

Security issues complicate advancement of journalism

CASEY HANDMER
Contributing Writer

It's been a busy couple of weeks since midterms. First up, President Obama spoke at a White House Summit on Cybersecurity and Consumer Protection held at Stanford University on Feb. 13. Edward Snowden leaked information revealing that parts of the U.S. federal government routinely spied on communications of hundreds of millions of people — communications mediated by US-based companies such as Facebook, Google, Yahoo, and Apple. In response, these companies have begun to implement end-to-end encryption of consumer data and insist on warrants for provision of information. A government-industry dialogue on information security is a hilariously asymmetric exercise, and this particular summit was no exception.

Highlights included non-attendance by the CEOs of Facebook, Google, and Yahoo. Apple's CEO, Tim Cook, went along, but the other companies sent their chief technology officers (CTOs) instead. Several competent attendees (including Pieter Zatkó) caught the Secret Service using IMSI catchers (eavesdropping devices used for intercepting mobile phone traffic and tracking movement between mobile phone users) to monitor summit participants, a highly ironic situation.

Dialogue, to the extent that it existed at all, was muddled. Obama suggested that end-to-end encryption would hinder the ability of the FBI to capture metadata about individuals with whom criminals are communicating, which is categorically incorrect. There was also a suggestion that failing to compromise, or backdoor, encryption for lawful interception would be a boon to international terrorists, despite the established fact that many drone-paranoid terrorists are already experts at privacy and security. Additionally, security researchers Kaspersky Labs have documented incidents of cybercriminals using some of the NSA's own tools and backdoors against civilians, illustrating the steady flow of military cyberweapons into the public sphere, where they stand to endanger the Internet for everyone. Several tech company representatives affirmed their belief that secure backdooring was impossible.

The Internet, arguably the greatest tool ever invented for the advancement of humanity, is at a crossroads. Do we strive to build a system that is fundamentally secure for everyone, a platform on which we can build finance, health, communications, and governance? Or do we allow the decay of standards to a wild jungle where any interaction is perilous and only the maintenance of arcane and incredibly expensive knowledge affords any kind of safety?

On the heels of the Summit on Cybersecurity and Consumer Protection, the White House held another summit on Feb. 19, the Summit on Countering Violent Extremism. One might think the starting point for any sort of discussion should be a precise definition of

the scope and nature of the matter at hand. Sadly, this was not the case, with examples limited to the Islamic State of Iraq and Syria (ISIS) and a half-hearted reference to the Revolutionary Armed Forces of Colombia (or Fuerzas Armadas Revolucionarias de Colombia, FARC), a guerilla army. Defining a set of beliefs or actions that uniquely identify violent extremism is difficult. Most of the U.S.'s international concern is directed towards Islamic extremists such as al Qaeda, ISIS, or (dare I say) the elusive Khorasan group. But there is no shortage of other examples where justification for indiscriminate killing is taken from other religions or from racist or nationalist ideology. Similarly, a suggestion that engagement away from a declared battlefield or killing of civilians veers dangerously close to the behavior of the U.S. and allies in the ongoing drone war.

The reality is that the conception of war as a conflict between uniformed troops in neat lines on a marked battlefield later to be adorned by a monument was outmoded by the time of the American Civil War. Since the invention of automatic weapons and nitrates nearly a century ago, killing people has become cheap and easy — a commodity. Wars are no longer fought or won that way. If, as individuals or as a nation, we decide wars must be fought, we need to think carefully about the how, as well as the why. It is clear that ISIS is already repeating many of the mistakes the U.S. made in Iraq and, as such, formulating a coherent response is as much a case of doing anything as doing something. Should the U.S. regularly intervene in foreign affairs and, if so, should it be at the point of a gun?

Finally, Attorney General Eric Holder has been the subject of a blistering attack by New York Times journalist James Risen. Not to be confused with Fox journalist James Rosen, who has also been subjected to prosecutorial scrutiny in connection with jailed leaker and Korea expert Stephen Kim, Risen was the subject of a decade-long legal battle to avoid being called to testify in the case of former CIA officer Jeffrey Sterling, who was also recently convicted of unauthorized leaking, this time in connection with a botched operation to feed Iran flawed nuclear secrets. Both leakers were prosecuted under the 1917 Espionage Act, the Obama Department of Justice's go-to law for cracking down on leaking, partly because it doesn't permit a public interest defense.

Risen lost his appeal but indicated that he'd nonetheless refuse to testify. In January, the DOJ dropped its proceedings and indicated that he wouldn't be called to testify after all. Given that the DOJ secured Sterling's conviction shortly after with metadata, it is understandable that Risen feels he was harassed by vexatious litigation as punishment for his 2006 book *State of War: The Secret History of the CIA and the Bush Administration*, detailing a series of

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Alumnus brings resources to schools via crowdsourcing

CALTECH ALUMNI
ASSOCIATION

Long before "crowdfunding" became a buzzword, Cesar Bocanegra had been harnessing it to bring needed resources to public schools at *DonorsChoose.org*, a nonprofit that matches classroom projects with potential benefactors.

Founded in 2000, the organization invites teachers and school administrators to post a project on its website, along with the supplies required to complete it and a budget. Donors then bid gifts, usually in small amounts. Once the budget is met, *DonorsChoose.org* ships the supplies directly to the school. According to the company, 62 percent of public schools in the United States have at least one teacher with projects on *DonorsChoose.org*.

Bocanegra, who holds degrees from Caltech, MIT, and Wharton, leads the organization's operations, helping it to translate gifts made in cyberspace into physical supplies in the hands of students. We spoke with him about his work and the role technology can play within nonprofits today.

You have expressed a particular interest in education and mentoring. What drives that?

I think it's because I know the power of having strong teachers and mentors in one's life. I grew up traveling between the United States and Mexico. I knew as a child that I wanted to become an engineer, but by the time I reached the 10th grade, I was behind in my English and math courses. A counselor sat me down and said, "Look, if you're serious about going to a top engineering school, you'll need to work very hard to catch up." She laid out an ambitious plan. I joined a magnet program at San Fernando High School and devoted myself to my studies. I did well enough to eventually make it to Caltech. That could not have happened without the support and guidance of my teachers.

Tell us about DonorsChoose.org and how it became involved with public schools.

DonorsChoose.org was started 14 years ago by Charles Best, who at the time was a history teacher at a public high school in the Bronx. He found that he was starting to spend money—his own money—on school supplies. His friends wanted to support him, but they weren't quite sure how, given the opaque bureaucracy of school systems. Charles decided to create a crowdfunding website, before the word "crowdfunding"



Cesar Bocanegra (BS '95) is the chief operating officer of *DonorsChoose.org*, a nonprofit organization that matches classroom projects with benefactors.

[-http://alumni.caltech.edu](http://alumni.caltech.edu)

entered public consciousness. Teachers could post projects—all aimed at public education—and then anyone could donate to that specific project. Before Kickstarter, Twitter, or Facebook, *DonorsChoose.org* was a pioneer in the world of crowdfunding and social media.

What is your role?

I joined in 2007 as Chief Operating Officer to help scale the organization. *DonorsChoose.org* is a bit different from other crowdfunding sites in that we don't just pass on funds, we actually fulfill orders of school supplies and ship them to classrooms. Where once it might take three minutes to fulfill a single order, I helped set up systems, integrations, and partnerships that allowed us to do 1,000 orders with the click of a button. In the first nine months, we went from supporting 10,000 schools to supporting 100,000. Today, we have fundraised more than a quarter of a billion dollars and helped more than 400,000 teachers.

"Engineers and people who work in nonprofits share this in common—we want to make the world a better place."

The crowdfunding model has become more established since you started. What kinds of challenges and opportunities do you face today?

We actually have many of the same issues normal online retailers would have in terms of sourcing inventory and creating a distribution network. We joke that we have become the Amazon.com of the nonprofit sector.

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Caltech Y Column

CALTECH Y

The Caltech Y Column serves to inform students of upcoming events and volunteer opportunities. The list is compiled by Neera Shah from information given by the Caltech Y and its student leaders.

More information about the Caltech Y and its programs can be found at <https://caltechy.org>. The office is located at 505 S. Wilson Avenue.

Upcoming Events

1. Reproducibility in Science Seminar Series: A Conversation with Prof. Pietro Perona

Tuesday February 24th | Noon - 1pm | Avery Library | Lunch is provided, but space is limited

RSVP Required

For the next installment of our scientific reproducibility series, we will be discussing quantitative methods in biology and publication standards. This topic is relevant because research in biology has steadily become more reliant on analytical methods, yet many biologists are not formally trained in mathematics or statistics. We aim to address how this trend has impacted reproducibility. Prof. Perona will give a short introductory presentation on his experiences followed by an open question and answer session.

Dr. Pietro Perona is the Allen E. Puckett Professor of Electrical Engineering at Caltech. He is the director of the NSF Engineering Research Center in Neuromorphic Systems Engineering. He also directs the Computation and Neural Systems PhD program centered on the study of biological brains and intelligent machines. Professor Perona's research centers on vision. His research is focused on the computation foundations of vision to help design machine vision systems. He has contributed to the theory of partial differential equations for image processing and boundary formation, and to modeling the early visual system's function. He is currently interested in visual categories and visual recognition.

Presented by the Caltech Y Social Activism Speaker Series. RSVP at <https://docs.google.com/forms/d/1jxkRNpJezqygmsOsJ7YkU9VTMVJrQpB4dvWtDUaCR90/viewform>.

2. The Black Panthers and the Fight for Civil Rights: A Conversation with Hank Jones

Thursday | February 26th | Noon - 1:00 PM | Avery Library | Lunch is provided, but space is limited. RSVP Required: <http://goo.gl/forms/MdQDYmGmWZ>

Henry "Hank" Jones has been an activist since the murder of Emmett Till in 1955. He became a community organizer working with the Student Nonviolent Coordinating Committee (SNCC) in San Francisco in the early 1960s. He joined the Black Panther Party for Self Defense in 1968, about the same time Federal

Bureau of Investigation (FBI) Counter Intelligence Program (COINTELPRO) actions intensified against it.

Beginning in 2003, Jones was one of eight former Panthers, collectively known as the San Francisco 8 (SF8), who were targeted by a joint terrorist taskforce, under the direction of the Department of Homeland Security and established to investigate and prosecute suspects in an unsolved killing of a police officer in 1971. As a result of the taskforce investigation, Hank spent 30 days in jail for resisting a grand jury investigation in 2005 and seven months in county jail due to a criminal complaint in 2007. In 2009, 36 years after the taskforce began targeting the SF8, all charges were dismissed against him. Hank Jones continues to work for social justice and human rights.

3. Alternative Spring Break

Multiple Locations | Multiple Dates | More Info Coming Soon

Explore a new place, meet new people, serve a community, and have fun! Join other Caltech Students experiencing a non-traditional spring break volunteering in the community.

Trips under consideration this year include: Catalina and Malibu. More info and applications coming soon.

4a. Pasadena LEARNS

Friday | 3:00 - 5:00pm | Madison and Jackson Elementary School | Pasadena

Come volunteer at Madison and Jackson Elementary School! We work with their Science Olympiad team or do regular tutoring along with occasional hands-on science experiments. Transportation is provided. For more information and to RSVP, contact vkumar@caltech.edu.

4b. Hathaway Sycamores

Monday | 5:30-8:00pm | Highland Park

Volunteer at Hathaway-Sycamores, a group that supports local underprivileged but motivated high school students. The service trip includes about an hour of travel time and 1.5 hours of tutoring. Transportation is included. For more info and to RSVP email Sherwood Richers at srichers@tapir.caltech.edu.

Other Announcements - Beyond the Caltech Y

FREE SCREENING OF TO LIGHT A CANDLE: A DOCUMENTARY FILM BY MAZIAR BAHARI

Sunday | March 1, 2015 | Laemmle's Pasadena Playhouse | Doors open at 10:30 a.m. The event begins at 10:45 with an introduction to the film by Jan Grammer of KNX Radio of Los Angeles. The film, a 55-minute documentary, will begin at 11 a.m.

A brief panel discussion will follow the film to answer questions from the audience. Entrance is free but due to limited seating, tickets must be reserved at:

<http://pasadenabaharis.ticketleap.com/>

White House summits address security issues

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serious failures in George W. Bush's approach to Iran's nuclear program.

On Feb. 10, Eric Holder delivered a speech at the National Press Club in which he characterized the DOJ's dealings with Risen as a model for prosecution of unauthorized leakers. Comparing the protection of classified information that falls into the hands of the press to the disclosure of the Manhattan Project, Holder suggested that the government and press share responsibility for the protection of secrets that protect national security. There was little, if any, acknowledgement of the press' traditional role as an adversarial check on power and the universal tendency of democratically accountable governments to attempt to use classification to hide wrongdoing.

Risen responded in a series of tweets:

"Given Holder's speech today, I repeat: The Obama Administration is the greatest enemy of press freedom in a generation."

"Eric Holder has been the nation's top censorship officer, not the top law enforcement officer."

"Eric Holder has sent a message to dictators around the world that it is okay to crack down on the press and jail journalists."

"Eric Holder managed to destroy any semblance of a reporters [sic] privilege in the United States."

"This is Eric Holder's true legacy on press freedom: 'There is no First Amendment reporter's privilege.' From DOJ brief in my case."

"I plan to spend the rest of my life fighting to undo damage done to press freedom in the United States by Barack Obama and Eric Holder."

"My son is a reporter. I don't want him to have to live in a country where there is less press freedom than when I started as a journalist."

Whatever your views on leaks, official or otherwise, it is widely

acknowledged that the use of the Espionage Act to prosecute whistleblowers for talking to the domestic press has a chilling effect on press freedoms. In nearly a century it has been used only 11 times to prosecute government officials for talking to journalists, seven times under the Obama administration. They include Sterling and Kim, as well as Thomas Drake for leaking information about the NSA's Trailblazer project, FBI translator Shamai Leibowitz for leaking information related to FBI surveillance, Chelsea Manning for releasing what became the Iraq War Logs, Afghanistan War Diaries, State Department Cables, and Collateral Murder, John Kiriakou for disclosing the CIA's torture program, and Edward Snowden for exposing the NSA's warrantless blanket surveillance program PRISM. It is probably fair to surmise that authorized or flattering disclosures of classified information do not receive the same treatment.

New interdisciplinary studies major available

JOHN O. DABIRI

Dean of Undergraduate Students

I am pleased to announce that the Faculty Board recently approved a new Interdisciplinary Studies major that will enable students to craft custom-tailored curricula---comprising Caltech courses, academic-year research, courses at other schools, and independent study courses--in collaboration with faculty advisors. The new major has its origins in the Independent Studies Program, which was pioneered by former President Harold Brown as a means for students to pursue educational goals that cannot be achieved through the standard degree-granting options. It is also perhaps the most direct means for students to take advantage of our low student-faculty ratio and to

undertake academic-year research for credit.

An important change from the older Independent Studies Program is that the degree recipient can now propose a designated academic specialty on the transcript. Hence, instead of the nondescript title "B.S., Independent Studies Program" that was formerly used, the degree name can be more detailed: "B.S., Interdisciplinary Studies Program in X", where X could be "Biophysics", "Decision Neuroscience", "Environmental Science and Policy", or "Quantum Information Science", to borrow examples from previous Independent Studies Program majors.

The new major streamlines the process of formulating and petitioning for approval of the major. Two professorial faculty

from different degree-granting options are required to serve as a committee for each student, akin to the committees required for our doctoral programs. The committee advises the student on the structure and content of the curriculum, and they commit to provide mentorship throughout the degree program. The program proposal must be endorsed by the Dean of Undergraduate Students, after which it is sent to the Curriculum Committee for final approval. Further details on this program, including a web application to facilitate curriculum planning, will be forthcoming early next term. I encourage current underclassmen to consider the Interdisciplinary Studies Program as an option for pursuing your academic passions at Caltech.

Bocanegra connects engineering and nonprofits

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I'm proud to say we're quite good at quickly translating an online donation into physical supplies in the hands of students.

Now we see new opportunities in the data. We've been doing this for 14 years, so we have accumulated a great deal of information that could drive new insights. Hypothetically, we might observe, "Why do California teachers seem to order more pencils than teachers in the rest of the country?" or "Why are teachers in this Texas school district asking for more technology than books?" What stories would such data tell us? At a minimum, this could help enlighten key decision-makers about the needs and priorities of educators in their regions.

We're also starting to drive more experimentation in the classroom. The best teachers are in many ways

entrepreneurs, so we also want to connect them with entrepreneurs in industry. When MakerBot, a 3D-printing company, wanted a way to make its technology available to schools, we were able to affordably place more than 1,000 printers across the country in less than two months. Classes are using them to make anything from chess pieces to prosthetic limbs to replicas of artwork.

How does your training as a Techer help you in the nonprofit sector?

I think many people assume that nonprofits don't necessarily need a lot of technical expertise. In fact, the opposite is true. Advances in technology have created similar opportunities and opened the same kind of disruption you see in business. We have fewer resources, so we need to be efficient with them. In the case of DonorsChoose.org, I was able to apply lean management

techniques that I learned at Caltech, and MIT and Wharton afterwards, to refine it into what I call a "social, lean enterprise." Even though we have been doing crowdfunding for 14 years, we still feel like we've realized only a fraction of the potential.

Engineers and people who work in nonprofits share this in common—we want to make the world a better place. When people ask me for career advice, I often say that every company has a mission, so it's important to find a mission that matches your passion. There is probably a position or job within that company that requires your skill set and education. I feel incredibly lucky to have found such a role, and I get paid to do it.

I'm even more blessed to know that we're making a difference in the lives of educators...because they certainly made a difference in mine.

STEM gap must be closed to achieve goal of 100k Latino engineers

CONGRESSMAN TONY CÁRDENAS
ADRIAN MEZA
Guest Writers

Congressman Tony Cárdenas represents California's 29th District (CA-29); Adrian Meza is a USC graduate in Aerospace Engineering, Teach For America - Los Angeles corps member, and high school science teacher at Synergy Quantum Academy.

At the start of 2015, America leads the world in technology and innovation. But what comes tomorrow?

As engineers, who have become a high school math and science teacher and a Congressman, we ask ourselves that question again and again.

Jobs in science, technology, engineering and mathematics-related (STEM) fields are critical to our economy and will increase by 17 percent over the next 10 years. Despite this, the United States ranks 27th worldwide in the proportion of our college students earning science or engineering degrees. Knowing this, our nation

will be challenged to fill crucial open jobs with American STEM graduates.

STEM jobs are the jobs of the future. However, looking at the face of tomorrow's workforce, too few STEM graduates can be found.

Currently, 17 percent of Americans are Latino, and this number will only grow. At colleges and universities across the country, only about 7,000 Latinos graduate with engineering degrees, out of 83,000 total engineering degrees awarded each year. That's less than nine percent.

As the number of STEM graduates lags behind the number of STEM workers required over the next decade, we must pair the debates about why with action that addresses our nation's changing demographics.

In 2010, only 53 percent of Latino second-graders in California were proficient in math. This lack of mathematical fluency continues through high school as only 19 percent of AP Calculus and Statistics test takers in our state were Latino, though Latinos represent 49 percent of

the high-school aged population in California.

The STEM gap in the Latino community must be closed. We must do more to ensure Latinos have the opportunity to follow through in the path from school to college to STEM jobs. This is an effective way to make up for 407,500 baby boomer-aged engineers who will retire by 2022.

Despite the differences in where we are now, both of us share something important in common: our degrees provided our destinies.

Thanks to our education as engineers, we were both able to find career paths we were passionate about, lifting ourselves out of poverty. Teachers recognized Meza as high achieving in mathematics and that changed his life trajectory, propelling him from a low-income, mobile-home upbringing to study aerospace engineering at the University of Southern California and become a STEM teacher in South Central Los Angeles. Congressman Cárdenas' parents didn't have higher than a second-grade education, but his math and science skills led him to obtaining his electrical engineering

degree from the University of California, Santa Barbara, using his experiences to run for state and federal offices. Our stories are the stories America needs to be able to tell in the coming years.

Given the growing Latino population, if Latino kids don't start getting degrees in STEM fields, our nation will have difficulty maintaining global tech leadership. We must level the playing field and broaden STEM education opportunities not only for the sake of our Latino students and their families, but also for the sake of our status as a world leader in innovation.

We must encourage these students, provide mentorship, and close the opportunity gap.

The White House and Department of Education should partner with the tech industry, state governments, and local governments to close the STEM gap. This won't be easy, but a proactive national effort that encourages collaboration on best practices, mentorship, and strategic use of our resources can prepare our future workforce.

We should teach kids how to code regardless of their native language because coding is a language unto itself. We should embrace this reality and teach this language of the future in our schools. We should bridge the opportunity gap by encouraging Latino students to take math and science classes and stay in them. We should provide the resources Latino students need to succeed and become our future leaders in STEM.

The decisions we make today determine our workforce and competitiveness tomorrow. The numbers seem stark, but the reality is that we can produce more STEM graduates if we are willing to make the commitment. Latinos enroll in STEM majors at a rate comparable to that of their colleagues, but fail to persevere.

We must commit to this extra effort, to graduating 100,000 Latino engineers in the next 10 years, for the sake of our economy.

It starts by setting higher educational goals for our changing demographics and giving kids the opportunities they need to close the opportunity gap today and become a generation of leaders tomorrow.

Dr. Wanda Austin encourages better marketing for STEM fields

MONICA ENLOW
Editor-in-Chief

As part of the Science and Engineering Policy At Caltech (SEPAC) and Graduate Aerospace

Laboratories of the California Institute of Technology (GALCIT) Distinguished Women in Aerospace Lectures, Caltech was honored to host Dr. Wanda Austin, President and CEO of the

Aerospace Corporation. Dr. Austin presented a lecture on "Space and the Marketing of STEM," which had a primary focus on how scientists and engineers can better inspire future generations to go into STEM fields. She began by noting that the United States is seeing a decrease in the number of students who wish to pursue STEM-related fields, and that this is a problem that is relevant to anyone who wants scientific innovation and engineering success to continue.

Any student who goes to Caltech knows one thing for certain: research and engineering are not easy. Dr. Austin emphasized this as a critical component in her talk. While STEM fields can be difficult, that should not be a point with a negative connotation. The difficulty should be celebrated because it promotes exciting innovation and creative solutions to problems. By talking about the difficulties of scientific discovery as being something

only overcome by natural ability, students and others who may not be as naturally gifted become deterred from wanting to take part.

STEM fields are often taught to students by teachers who preface their lessons with, "I wasn't particularly good at science, and I don't expect you to be either. Let's just simply get through this required science curriculum." This attitude needs to be eradicated from classrooms. However, that process can only begin when the stigma of science only being for the naturally gifted is replaced with the idea that anyone can master STEM fields with time and dedication.

Dr. Austin also stressed that content is not the issue when it comes to marketing STEM. She beamed over the countless accomplishments of Caltech scientists, and then she pointed out how the general public doesn't know about a majority of activities going on at Caltech and in other notable STEM facilities.

In one activity she began by asking people to think of three professional athletes. Being that this was a Caltech lecture, only 25 percent of the audience thought of three athletes and then raised their hands. She then asked the room to think of three scientists or engineers not at Caltech. The number of hands that went up was just over half the individuals in attendance. Her point was that in any crowd that is not primarily STEM affiliated, the number of hands that would go up for professional athletes would be nearly everyone in the room, and she would be hard pressed to find any hands being raised for three famous STEM individuals. Imagine if science and engineering were marketed like LeBron James. (Aside: If NASA and Nike ever team

up for a collection, I'll be first in line.) Students wouldn't find STEM fields to be mundane if STEM fields stopped marketing themselves as difficult and mundane. There are so many exciting feats in STEM fields surfacing every day, and more people should be excited and aware that these things are happening.

The takeaway from Dr. Austin's lecture was that it is going to take effort on the part of individuals and groups in the STEM fields to improve their marketing. Scientists and engineers need to be confident and proud of the work they are doing, and they need to be excited about sharing it. That doesn't mean that every detail of every experiment needs to be explained, but Dr. Austin said during a lunch with students following the lecture that the "elevator speech" needs to be perfected. This is the simple explanation that a seven-year-old or someone you just met at a bar can understand, and not only understand, but also be actively interested. STEM fields are a challenge for the individuals in them and so is the marketing and communication aspect. This is a challenge that shouldn't be shielded away from.

Just like the many simulations and experiments being run on the Caltech campus currently, it's going to require time, patience, and dedication to achieve the expected results of effective marketing of STEM fields.

I would like to give a special thank you to GALCIT and SEPAC for hosting this lecture, to SEPAC for selecting me to attend the lunch with Dr. Austin, and to the Moore-Hufstедler Fund for financing the lunch with Dr. Austin.

2015 CALTECH UNDERGRADUATE WRITING PRIZES

Each year the division of Humanities and Social Sciences awards a number of prizes for undergraduate writing. Consider submitting your work to be recognized and rewarded for your work as a writer.

Submit your Writing this year for these prizes:

MARY A. EARL MCKINNEY PRIZE IN LITERATURE

AWARDED TO THE BEST ORIGINAL POETRY AND FICTION. SUBMIT UP TO 3 POEMS. FICTION SHOULD NOT EXCEED 12,000 WORDS.

Prize amount: \$ 500.00/each category

HALLETT SMITH PRIZE

Awarded to an outstanding essay related to the work of Shakespeare.

Prize amount: \$500.00

Submission Guidelines:

Deadline: April 3rd, 2015

Only currently enrolled full-time students may submit. Entries should be double-spaced PDFs. Winners will be announced in June, and winners' names will be in the commencement program. Winning writing will be archived using CODA through the Caltech Library. Email entries to Sini Elvington at elvington@hss.caltech.edu, noting the prize to which you are applying in the email subject and filename.

Contact Sini Elvington at elvington@hss.caltech.edu with any questions

Copa Vida: The Cup of Life

KSHITIJ GROVER
Contributing Writer

I had a chance to visit a rather new addition to the coffee scene in Pasadena on a Monday Morning: President's Day. It being a holiday, I expected a crowd-- who doesn't love a sweet little café on their day off?

Boy, was I right. There was an impressive line out the door. Rather uncommon for most Pasadena coffee places: it's hard to miss this walking down the street.

Vibe & Culture

The first thing that struck me was that the crowd wasn't exclusively college students. It wasn't just hipsters listening to music or the studious typing away on their laptops. It was an incredible mix: the Asian woman with a stroller to the old man reading a newspaper, Copa Vida seems to attract it all.

This place insists on simplicity, and it works.

Given the number of people, I absolutely loved the feeling right when I walked in. It's minimalist emphasis in its layout and design looks phenomenal with the lighting and space. Tables aren't crammed, and you can have your personal workspace. No elbow ramming, and I didn't feel distant from everyone else. Copa Vida got this right, and it's easy to tell that they put thought into the layout (there's actually ~3 subsections that the floor is divided into). The colors on the wall are wood, brick, or plain. The patched-up look, much like everything else here, really seems to work for the vibe.

In terms of noise level, I'd say this is the ideal coffee shop to work in. The background noise I've come to fall in love with is ever-present in Copa Vida: I couldn't imagine a good coffee shop without it. Yet, it doesn't have the rushed feeling of Starbucks to it. It doesn't have the crying baby or the loud conversations. To put it concisely: I'd take a final exam here, no problem.

The Service

I was disappointed when I was asked for my drink order in line; it felt impersonal and the barista forgot what I had ordered by the time it was made. After paying for my drink, I had to hang around the front counter, patiently waiting for the drink to be served up. Why didn't they just serve it to the table with my food? No idea.

I'm willing to attribute this to the busyness and time of hour, but it's certainly not the best service I've had at a coffee shop.

That being said, the baristas here know what they're doing. Seriously. They're incredibly fast with the drink order and confident with their menu. The rest of the staff is professional, but nothing special caught my eye.

Menu

Looking at the menu, you wouldn't be surprised that this place is popular. It doesn't make an attempt to overkill its offerings with lots of options: the main menu has tea, coffee, and a limited number of 'brunch' options.

The drinks run the standard range for this kind of establishment: Green Tea, White Tea, Oolong, Pu-Erh, Black, Herbal, and Milk. Of course, you can get On Tap Cold Brew, Pour Over Hot Coffee, Espresso Pressure Drinks, or Lattés. I'd say the price is also par for the course here: around \$3.50 - \$5.

With food, we have a different story. Expecting a brunch place, I was *hungry*. Don't expect this place to serve you a buffet, though. Come for a snack, and you won't be caught off guard. They had 4 sandwich options, 3 salad options, and a soup. Pricing on this front for the quantity is a bit high and caught me by surprise. You can't get by without dropping at least \$10 on a food item.

Food & Drink

MILK + TEA / BRULEE MINT LATTE

I had no idea what to expect, given I was ordering a hot milk drink with Mint in the name. There's so many ways this could've gone horribly.

It comes in a little plain green cup, and I'd say I was happy with the quantity for \$4.50. Didn't feel like I was being ripped off just yet, though I would've loved some sort of better presentation: certainly with the vibe of this place, this cup could've been better set. The tasting was yet to be done.

First sip. Amazing. I was blown away by the flavor packed into this drink; it promises minty. It promises creamy. It delivers on all fronts, and promisingly so. I'm often turned off by flavors that seem artificial, or that pop too much in a hot tea drink. Copa Vida didn't make this mistake, and I was pleasantly surprised.

As I sipped on, I realized that they had revealed the punch all too early. The taste was monotonous after a while, and it didn't have the depth of flavor I expected. In simpler terms, the drink got boring halfway in, and there was no aftertaste to keep me coming back. I finished it, though the last gulp was reluctant.



Photo Courtesy of Kshitij Grover

SALAD / KALE

This was served straight to the table, and I have to say it didn't look very appetizing at first. Visually, it was kind of a mess and had too much grease.

Pushing that off for later, I started with the accompanying slice of toast with Basil Aioli spread: solid. Good flavor profile, and the toast was well-done. Not too much spread at all. All around, this was probably the best part of my meal.

The Kale Salad wasn't exceptional, but by no means bored me. Expecting the kale to be bitter as some preparations lend it to, the salad played the tough balancing flavor act well. The red grapes and parmesan cheese worked well with the vinaigrette. Another thing to note: this salad is by no means light! The kale seemed light and airy, but the copious amount of cheese make it no less than a full meal. My suspicions with the grease at first glance were well-justified: the salad was generally a horror to eat in a clean manner, and the flavor of the vinaigrette seemed to mask most of everything else as I picked out the grapes one by one.

Final Thoughts

The vibe at Copa Vida is going to bring me back without a doubt. The food options aren't perfect, but they seem to have the flavors down: I'm expecting the food rating to shoot up the next time I'm here. To wrap up, I'll give my stars for this visit.

Vibe & Culture: 4/5

The Service: 3/5

Menu: 3.5/5

Food & Drink: 2.5/5

Dear White People causes viewers to challenge notions of self-identity

JENNY HE
Contributing Writer

When I first heard the title *Dear White People*, I'd honestly hoped this film would share the perspective of people from neither Caucasian nor African-American backgrounds. I was slightly disappointed when the trailer started and seemed to be another film about tensions between white and black people. Like the white, important-looking man (he's in a suit and tie) says at the end of the trailer, I thought "racism [was] over in America," too. The trailer convinced me otherwise in less than three minutes, however, as it presented a slew of mixed ideas even among the black students. Since September, when my friend first showed me this trailer, I decided to check out the film if the opportunity ever rose.

Yet when I walked into the *Dear White People* showing two Saturdays ago, I tempered my expectations again. I was wary to hope for too much in a social commentary film, but I was also looking forward to hearing more sassy broadcasts of the "only radio show on campus" and source for the movie's title, *Dear White People*. This letter disguised as a campus-wide broadcast is Samantha "Sam" White's (Tessa Thompson) project, in which she teaches the "white people" new social norms like how having many black friends was considered enough to not be racist. "By the way, your weed man, Tyrone, doesn't count," she said.

The movie introduced a different perspective from each of the four main characters. Sam, Colandrea "Coco" Conners (Teyonah Parris), Troy Fairbanks (Brandon Bell), and Lionel Higgins (Tyler James Williams) are black students at a fictional Ivy League school, Winchester University. At the start of the film, each student struggles with varying levels of confidence in identity and race.

Without giving too much away, I will just say that this film remembered that a constant reality about people is that they change. Through the entire film, each of the four characters grow. The confident learn to be more open-minded, and the insecure make a place of their own. It is more common for stories to develop a world in which one or two characters grow, but all four members of the cast embarking on an inward journey and

arriving somewhere new felt like watching a giant game of musical chairs. At the beginning, some people have a chair and know where they sit. As the music plays, everyone moves around to a new place, uncertain of where they will end. When the music stops,

people who might have had a chair to begin with suddenly find themselves without one, and others find new places to sit and belong. The characters in *Dear White People* are no different. In portraying these characters as very much mutable, the film allows the audience to come along and sit at the chairs with each of these different views without picking one to



-<http://en.wikipedia.org>

be the throne or any more important than another.

Perhaps it is because this film creates college students that are uncertain and are open to change that makes it more than just another film about racial tensions. *Dear White People* embraces students who are still searching for their identity and forgives those who seemed set but want to change their minds. By the end of the film, these four characters are no longer the same as when they were first introduced; progress has been made. But this progress is not the linear sort that travels towards an end goal. To define an end goal is to define any particular perspective as more correct than others. *Dear White People* neutrally defines progress as self-realization instead: to find yourself and realize where you stand. Everyone is climbing their own mountain, and the non-linear (perhaps circular) progression only takes you higher up that mountain, with each step offering a slightly different perspective and understanding of your place in your surroundings.

I rate this movie 8 out of 10, for making me think on a Saturday night and about issues I was not aware still existed. Not only is this film great for those who have struggled with their identity and defining a place for themselves, but it challenges those who feel confident in their identity as well. This film is a must-watch for anyone who likes Fat Amy or other sassy ladies.

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Write reviews of interesting restaurants, new movies, and even books! You can even submit your own comics!

Contact us at tech@caltech.edu if interested.

Women's basketball wins second conference game in a row

GOCALTECH.COM
Actual Sports Content Editor

PASADENA, Calif. (Feb. 21, 2015) – Junior Stephanie Wong (Palos Verdes Estates, Calif. / Palos Verdes Peninsula) took the game on her shoulders to lead the Caltech women's basketball team to a second straight SCIAC win in a 72-61 victory over Occidental College while becoming the fastest in program history to record 1,000 career points on Saturday night.

"Tonight was a very collective effort," Head Coach Sandra Marbut said. "Our strength was in working together. We talked about building on the momentum from Wednesday and really taking control of the game. We were able to do that and push ahead."

The win marked the first back-to-back SCIAC victories for the Beavers since 2007-08, making for quite the sendoff for senior Bridget Connor (Albuquerque, N.M. / Albuquerque Acad.) in her final game in Pasadena, and was the first in program history over the Tigers.

"I have never seen a player work as hard and put in as much time as Bridget," Marbut said. "Nothing makes me happier than to give her a win on Senior Night and to see the team come together to make it happen. She deserves it!"

Wong's seven made three-pointers also set a program single-game record, which she had already tied twice previously with six.

"Stephanie had a major shooting night – she came up big and shot the ball with amazing confidence," Marbut said. "She made a few that were just flat-out gold. She came ready to play, and Oxy had no one who could stop her. We were so wrapped up in getting the win, we didn't realize she had already reached the milestone – 1,000 points

is a big deal in our program; she is only the second player to reach that. I couldn't be happier for her, I knew it was coming from the day she stepped on campus and to have it happen the same night as a win is special."

Caltech outshot Oxy 48-34 percent from the field, a whopping 56-29 percent beyond the arc – thanks almost entirely to Wong – and 74-38 percent from the free throw line to overcome deficits in rebounding (-6), turnovers (-1) and second-chance points (11-0). The Beavers improve to 2-22 overall and 2-13 in the SCIAC while Oxy drops to 4-20 (2-13).

Oxy went ahead to start the game as Caltech could not hit a basket over the opening four minutes, but sophomore Michelle Wong (Palos Verdes Estates, Calif. / Palos Verdes Peninsula) dished out assists to her elder sister and junior Esther Du (Walnut, Calif. / Troy) for back-to-back three-pointers to make it a two-point game at 10-8 with 15:22 on the clock. Another three from Stephanie Wong would bring the Beavers within one at 12-11, and the wing soon hit two more consecutive treys to key a 12-2 run that saw Caltech surge ahead to a 27-23 lead with 6:59 left in the half. After nearly four full scoreless minutes, Wong found Connor for a mid-range jumper to make it 29-25 at the 3:02 mark.

Consecutive scores put Oxy back on top briefly, but Du nailed another three in the final minute to give Caltech a 32-30 edge heading into halftime.

Caltech hung onto the lead for the first four minutes of the second half, but Oxy fought back to go up 40-38 at the 14:49 mark. Sophomore Kate Lewis (San Antonio, Texas / Ronald Reagan) leveled the score at 40-40 and made a block at the other end, but the

Tigers extended the margin to five at 47-42 with 11:38 remaining.

Wong sent her team ahead with yet another three at 49-47 with 9:56 on the clock and the hosts never surrendered the lead, with Wong pouring in 13 points over four-and-a-half minutes to carry her team out to a 63-55 lead with just 5:20 left to play. Oxy never came closer than six points down the stretch as Caltech cruised to the 72-61 win.

"It was nice to go into the final minute and see we had the advantage enough to force Oxy to have to make a move," Marbut said. "They tried, but we had found a huge reserve of confidence."

Wong recorded the first 30-point game of her career, finishing with 31 on a ridiculous 7-of-12 from beyond the arc and 9-of-16 from the field while adding a team-high eight rebounds, three steals and two assists. Lewis chipped in 16 points, seven rebounds and two

blocks while junior Kristin Anderson (Folsom, Calif. / St. Francis) contributed six points, seven rebounds and two assists in just 24 minutes off the bench. Michelle Wong dished out a team-high three assists and Du was a perfect 2-for-2 shooting, both from long range.



Stephanie Wong is bae.

-http://gocaltech.com



Bridget Connor celebrates her last home game, which coincidentally happens to also be an amazing conference win.

-http://gocaltech.com

Beavers swim fast, break several records

GOCALTECH.COM
Actual Sports Content Editor

WHITTIER, Calif. (Feb. 21, 2015) – Freshman Henry Baer (Lafayette, Calif. / Acalanes) and junior Kevin Yu (Seattle, Wash. / Lakeside) each broke yet another record as the Caltech men's swimming and diving team kept pace in a tight race at the bottom of the standings in the SCIAC Championships.

Baer followed Friday night's 50 Free record with a blazing 52.45 100 Backstroke in the prelims and lowered the mark further at finals, posting a 52.38. Yu lowered his own 100 Fly record once again by nearly a full second, clocking a 52.49 in the prelims.

Caltech sits just 10 points out of eighth place with 160 and is within striking distance of seventh, at 186.

Yu earned a berth in the 100 Fly consolation heat and, after taking the first leg out right in the middle of the pack, ended up in 18th place to earn the Beavers a point. Baer hopped in for the 100 Backstroke 'A' final immediately afterward and trimmed .07 to hold his sixth-place ranking – tops among all freshmen in the event.

With just one relay record remaining unbroken this season, the 400 Medley Relay team of Baer, freshman Eric Lin (Potomac, Md. / Montgomery Blair), Yu and junior Patrick Eck (Fullerton, Calif. / Troy) promptly completed the feat, slapping down a 3:36.36 to shatter the 2005 mark of 3:39.96. Baer led off with a 53.21 backstroke leg while Lin swam the breaststroke in 1:01.85. Yu then touched in 53.03 and Eck brought it home in 48.27 to just touch out Chapman University

by .35. The 'B' relay team of freshman Philip An (Troy, Mich. / Troy), junior Matthew Cedeno (Virginia Beach, Calif. / Ocean Lakes) and seniors Matt Lappin (Westminster, Md. / Westminster) and C.J. Culpepper (Leonardtown, Md. / Leonardtown) picked up some points as well, placing 16th with a 3:56.48.

Senior Benjamin Grabowski (Lake Forest Park, Wash. / Inglemoor) and freshman Alex Bourzutschky (Potomac, Md. / Montgomery Blair) finished out their meet with the 1-meter prelims, placing 10th and 13th, respectively. Grabowski totaled 318.30 points while Bourzutschky impressed with 270.60, although both will await their point awards toward team scoring until the finals conclude on Sunday evening.

As Baer's and Yu's morning swims would suggest, the day began brightly for the entire Beavers team as junior Galen Gao (Irving, Texas / St. Mark's School) started the day dropping eight seconds in the 400 IM to be named first alternate for the finals and Lappin then dropped three seconds to get under the one-minute barrier for the first time in his career in the 100 Fly.

WHITTIER, Calif. (Feb. 21, 2015) – Sophomore Zofii Kaczmarek (New York, N.Y. / Stuyvesant) recorded a near-50-point improvement over last season to score 11 points for the Caltech swimming and diving team, which also picked up 24 on the 400 Medley Relay to total 89 through Day Three of the SCIAC Championships.

The Beavers trail Cal Lutheran University by just 22 points for eighth place.

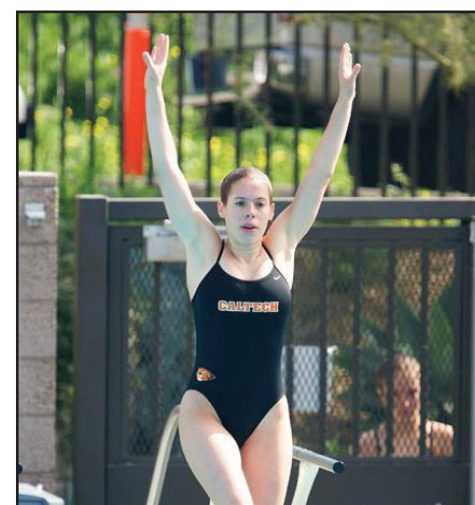


The only reason I have to suspect that this photo is of Kevin Yu is because this particular individual is swimming fly. #2fly2live

-http://gocaltech.com

Kaczmarek scored a 281.80 in the 3-meter competition while the relay team of junior Grace Lee (Artesia, Calif. / Gretchen Whitney), senior Shalini Majumdar (Orinda, Calif. / Miramonte), junior Alexandra Ilic (Austin, Texas / Westlake) and sophomore Kate Evans (Suwanee, Ga. / Lambert) clocked a 5:11.34. Lee led off the backstroke leg with a 1:21.62, followed by a big drop from Majumdar to record a 1:23.24 in the breaststroke. Ilic was timed at 1:16.20 on the butterfly and Evans brought it home in a 1:10.28.

During the morning prelim session, Evans chopped an impressive five seconds off her 200 Free time and Ilic about matched her personal best in the same event.



Zofii Kaczmarek sticks the landing.

-http://gocaltech.com

ASCIT Minutes

ASCIT Board of Directors Meeting

Minutes for 20 February 2015. Taken by Sean McKenna.

Officers Present: Cat Jamshidi, Nima Badizadegan, Patrick Nikong, Annie Chen, Sean McKenna

Guests: Margaret Lee, Elliott Simon, Alex Ryan, Bianca Lepe, Nikita Sirohi

Call to Order: 8:04 pm

President's Report (Cat):

- Final wording of the BOC resolution change proposal has been written by Cat, Connor, and Alex Hartz. Barring objections to the wording by the BOD, Cat will work with Chris Dosen to prepare for a vote by undergraduates.

Officer's Reports:

- V.P. of Academic Affairs (ARC Chair: Nima):**
 - Student Faculty Conference committees are writing up final reports. Nima will make a Faculty Board presentation regarding the SFC.
 - Freshman peer advising is being set up for the Class of 2019. This advising will try to blend in peer advising alongside faculty and could include advising for frosh on first-term registration.
 - Take a prof to lunch!
- V.P. of Non-Academic Affairs (IHC Chair: Connor):**
 - Concerns about pulling all-nighters have motivated discussion on the effectiveness of changing due times to nights (midnight-2am) or afternoons (4pm-6pm) for core classes. Guidelines on this could come from Core Curriculum Steering Committee, a directive of the Vice Provost, or conversations between the core professors and the ARC/IHC chairs.
- Interim Director of Operations (Sean):**
 - ASCIT projector system will now be available for undergraduate use. Reservations will take place through Donut
 - ASCIT ping pong equipment is coming soon.
 - There are still yearbooks left! Pick one up from your house lounge if you didn't already grab one.
- Treasurer (Patrick):**
 - Patrick will do a budget report next week
- Social Director (Annie):**
 - Many events are coming up:
 - Magic Mountain, March 7th
 - Be a Kid Again, March 1st
 - ASCIT Formal, April 4th
 - Harvey Mudd Party, sometime in May (transportation provided)
 - Transportation to a food festival, date TBD
- Secretary (Sean):**
 - Sean is updating house positions on Donut and will reach out to secretaries to let them know that they can update their house's Donut positions on their own.

If anyone has any questions or concerns about a section of the minutes please email the appropriate officer. We are happy to answer any questions. The next meeting will take place on **February 27th at 8pm in SAC 15.**

Meeting Adjourned: 8:23

**YOU ARE NEVER ALONE.
REMINDER FROM
THE COUNSELING CENTER:**

Meditation Mob
(drop-in mindfulness
meditation group)
Meets every Tuesday
Bottom floor of Winnett
12:00-12:50 pm

CALTECH *presents*

Saturday, February 27, 2015 / 8 p.m.

\$40, 35, 30; Youth \$10



Les Ballets Trockadero de Monte Carlo

Beckman Auditorium

Call campus x 4652

visit the Caltech Ticket Office 101 Winnett Center



CALTECH THEATER offers several chances to branch out and take chances, have fun and expand your social network this year!

WANTED: Actors, singers, musicians, technical personnel, and designers for new, original Caltech musical *Alice Through the Wormhole!* This musical is currently in the development phase with a world premiere run Feb 20-March 1, 2015! If you are interested in any facet of production, including script development, contact Brian Brophy directly (brophy@caltech.edu).

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Brad/Chad Business Tutorial: BCG Product Matrix

BRAD CHATTERGOON
Contributing Writer

Hey Techers. It's week 8. Drop day will soon be here which means two things: (i) scrambling to get professor signatures, and (ii) it's time to pick classes again! Be sure to sign up for those lottery classes before Wednesday and start browsing the courses that you want take ahead of time so that you can get enough time to think about classes, especially if they are limited seating.

This week's monologue is a case study on how going to Caltech sometimes makes it difficult to communicate with "normal" (read: non-technical) people. The setting is an interview with a non-technical program director for grad school.

Interviewer: So why do you want to enroll in this program?

Response: There are a lot of big problems across the world that are standing in the way of development. For instance I was in Jakarta last summer and I sat in a taxi mixed into a chaotic mess of cars just drifting along the highway ... do you know what drift velocity is?

Interviewer: Uhh no.

Response: OK, well it's this thing where ... *explains drift velocity using the travel of electrons in a wire 'drifting' along instead of going at their actual velocity*. And yeah, that sort of slow transportation problem will hold back development because people won't be able to move around efficiently and the entire economy is just moving slower than it should be.

Interviewer: OK. So what do you want to do after you finish the program? How do you want to get to a position where you can solve these kinds of problems?

Response: Well I'm not sure exactly what opportunities will present themselves as I go along so I'm just using a greedy algorithm to ... do you know what a greedy algorithm is?

Interviewer: *jokingly* What's with all these hard questions? No I don't know what it is.

Response: OK, well it's... *explains greedy algorithm*. So I'm just optimizing locally at every branch to decide what the best path to take at the time is.

This week's article will focus on the BCG growth-share matrix, which is a representation of product portfolios within companies. The matrix is divided along two criteria: market share and market growth rate. A product can be either high or low in each of these two categories, resulting in a four-section matrix.

High Market Share and Low Market Growth Rate, the Cash Cow:

These products are in a market that has already matured considerably and has attained market leadership or close to market leadership. Because of the maturation of the market, there is a lot of cash flow and the market dominance ensures that that money is being pocketed by the company. In general, these products are there to support other product endeavors, especially in the emerging markets arena where it is possible that those products may have negative cash flow.

High Market Share and High Market Growth Rate, the Star:

These products are new products that have established a strong presence in an emerging or new market. These are products that are expected to be converted into cash cows later in the market life cycle as they have already established themselves and have the important market share advantage over competitors, which can be crucial depending on the market. These products are usually cash flow positive, and therefore can sustain themselves with profits being reinvested into developing and selling the product.

Low Market Share and High Market Growth Rate, the Question Mark (sometimes called "Problem Child"):

These are new products that are just beginning to challenge competitors for market share in an emerging market. The future of these products is uncertain and the products will require work to develop into a competitive position. The cash flows from the cash cow products are best invested into developing products in this category, as they are often cash flow negative and will need assistance to develop into stars, lest they go unaided and enter the last category on the list.

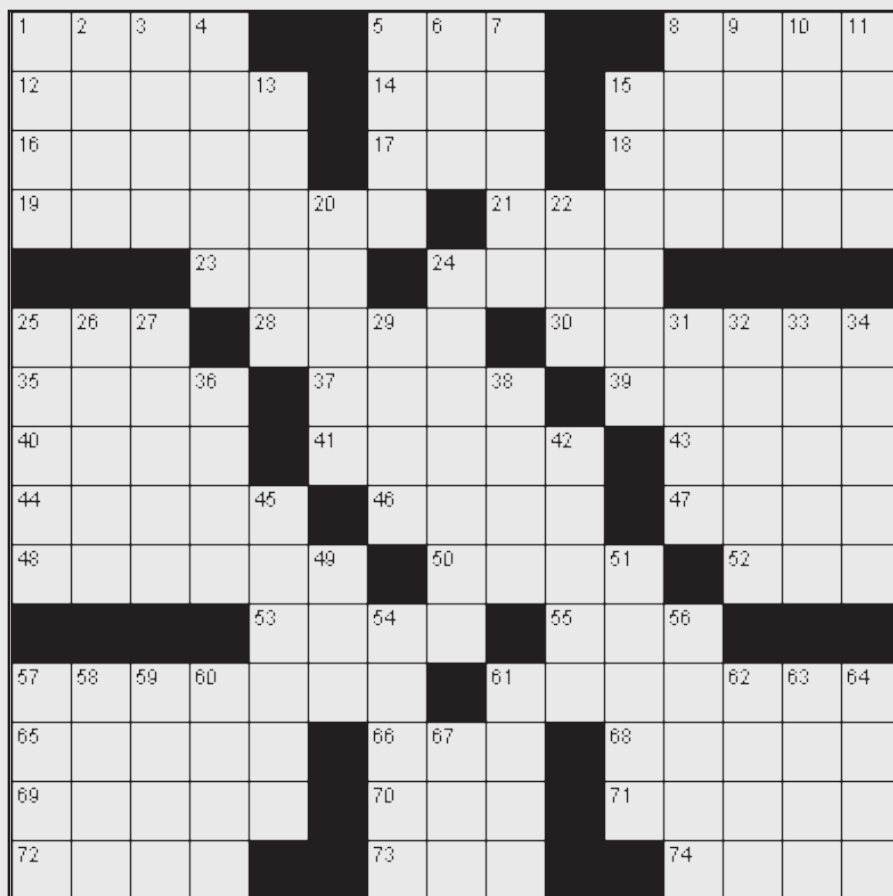
Low Market Share and Low Market Growth Rate, the Pet:

This category is populated with, in a sense, "failed products." They did not capture a high market share and the market is in a mature or declining stage, so there is not much more that can be done with these products, although they may yet be breaking even. It is sometimes best to divest the assets related to these products and focus on the other three categories.

Thanks for reading! A question I have had lately is, "Does anyone even read these?" If you do, I would be only too enthusiastic to hear the feedback.

-Brad/Chad

Crossword



-http://puzzlechoice.com

Across

1. Stalk
5. Possessed
8. Scorch
12. Bulbous plant
14. Female animal
15. Desire
16. Humiliate
17. Snakelike fish
18. Building offering lodging and meals
19. High ranking officer
21. Ornate manner of speaking
23. Relieve from
24. Rapid active commotion
25. Mediterranean fruit tree
28. Deposit of valuable ore
30. Disorderly fighting
35. Part of the eye
37. Let for money
39. Beauty shop
40. Rant

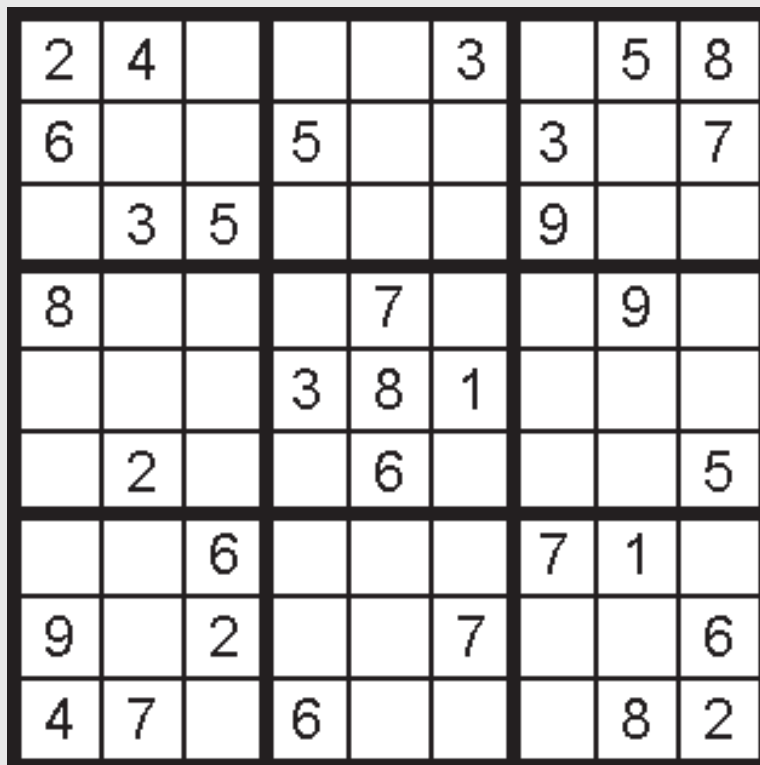
41. Come after
43. Small semi-aquatic salamander
44. Warhorse
46. Change direction
47. Cervid
48. Bid
50. A great distance
52. Inquire in a meddlesome way
53. A small compartment
55. Crib
57. Bluster
61. Steadfast
65. Speedy
66. Actor's prompt
68. Took without consent
69. Part of a church
70. Employ
71. Sum
72. Mirth
73. Deplete
74. Rip

Down

1. Male red deer
2. Long hollow cylinder
3. Panache
4. Stingy hoarder
5. Part of a shoe
6. Veneration
7. Style of glazed earthenware
8. Black bird
9. Detest
10. Report or maintain
11. Depend
13. Danger
15. Part of a song
20. Worship
22. Illuminated
24. Sultry
25. Number one
26. Very angry
27. Presumption
29. Depression in a surface
31. Grains of rock or coral
32. Slumber
33. Further down
34. Way in

36. Outstanding tournament player
38. Divot
42. Represent as if in a play
45. Ten years
49. Color
51. Cook by dry heat in an oven
54. Venue
56. Private instructor
57. Boast
58. Complain bitterly
59. Part of a church
60. Despicable
61. Ooze
62. Short letter
63. Group related by blood or marriage
64. Contained
67. Country, initially

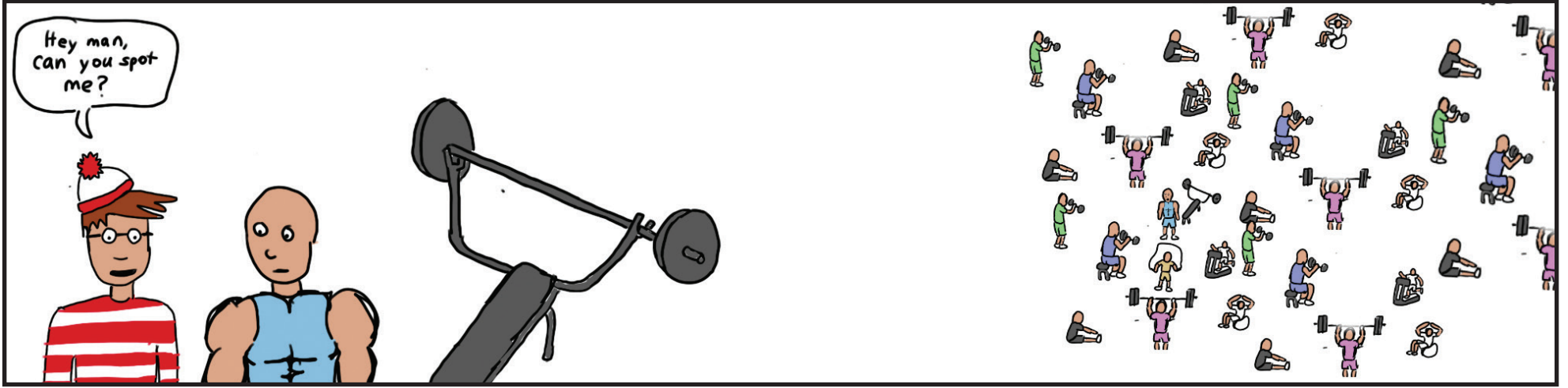
Sudoku



-http://puzzlechoice.com

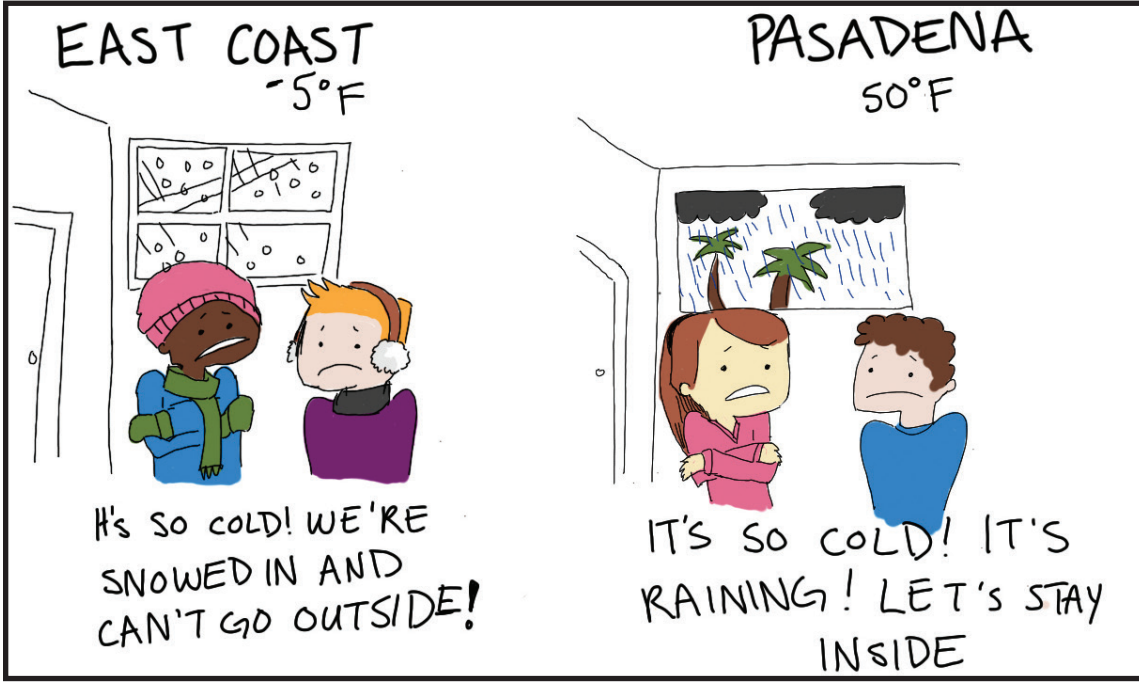
Acquired Taste

Dr. Z



"Weather"

Liz Lawler




"This comic does not contain basketball, graduation rate, hair, or drop day-related materials."

Georgio Kraggman

This is the ruby seadragon, *Phyllopteryx dewysea*. It was recently discovered in Western Australia.

It is the first new species of seadragon to be discovered in 150 years, making it the third known seadragon (the others are the leafy seadragon and the weedy seadragon).

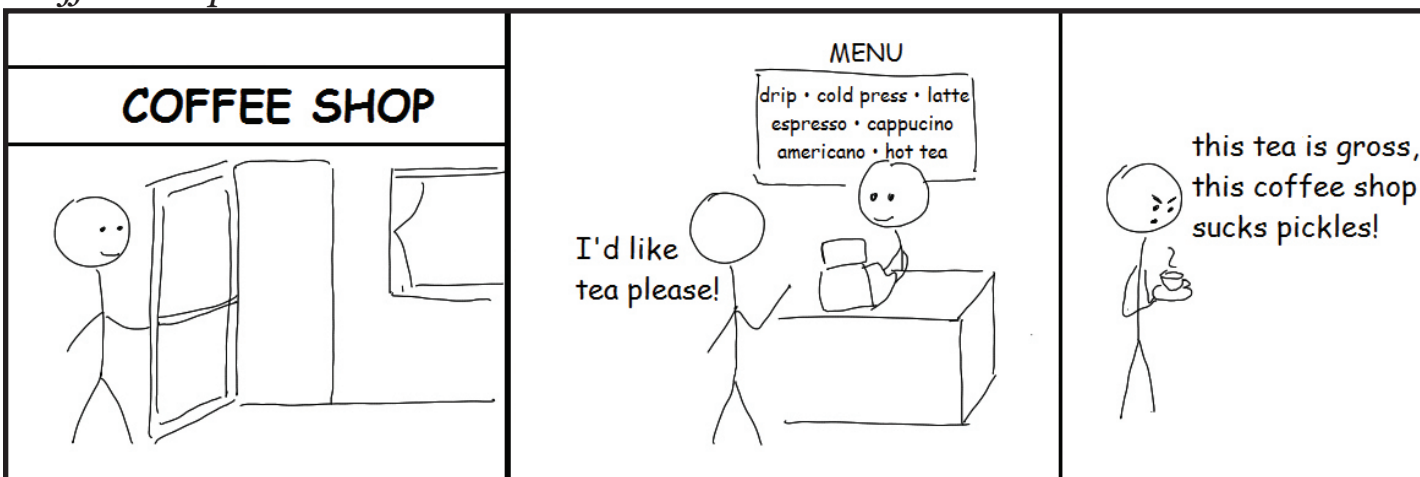


Seadragons are a type of pipefish, related to the seahorse. They do not have the curved prehensile tail of the seahorse and can move slowly using their dorsal fins. Like the seahorses, the seadragon males carry the eggs.

They are relatively large; the first ruby seadragon found was 24 cm (9.4 in) in length. The leafy and weedy seadragons are classified as near threatened and have been endangered by human collectors and pollution, as well as by their inability to hold on during a storm.

"Coffee Shop"

Turtle Lover



Answers to previous crossword

| | | | | | | | | | | | | | | | |
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<http://puzzlechoice.com>

Answers to previous Sudoku

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

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