

Four from Caltech elected to National Academy of Sciences

JESSICA STOLLER-CONRAD
Caltech Media Relations

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One Caltech professor and three Caltech alumni have been elected to the prestigious National Academy of Sciences (NAS). The announcement was made Tuesday, April 28, in Washington D.C.

The Caltech faculty member elected to the Academy is Marianne Bronner, Albert Billings Ruddock Professor of Biology and Executive Officer for Neurobiology. Bronner is a developmental biologist whose studies focus on the cellular and molecular events underlying the formation, lineage, and migration of neural crest cells—early cells in vertebrate embryos that eventually give rise to a diverse range of cell types, from neurons to facial skeleton cells. In 2013, she was awarded the Conklin Award from the Society for Developmental Biology, and she currently serves as the editor in chief of *Developmental Biology*, the society's official journal. She is a fellow of the American Academy of Arts and Sciences (2009) and presently serves on the scientific advisory board of the Sontag Foundation.

Bronner joins 75 current Caltech faculty and three trustees as members of the NAS. Also included in this year's new members are three Caltech alumni: Eric Betzig (BS '83), a Nobel laureate and group leader in physics at the Howard

Hughes Medical Institute's Janelia Farm Research Campus; Robert Schoelkopf (PhD '95), the Stirling Professor of Applied Physics and Physics at Yale; and William Ward (PhD '73), an institute scientist in the Department of Space Studies at the Southwest Research Institute.

The National Academy of Sciences is a private organization of scientists and engineers dedicated to the furtherance of science and its use for the general welfare. It was established in 1863 by a congressional act of incorporation signed by Abraham Lincoln that calls on the academy to act as an official adviser to the federal government, upon request, in any matter of science or technology.

A full list of new members is available on the academy website at: <http://www.nasonline.org/news-and-multimedia/news/april-28-2015-NAS-Election.html>



Along with three Caltech alumni, current Caltech Professor Marianne Bronner was elected to the National Academy of Sciences.

Photo Courtesy of Lance Hayashida/Caltech

Six lanes one way, one the other: The reality of the two-way street

ANDRE COMELLA
Contributing Writer

Last week, Brad Chattergoon published an article about rape and gender discrimination. He specifically focused on the case of Emma Sulkowicz of Columbia University. I encourage you to read his article for context, but here, I want to focus on the broader issues Brad's article touches on. Before going further, I would like to say that this article will discuss a great deal about rape and sexual assault. For some, such things can be difficult or triggering. Be aware, this could get uncomfortable.

Before we get started, I would like to set the tone of this piece. It chiefly discusses rape and sexual assault in its most commonly discussed form: a man raping a woman. Male, transgender, and gender-nonconforming people are also far too often the victims of sexual assault, and they deserve far more attention than the next-to-nothing they get. This is a reaction piece, however, so I will be focusing on the scenario discussed by Brad in his article.

First, let's look at Brad's bold statement, "There's no way Paul Nungesserraped Emma Sulkowicz." This comes after he discusses the Facebook conversations between Sulkowicz and Nungesser. They do seem confusingly friendly, even after the alleged rape, but it's quite naive to think that every rape victim immediately responds with fear, revulsion, and avoidance. Sulkowicz's response is actually fairly common; she wanted to discuss the incident with Nungesser, but she also wanted things to be normal. For those interested, I recommend

reading the Jezebel article about this case, which includes the Facebook conversations complete with annotations from Sulkowicz herself. The annotations highlight a lot more of the subtlety and explain behavior that would seem strange to many.

In fact, one of the largest problems that stand in the way of rape reports and convictions is a flawed idea of how rape victims should behave. Rape is inherently a very traumatic experience, and as such, often elicits strong responses from the victims. But here's the thing: you cannot predict how a victim will respond. Some are able to compartmentalize and move on after some time, others respond with extreme fear and anxiety, and still others respond in totally different ways. Many victims react as Sulkowicz did, by trying to pretend everything is normal in hopes that one day the pretending will make it true. The fact that her accusation came months later is also not unusual; rape is considered among the most under-reported crimes. Many victims are unwilling to publicly make such an accusation, particularly because of how difficult proving rape is and how society treats alleged rape victims. When reports do happen, they are often much later — after the victim has had time to process, or perhaps, like in Sulkowicz's case, because they have found out their assailant had assaulted other people.

Brad portrays Sulkowicz as a jealous woman crying rape after the man she was sleeping with called things off and began sleeping with other people. The idea that rape victims are really just jealous or vindictive women is unfortunately

common, but also totally out of line. Consent is a thing that needs to happen every time people have sex. Consent in the past does not guarantee, or even imply, consent in the future. Just because they had previously had consensual sex does not mean that it was impossible for Nungesser to have raped Sulkowicz. While it is true that false rape reports happen, to assume that every case is just a petty women pitching up a storm goes beyond sexist.

But perhaps we should consider where these viewpoints come from, and why it seems so many rape allegations turn out to be false. Beyond the fact that many victims retract their allegations when the process turns out to be a second nightmare, there's also incentive for the media to present dubious cases. I encourage you all to read the article called "The Toxoplasma of Rage," which goes much more into this, but in short, the most profitable articles are the ones that people will argue over. Clear-cut cases don't drum up controversy and can't be milked for weeks, so the media tends to report cases where facts are muddier and there's plenty of room to argue. There are, of course, many situations where the facts are clear-cut, and people still argue against calling the crime rape, and this is where victim blaming comes in.

See, Brad puts forward an idea that's fairly popular among so-called "men's rights activists," the idea that when it comes to rape, men are the persecuted party. He claims that men are the real victims because, as a society, we label men as rapists and hold on to that

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Student examines societal trends regarding investigation of rape cases

ADAM JERMYN
Contributing Writer

In a recent article in *The California Tech*, Brad Chattergoon made a bold claim: "As a society, we discriminate against men as rapists. We are ready to launch an attack against anyone who has a finger pointed at them." This claim struck me as strange and counter to what I have seen, so I decided to investigate.

Useful hard data on this question is difficult to find. The ideal dataset in this case would be a summary of the outcomes of a random sampling of sexual assault accusations against both men and women, along with the outcomes of

the resulting investigations. Even if these data were available, however, there is an even greater problem: many cases are never reported, in no small part due to hostile environments.

College football is a good arena for understanding this problem. This area has been a perennial problem for sexual harassment reporting and enforcement, from the Notre Dame case of 1976, where a witness was told by university administrators "to shut up and mind my own business" to the Brigham Young University case of 2004, where two members of the football team were acquitted in court because, in the words of the jurors, "they had suffered enough,

they lost their scholarships." That reasoning seems bizarre to me: the decision to acquit or convict in a legal case should be based purely on the facts of the case, not on whether the defendant has "suffered enough." Of course, this is just one case, so we should look further and see what the data says.

Fortunately, the high-profile nature of these and other cases means that statistics have actually been kept. The Benedict/Crosset study found that male college athletes accused of sexual assault are convicted at less than half the rate of the general population. Barring seemingly-unlikely selection effects (that athletes are that much more likely to be

falsely accused, for instance), this suggests that at least in the realm of athletics, the current system discriminates against the (mostly female) victims, not the (mostly male) accused.

More broadly, the reasons that women do not report sexual assault cases are well-documented. In a National Institute of Justice study, the three most commonly cited were lack of trust in the justice system, fear of not being believed and fear of being accused of playing a role in the assault. None of these paints a picture of a system which overtly discriminates against accused men. Additionally, the last of these reasons is essentially a fear of victim blaming. This fear,

along with the actual practice of victim blaming, is so prevalent that many jurisdictions in the U.S. have adopted special laws (known as Rape Shield Laws) to prevent its most egregious forms in court.

None of this evidence suggests that there is systematic discrimination against men in sexual assault cases. Of course there have been cases of wrongful accusation and wrongful legal/disciplinary action, but these would appear to be the exception, rather than the rule. The rule appears to be one of discrimination against victims of sexual assault, not the accused perpetrators.

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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.

Founded by students in 1916, the Y was organized to provide extracurricular activities planned and implemented by students as an opportunity to learn leadership skills and discover themselves. The mission of today's Y remains the same—to provide opportunities that will prepare students to become engaged, responsible citizens of the world. The Y seeks to broaden students' worldviews, raise social, ethical, and cultural awareness through teamwork, community engagement, activism, and leadership. 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.

Ongoing and past programs hosted by the Y:

Alternative Spring Breaks: Costa Rica, New York, Yosemite, San Diego, San Francisco

Make-A-Difference Day: Hillside Home for Children, LA County Arboretum and Botanic Garden, Children's Hospital Los Angeles (Coachart), Eaton Canyon, Lifeline for Pets

Explore LA: Lakers game, Next to Normal musical, Norton Simon Museum trip

RISE Tutoring program (an afterschool math and science-focused tutoring program that serves public school students between grades 8 and 12)

Upcoming Events

1. Caltech Y India Cultural Trip - Info Meeting

Thursday | May 7th | 12:00 - 1:00 PM | Caltech Y | RSVP Required

The Caltech Y, in partnership with the SURF Program and IIT Gandhinagar (IITGN) in India, is coordinating a trip to Ahmedabad, India. Come hear more about the trip from two of this year's participants: Lekha Viswanadham and Aditya Bhattaru.

The Caltech Y India Cultural Trip explores India as an emerging nation and its potential role as a global leader in the context of its history and culture.

RSVP at <https://docs.google.com/forms/d/1nUUnxYVoYBi3GPDWVFSMzKB4RBZoiXaqSfbR3zmHWQQ/viewform>.

2a. Pasadena LEARNS

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

Come volunteer at Madison and Jackson Elementary School! We are partnered with the Pasadena LEARNS program and 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. Eligible for Federal Work Study.

2b. Hathaway Sycamores

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

Volunteer at Hathaway-Sycamores, a group that supports local underprivileged but motivated high school students. There are a variety of ages and subjects being tutored. 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. Eligible for Federal Work Study.

Other Announcements - Beyond the Caltech Y

Afternoon Coffee with Dr. Shirley Malcom

Wednesday | April 29th | 2:30 PM | Gates Library in Gates Annex | RSVP Required

The Caltech Women in Chemistry Committee cordially invites you to "afternoon coffee with Dr. Shirley Malcom," Head of Education and Human Resources Programs at AAAS

About the guest: Dr. Shirley Malcom is head of Education and Human Resources Programs at AAAS. She works to improve the quality and increase access to education and careers in STEM fields as well as to enhance public science literacy. Dr. Malcom is a trustee of Caltech and a regent of Morgan State University, and a member of the SUNY Research Council. She is a former member of the National Science Board, the policymaking body of the National Science Foundation, and served on President Clinton's Committee of Advisors on Science and Technology. Dr. Malcom, a native of Birmingham, Alabama, received her Ph.D. in ecology from The Pennsylvania State University, masters in zoology from UCLA, and bachelor's with distinction in zoology from the University of Washington. She also holds 16 honorary degrees.

Dr. Malcom serves on the boards of the Heinz Endowments, Public Agenda, the National Math-Science Initiative and Digital Promise. Internationally, she is a leader in efforts to improve access of girls and women to education and careers in science and engineering and to increase use of S&T to empower women and address problems they face in their daily lives, serving as co-chair of the Gender Advisory Board of the UN Commission on S&T for Development and Gender InSITE, a global campaign to deploy S&T to help improve the lives and status of girls and women. In 2003, Dr. Malcom received the Public Welfare Medal of the National Academy of Sciences, the highest award given by the Academy.

Source: <http://www.aaas.org/person/shirley-malcom>

From the (Interim) President's Desk: Research during the academic year

CONNOR ROSEN
Interim ASCIT President

I've had many discussions with students, administrators and faculty recently about the 12-term tuition policy. There are many nuances and arguments to be made about the policy, certainly, but I remain convinced that the policy solves no problems and is only creating more issues for students, and therefore needs serious reconsideration or repeal. One argument many faculty have made to me in particular bears discussion, however, and that is the argument that students can just add research units to make up the difference in any term they would otherwise underload. Given the many discussions I've had with faculty over the past three years about academic research, this is a disingenuous suggestion and a failure to actually address any issues with either the 12-term tuition policy or low research participation.

Academic-year research has been a topic of discussion at Caltech my entire time here. For more than two years, one of the opening panels at the Student-Faculty Conference focused on steps that could be taken to improve the participation rate of undergraduates in academic-year research, predominantly through the faculty and curriculum design. None of those steps have been taken. Shortly after the SFC, the Curriculum Committee was asked to look into adding a research requirement. After a year and a half, the committee finally reported back to the Faculty Board, recommending against a research requirement and suggesting that other ways of encouraging research be examined—like those mentioned two years prior at the SFC. Still nothing has happened.

There are a number of barriers to increasing participation in academic-year research. While Caltech boasts of its 3-to-1 student-to-faculty ratio, that ratio varies

dramatically by option, and in the largest options, such as computer science or mechanical engineering, this ratio is far worse. This makes it difficult for many students to find research in their majors. Students in these majors also look for off-campus internships at a higher rate, and the SFC two years ago pointed out that students have an easier time finding and succeeding in academic-year research if it follows an on-campus SURF. Faculty and students in the Division of Engineering and Applied Science, along with other options, argue (perhaps rightly) that many students are focused on non-research careers after graduation, and therefore shouldn't be forced to do research while here. Students in all departments point out that their research interests don't always line up with the research available in their majors, making it difficult to find a lab they are interested in that is also willing to take an undergraduate.

These are all valid reasons not to do research. However, it is unjust for the faculty to cite these reasons on one hand to justify the status quo of low research participation, and then on the other hand ignore them completely and suggest that students somehow overcome all of these barriers their senior year

(or in any other term they would otherwise underload) in order to reach 36 units. It is unreasonable to expect students to suddenly be able to find research third term of senior year when they are underloading, without multiple terms or even years of work before, especially when divisions make no provision for research in their planned curricula. In fact, the only options that explicitly include research in their recommended course paths (in the catalog) are humanities and social science options, applied physics, astronomy, materials science, and electrical engineering (in the thesis path).

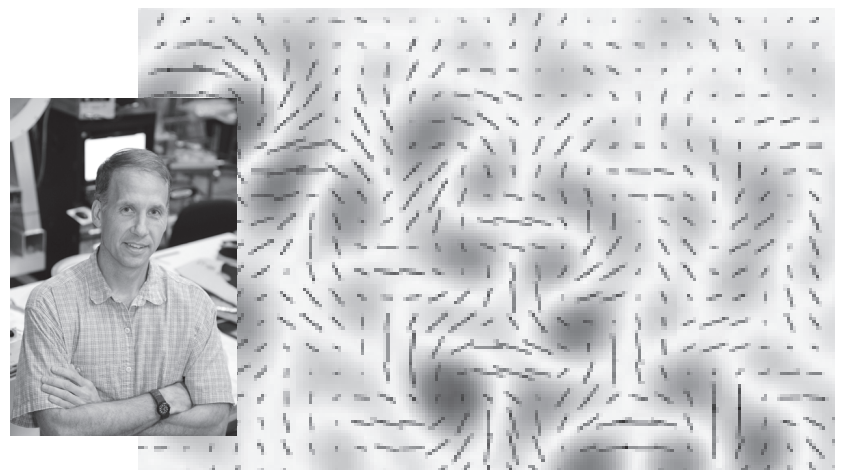
Academic-year research should be a priority for students. Faculty in the various divisions should refine the curricula, both required and recommended, to make provisions for research during the school year. This must be accompanied by encouragement of multi-disciplinary projects, independent reading, and recognition that research is an important skill regardless of career path. Until all of that happens, research participation will remain low. Right now, research cannot be a reliable method of achieving a full-term load, and the problems with the 12-term tuition policy remain unsolved.

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At the intersection of the Honor Code and Title IX: Discussing respect and consent

EMILY MAZO
Contributing Writer

Last week's Tech article "The girl that cried wolf: Gender discrimination is a two-way street" made a seriously dangerous statement about the ability of a woman to consent to a sexual relationship. The author, after stating that he had read all of the messages between Emma Sulkowicz and Paul Nungesser presented in evidence in Nungesser's suit against Columbia University, said that he believed "There is no way Paul Nungesser raped Emma Sulkowicz." He based this statement on the communication between the two of them that presented examples of a consensual sexual relationship before the alleged rape, and also "extreme unrequited emotional attachment" from Sulkowicz onto Nungesser after the event.

Let's get something straight. If a man or woman consents to sex once, it means he or she consents to sex that time only. If a man or woman consents to one aspect of a sexual relationship, he or she is consenting only to that act and not to any others without explicitly giving consent to those also. If a man or woman says yes to sex one night, and no the next night, having sex

after he or she says no is rape, even if he or she said yes once before. If a man or woman consents to oral sex and then you have penetrative sex without his or her agreeing to it, that is rape. Just because someone is in a previously consensual sexual relationship does not mean that he or she consents to sex forever after. Respect your partner's right to say no, and respect your partner's right to change his or her mind.

This is not a campus where students feel they are ever in danger of sexual assault. This is not a place where students feel anything but safe at Interhouse parties and while drinking with housemates and friends. Thank god for that. But this is campus where I've stood next to male students calling a conservatively-dressed female student a slut because she was dancing on top of a speaker. This is a campus where I've danced at Interhouse parties and had strangers grab my body and start grinding on me without asking permission. On this campus, "Title IX" is a joke yelled at dinner when someone says something that in any way mentions femininity. After freshman orientation this year, my housemates found a copy of a handout on how to ask for sexual consent and mocked it mercilessly, until I tried to convince them

that asking "Wanna have sex?" is not a weird question to ask when you're already being intimate with someone.

The idea that anyone on this campus needs to pay more attention to respect and consent is generally considered a joke. We mock Title IX initiatives because we don't think we need them. No one who laughed at that consent pamphlet was at all considering changing the way that they approach a sexual encounter. "This is Caltech! We respect our housemates so much and we know everyone else on campus, and we trust each other. We have the Honor Code. People don't get assaulted here because Techers are better than that." At least, that's what you might want to believe.

But sexual assault does happen on this campus: even if you haven't heard about it yourself, I can assure you that it has happened while you've been here. We do have a problem with sexual assault, just like every other college campus in this country. But we do have the Honor Code, and we are a small school with a house system that fosters close friendships and relationships with housemates. We have huge potential to change the way that we approach respect and consent.

I say that this statement in last week's article is dangerous to this community because I see this community as one that already suffers from misunderstandings of consent, and one that already has problems with respecting fellow students and their bodies. The last thing we need is to pass around the idea that because Emma Sulkowicz was once in a sexually consensual relationship, that automatically means she was not raped. I cannot pass any judgement on what happened between Sulkowicz and Nungesser, two complete strangers to me whose case belongs in a court of law, but I am frightened by the implications to our campus that an assumption like that, commonly held, can have.

I wrote this article first to clear the air on the fact that consent can be retracted. But I find myself ending with a plea to students on this campus: please take sexual consent and respect for your fellow Techers seriously. Please listen when your Title IX representative presents to the house, or tells you that something you've said or a way that you've acted is potentially damaging. Please speak up when you see someone being mistreated or taken advantage of. Help each other. Always ask for consent.

Letter response to Brad/Chad

ARIEL MARGARET O'NEILL
Contributing Writer

Dear Brad,
You are not the judge of who has or has not been raped, regardless of how thoroughly you have reviewed the facts of the case available to the public. Like you, I am also concerned about fair treatment in cases of alleged discrimination, harassment or assault. All parties of all genders deserve to be treated fairly in these cases, and I feel that this is often not what happens.

While we may feel outrage over the outcome of proceedings, I believe we should focus our efforts for reform at the process, rather than the specifics of the case. Starting with the outcome we want, even if it is very clear to us what the correct outcome is, and working backwards to create a procedure that remedies the perceived injustice is not a reliable way to create fair policies.

I agree that women are strong. However, when you imply that because women are strong, they should act a certain way, you are not empowering me to stop acting like a victim. You are another person telling me how I, as a woman, should act in order to live up to your assessment of a group to which I belong. One of the strongest things I have ever done was reporting gender-based discrimination when the people around me told me I was crying wolf.

I am a feminist and I am strong, but I do it my way.

Sincerely,
Ariel Margaret O'Neill

Sexism an imbalanced 2-way street

Continued from page 1

viewpoint long after they have been acquitted. But let's really talk about how we treat each side of a rape case. Undoubtedly, there are those who immediately assume guilt, and even more moderate people are prone to doling out severe criticism of alleged rapists. For many, even an acquittal isn't enough to change their opinions, but should it be? Most of the evidence needed to prove rape is biological and decays after a few days or even a simple shower and therefore is never collected. Additionally, many rapists coerce their victims by exerting authority over them; the same authority can protect the rapist from being convicted or even tried (cases like these are believed to be most common in the military). In short, there are many things besides innocence that can prevent a guilty verdict.

Victims of rape are subjected to enormous amounts of criticism and abuse. They are blamed for their assaults, called sluts and made to feel dirty and worthless. There are constantly those who will blame the victims, tell them they were "asking for it" (how one can ask for something that is, by definition, non-consensual is beyond my understanding) and in general add untold amounts of awfulness to the process.

And in the typical scenario, how do we see the man? True, some people call for a "guilty-until-proven-innocent" standard

or condemn men who have been clearly proven innocent, but these people are a radical minority. The major public opinion is to doubt the woman, to blame her and to write off the man's actions with a simple "boys will be boys." Let's look back at the Steubenville rape trial from two years ago. Two teenagers were convicted of raping one of their high school classmates while she was unconscious. There was no doubt of the boys' guilt; video, eyewitnesses and dozens of pictures were available. But many media sources portrayed the girl as a "slut" or an attention-seeker. Her community lashed back at her, claiming she was hurting the reputation of the town's football team. And the rapists? The media (CNN in particular) was far more sympathetic to them, describing how difficult and painful it was to be convicted of rape. The media even went so far as to describe the tragic loss of the boys' promising futures and football careers.

So yes, sexism happens to both sexes, but calling it a "two-way street" implies something far more balanced than the reality. Those who treat alleged rapists unfairly are a radical minority. But those who treat victims with scorn, disbelief and shame while defending rapists form a much more common demographic. This is a societal problem, which makes it a daunting one to take on, but on the other hand, it means we can each have a hand in solving it. And I really believe we can do better than this. Frankly, we have to.

Dangerous misconceptions: How rape skepticism harms victims

LAURA WATSON
Contributing Writer

Brad Chattergoon published an article last week about sexual assault. In general, maybe it isn't super tactful to start an article about the painful and complicated issue of rape with "Avengers premieres this week, so that makes life worth living." That being said, I'd like to thank Brad for bringing up this issue — he has started a conversation about sexual assault in the otherwise politically-dead bubble that is Caltech and provided an opportunity for education.

Brad's overall message was that "As a society, we discriminate against men as rapists." His argument was based on a sexual assault case at Columbia University in which Emma Sulkowicz accused Paul Nungesser of rape. Brad claimed that a series of Facebook messages was proof that "There is no way Paul Nungesser raped Emma Sulkowicz" and continued to allege that Sulkowicz accused Nungesser of rape because she was mad he started dating other women. Let's get into the misconceptions and stereotypes which made this article misleading and harmful to victims of sexual assault.

First of all, a failure to convict Nungesser does not "confirm his innocence." Rape is an extremely difficult thing to prove, as many of the cases truly come down to a he-said, she-said argument about whether or not consent was

attained. Sexual activity is naturally private, which leaves a crime scene with no witnesses and little evidence. Most rapists are serial rapists, and Nungesser has three other sexual assault complaints against him, a fact unmentioned in the previous article (according to *The New York Times* and *Jezebel*). We can't prove that he is a rapist, but when multiple people come out with the same story, it raises doubts about his innocence.

Brad also cites Facebook messages between the two students as evidence that Sulkowicz wasn't raped. This is incredibly insulting to any person who has been sexually assaulted — who are we to decide how a person should respond to intense physical and emotional trauma? Violation of one's body can be extremely damaging psychologically, and there is no correct way to react. Sulkowicz responded casually to Nungesser's messages, implying that a sexual assault had not occurred. I encourage everyone to research the case, read the messages and read Sulkowicz's comments on her feelings during this time (which can be found in the *Jezebel* article). These give context to and insight into why a person may respond "normally" to such a traumatic event. Not everyone is able to immediately come out against his or her rapist — 73% of sexual assaults are committed by a non-stranger (according to the Rape, Abuse, and Incest National

Network). If a victim is raped by a friend, a relative or a spouse, we wouldn't expect these people to immediately stop loving the other person, or to be able to immediately halt contact with them. When a person cannot leave an abusive relationship, we don't assume that it wasn't abusive. Sometimes the social and emotional consequences of changing behavior towards or speaking out against a rapist can be damaging. All in all, there is no reason any person looking in from outside of Nungesser and Sulkowicz's relationship can make any judgements about what events occurred or how either should have responded. It's ridiculous to think one could know everything about the nuances of a person's feelings and relationships based on his or her Facebook interactions.

According to Brad, the story of this accusation was that Sulkowicz accused Nungesser of rape after Nungesser rejected her and proceeded to date other people. "Hell hath no fury like a woman scorned," Brad continued. As misogynistic as this is, it sadly isn't an uncommon thread in rape cases. Rape victims who speak out are often ostracized as crazy or "sluts who were asking for it," sometimes to the point where they leave school due to the intense public backlash

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Blur releases first LP, *The Magic Whip*, after 12 years

NAILEN MATSCHKE
Contributing Writer

At 26 years old, Blur and its now middle aged members are getting fairly long in the tooth, with a storied history to match. Born out of England's more underground scenes in the late 1980s, Blur's 1991 debut, *Leisure*, reflects the reverberant influence of new wave and shoegaze, welded together with the more upbeat, danceable alt-rock that would define much of the following decade. The next few years saw the band honing the latter half of their sound, producing a series of bright, radio-friendly albums whose lyrics fully embraced the group's British heritage, cementing them as early figureheads of the Britpop subgenre. In 1995, the band famously engaged in a public rivalry with fellow act Oasis, and while Blur won in the UK with albums like *Parklife* and *The Great Escape*, these were outshone by the massive sales of Oasis' (*What's the Story*) *Morning Glory?* elsewhere, and partially as a result of this Blur's 1997 self-titled LP displayed a lo-fi-influenced aesthetic with far more lyrical references and musical nods to the U.S. This was followed by the increasingly artsy 13 and sonically diverse *Think Tank*, as the band's members drifted apart and eventually went on hiatus to pursue other projects. Since the group's reunion in 2008, Blur has

played a number of shows and released a handful of material, with *The Magic Whip*, released April 27, being their first studio album in almost 12 years.

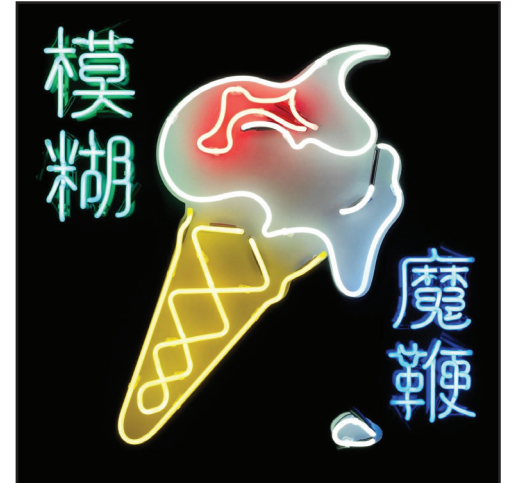
Recorded mostly while the band was stranded in Hong Kong for five days, *The Magic Whip* certainly sounds like the work of a band that's neither here nor there, morphing through a variety of styles that, while building upon the already solid foundation of their prior releases, demonstrate no lack of influence from the changes that have transpired in alt-rock since they last stood at its forefront. Right out of the gate, the group establishes this as a Blur album with opener "Lonesome Street," which comes in with loosely strummed distorted guitars and a grooving drumbeat that could have come right out of leftover material from the '90s. In comparison to Blur's earlier work, however, there has been a noticeable increase in the group's songwriting ability. The song smoothly flows to and from its pre-chorus sections with layered vocals and synthesizers, as well as from the bridge into a funky synth solo, and throughout its length this track is packed with minute details from the keyboard pattern backing up the main melody to whistles to improvised jams in the bass, all fitting together coherently. Still, it feels a little sterile, and an album of just this would get old quickly.

Thankfully, the band does a sonic about-face on the next track, "New World Towers," which begins with a sparse background of interspersed vocals and a contemplative piano melody supporting Damon Albarn's vocals, gradually adding in a basic beat and a variety of warbling and stabbing synths before a noodly guitar passage gently takes control of the song's direction. While this goes on for a couple more minutes without anything terribly exciting happening, it's interesting that these two tracks open the album, as they essentially demonstrate its two extremes of energetic alt-rock and quieter, emotional tracks, many of which revolve around lyrical themes of homesickness and feeling out of place. Personally, I find that most of my favorites on the album lie somewhere in the middle of the spectrum, as the slow songs tend to drag on once they incorporate all their instrumental layers, while the louder ones feel like remnants of an earlier time in Blur's history, without any really solid riffs to make them memorable.

That's not to say that there isn't a great deal of meat in the middle, however. In particular, I find myself coming back to "There Are Too Many of Us," lamenting the increasing emotional disconnect of the modern world despite its ever-increasing density and physical interconnectivity. Starting off like a

march, the song makes a transition to a constant, disconcertingly steady beat so that when Albarn sings, "There are too many of us / that's plain to see / And we all believe in praying / for our own immortality," it really feels like humanity is hurtling toward some unforeseen consequence of our collective hubris.

This is just one of the diverse set of tracks that make up the heart of this album. "Ice Cream Man," another personal favorite, is led in and supported throughout by a bubbly synth pattern that meshes remarkably well with the acoustic guitar and bass; this, together with the vocals and layers of drum machine and synthesizer effects, creates a subtle yet infectious groove. "Pyongyang," towards the end of the track list, also stuck out to me at first because I was caught off guard by its abrupt transitions between dissonant, dark verses and a huge, swelling chorus that juxtaposes the beauty of Pyongyang's "perfect avenues" and "cherry trees" with its dysfunctional reality of "silver rockets" as "the light to bathe the great leaders is fading." Over time, however, it has very much grown on me, as I think it's a pretty unique and tasteful artistic look



-<http://www.theskinny.co.uk>

at somewhere that doesn't usually get mentioned in popular music, and the song has some of the most interesting instrumentation on the album.

Much of this LP is incredibly diverse in musical style, and I could easily go on with other songs that were unexpected at first but very enjoyable once I wrapped my head around them. There definitely were some that felt like filler, such as "I Broadcast," mostly because it just didn't feel like their hearts were really in it, and these tended to be the ones that sounded the most like what made Blur popular originally. Otherwise, the album presents a truly impressive scope of styles and textures, with Blur's songwriting and lyrical execution in top shape, making *The Magic Whip* one of the best alt-rock albums I've heard in quite some time.

Mother's Day: Do it to believe it

KSHITIJ GROVER
Contributing Writer

Adapted from an article originally published at medium.com/@kshithappens as Mother's Day 2014.

"The phrase 'working mother' is redundant." — Jane Sellman

Mothers do a lot. We all know that, and inevitably we all forget that. I certainly didn't appreciate it until I got to college, and now it's hard to deny the effect it's had on me.

Teenagers are slobs.

I have no idea how my mom dealt with *two of us* at the same time. Gosh, in retrospect, that must have been painful.

Mother's Day is not really a huge deal in my family — we often just go out for brunch and spend a warm day in front of the TV. Nothing *glorious*, but definitely special. Definitely memorable.

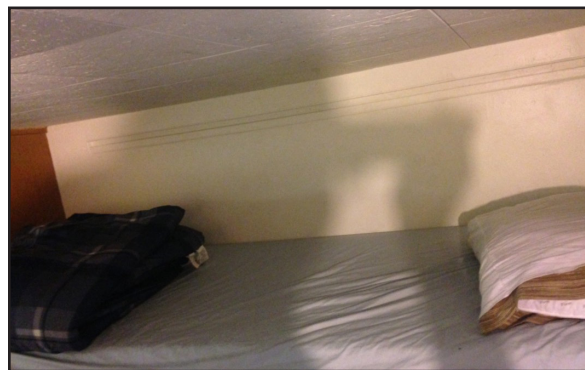
For obvious reasons, I can't do that this year. Sitting in Pasadena, there wasn't much I could really think of that would show my mom how much I love her.

You see, the first step to loving your mom is understanding what she goes through.

That's exactly what I set out to do.

I spent the afternoon doing *laundry*. This is the result of 4 hours of my afternoon:

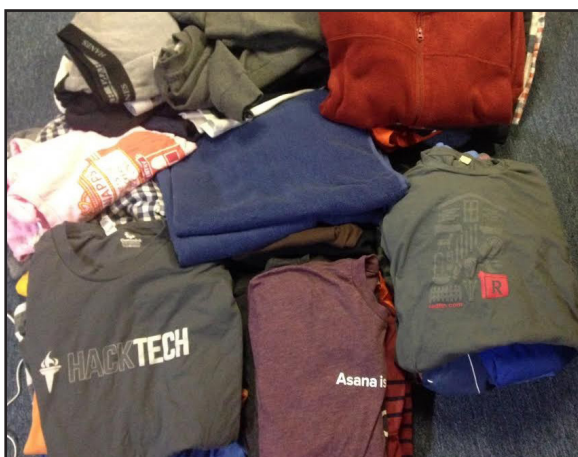
Next came washing the sheets and setting the bed.



Getting out those wrinkles will always be a bigger struggle than anything else. I don't know how my mom does it.

Photo Courtesy of Kshitij Grover

Thinking I was done and I should move on to homework for the day, I took one look at my desk. It was a mess.



I can definitely graduate college before I ever learn how to fold like my mother.

Photo Courtesy of Kshitij Grover

So naturally: I forgot to clean the monitor screens. I know my mom wouldn't forget.

These are little things, and far from who a mom truly is and what she truly means.

Yet, it's the little things that make you miss your mother at first.

It's the little things that lead to big realizations.

Instead of baking a cake or making breakfast, spend some time understanding what your mom does for you. I promise — at the end — you'll have a broken back, a headache and a larger heart.

Here's to the hardest job in the world. Here's to all the mothers out there this Mother's Day that heartily deserved to be recognized. Here's to my mom.

Victims harmed by skepticism

Continued from page 3

during a traumatic event in their lives. The fact that this kind of stereotyping emerged so casually last week is insulting to rape victims — the truth is that only 2% of rape accusations are falsified, which is the same rate for other felonies (according to the FBI). We don't immediately doubt those who come forward claiming other felonies. Brad stated, "I recently spoke with a retired attorney from the Los Angeles District Attorney's Office, and he related to me that around 70% of sexual discrimination cases get dismissed right away because of how frivolous they are." First of all, an estimate by a retired DA is not a statistic. Secondly, the use of this *sexual discrimination* statistic immediately following discussion about the need to give the benefit of the doubt to the accused in *sexual assault* cases was misleading. Public backlash contributes to the extremely low levels of rape reporting (just 32% of rapes are reported, according to the Justice Department). The commonplace reduction of victims of sexual assault to vindictive women dominated by their hormones set on destroying the lives of young men is despicable and undeserved. This isn't just a women's issue — reporting statistics are even lower for male victims of sexual assault. One out of three women are sexually assaulted before age 18 and one out of six men are, which means that

males are much more likely to be sexually assaulted than to be falsely accused of sexual assault (according to David Finkelhor and the CDC). Both women and men suffer from stereotypes that victims of sexual assault are just "crying rape," and the result is that for every 100 rapes committed, only two rapists serve a day in jail (according to the Department of Justice). So who is really being discriminated against here, victims of sexual assault or those accused of it?

There's no right way to respond to sexual assault. If you or a friend is a victim of sexual assault or rape, reach out to campus resources — UCCs, Health Ads, RAs, the Counseling Center and confidential resources Jenny Mahlum and Taso Dimitriadis. Assaults can be reported to Felicia Hunt, the Title IX coordinator; reporting *does not mean you have to press charges*. If someone approaches you saying he or she was raped, *be supportive*. It isn't your job to determine what happened, and sexual assault is a painful and emotional event. If you are raped, even if you don't plan to press charges, I recommend going to the Rape Treatment Center (424-259-6000) to get biological evidence taken. Biological evidence is the most intact shortly after sexual assault — try to go before showering, and even before urinating if possible. The RTC offers free medical care, counseling and evidence collection for sexual assault victims 24 hours a day.

Emily Shih scores epic anti-shutout goal



Mary Boyajian: "Emily Shih: 'Yes, I think we get pretty aggressive because of polo.'" P.S.: This is a very effective use of the color page.

-<http://gocaltech.com>



Eric Martin is a very special snowflake who undoubtedly stands out in his race.

-<http://gocaltech.com>



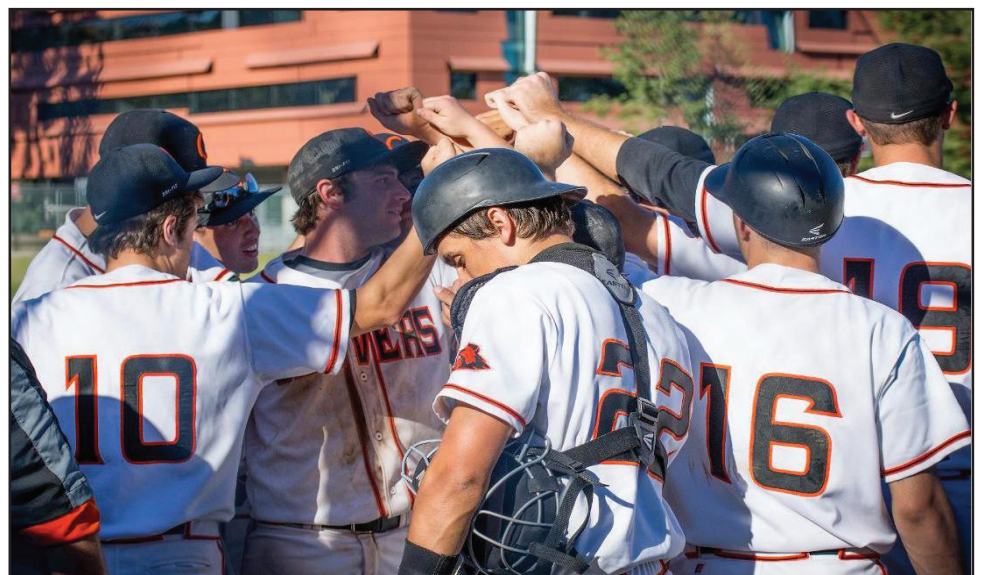
Erin Wang admires the way the sun shines off of her bicep as she rises up to meet the ball.

-<http://gocaltech.com>



As David Watson stood at the plate awaiting the pitch, he caught a glimpse of the sunset and thought to himself, "Should I get Chipotle for dinner?"

-<http://gocaltech.com>



For Tim Menninger, the loss was hard to accept. But what was harder to accept was the fact that Chick-fil-A is closed on Sundays.

-<http://gocaltech.com>

Do you **like** sports? Are you *witty*? Do you believe that Monica should have less responsibilities???? Then **YOU** should become the sports page contributor! Email **tech@caltech.edu** for more details. **Do it for Monica; she needs sleep.**

ASCIT Minutes

ASCIT Board of Directors Meeting

Minutes for 28 April 2015. Taken by Sean McKenna.

Officers Present: Connor Rosen, Nima Badizadegan, Jay Palekar, Catherine Jamshidi, Connie Hsueh, Patrick Nikong, Kalyn Chang, Annie Chen, Sean McKenna

Guests: Anne Dorsey, Katherine Guo, Jonathan Liu, Ciara Ordner

Call to Order: 12:01 pm

President's Report (Connor):

- Board of Trustees Student Experience Committee is meeting tomorrow
- Cindy Weinstein's office hours happen on Tuesdays as well.

Officer's Reports:

- **V.P. of Academic Affairs (ARC Chair: Nima/Jay):**
 - Discussing the Library survey results with Cindy Weinstein..
 - Undergraduate Seminar Series talk will happen on May 13th. The speaker is Mike Brown (the guy who killed Pluto).
 - Curriculum Committee is looking into the 12 term tuition policy
 - BoC leadership will be holding a town hall to talk about the bylaw amendment in Winnett on Monday 11 May at 7pm.
 - ASCIT Teaching Awards nominations are due Sunday 3 May.
- **V.P. of Non-Academic Affairs (IHC Chair: Cat):**
 - Transition retreat went well. We are putting together a Rotation guidebook for prefrash. The IHC wants to emphasize that prefrash can ask whatever they want, but may not get an answer. When a prefrash asks you about a house other than your own, please introduce them to someone of that house so they can have their question answered.
 - The IHC is doing committee interviews on 5/11 for the same committees as last year. Sign ups will be posted Monday.
 - We will be meeting with the Head UCC's soon.
- **Director of Operations (Connie):**
 - ASCIT Movie night will happen on Friday 1 May.
 - Avengers will be shown at 10pm on Thursday 30 April.
 - Alex Ryan fixed the screening room.
 - Screening room reservations are forfeited if you are 30 minutes late
- **Treasurer (Patrick):**
 - Reimbursements finishing up.
 - Keytones applied for event funding for a workshop on Sunday with a capella groups.
- **Social Director (Annie):**
 - ASCIT Movie night will have free popcorn and drinks.
 - Trivia Night tomorrow, Wednesday 29 April.
 - Dachshunds were cute. People should tell Annie if they sign up for an event and then change their mind..
 - Harvey Mudd party probably will not happen this year.
 - Puppies will come on Saturday 6 June at 6pm.
 - Aquarium trip on Saturday 9 May from 10am - 4pm.
- **Secretary (Sean):**
 - Secretary interviews 2 - 4pm on Saturday 2 May.
 - New secretary will schedule interviews for the interim social director.

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 May 5th at Noon in the Winnett Common Space.

Meeting Adjourned: 12:36 pm

Senior Class Co-President nominations are open until Friday, May 8, at noon.
Email ReviewCommitteeChair@caltech.edu to nominate a team.

REMINDER FROM COUNSELING CENTER:

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

VICE PROVOST'S OFFICE HOURS

Professor and Vice Provost, Cindy Weinstein is holding office hours for graduate and undergraduate students. Professor Weinstein oversees the Council on Undergraduate Education, Caltech accreditation, the Staff and Faculty Consultation Center, Student-Faculty Programs, the Center for Teaching, Learning and Outreach and the libraries. She also has key involvement in diversity matters on campus.

Student Office Hours for Spring Term 2015:

Wednesday, May 6, 12 p.m.-1 p.m.

Wednesday, May 13, 12 p.m.-1 p.m.

Thursday, May 21, 12 p.m.-1 p.m.

Tuesday, May 26, 12 p.m.-1 p.m..

Wednesday, June 3, 12 p.m.-1 p.m.

There are four appointments per hour. Sign up the day of the meeting starting at 11:30 a.m. in 104 Parsons Gates, Vice Provosts' Offices (x6339).

CALTECH PERFORMING AND VISUAL ARTS PRESENTS: SPRING CHAMBER MUSIC SERIES

The first concert will be the Mother's Day Concert on Sunday, **May 10**, at 3:30 p.m. Enjoy music of Romantic masters Mendelssohn, Brahms, and Rachmaninoff performed by outstanding Caltech student musicians.

The second and final concert in the series is the Annual Chamber Music Marathon on Sunday, **May 17**, from 2:00 to 6:00 p.m. Caltech students present music for every taste -Vivaldi, Mozart, Haydn, Beethoven, Mendelssohn, Schubert, Schumann, a complete performance of "Four Seasons of Buenos Aires" by Piazzolla, and much more!

Audience members may drop in at any time and stay as long they wish. Please note that these concerts begin at different times. For complete program details go to music.caltech.edu one week before each concert. Admission is free and no tickets are required.

Contact Cindy De Mesa at Cdemesa@caltech.edu or (626) 395-3295 with any questions.

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Students relay dangers of replica firearms on a college campus

Student Contributors

This article was submitted by the Dean's Office on behalf of an anonymous group of current students.

There have been many fatal police shootings publicized in the last few years, but here's one that may not have been as widely reported: 12-year-old Tamir Rice was shot and killed by a Cleveland police officer on November 22, 2014 at a public park. This case was slightly different from the recent slew of law enforcement related deaths in that officers were called to the scene after bystanders reported seeing the boy brandishing what turned out to be an airsoft pistol stripped of its safety markings. The case is still being investigated due to suspicious circumstances surrounding the officers' reaction. However, it's clear that all of this could have been avoided if the boy hadn't been carrying around a replica firearm.

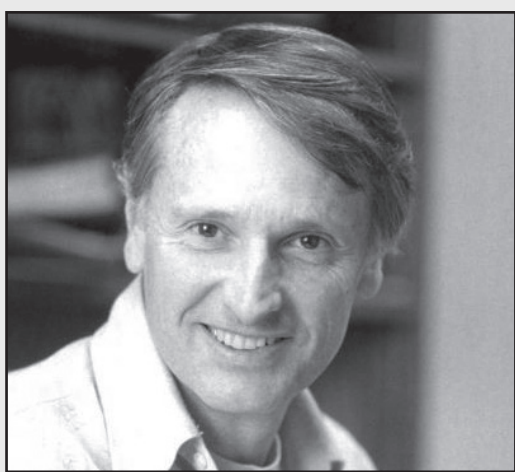
Incidents related to replica firearms occur far too often, and many of them happen on college campuses given our nation's heightened sensitivity to school shootings. It should be clear that these toy guns, which sometimes are almost indistinguishable from real guns, should be handled cautiously and with good judgment. It should also be clear that they have no place on a college campus.

In a recent interview with Bill Heim, Director of Security Operations, we talked about the dangers of owning a replica firearm

on campus. Most people believe they would never create a situation with a fake gun where an officer would feel in danger. However, a college environment can be very exciting, and alcohol or other substances can impair judgment. Heim mentioned a time where some students were participating in an airsoft battle. One of the students saw a security officer and absentmindedly waved his gun in the air. Maybe he thought he was helping the situation by making it clear he meant no harm, or maybe he didn't realize it was an officer. "For them that's a green light," Heim told us of the officer.

"There could have been a shooting right then and there. Thankfully, he paused and realized the situation." The only way to really ensure these types of situations don't happen is to keep replica guns off of campus.

What if a student's hobbies include use of replica firearms, or even real ones? Airsoft and BB gun events can be very fun when done safely. Also, many students frequent shooting ranges. Owning and maintaining a weapon, as well as expensive ammunition, would basically be impossible while living on campus. Are there any resources available to students to allow for this? "Not at this point, though it's something we can explore," says Heim. Perhaps in the future there will be a way for students to safely explore these types of activities. Until then, guns, real or fake, have no place on campus.



John H. ("Jack") Richards, professor of organic chemistry and biochemistry, passed away on Thursday, April 23, 2015. He was 85 years old.

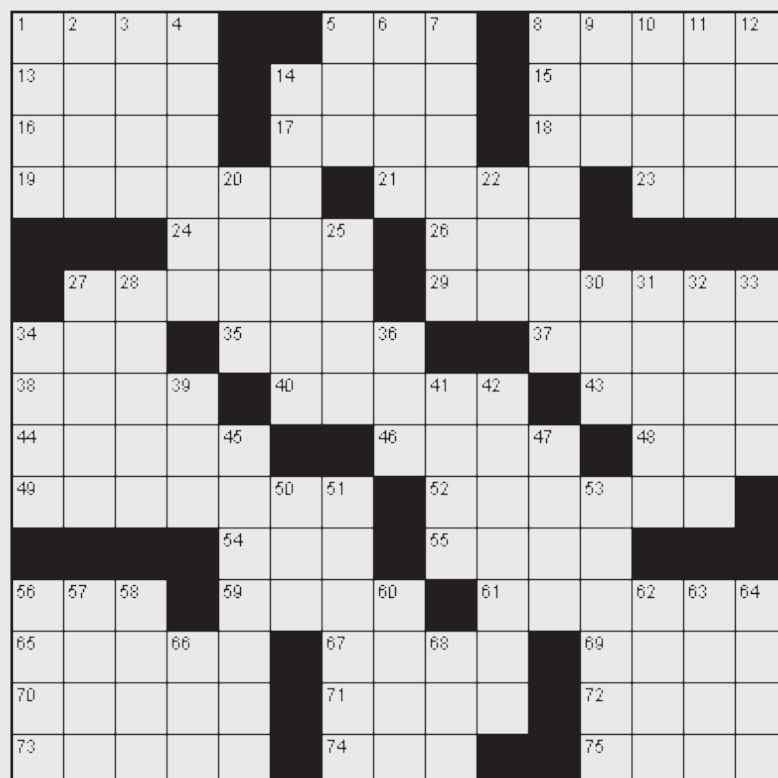
Richards studied the mechanisms by which proteins function—how proteins act as catalysts to perform the chemical reactions necessary to life, including the proteins that endow some microorganisms with antibiotic resistance; how proteins transport the electrons that are the cell's energy currency, especially a class of copper-containing proteins called azurins that power certain types of bacteria; and how proteins interact with nucleic acids in order to manage the cell's activities.

Richards earned a BA from UC Berkeley in 1951; a BSc from the University of Oxford, England, in 1953; and a PhD from Berkeley in 1955. He joined Caltech as an assistant professor of organic chemistry in 1957. He was promoted to associate professor in 1961 and to professor in 1970. He was named a professor of organic chemistry and biochemistry in 1999.

A full obituary is posted at <http://www.caltech.edu/news/john-h-richards-1930-2015-46693>.

Written by Douglas Smith/Caltech Media Relations
Photo Courtesy of Caltech Archives

Crossword



-<http://puzzlechoice.com>

Across

1. Sort
5. Small snake
8. Brusque and surly
13. Vessel
14. Cylindrical tower
15. Relating to the moon
16. Curved masonry structure
17. Slow pace of running
18. Become one
19. Part of the eye
21. Trial
23. Golf accessory
24. Jargon
26. Mesh
27. Dwell
29. Ballroom dance
34. Container
35. Period of calm weather
37. Health professional
38. Adjoin

Down

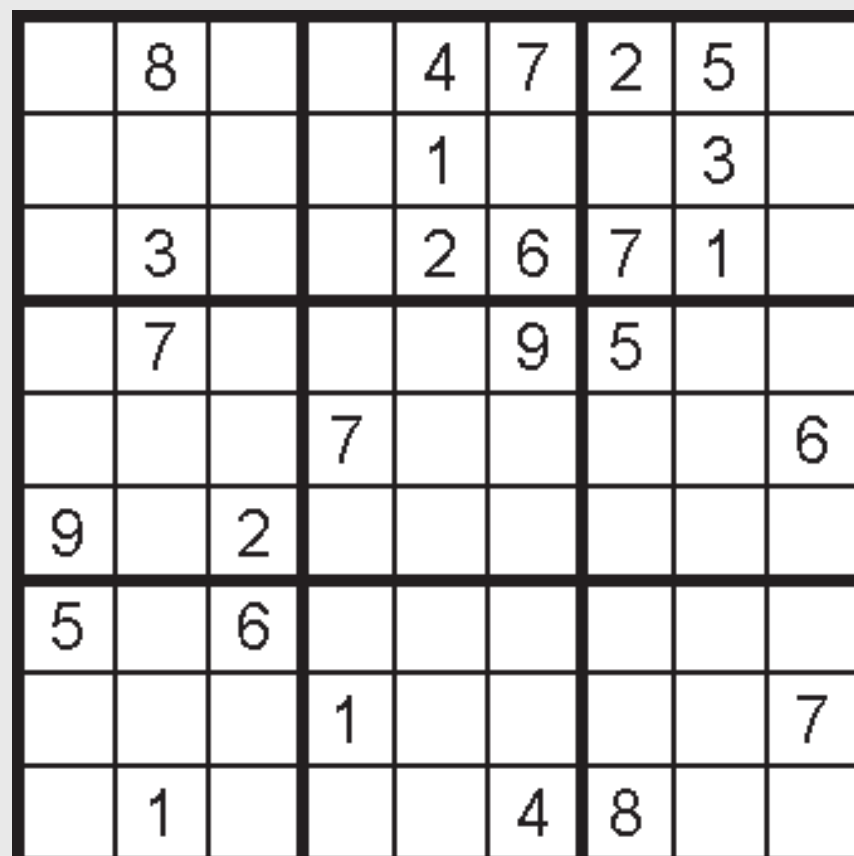
40. Chubby
43. Lowest part of the musical range
44. Pale purple color
46. Cogwheel
48. Feline
49. Contestant
52. Faithful
54. Neither one ___ the other
55. Facilitate
56. Armed conflict
59. A duplicate copy
61. Signal fire
65. Dodge
67. Young horse
69. Wander
70. Strange and frightening
71. Solitary
72. Talon
73. Clean with a bill
74. Finish
75. Stop

Down

1. Alpine lift
2. Yesteryear
3. Treaty
4. Principles of right and wrong
5. Atmosphere
6. Gambling machine
7. Having great influence
8. Person who eats and drinks to excess
9. Operate
10. A single undivided whole
11. Destiny
12. Liberate
14. Type of comedian
20. Metal fastener
22. Darn
25. Recount
27. Small bird
28. Express great joy
30. Long crusty sandwich roll
31. Extended area of land

32. Composition
33. Annoying person
34. Large bundle
36. Carry with difficulty
39. Mariner
41. Boundary line
42. A short moral story
45. Water flask
47. Artifice
50. Immediately
51. Sponge cake with jam, wine and custard
53. Explore
56. Sob
57. Allege
58. Uncommon
60. Middy
62. Carbonated drink
63. Ellipse
64. Small semiaquatic salamander
66. Device used for shaping metal
68. Conjunction

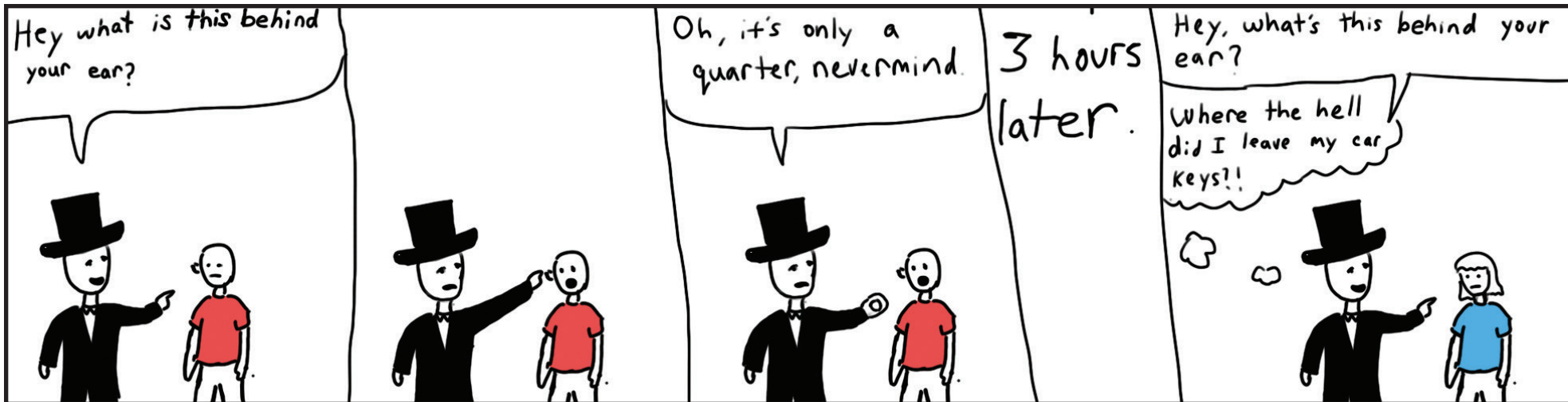
Sudoku



-<http://puzzlechoice.com>

Acquired Taste

Dr. Z



"Anyway, here's some eagles..."

Liz Lawler



Answers to previous crossword

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

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