styles won't look as good on you as they would on someone else; this goes for all body types. This means that you have to find what works for you and capitalize on it. The most common problem for short, thick women is that pants tend to fit in one place but not in the other. When your pants fit around the thighs but not the waist, get the waist tucked in by a tailor.

Having self-esteem with clothing stems from knowing how to do right by your body. Once you know a few tricks to keep clothes fitted (safety pins and double-sided tape, anyone?), you'll be well on your way to being perpetually stylish, no matter what type of body you have.

**Khadijat Yussuff** | Staffwriter



Rachel Cohen | Pillbox Editor

## Advice for awkward people

About traveling and reheating pizza

Dear Patrick,

**I'm going to be traveling to another country over winter break. I've only traveled overseas a little. I did my research; I know what I want to see and do already. What else can I do to make this a blast?**

Thanks,  
**Parting America Soon,  
Seeking Portentous  
Opportunities, Risky Trips**

Dear PASSPORT,

Let me guess: You're taking this trip to "find yourself" and "experience new cultures" — maybe prep for backpacking across Europe after you graduate. That's traveling for hippies. You should travel like an American. For starters, don't bother learning their language; most of them probably speak American too. If they pretend they don't understand, just talk slower and louder. They'll catch on.

Some people will tell you that you should pretend to be a Canadian when you travel, but if you do that, the terrorists win. Break out your most patriotic Fourth of July gear so everyone knows you come from the No. 1 country on the planet. Throw on a fanny pack too; it's practical and fashionable. If anyone starts giving you trouble, just remind them we're back-to-back World War champs. Why are you traveling anyway? If your country doesn't have drive-thru gun and liquor stores, then it's not worth visiting.

**'Murica!  
Patrick Hoskins**

Dear Patrick,

**It's the middle of the night, I just got back from the bar, and I want some pizza. All the pizza places are closed, but I have some leftovers in my fridge. You must have some pizza-reheating tips. Care to share?**

Thanks,  
**Craving Reheated  
Appetizing Vittles, I Need  
Good Suggestions**

Dear CRAVINGS,

Lucky for you, I am a fan of pizza and an excellent chef. By that I mean I know how to reheat food. Now, there are a few different methods of reheating pizza available to you, and the key to choosing which method to use is how much you've had to drink. If the answer is nothing, then you can take the time for some fancier reheating. Too much, and you'll wind up eating dough and chomping into tomatoes.

For the quickest reheating method, put a glass of water in the microwave with your pizza. That keeps the pizza from getting soggy. Scientists say we'll never know why this method works, but it does. If you're feeling super fancy, pop the pizza in the oven for ten minutes (just be sure to turn the oven on first). Bonus points for a toaster oven.

**Enjoy that cheesy  
goodness,  
Patrick Hoskins**

Need advice? Send queries to [advice@thetartan.org](mailto:advice@thetartan.org).



# Moon Over Buffalo flaunts student talent

Scotch'n'Soda strikes comedic gold with hilarious, entertaining production

Mistaken identities, aging actors desperate to redeem themselves, love gone awry, and a whole lot of drunken antics made for quite the crazy ride in Scotch'n'Soda's latest production, *Moon Over Buffalo*. Presented Friday and Saturday in McConomy Auditorium and co-directed by sophomore chemical engineering major Evan Starkweather and sophomore international relations and politics major Razghiem Golden, the show was a whirlwind that featured few characters, but lots of laughs.

The plot was a labyrinth of catastrophes: an extramarital affair (or two or three), a life-or-death matinée, and George S. Patton bound and gagged in the closet. Although a plot this jam-packed with calamities has the potential to be overwhelming and ridiculous (and not in a good way), Starkweather and Golden balanced the crazy with plenty of moments of sanity and sweetness, making the outrageous story easier to swallow.

The set was cleverly planned with five doors, allowing for the action to flow across the stage — albeit somewhat clumsily in parts — and the costumes were vibrant and well done.

Junior creative writing major Chelsea Bartel was a true force of nature as the wildly dramatic diva Charlotte Hay, wife of sophomore vocal performance major Ethan Crystal's George and mother of first-year dramaturgy major Holly Dennis' Roz. The chemistry between Bartel and Crystal was sincere and genuine, becoming a true driving force for the story and the play. Their banter and eventual epiphanies were only made more hilarious and heartwarming by the way the actors interacted with each other, physically and otherwise. Their back-and-forth was as lively and well timed as a fast-paced tennis match — true comedic gold.

Crystal's timing was a large part of the hilarity of the play; his drunken antics were positively uproarious. From his facial expressions to the fluidity of his vocals as an actor playing an actor, he crafted a personality that was lovable and raucous. Equally humorous as a sober man and as a drunk, Crystal was a true stage presence.

The extramarital interests of Mr. and Mrs. Hay, senior decision sciences major Kevin Handerhan as Richard and senior psychology and biology double major Diane Koeller as Eileen, both shone in their smaller roles as well. Handerhan, playing the Hays' lawyer and

representative, was the very essence of charming and suave from the second he stepped through one of the many doors. In a wonderfully clever character twist, he was able to go from the definition of classy to childish and wounded, a transition that he accomplished with grace and ease.

Koeller's Eileen was sweet and ironically innocent, considering she was carrying George's baby. Her wide-eyed and slightly ditzy characterization would have made the affair hard to buy in to in any other show — but in this production, where the absurd was common, the irony only made her character more believable.

First-year vocal performance major Shannyn Rinker stole the show as Ethel, the elderly grandma with a hearing problem and a spunky streak. Cute as a button and convincing as a senior citizen (a challenging task), Rinker played the part well. Her spirited rivalry with George was a favorite aspect of the family dynamic, drawing consistently exuberant laughter from the crowd at every major battle. Her signature "Ohhh!" that punctuated every plot twist quickly became an indication that things were about to get crazy, and her missing hearing aid caused more than a few problems for the entire cast of kooks.

Equally as endearing was senior ethics, history, and public policy major Andrew Minton, who played Roz's soon-to-be left-in-the-dust fiancé, Howard. Minton's Howard was adorably sweet and spineless, the kind of all-around good guy who never gets the girl. Though the part was one of the smaller ones in the show, Minton

reveled in it, and as a result he charmed his way into the hearts of the audience members.

Roz's ex-fiancé was played by Derek Lessard, a junior double major in engineering and public policy and mechanical engineering. Lessard's character, Paul, was arguably the most serious of the characters, which had the potential to make his performance fall flat. But instead of coming off as boring and strict in comparison to the insanity around him, Lessard managed to create a character that was controlled, smooth, and convincing — adding that extra something that made the show that much more reminiscent of real life.

Roz herself was another more serious character, providing a contrast to the rest of her family. This contrast was appropriate in that Roz desired nothing more than to get away from the craziness that was live theater. She was a breath of fresh air throughout the crazy story, and yet she managed to add some drama of her own at the same time.

Overall, the entire play was enjoyable and well done. There's just something about live theater that a generation raised on movies and YouTube videos doesn't get to appreciate enough. Everyone should seize the opportunity to experience live theater as often as possible, especially when it's theater of this quality.

**Laura Scherb** | Assistant Pillbox Editor



Courtesy of The Thistle



# *Killing Them Softly* offers social commentary

Crime film starring Brad Pitt seems better suited to literary format with heavy symbolism

*Killing Them Softly* opens with career criminal Frankie (Scoot McNairy) walking through a sea of trash amid audio of a pre-presidential Barack Obama speech, interspersed with title cards and accompanied by a low, droning tone. It seems that every time a character is in a car there is a political speech on the radio, and the televisions in bars or restaurants all show 2008 campaign speeches from Obama.

This political undercurrent turns out to be a major instance of foreshadowing, as the more message-driven aspects of the movie unfold. The economic crisis is the explanation for the use of political propaganda; the characters in the film are all motivated by money. The main theme of the film is choice: Make a good choice and you will be rewarded; make a bad choice and you pay the price. This theme is used as an analogy for how America works as a whole — everyone is trying to get ahead, rather than work together as a community.

The movie is based on the novel *Cogan's Trade* by George V. Higgins, so it's easy to see why some of the subject matter feels better suited to a form other than cinema. The film is undoubtedly entertaining, but one might wonder why symbolism plays such a large part.

Brad Pitt appears in a role he must be comfortable with by now: the man with all the answers. He plays Jackie

Cogan, a mafia hit man and a consultant to the more affluent mafia members. His colleague Driver (Richard Jenkins) is a representative for the richest members of the mafia, and he needs Cogan to get rid of Frankie and the rest of the men who perpetrated a crime against the mafia.

While each actor does well with his screen time, it is clear that Pitt monopolizes the movie. Ray Liotta's character Markie Trattman, a mafia member who runs a gambling ring, could easily have had a larger role in the film.

James Gandolfini plays a similar small role as Mickey, a hit man whom Cogan contracts, but never delivers on the deal. Gandolfini's character serves as a symbol for society at large: He would rather have sex and drink than do the work he was hired to do. This kind of symbolism, like the portrayal of drug use to represent the degradation of society, might have been richer in the novel. In the film, drug addiction seems like a tangent.

The R rating for this movie is definitely earned. Tremendous amounts of violence fill the screen, perhaps too much for particularly squeamish viewers. Most of the scenes containing violence are almost Tarantino-esque and are very well done. The film's treatment of drug use is fleeting, but the repetitive nature of one

scene, wherein Russell (Ben Mendelsohn) uses heroin, making him too distracted to face his problems, pulls the viewer away from the driving plot of the film. This type of technique might be better suited for a text piece, as the adaptation is limited by the visual format. In a novel where extra emphasis can be placed on character, drug use would be a more prevalent theme.

A lot of dark humor comes through in the dialogue, an added touch that only makes the film better. The film poses the question, "Is America a community?" Cogan answers, "A community? Don't make me laugh. America isn't even a country; it's a business. Now pay me." This dark humor plays a special role at the end of the movie that may leave the viewer unsatisfied at first, but only because the credits come so suddenly.

If you're a fan of the crime film genre, go see this movie. You might get hit over the head with symbolism, especially at the very end of the movie, but *Killing Them Softly* is still an entertaining movie with a great cast.

**Christopher Sickler** | Junior Staffwriter



# FOCUS

## PITTSBURGH FILMMAKERS SCHOOL

FILM • PHOTOGRAPHY • DIGITAL MEDIA



[pfm.pittsburgharts.org](http://pfm.pittsburgharts.org)  
call for a tour 412.681.5449

CMU STUDENTS  
YOU CAN REGISTER!  
CONTACT College of Fine Arts - 412.268.2348



# Angels in America offers heavenly experience

School of Drama production explores AIDS epidemic, showcases student performances

*Something's coming — something big.*

That thought nags at the back of the audience members' minds from the moment they sit down and gaze at the vastly empty set for *Angels in America Part One: Millennium Approaches*, and it slowly edges its way to the forefront until the final scene, when the world comes crashing down.

In 1980, immunologist Andrew Saxon and his team at University of California, Los Angeles published a report on what would later be recognized as the AIDS epidemic. The report wasn't taken up by the Centers for Disease Control and Prevention (CDC) until 1981, and by then the virus now known as HIV had spread rapidly, especially in the gay male community.

The Pulitzer Prize-winning, two-part play *Angels in America: A Gay Fantasia on National Themes* premiered over the period of 1991 through 1993. It chronicles the lives of people living in New York City in 1985, when the AIDS epidemic was belatedly coming into the public eye. This was still two years before the government would even acknowledge the epidemic — and by that time, more than 25,000 people were dead.

And yet, *Angels in America* isn't about AIDS — it's about what it means to be human. Existentialism, justice, love, faith, hope, money, bureaucracy are all laid bare, debated, realized, and misconstrued by the play's characters.

The story narrows in on two relationships in turmoil. One is between Prior Walter (senior musical theatre major Trevor McQueen-Eaton) and Louis Ironson (senior acting major Jesse Carrey-Beaver), who panics and feels he must leave his lover after finding out Prior has contracted AIDS. The other couple, Joe and Harper Pitt (played by senior acting major Adam Hagenbuch and senior musical theatre major Emily Koch, respectively) struggle with their secrets, a challenge exacerbated by the fact that Joe wants to move to Washington, D.C. for a job.

The show's playwright Tony Kushner preferred a transparent staging, with minimalist sets and quick scene changes, and for the most part, director Jed Allen Harris — associate teaching professor in the School of Drama — stayed entirely faithful to this concept. The vast stage was treated as a blank canvas, in which various settings could glide during scene changes. There were no blackouts in this production; instead, the stage lights all turned red, a nod to the color of AIDS relief.

Staging and even plot aside, *Millennium Approaches* shows its true colors through the relationships between the characters, through their intricate webs of thought processes and morals. Therefore, not only must all the actors be tremendously skilled, but they must also serve

as foils to each other. Luckily, this production boasted some of the most solid acting the School of Drama has exhibited in the past two years.

McQueen-Eaton was an obvious standout. Prior struggles with the disease for the play's entirety, and often his pain is difficult to watch. But McQueen-Eaton had an astounding ability to retain Prior's stoicism even when he was screaming and convulsing, and the audience didn't dare look away.

The acting talent didn't stop there. One could see Carrey-Beaver thinking as he portrayed the paranoid Louis, staying true to his character in that respect, and his performance was a methodical one. Roy Cohn (senior acting major Brian Morabito) is a raucous, scheming thunderstorm of a man, based on the real-life McCarthyist lawyer of the same name. Morabito at first brought a lazy, laid-back quality to the character, but this persona was peeled away like old wallpaper throughout the play, culminating in his collapse in Act Three. Joe's mother Hannah Pitt, played by senior musical theatre major Casey Anderson, also has a formidable disposition, but she's onstage for too short a time to fully develop an individuality.

It is Koch who truly stole the show as Harper Pitt, the Valium-addicted, agoraphobic, Mormon housewife. She learns most of what she knows from radio and television programming and spends much of the play in a hallucinatory state. Her emotions seem more realistic than anyone's in the play — even more than Prior's — and she maintains a perfect combination of comedic wit and great anguish.

The other two most memorable performances, however, were done by the same person: Senior musical theatre major Rodney Earl Jackson, Jr. played both Prior's best friend Belize and Harper's imaginary travel agent, Mr. Lies. What's astounding is that Jackson brought such depth to both characters, even when he had to make costume changes in under a minute.

It's difficult to think of any criticism for these phenomenal actors, but there could be some improvements. Senior musical theatre major Imari Hardon expertly juggled her many roles — she serves as a homeless person, a sassy nurse, and an angel — but as a result, she didn't sink into any one of them. Hagenbuch was almost as convincing as Joe Pitt, a deeply closeted Mormon man with staunch morals. But when it finally comes time for him to be emotional, he

seemed too reserved and controlled. A fun side note, though: He played Patrick's pot-dealing friend Bob in *The Perks of Being a Wallflower*.

The School of Drama is only performing *Part One: Millenium Approaches*. To make up for the incomplete storyline, the cast performs a comedic 15-minute version of the five-act *Angels in America Part Two: Perestroika* in the Purnell lobby after the show. Also in the lobby was a table with fliers and information about LGBT and AIDS-related organizations and events in the Pittsburgh area.

*Millennium Approaches* continues through Saturday. You don't want to miss this top-quality production of one of the most important plays in recent history.

**Evan Kahn** | Copy Manager



**Jonathan Carreon** | Photo Editor





# The Weeknd haunts listeners with *Trilogy*

Recording artist Abel Tesfaye remixes old material for improved, despondent sound

Existing fans of Canadian R&B artist The Weeknd might not be terribly excited about his November release, *Trilogy*. The three-disc compilation, his first release on a major record label, mostly consists of remastered versions of his three previously released mixtapes — *House of Balloons* from March 2011, *Thursday* from August 2011, and *Echoes of Silence* from December 2011 — with only three new songs. But for those who haven't yet heard his music, *Trilogy* is a beautiful crash course in The Weeknd's world of sex, drugs, and echoing, haunting soundscapes.

The Weeknd is 22-year-old Abel Tesfaye, a recording artist and record producer who first started gaining attention when he uploaded several songs to YouTube in early 2011. The Weeknd's debut mixtape, *House of Balloons*, was released online for free and immediately garnered critical acclaim for its inventive, haunting blend of electronic, R&B, and soul genres. According to *Metacritic.com*, it was the third-best-reviewed album of 2011.

Like many hip-hop and R&B artists, The Weeknd's lyrics focus almost exclusively on sex, drugs, and partying: "From the morning to the evening / Complaints from the tenants / Got the walls kickin' like they six-months pregnant / Drinking Alizé with our cereal for breakfast / Girls calling cabs at dawn quarter to seven," Tesfaye croons in his song "The Morning."

Unlike most artists of those genres, though, his falsetto is accompanied by brilliantly produced soundscapes that are often as melancholy as they are sexy. The Weeknd's songs include everything from downtempo basses, hip-

hop beats, and electric guitars to synthesizers, violins, and piano chords, all of which are tightly produced to become echoing and distant.

Heartache and emptiness are also common themes for The Weeknd: "I'll give you what you called for / Just let me get in my zone / I'll be making love to her through you / So let me keep my eyes closed / And I won't see a damn thing / I can't feel a damn thing / But I'mma touch you right," Tesfaye sings in "The Zone." The Weeknd's singer may love drinking, getting high, and hooking up, but his haunting music suggests that these things don't always bring him happiness.

Clocking in at about two-and-a-half hours long, *Trilogy* immerses the listener in The Weeknd's sexy, lonely world. It's worth the purchase, even for those who have already downloaded his mixtapes: Tesfaye has remastered his old songs, and even though the differences may be subtle, *Trilogy* is more focused, better emphasizing The Weeknd's unique, moody sound.

"Lonely Star" was already a compelling, tense plea: "Baby, I could be your best friend / Baby I could f\*\*\* you right / Baby you could have it all." But in *Trilogy*, Tesfaye has eliminated some of the grit and heaviness, making the song fit more with The Weeknd's despondent tone. And although his three new tracks in *Trilogy* — "Twenty

Eight," "Valerie," and "Till Dawn (Here Comes The Sun)" — are far from The Weeknd's strongest work, they're still worth a listen. Even those who aren't normally fans of R&B will be drawn into The Weeknd's haunting music.

**Anna Walsh** | Personnel Manager



Courtesy of Shubvirk via Wikimedia Commons



PITTSBURGH SYMPHONY ORCHESTRA  
BNY MELLON GRAND CLASSICS  
2012 • 2013 SEASON  
**HAYDN & SAINT-SAËNS'**  
**ORGAN SYMPHONY**

*Fri, Dec. 7 • 8PM \ Sun, Dec. 9 • 2:30PM \ Heinz Hall*

Leonard Slatkin, conductor  
Anne Akiko Meyers, violin

**Haydn:** Symphony No. 68

**Bates:** Violin Concerto (world premiere & PSO co-commission)

**Saint-Saëns:** Symphony No. 3, "Organ Symphony"



**THIS WEEKEND!**



**STUDENT TICKETS ONLY \$15**  
**FACULTY AND STAFF \$20**

Subscribe for the best seats\* and to avoid missing out on sold-out concerts! \$20 student rush tickets available at Heinz Hall two hours prior to concert\*

\*SUBJECT TO AVAILABILITY

**FOR TICKETS VISIT**  
**PITTSBURGHSYMPHONY.ORG/CMU**

TITLE SPONSOR  
 BNY MELLON

PROMOTIONAL PARTNER

MEDIA SPONSORS



# Pittsburgh exhibit explores human relationship with place through art and writing

*The City & the City: Artwork by London Writers* features Pittsburgh as an unlikely setting for a collection of London-themed pieces at the Wood Street Galleries

by **Chloe Lula** | Junior Staffwriter

As individuals with unique experiences, humans have inherently subjective interpretations of the world. *The City & the City: Artwork by London Writers*, an ongoing exhibition at Wood Street Galleries, is a study of this concept — that our emotions and backgrounds shape how we perceive a place.

For experimental artists and authors Sukhdev Sandhu, Rod Dickinson, Tom McCarthy, and Rachel Lichtenstein, among others, London is a shared hometown through which they project their respective examinations of a modern city and varying ways to look at a single place through language and art.

The exhibit, which opened Sep. 31, is curated by Pittsburgh conceptual artist and writer Justin Hopper. Although the installation is aesthetically minimal, the entirety of the exhibit is ample in theoretical content. The artists challenge viewers to consider a world beyond the confines of their immediate environments, assessing the present in light of historical trends and alternate realities.

The first room of the gallery is dark and bare, save for a wooden table and a computer mouse. Once the mouse is engaged, projected images materialize against the walls and dissonant music spills out of speakers in the ceiling. The piece — titled “Night Haunts: A Journey Through the London Night” and created by London-based author Sandhu — recounts the gradual waning of the furtive nighttime atmosphere that characterized London throughout the Victorian era.

In the projected text, the author laments the city’s fabricated, disingenuous present. Certainly, London’s modern-day nighttime atmosphere no longer resembles the mysterious luster of its past. The text describes it as “a clutch of surly-looking bouncer-fronted clubs pumping out monotonous bpm, and from which puked-breathed likely lads emerge at 2 a.m. to pick fights with girls that won’t go home with them.”

Sandhu’s London has been economized, rebranded, and deauthenticated. Even the stripped physical structure of the installation seems to mirror the city’s emptiness beneath its ostensible personality. The room reflects the relationship between place and memory, depicting the

Rod Dickinson and Tom McCarthy’s “Greenwich Degree Zero” presents falsified artifacts from a near-successful terrorist attack on The Royal Observatory, Greenwich in 1894.

author’s disillusionment with a city that has betrayed its own history.

London’s past is also surveyed in a piece titled “Greenwich Degree Zero” by Dickinson and McCarthy. The work is an alternative history based on French anarchist Martial Bourdin’s very real attempt to blow up The Royal Observatory, Greenwich in 1894. The artists demand that viewers consider the alternative to reality: What if Bourdin had succeeded in his terrorist attempt?

The thorough multimedia piece displays newspapers, photographs, and film that have been doctored to portray the destruction of The Royal Observatory, Greenwich. The artists even created fictional anarchist magazines to document Bourdin’s personal history and political activism preceding his attack on the observatory.

The counterfeit reports are comprehensive and creative, detailing Bourdin’s alleged desire to bomb the observatory as an expression of his frustration with the parasitical nature of an “idle and vicious” upper class. Dickinson and McCarthy’s interpretation, while mythical, is timeless and universal, speaking to

individuals beyond the specific historical situation they examine in their piece.

Lichtenstein’s “Sight Unseen” is probably the most tangible avenue for historical analysis and the relationship between past and present. The piece is a site-specific installation that coincides with the launch of her new nonfiction book, *Diamond Street: The Hidden World of Hatton Garden*.

Hatton Garden is London’s diamond and jewelry quarter, home to an extremely private community of brokers and manufacturers. Working behind closed doors are silversmiths, gold beaters, pearl and diamond merchants, and lapidaries. In her piece, Lichtenstein reimagines the skills, stories, and memories of these individuals by recreating their artifacts. Velvet and gold objects form a multilayered homage to the craftspeople who operate in the Hatton Garden area.

The collection is not striking upon first inspection. However, a more profound understanding of its origins lend it considerable power as an ensemble. Unlike the gallery’s other pieces, Lichtenstein’s does not



Chloe Lula | Junior Photographer

present the viewer with a metaphysical concept. Her representation of London is concrete; for her, it is a city built upon the endeavors of the industrialists that lived and worked in relative obscurity.

The respective historical studies of Sandhu, Dickinson, and Lichtenstein contextualize our modern world. Their perceptions of London’s present-day identity, along with the diverse relationships they have each cultivated with the city, are rooted in their own interpretations of historical perspective. Indeed, it is evident that each artist relates differently to London in the same way that many people relate dissimilarly to cities across the U.S.

It is the exhibit’s ability to transcend geography and audience that makes it so memorable. Every person establishes some relationship with the geographical places they inhabit. This unifying feature of *The City & the City* offers an experience that many people can relate to and ultimately acknowledge in their own lives.

In particular, Hopper hopes to allow viewers to examine these geographical places through a new artistic lens. “I’d be pleased if people came out of the show with, perhaps, a slightly altered idea of how art and literature can combine to envision new nonfictions — how can we look at our surroundings in a different way because of the ideas that these artists have presented. That’s how all contemporary art shows function: What’s beautiful in the world that I hadn’t previously recognized as beauty?”

However, Hopper hopes that the exhibit will reinforce an identity in the city of Pittsburgh specifically. “Pittsburgh

Rod Dickinson and Tom McCarthy’s piece showcases modified newspapers giving a fictional account of the attack.

has been seeking to newly understand its own identity, and artists and writers are a significantly important part of that process,” Hopper said via email. “London is the most written-about, artistically-represented city in the western world, and is currently the home of a fiercely independent and yet dominant scene of artists and writers looking to understand notions of place and memory and the intersections thereof.”

Pittsburgh, though not usually compared to London, is certainly similar in the sense that it receives varied and divergent reviews regarding its appeal as a city. It seems apt that the artists chose Pittsburgh as a location for a portrait of a place that shares so many of our city’s conceptual qualities.

“Psychogeographers, concrete poets, documentary-fiction videographers, liminal cartographers, avant-historians — London is littered with people creating new methods and concepts for looking at ‘place’ and

at ‘the city’ in different ways,” Hopper said via email. “Pittsburghers are doing the same thing. Why not position the two together?”

Sandhu was impressed that Pittsburgh was host to the exhibition, noting in an interview with the *Pittsburgh Post-Gazette*, “People have been hearing about this show, and they say, ‘It’s in Pittsburgh?’ as though they expect it to be in California or New York or even Chicago. They say, ‘Let me know how it goes because we’d like to do it here.’ ”

Hopper has similar enthusiasm about Pittsburgh as a site for fostering cultural introspection and awareness: “As to why a show on London in Pittsburgh: Why not? If this show were in New York, Chicago, L.A., no one would bat an eye. Why shouldn’t Pittsburgh host an exhibition of important contemporary artists working in a new cross-disciplinary way, regardless of where they come from or what their subject is? The question should be, ‘Why isn’t there a show of work about Pittsburgh in London?’ ”



Chloe Lula | Junior Photographer

As part of “Greenwich Degree Zero,” a falsified film portraying smoke rising from The Royal Observatory, Greenwich adds to the artists’ imagining of the destruction of the Observatory.





## Did you know?

100  
years ago

Dec. 12, 1912

"Merry Christmas" wishes abound for the classes of 1912 and 1913, Carnegie Tech staff, and the women on campus. Someday, the writer hopes, these women might be recognized for their hard work. Until then, The Tartan sends the ladies best wishes in the hunt for a husband during the holidays.

50  
years ago

Dec. 19, 1962

In response to campus apathy toward outward appearances, the Panhellenic Council is sponsoring a contest for all women on campus that will be judged on neatness and proper hair and makeup for different situations. The winner will be sent to the next round of a competition sponsored by *Glamour* magazine.

25  
years ago

Nov. 24, 1987

One hundred fifty Carnegie Mellon students are arrested when two large fraternity parties are raided over the weekend. Many of the brothers from each house find the police to be unnecessarily brutal, and one tells The Tartan, "The police have been watching too much TV."

10  
years ago

Nov. 25, 2002

Students share the multitude of ways they deal with "sexiling." Some students stick to the sock-on-the-door technique, but other students are more innovative. One pair of boys uses a secret code on the whiteboard outside their room. One girl admits to ignoring sexiling altogether, and just waits until her boyfriend's roommate falls asleep.

5  
years ago

Dec. 3, 2007

A water main break cuts through campus on Friday afternoon. Students meandering along the Cut around 1 p.m. have the chance to take pictures and videotape the water that runs from campus to Forbes Avenue. Surprisingly enough, all this water and chaos is caused by an eight-inch break in the water main.

1  
year ago

Nov. 21, 2011

Carnegie Mellon is heading to China. A university press release announces that Sun Yat-sen University will begin offering master's and doctorate degrees in electrical and computer engineering in 2013 in partnership with the Carnegie Mellon ECE department.

Catherine Spence | Staffwriter

# Twilight series ends well

## Breaking Dawn: Part 2 is highlight of mediocre saga

It was almost a year ago when *The Twilight Saga: Breaking Dawn: Part 1* made its appearance in theaters, much to the delight of rabid fans. Tension was high at the end of part one when Bella, after giving birth to her half-human, half-vampire child, was finally turned into a member of the undead by her glittery and brooding husband.

This November, fans waited with bated breath for the fifth and final installment of the series. *Breaking Dawn: Part 2* opened in theaters Nov. 16 and made a killing of \$71.2 million in the box office on its opening day, according to *boxofficemojo.com*.

In this installment, the Volturi — the power-hungry arm of vampire law — come after Bella and her daughter, Renesmee, under the guise of protecting the secrecy of their species. Thinking that Renesmee is dangerous, the Volturi plan to kill her and use Alice, another vampire, and her long-sought-after powers for their own devious means.

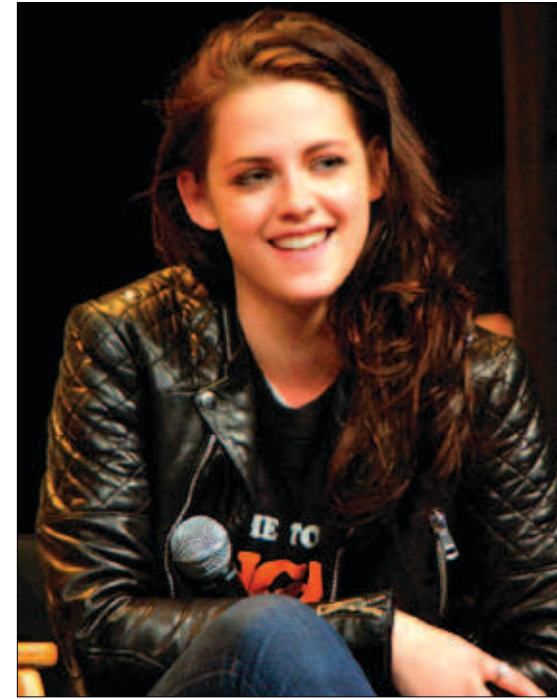
If anything can be said for this installment of the *Twilight* series, it's that it certainly catered to its fans. As in the book, when Bella becomes a vampire, she is much less whiny, and she finally seems to come into her own. In fact, she acknowledges this when she remarks in one scene that she "was born to be a vampire."

Edward is the same as ever: brooding, moody, and extremely pale. Jacob is also unchanged: still a wolf, and still overprotective. In fact, every character except Bella remains largely stationary. It makes sense that this installment would focus on Bella's transformation, but expecting Kristen Stewart to carry the entire movie is ludicrous; the actress is just not up to the task.

Stewart seems unable to make her character more interesting, despite the added ability to run fast, climb things at lightning speed, glitter in the sun, and drink human blood. She needs to learn that long stares and twitching brows are not the only way to emote.

There is a lot of seemingly unnecessary dialogue in the movie as well. Many scenes consisted of the main characters standing around the Cullens' living room, deciding what to do about this dilemma or that. For the purposes of the movie, this much exposition wasn't needed. In fact, its only apparent purpose was to please viewers who were loyal readers of Stephanie Meyer and couldn't wait to hear each line from the books played out onscreen.

But despite Stewart's acting and the superfluous dialogue, *Breaking Dawn: Part 2* is still one of the best *Twilight* movies, mostly because changes



Courtesy of Gage Skidmore via Wikimedia Commons

Kristen Stewart, who stars as Bella Swan in the *Twilight* saga, is forced to carry the movie in the last installment of the series.

actually happen in this installment. Bella now has a baby, Volturi drama ensues, and vampires from all around the world flock to the Cullens' home.

Unlike *Twilight*, *New Moon*, *Eclipse*, and *Breaking Dawn: Part 1*, all of which seem to deal largely with Bella pining after Edward and whining over the fact that she's human, *Breaking Dawn: Part 2* has an actual story line and doesn't center around one teen's mood swings.

Although the movie — and the entire series — was not my cup of tea, it was no doubt satisfying to long-time fans of the book and movie series. Overall, *Breaking Dawn: Part 2* is sure to go down in the annals of history as a good end to a mediocre series.

Christa Hester | Publisher



Sudoku Puzzle: Medium Difficulty

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

Sudoku courtesy of [www.opensky.ca/~jdhildeb/software/sudokugen/](http://www.opensky.ca/~jdhildeb/software/sudokugen/)

Kakuro Puzzle: Easy Difficulty

			13	5		
		9				
		13			11	
	10					
						17
	12			11		
			17			
		21				
			13			

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

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 on its top. No number may be used in the same row or column more than once.

## Solutions from Nov. 19, 2012

S	L	A	M	S		S	M	O	G		S	A	M	P
T	A	R	A	S		P	A	T	H		E	P	E	E
A	M	B	I	T		E	S	T	O		R	I	A	S
L	I	O	N		A	C	C	O	U	N	T	A	N	T
E	A	R	L	E	S					L	E	A	N	T
			I	C	I		L	A	I	R	S			
A	M	I	N	O		L	A	S	S	O		H	M	O
S	A	L	E		W	O	R	T	H		M	E	A	L
A	O	L		S	H	I	V	A		E	E	R	I	E
			A	R	E	N	A		M	A	S			
T	A	S	M	A	N		S	A	U	S	A	G	E	
A	N	T	I	S	E	P	T	I	C		H	A	R	E
M	E	A	D		V	I	E	D		M	A	H	A	L
E	R	I	S		E	S	S	E		A	L	E	V	E
R	A	N	T		R	A	S	A		E	L	D	E	R

Crossword

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

Very Hard Difficulty

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

Hard Difficulty





kathrynmoira@gmail.com

Online at [www.harkavagrant.com](http://www.harkavagrant.com)



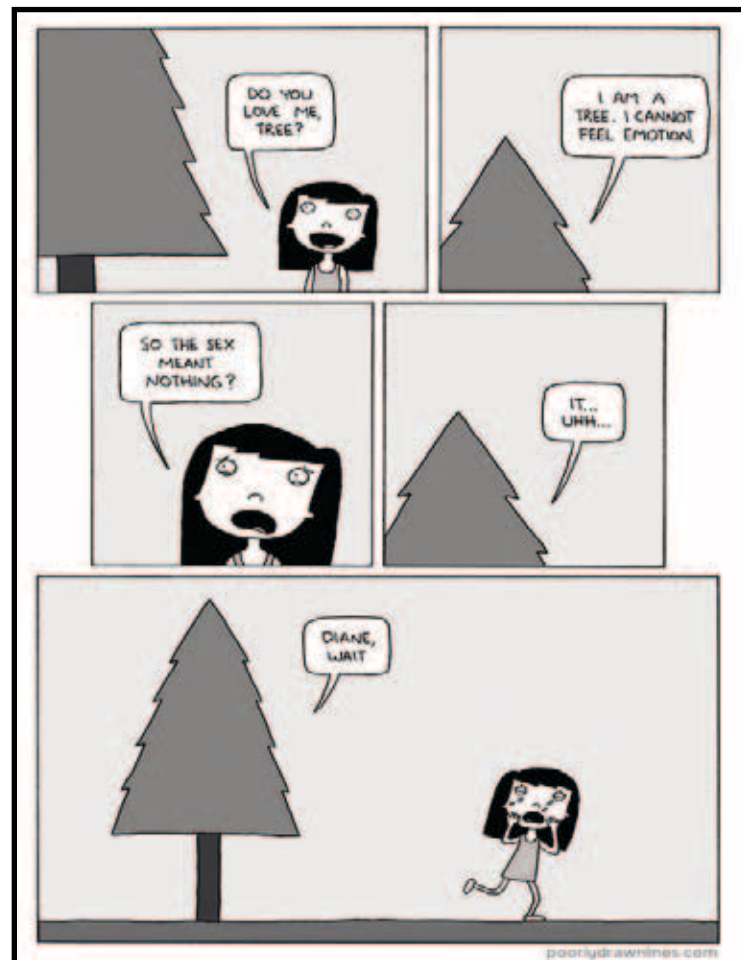


# Stick Cats #12 by Nick Marino



nickmarino@gmail.com Online at [www.nickmarino.com](http://www.nickmarino.com)

# Love Tree by Reza Farazmand



Online at [www.poorlydrawnlines.com](http://www.poorlydrawnlines.com)

# Piled Higher and Deeper by Jorge Cham



jorge@phdcomics.com

Online at [www.phdcomics.com](http://www.phdcomics.com)



# Horoscopes

## aries

march 21–april 19

Don't do it. Trust me, that brilliant plan is going to blow up in your face.

## taurus

april 20–may 20

Cry, go for a walk, or just listen to some music. Whatever you do, make sure you find some safe way to relieve the stress from finals. You will get through this.

## gemini

may 21–june 21

Because it is cold outside and the sky is gray, treat yourself to something that you want. Don't think about needs or practicality, just treat yourself.

## cancer

june 22–july 22

It's that time of year when it's important to sit back and take note of the good things in your life. The next two weeks may not be fun, but don't let them impede on your happiness.

## leo

july 23–aug. 22

Over the semester you haven't be living a lie, per se, but you haven't been completely truthful. Before the year runs out, make an effort to stop hiding who you are.

## virgo

aug. 23–sept. 22

Smile! It's good for you. Just make sure you are aware of your surroundings when you smile. No one wants to look up from their laptop and catch one of your creeper smiles.

## libra

sept. 23–oct. 22

Because it is cold outside and the sky is gray, buckle down and get back to work. Why be outside in such sad conditions? Work now, play later when the sun comes back out.

## scorpio

oct. 23–nov. 21

It might be hard to hear this, but it must be said: Furbies are back.

## sagittarius

nov. 22–dec. 21

Happened yesterday, something weird did. The problems you were having with your project, tried to explain you did. However, your professor looked at you as if you were Yoda.

## capricorn

dec. 22–jan. 19

Peace and blessings be upon you. In your times of great strife, keep sight of your goals and don't back down.

## aquarius

jan. 20–feb. 18

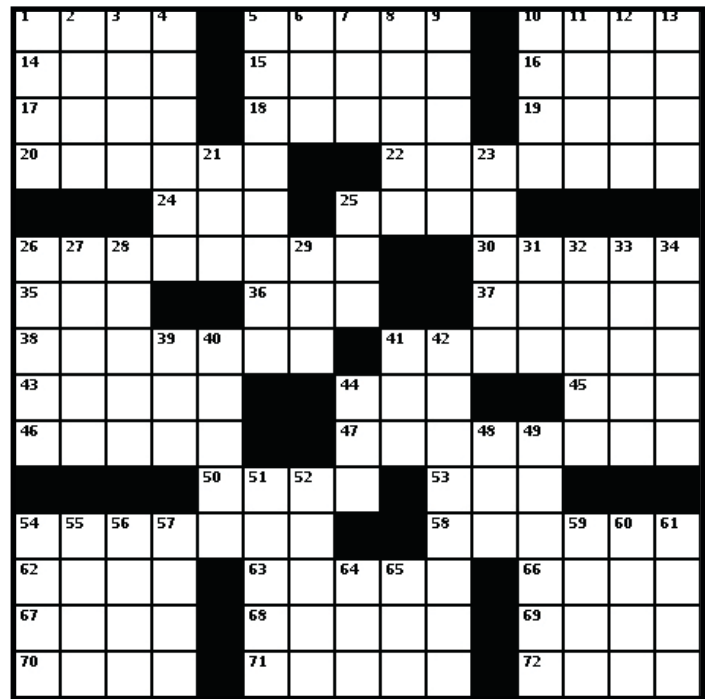
Out in the real world, people say the real world is harder than Carnegie Mellon. God help us all.

## pisces

feb. 19–march 20

"People are more difficult to work with than machines. And when you break a person, he can't be fixed." — Rick Riordan, *The Battle of the Labyrinth*

Nicole Hamilton | Comics Editor



Crossword courtesy of *BestCrosswords.com*

### ACROSS

- Colombian city
- Church areas
- Bluesy James
- Up and \_\_\_!
- Slip
- Fleece
- Pierce with a knife
- Thick sweet liquid
- Switch ending
- Falafel sauce
- Sildenafil \_\_\_: Viagra
- Air rifle ammo
- Mariners can sail on seven of these
- Endanger
- Org.
- Fair-hiring abbr.
- "Hold On Tight" band
- Happen again
- Calamity
- Become cheeselike
- Adlai's running mate
- It's a moray
- Hwy.
- Kick off
- Candy
- Sewing case
- Structural engineer's software
- Distribute the wrong cards
- Linger aimlessly
- ABA member
- Land's end?
- Mrs. Chaplin
- To \_\_\_ (perfectly)
- \_\_\_ firma
- Horse's gait
- May honorees
- Diamond flaw?
- Cubs slugger Sammy

### DOWN

- Dramatic troupe
- \_\_\_ girl!
- Jacob's first wife
- Drink
- Aided
- Thickness
- Title of a knight
- Elicit
- Photographic tone
- Water pitcher
- When said three times, a 1970 war movie
- Horn sound
- Tropical plant
- Jazz org.
- Autocratic Russian rulers
- \_\_\_-Cat
- French beans?
- Actor Buchholz
- Gauche's rope
- TV Tarzan Ron
- Get it?
- Line of cliffs
- \_\_\_ lunch
- Crawl
- Neth. neighbor
- Lauder of cosmetics
- Corp. honcho
- Signal that danger is over
- New Haven collegian
- Philosopher \_\_\_-tzu
- Foolish persons
- Sample
- Stomach woe
- Polite address
- Sock \_\_\_ me!
- Wineglass part
- Stains
- Mower brand
- Slaughter of baseball
- Pro \_\_\_
- Part of ETA
- Paid player





**Candice Millard.** Carnegie Music Hall in Oakland. 7:30 p.m.  
Candice Millard, author of *Destiny of the Republic: A Tale of Madness, Medicine, and the Murder of a President*, will speak as part of the Monday Night Lecture series at Carnegie Music Hall.

TUESDAY 12.4.12

**Give Me a Break.** The Gladys Schmitt Creative Writing Center. 8 p.m.  
The final student reading of the year will take place in Baker Hall 260. The reading will feature the work of Adria Steuer (senior English major), Austin Moyer (senior creative writing major), Anna Nelson (junior fine art and creative writing double major), Sara Keats (senior Bachelor of Humanities and Arts student), and Matt Finlay (junior creative writing major). After the reading there will be an open mic, and the event includes free pizza and a raffle.

WEDNESDAY 12.5.12

**Arlo Aldo.** Skibo Cafe. 7:30 p.m.  
AB Skibo presents a concert by Pittsburgh-based alternative-folk band Arlo Aldo. The event is free and open to the public.

THURSDAY 12.6.12

**Convocation: Chamber Music.** Kresge Theatre. 1:30 p.m.  
A variety of chamber music ensembles will perform in the College of Fine Arts.

**The Smashing Pumpkins.** Stage AE. 7 p.m.  
Nineties alternative rock band The Smashing Pumpkins

will perform at Stage AE. More information and tickets are available at [stageae.com](http://stageae.com).

FRIDAY 12.7.12

**The Carnegie Mellon Philharmonic and Choirs present a Holiday Concert.** Rangos Ballroom. Noon.  
Robert Page and Michael Van Camp will conduct a performance of holiday music, including excerpts from Handel's *Messiah*, by the Philharmonic Concert Choir and the Repertory Chorus. The concert will also be performed at 8 p.m. the same night in the College of Fine Arts' Great Hall. The event is free and open to the public.

**Winterfest 2012: A Last Day of Classes**

**Extravaganza.** Wiegand Gymnasium. 2:30 p.m.  
AB Special Events presents its annual end-of-classes celebration, Winterfest 2012. Stop by Wiegand Gymnasium after your last class for free food, raffles, and massive inflatable structures (including a wrecking ball, gladiator jousting, and a Batman-themed bounce house).

**The PSO presents Haydn and Saint-Saens' Organ Symphony.** Heinz Hall. 8 p.m.

The Pittsburgh Symphony Orchestra will perform Franz Joseph Haydn's *Symphony No. 68* and Saint-Saens' *Symphony No. 3*. Violinist Anne Akiko Meyers will premiere *Violin Concerto* by PSO 2012-13 Composer of the Year Mason Bates. The concert will also be performed on Sunday at 2:30 p.m. More information and tickets are available at [pittsburghsymphony.org](http://pittsburghsymphony.org).

SATURDAY 12.8.12

**Olivia Newton-John with the PSO.** Heinz Hall. 8 p.m.  
Four-time Grammy winner Olivia Newton-John will perform a special, one-night-only concert with the Pittsburgh Symphony Orchestra. More information and tickets are available at [pittsburghsymphony.org](http://pittsburghsymphony.org).

**Portraits of a Garden, Brooklyn Botanic Garden Florilegium.** Hunt Institute for Botanical Documentation, Hunt Library, Fifth Floor. Through Dec. 16.  
The exhibit showcases work from 48 American botanical artists who are creating an archive of watercolors and drawings of the plants at the Brooklyn Botanic Garden. The selected pieces will be displayed with historical printed volumes from the Hunt Institute's collection. The gallery's operating hours are available at [huntbot.andrew.cmu.edu](http://huntbot.andrew.cmu.edu).

**White Cube, Green Maze.** Carnegie Museum of Art. Through Jan. 13.  
The exhibit includes models and drawings by architects and landscape architects who have worked on collaborative projects, focusing on six sites from around the world.

**Inventing the Modern World: Decorative Arts at the World's Fairs, 1851-1939.** Carnegie Museum of Art. Through Feb. 24.  
This exhibit features works ranging from jewelry to furniture that showcase changing tastes in aesthetics and design within the span of nearly nine decades.

Compiled by **Allison Cosby** | Staffwriter

Want your event here?  
Email [calendar@thetartan.org](mailto:calendar@thetartan.org).





**PITTSBURGH SYMPHONY ORCHESTRA**  
**BNY MELLON GRAND CLASSICS**  
2012 • 2013 SEASON

**TCHAIKOVSKY'S WINTER DREAMS**

*Fri, Dec. 14 • 8PM \ Sat, Dec. 15 • 8PM*  
*Sun, Dec. 16 • 2:30PM \ Heinz Hall*

Arild Remmereit conductor  
Gil Shaham, violin

**Walker:** Sinfonia No. 4, "Strands" (PSO co-commission)  
**Mozart:** Violin Concerto No. 5, "Turkish"  
**Tchaikovsky:** Symphony No. 1, "Winter Dreams"



Remmereit

**NEXT WEEKEND!**

**STUDENT TICKETS ONLY \$15**  
FACULTY AND STAFF \$20

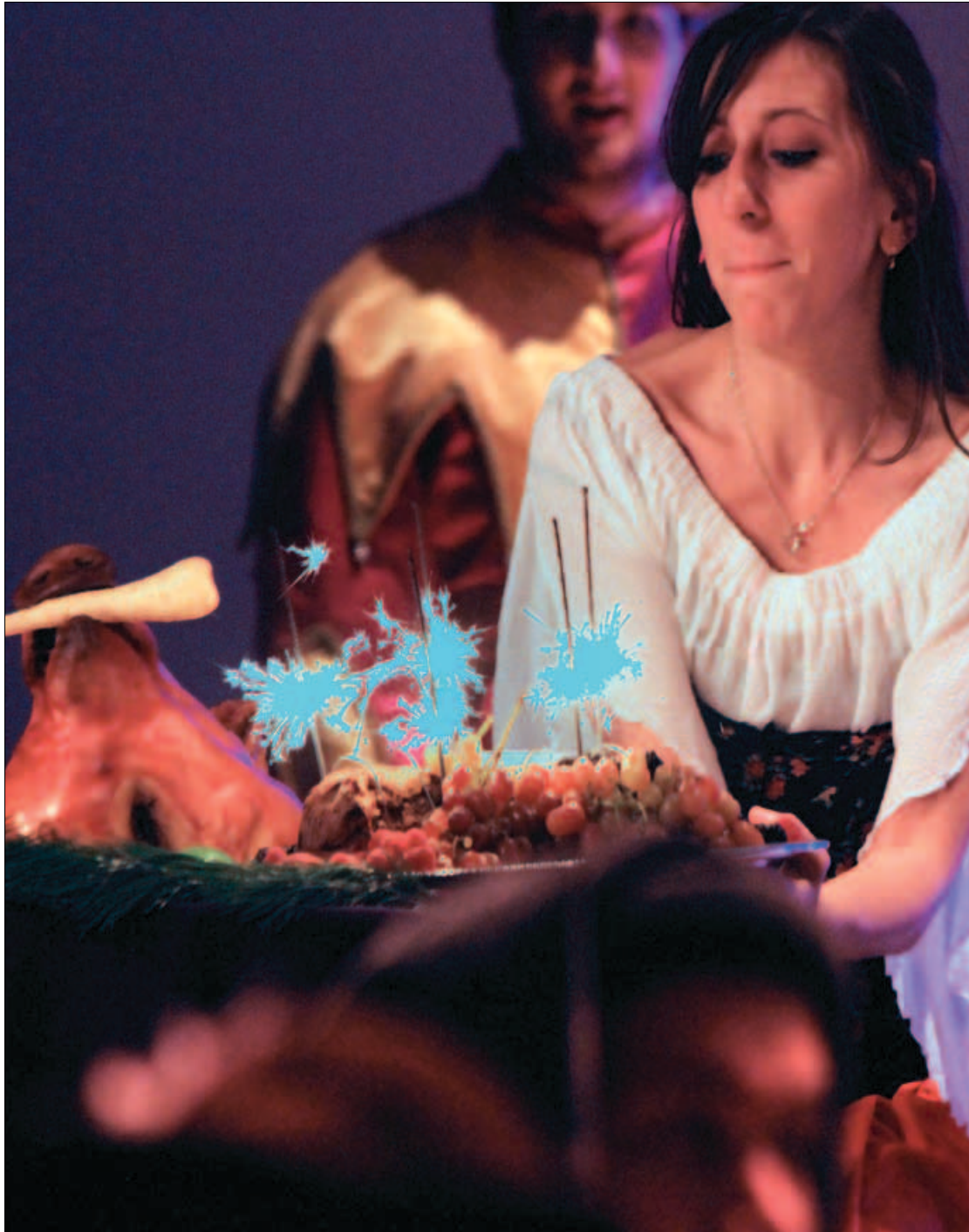
Subscribe for the best seats\* and to avoid missing out on sold-out concerts! \$20 student rush tickets available at Heinz Hall two hours prior to concert\*  
\*SUBJECT TO AVAILABILITY

**FOR TICKETS VISIT**  
**PITTSBURGHSYMPHONY.ORG/CMU**





# madrigal dinner.



Jonathan Carreon | Photo Editor

On Saturday, the School of Music, Student Senate, Student Affairs, the Office of Orientation, Alumni Relations, Student Dormitory Council, and CulinArt collaborated to present the Madrigal Dinner. The event was a traditional Christmas meal accompanied by the School of Music Chamber Singers, a magician, a juggler, a mime, a stilt-walker, and a harpsichord player. The event took place at 6:30 p.m. in Rangos Hall.

