

FRANKLY SPEAKING

Free, as in beer.
November 2010

Olin's unofficial, student-run, news source.

FranklySpeakingNews.com

Our Commitment to Change

Kat Brookshier
Staff Writer

The numbers are in – Olin's student body was very disappointed to learn last year that the full-tuition scholarship that had historically been offered to all admitted students would be reduced by half.

Of course, it is in the college's financial interests to charge half tuition for this year's incoming class and all classes thereafter. Olin uses a three-year rolling average budget to determine a plan for the year ahead.

Because of the financial crisis, Olin's investments were severely impacted in 2008 and 2009, which means that, even after the recession ends, Olin's financial situation will be affected.

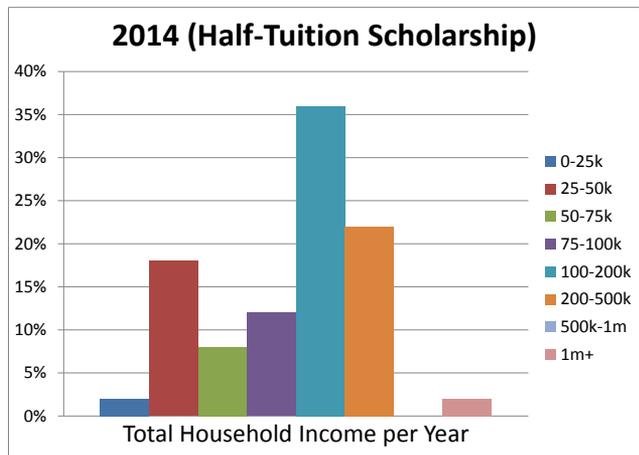
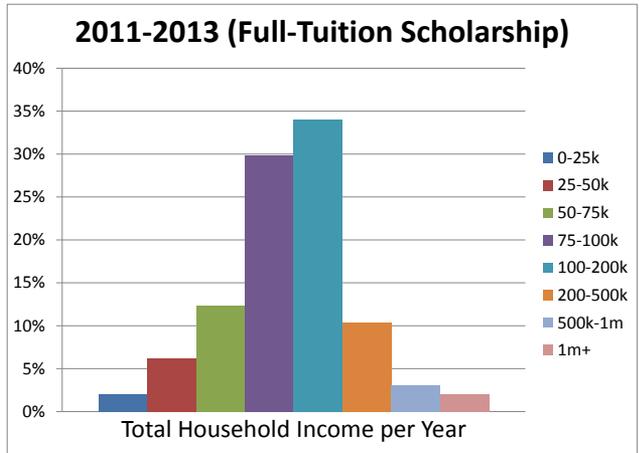
From a student's perspective, I am worried that the reduction in the scholarship will change the type of students who can and will come to Olin College.

A survey request was

sent out to all current Olin students, and 171 responses were collected.

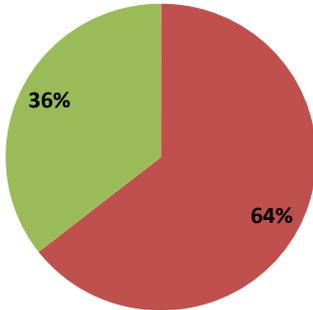
This covers roughly half of the student body, with a nearly equal sampling of men and women.

The students were divided into two categories – students admitted with a full scholarship (2011-2013) and current freshmen admitted with half scholarship (2014).



2014 - All

- No scholarship - would attend other institution
- No scholarship - would attend Olin

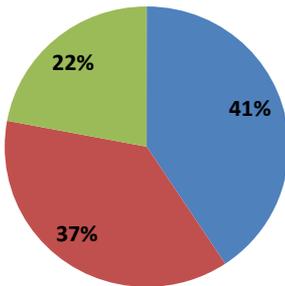


Out of the first group, with the scholarship, 41% of men and 58% of women would have chosen to attend another university if they had not received a full scholarship.

These data show that about half of the students from 2011-2013 reported that they would likely not attend Olin, and that women are especially less likely to matriculate without a full scholarship.

2011-2013 Men

- Half scholarship - would attend other institution
- No scholarship - would attend other institution
- No scholarship - would attend Olin

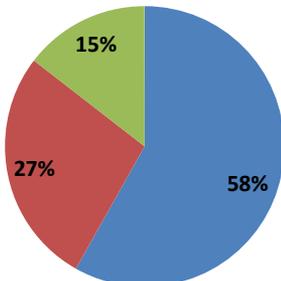


Because Olin prides itself on a nearly equal ratio of men to women, the scholarship reduction may ultimately hurt one of its best selling points.

But the half scholarship still attracts students. A particularly interesting result from the survey is that the ratio of students who would choose another school if there was no scholarship, and those who would come to Olin no matter what the cost, was extremely consistent from group to group (men, women, 2014, 2011-2013).

2011-2013 Women

- Half scholarship - would attend other institution
- No scholarship - would attend other institution
- No scholarship - would attend Olin



This ratio was approximately 1.75 to 1 (students who would choose another school, to students who would stay).

These data suggest that having at least a half scholarship continues to draw students to Olin, because it has a competitive price tag compared to many other prestigious universities. However, in-

creased costs might continue to drive students towards other institutions.

While Olin's half-tuition scholarship is very enticing, one first year said, "It would increase [2014's] loyalty to Olin if we had a full scholarship."

A full scholarship offers the promise of graduating without debt. However, a third (36%) of the first years reported paying or helping to pay for their education.

With the estimated cost of Olin attendance at over \$150,000 for four years, these students are likely to struggle with the scholarship reduction even after they graduate.

But what about the finances of the students' families? From the upper-

classmen, there is a clear bell curve around the upper-middle class created by the self-reported financial backgrounds of the students – whereas the "curve" for 2014 has a distinctly different trend.

Remarkably, it seems that students at the lower end of the scale are more likely to apply and accept, presumably because they can make up most of the difference with Olin's need-based financial aid.

The number of students in the middle category drops drastically, perhaps because they feel they cannot close the gap once the scholarship was reduced. The students in the upper financial tier don't

necessarily need the fi-

ancial assistance, so they are more likely to attend Olin despite the cost.

So what the data suggests is this: the reduced scholarship decreases gender diversity in the student population. With fewer women willing to matriculate, it will become increasingly difficult to attract female students.

Furthermore, the increased costs limit the number of people able to comfortably afford the excellent education Olin offers.

Admittedly, data is limited due to Olin's small size and because the scholarship reduction occurred within the last year. However, it would be prudent to keep an

Beautiful Breadboarding

Stephen Longfield

Staff Writer

A well breadboarded circuit is a thing of art. Knowing how craft these beauties will make you the envy of your peers, the joy of your NINJAs and the apple of your professors' eye.

That said, I know many Oliners take a very lax approach when prototyping their circuits.

Clean breadboarding is simple, and can save you a great deal of time in debugging. Plus, no more worrying if you've got a

short in your bird's nest of a breadboard.

1. Trim the leads off of passives. Fold them into position, and then cut them cleanly. If you need more space, you can fold a resistor vertically.

2. Only use pre-cut wires where they fit.

3. Custom-cut wires look very good. Route the wire to where you want it to go, mark the end with a marker, and cut it.

4. Use two pairs of needle nose pliers to make a neat right angle in wires that need to run around the

board.

5. Think about what components need to go where before you place them down. If a chip needs a dozen capacitors around it, leave space!

6. Similar to #5, if you're putting down a PIC, and are going to be adding accessories, consider putting all of the PIC support circuitry on one side, and all the accessories on the other.

7. Link multiple boards together with buses of wires. A piece of tape under a bus will keep the wires neat and parallel.

Happy Breadboarding!

Keepin' it on the DH II

Harold Jaffe
Staff Writer

Last issue, we heard from Olin students about their opinions of and experiences with changes in the Dining Hall this year. Now we get the idiomatic scoop straight from the idiomatic horse's mouth: Dave Nadreau talks about settling in at Olin and what's in store down the idiomatic road.

Dave comes to Olin from Sodexo Campus Services at Assumption College in Worcester, Mass.

Many of the usual bumps and snags associated with a change of management have produced some challenges, but also opportunities for innovation.

Some of the changes that have turned out well are procedural, such as the switch to having both the grill and the soup/pizza/pasta station open at both lunch and dinner — a switch welcomed by many Olin students, as well.

Another new policy that had considerable success is the implementation of “speed scratch cooking” (the combined use of prepared or canned ingredients with fresh) for certain dishes.

In this way, trays of food can be prepared fresh and served hot throughout lunchtime, instead of being prepared en masse in the morning and continuously reheated.

While these and some smaller changes (like breadsticks) have been received enthusiastically, Dave acknowledges that others have not been quite as welcome—but explains why some unpopular changes may be the best option available.

The removal of lunch meats and cheeses from the deli station caught quite a bit of flak, but was important to ensure that all available food stay fresh and hygienic. (For this reason, he added, students who stop by the DH between meals should feel free to ask the staff at the Grill for a sandwich.)

Likewise, any student with a food allergy should let Dining staff know, and should not hesitate to request an allergen-free alternative at any meal.

The new administration has strove to ensure that everyone has access to a variety of options they can eat; posters have been put up in the kitchens alerting staff to safety issues; and the descriptions of different foods now list what allergens they contain, and in

many cases whether they are either vegetarian or vegan.

Indeed, the Dining Hall passed a recent inspection by Needham Health Inspector Tara Gurge with flying colors.

Another area in which the Dining Hall continues to make strides is waste minimization.

In conjunction with Nick Tatar's composting co-curricular, nearly a ton of ‘waste’ fruit and vegetable matter has been successfully composted, with more on the way — perhaps eventually including coffee grounds and eggshells as well.

Furthermore, Dave expressed an ambition for Olin to emulate the “zero waste stream” model of certain other institutions, and mentioned the possibility of a “sustainability dashboard” to measure and keep track of energy and water used.

Overall, Dave seems optimistic about the possibilities Olin's Dining Hall affords.

He recognizes that “Olin is a unique community,” and hopes to improve the overall Dining Hall experience by changing the way we interact with Babson and Wellesley; by paying attention to the ways our food touches the environment; and by better meeting the needs of Olin students.

Interview With a Freshman: Anne-Marie

Katie & Michael Sullivan
Staff Writers

This is the second installment of our 92-part series: Better Know a Freshman! Katie and Michael Sullivan interview Anne-Marie Buchenan

Michael Sullivan: So Anne-Marie, What is your favorite thing about Olin so far?



Anne-Marie Buchenan: It's great how you don't have to worry about theft or anything like that; you can leave your laptop out all the time. Also if you're not feeling well, there are so many people around who are willing to take care of you.

Katie Sullivan: And also get sick with you.

AB: Yeah that too (laughs). But I really like the community here!

KS: What's the coolest thing you have done at Olin so far?

MS: Do you do fire-poi or anything?

AB: Yes I've tried fire poi but I'm terrible at it. I burned my hair a little and caught my pants on fire!

I think the coolest thing I've done was do a parkour flip over the railing in front of west hall. It looks awesome, but I don't even know how I managed to do it!

MS: I have seen you at the ODP lessons, and you're such a great dancer! Do you have a lot of experience?

AB: Thanks! (laughs) Actually, I did ballet for two years when I was little, but I stunk.

It's pretty funny because I wasn't graceful at all and I was never a good dancer.

But then this year when I found out about Argentinian tango, it sounded like fun. gave it a try and it just clicked.

The instructor even complimented me in front of everyone, and he is really strict and scary so maybe I'm all right!

MS: Be nice Katie. So Anne-Marie, what is your favorite class at Olin?

AB: Probably Design Nature- It's a fun class and I really like making things.

I basically grew up in a machine shop. My dad does a lot of machining, and when we moved to Carver PA, our new

house had a giant garage.

And, obviously, garages are way better for machine shops than for holding cars, so we set up our own shop there. I got to help out a lot and I loved it. My dad does work for Gillette, making aluminum trays used to seal their products. We got a ton of free razors! I'm really proud of the awesome things he does. My family is awesome.

KS: What is the one thing you are really good at that you could teach to others?

AB: Hmm, maybe horseback riding! Oh wait, actually... There was one time I was riding my horse and it got scared and took off. And I kind of fell off and got a concussion! So, on second thought, I'm not sure anyone would want riding lessons from someone who's gotten concussions from riding.

KS: Haha, okay, last question! If you were stranded on a desert island, what three things would you bring with you?

MS: Hmm good question. I would bring food. Chinese food with chicken! And maybe a book...

MS: The CAT book, right?

AB: (laughs) Oh yes, definitely the CAT book. And the last thing would be... a boat, to get off the is-

FRANKLY INTERVIEW: JEAN HUANG

A candid conversation with Jean Huang, resident microbiologist, on living on a farm in Taiwan, bicycling in Seattle, and learning to drive in Cambridge.

One of Olin's newest faculty members, Huang is only a year and a quarter into her time here. She teaches biology and does research with students on photosynthetic bacteria in the Olin labs. She also teaches a co-curricular called Pickles and Jams, which I, as a participant and something of a gourmand, can personally recommend.

Huang offered her time and her insights generously, despite the intimidating prospect of a photographed interview, and I hope that Frankly Speaking readers will enjoy reading her words as much as I enjoyed speaking with her.

FRANKLY: How did you get into microbiology?

HUANG: Very early on, when I was at Wellesley, I began doing research with cyanobacteria. It brought a lot of my learning from the classroom alive, because I could draw connections between coursework and actual experimentation in the research lab.

So that really got me excited about microbiology, and then after I graduated from Wellesley, I went to CalTech and worked in a lab in the environmental engineering department studying bacteria.

FRANKLY: I understand you went on to do microbiology

research at the University of Washington?

HUANG: So after I finished graduate school at CalTech, I did a postdoctoral work in the area of hydrogen gas production by photosynthetic bacteria. Bacteria of this type is the kind I currently study in my research lab.

FRANKLY: Do you work with students in your research here at Olin?

HUANG: Yes I do. Students are a very important and fun part of research here. It's something that I really enjoyed as an undergraduate, so being able to provide that experience for others, sort of a place for them to experiment,



"I really liked the ideas that come from biologists working with engineers."



"I learned to drive in the last year. So you can imagine my insurance rates for learning to drive in Cambridge."



"The biological way of thought is really melding those chapters and being able to see concepts in different contexts."

Photos by Michael Maloney

is nice.

FRANKLY: How do you balance research and teaching?

HUANG: Very carefully! Biology research takes a lot of time because the cells need to grow, so I have lab meetings every week, where I can meet with the students in the lab and we usually have somebody present; we can help troubleshoot, or we can talk about what's been going well and the data.

So outside of teaching and meeting with students related to coursework, I'm in the lab, pretty much, working with students.

FRANKLY: Why did you choose Olin?

HUANG: I went to graduate school at CalTech, and my lab was next to a lab that studied fruit fly flight, so they were interested in all sorts of engineering problems, and I really liked the ideas that come from biologists working with engineers.

FRANKLY: Can you tell me a little about your childhood?

HUANG: Let's see... I didn't grow up entirely in Brookline; I actually grew up for six years in Taiwan when I was younger. I came back when I was six, so my first language actually wasn't English.

FRANKLY: Did your whole family live there?

HUANG: No, I was actually living with my aunt; my family was living in the U. S. It was sort of an interesting situation.

Times were very difficult, so I went and lived with my

extended family, and then came back.

FRANKLY: Do you remember anything about living in Taiwan?

HUANG: I remember a little bit. My aunt was a chicken farmer. I remember accompanying her on a lot of her farm activities.

FRANKLY: Do you have family here now?

HUANG: I live in Cambridge, in Central Square, with my husband, who teaches computer science at Harvard. So we moved here from Seattle a year ago.

FRANKLY: How are you liking the change?

HUANG: I guess most students who have talked with me for a long time know that I love Seattle.

Seattle is very green; they have city-wide composting, they have bicycle traffic, the transportation is extremely good. The transportation here in Boston is good as well, but in Seattle there was a real culture of bicycling; I remember being in bicycle jams in the morning going to work.

In fact, I resisted driving until after accepting the position at Olin. I had to then learn to drive to come to Olin. I had held out with my bicycle for so long.

FRANKLY: Did you say you learned to drive?

HUANG: Yes. I was the first person in my family to get a driver's license.

I learned to drive in the last year. So you can imagine my insurance rates for learning to

drive in Cambridge.

Prior to this, when I was a graduate student in California, you'd think you'd need a car, but I did just fine with my bicycle. But the commute from the train station to Olin would be just too difficult in the winter, and especially with classes, I wouldn't want to come in flustered or anything.

FRANKLY: What's your philosophy in teaching biology?

HUANG: One of the things that I hope students will take out of a biology class are the interconnections between how life works.

In a textbook, you'll have these discrete chapters, but the biological way of thought is really melding those chapters and being able to see concepts in different contexts.

My philosophy is based on that idea: to give students a framework for which they can think of the world around them in a biological way.

FRANKLY: Do you have a favorite area to teach?

HUANG: Metabolism and biotechnology, so how can we use tools in molecular biology to find out more about how a particular living system works and how we might be able to develop sustainable solutions to problems using the biology and the tools that we know about.

For the full interview, go to <http://FranklySpeakingNews.com>.

Kelsey Breseman
Editor

A Fresh(man) Perspective

Neal Singer
Staff Writer

Here we are once again: another fresh new issue of *Frankly Speaking*, hot off the laser-sintered rollers of a Xerox machine; the finest in news reporting from Wellesley to Babson.

As the thirty-third academic day rolls past, and the deadline for writing an article approaches, I find myself contemplating how things have gone over the first of sixteen portions of time that we will spend at Olin.

To get an idea of how other students feel about this, I performed some informal interviews with members of the class of twenty and fourteen.

Generally speaking, we 2014ers (or young whipper-snappers, as some of you may know us by) find Olin to be a pretty alright place. Class load is generally seen as being large, but manageable. When asked, freshman Cypress Frankenfeld remarked that “If class load were a weight, it would probably be around fifty [non-metric] tons.” Indeed, amid the pained cries of “pass/no record” from upper-classmen, first-year students seem to manage a

good six to eight hours of sleep a night, depending on the distance between the current date, and the deadline for that darned ModSim or Design Nature or ModCon project. Some have described their sleep pattern as varying sinusoidally, which perhaps correlates to a relationship between the phases of the moon, and Brian Storey’s ideas for labs.

Since it has been said that, “Cuisine is both an art and a science,” I felt it only natural to ask a few budding engineers how they felt about the food in our dining hall. Most agree that the food is pretty good for a college eatery, but find that it has been decreasing in quality, or at least becoming more mundane since the start of the semester, with a definite, yet mysterious, spike in variety detected around mid-October.

Surprises seem to be the norm with our class; some students even commented that the thing they found most remarkable was that “there are so many surprises, that there aren’t anymore.” Still, others find that they are amazed at how “You don’t expect your-

self to change, but you do anyway... The environment and people affect you in such a positive way.” Truly, the “amount of stuff that is going on all the time,” as several put it, seems to be a common source of enthusiasm at our fine college.

Interestingly, or perhaps intuitively, there has been a common theme of sleep schedule readjustment among those I talked to, as the majority of interviewees had an almost unanimous response when asked about adjusting to Olin life:

“I never knew that there were so many hours in a day to avoid doing ModCon.”

This semester sure has been going by fast, as 2014ers across the board agreed that it seems like only yesterday we were sketching frog hoppers and learning about for loops and gain blocks. But, as evidenced by the few pages left in the *Cat Book*, we certainly have come a long way in the few/many short/long weeks that have come to be the beginning of the end of our stay at Olin.

Fundamental Errors

Allen Downey
Guest Writer

If you read Olin's founding precepts carefully, you might be surprised by Precept 4:

"...But for many reasons, including the very simple reason that many, but not all, faculty are resistant to change, progress has been slow and disappointing.

...the need to reform engineering education could be accomplished more easily at a new institution that is not burdened with people and existing programs resistant to change.

However, even a new institution can, with the passage of time, become resistant to change."

When the phrase "resistant to change" appears in three consecutive sentences, it is not hard to imagine the frustration the board felt after decades of trying to reform engineering education from the outside. Since I agree with the goal, I share their frustration.

But their diagnosis is wrong. Faculty are not "resistant to change." In fact, no one is resistant to change.

Some people seek novelty more than others,

but in general people are in favor of change they think is good and opposed to change they think is bad.

Precept 4 is an example of a fundamental attribution error, which is the tendency to attribute observed behavior to personal characteristics (like risk aversion) rather than circumstances (like organizational incentives).

In fact, the reward structure for faculty is a disincentive to change engineering education. Most universities are more interested in research than teaching, and new professors are told explicitly that they should focus on research. At many schools, teaching awards are the kiss of death--untured faculty who win one are unlikely to be promoted.

You might hope that tenured faculty would spend more time teaching, but once the selection process has weeded out professors with the most interest in education, it shouldn't be surprising if the survivors spend their time in the lab.

Imagine that you are a new professor at a large university, and you have been told that perfunctory teaching is good

enough for tenure, but a weak research program is not. How would you spend your time?

If someone from the Olin Foundation tried to get you interested in education reform, do you think you might be "resistant to change?"

Students don't help either. At most places, students discourage innovation in general and active learning in particular.

It's tempting to conclude that students are resistant to change, but again let's look at the circumstances.

Students admitted to top colleges did well at the high school game. They understand it, they're good at it, and when professors try to change the rules, some of them react badly. After one or two bites, most professors back off.

Fortunately, Olin is different. Students who don't want innovation don't come to Olin. So if Olin is founded on a misdiagnosis, there are two things we got right: we recruit faculty interested in innovative teaching and students who (at least) tolerate it.

Now all we have to do is fix the incentive structure.

Startups and Social Media @ Olin

Hari Iyer
Staff Writer

Though web startups from Facebook to Zappos have become household names, most people don't know how to create them. Knowing how to start a web business should be as central to a young person's education as the lemonade stand was to generations past.

Social media currents also distinctly shape our daily lives, and individuals who are even peripherally fluent with Twitter are being hired fast to build a company's web presence.

Despite these fundamental shifts, colleges and universities - including our own - are not educating students in these new areas.

To be fair, the most experienced and knowledgeable people in social media tend to be working in industry, are in their twenties, and don't have PhDs. Even if we wanted to teach this, where would we find the faculty?

And what does it mean to "teach" social media? After all, we don't "teach" e-mail, even though we're expected to use it constantly. And what about web startups? Does it take the coding skill of

Mark Zuckerberg to create something useful?

Educating our students about web startups and social media is not just the responsibility of business classes. Education in this area must be interdisciplinary. Given the rapidly evolving and highly accessible nature of social media, an effective method would be to encourage significant utilization on student projects.

Perhaps what is needed is a simple explanation that can change the way the technology is perceived. For example, Twitter to me seemed unattractive as a source of minute-by-minute updates about what my friends are doing. But once I thought of Twitter as the Facebook for people I found interesting but hadn't met, I initiated conversations with screenwriters, artists and entrepreneurs.

Unless you're one of the 0.4% of startups that receives venture capital backing, success demands a talented team with many different backgrounds.

For example, the founders and lead coders of Pinyadda and BostInnovation, two stars in the Boston startup commu-

nity, did not have technical backgrounds. They figured out how to build a tech business after they realized the potential of creating a valuable product and immersed themselves in the maker community.

Many of Olin's research methods are outdated. Pinyadda planned operations by the skillful navigation and creation of social networks with a level of efficiency unrivaled by traditional forms of research, such as Googling.

"Many of Olin's research methods are outdated."

Though the Olin education has effectively prepared us to learn and adapt fast, valuable skills in any startup, we'd be far better positioned if we could master web analytics, social media, and the process of making rapid design decisions to develop a base of early adopters.

A "Creating a Web Business" course would be a valuable educational experience that combines key elements from SCOPE, UOCD, FBE, and MobDev. This is a stark contrast to existing project based engineering

courses for three reasons.

First, students will continuously be held accountable to the market – a subgroup of internet “users” – and not to a pre-defined client.

Second, students will have to determine and constantly re-evaluate a user group to design for as they learn and develop.

Third, students will create unique processes tailored to specific situations instead of following predefined procedure.

Even though Olin is behind, there is an entire community of innovators in Boston who can provide valuable insight as we refine our curriculum, and we have already established this link in the Foundry through BostInnovation’s CampusConnect program.

Olin already has a reputation for producing some of the finest developers in Boston’s startup community. This is certainly an honor, but we should also produce the entrepreneurs who are employing developers.

Olin’s professors have done a marvelous job of designing and executing project based courses, and their experience combined with student enthusiasm should be utilized to define Olin as the top school for creating leaders in social and web-based technologies.

and... site is live! now
to watch the money
not pour in



Courtesy of <http://toothpastefordinner.com>

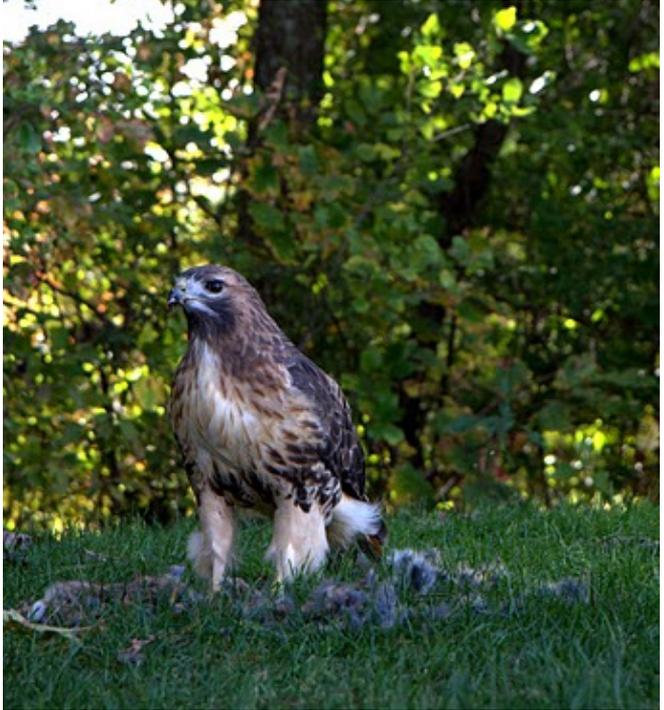


Photo by Brett Rowley

A Red-tailed hawk has rabbit for dinner, seen just outside of Parcel B. See the entire series at picasaweb.google.com/browley20

Want to write for Frankly Speaking?

Send us your articles at submit@franklyspeakingnews.com, follow us on Twitter @FrankSpeakNews or on the website: <http://franklyspeakingnews.com>

Olin College of Engineering does not endorse, and is not affiliated with Frankly Speaking.

Editor-in-Chief Ryan Mitchell

Editor Kelsey Breseman

Know Your Interwebs: BroSpotter

Paul Booth

Resident Internet Expert

“The point of this blog is to show some LUV to all the bros who make their way onto Wellesley’s campus, from our favorite lover bros to our baller class bros. They unDOUBTedly make Wellesley a better and more brotastic place.”
-BroSpotter

Not content with single-handedly ruling the internet with their control of both Wellesley FML and the infamous firstclass.wellesley.edu, Wellesley is now also responsible for a new monument on the landscape that is the interwebs.

BroSpotter.blogspot.com is the home of this new

phenomenon known simply as Bro Spotting. Since September 25, 2010, Wellesley’s BroSpotters have diligently sought out all types of “bros,” or gentlemen of high esteem, in order to photograph them to share with other “biddies.”

A “biddy,” according to Dictionary.com, is “a woman, esp an old gossip or interfering one.” To better stalk the bros that happen to venture onto this all-women’s college’s campus, these “photographs” are collected and placed onto the interblogs with a caption with some parts of words bro-placed with “bro”.

Mathematically, these captions are typically of a form described by:

_____ing bro is broing it up at _____ (verb)
(place)

To get an insider’s perspective into the effects of BroSpotter, I managed to have a chat with an actual BroSpotted bro. For safety, anonymous bro is anonymous. This bro described getting BroSpotted to be his life goal, one that he accomplished within a week. Now that some time has passed, however, this bro feels “washed up, forgotten, lost in the archives and brushed off the front page”. In their quest for fun and games, these Wellesley BroSpotters have been neglecting the emotional consequences of their BroSpotting.



“Adidas bro experiencing the epic-ness of Lu dining services. YUM all around”



“Get to class, bro! Wellesley biddies don’t like their bros late”



“Messiah of bros?! Lead your people here!”