

The Pioneer

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LET’S TALK ABOUT GENDER, BABY

GABRIELA GODLEWSKI (CE ‘19)

The Society of Women Engineers (SWE) at The Cooper Union is collaborating with supportive faculty members in order to introduce a forum at Cooper. The forum, called “Let’s Talk,” aims to increase conversation about the experience of women at Cooper as well as in the engineering workforce. The forum aims to offer support and advice to those who need it and could provide learning opportunities for those who want to know more about what their female colleagues experience daily.

“Let’s Talk” was born out of a conversation that Sara Wong (ChE ‘17), current president of SWE, and Camille Chow (EE ‘19), future vice president, had with professors Naveen Shlayan and Samuel Keene about the need for a space at Cooper geared toward women. “The idea behind ‘Let’s Talk’ is that it would be a source of support for women in engineering at Cooper because we all agree that that is lacking,” says Isabella Pestovski (ME ‘19), president-elect of SWE.

The topic of women in engineering is one familiar to those at Cooper. Recently, a census released by the Faculty Student Senate shows that, while the Irwin S. Chanin School of Architecture and the School of Art have an almost perfectly even ratio of men and women, only 20% of the students

in the Albert Nerkin School of Engineering are women. The number seems small, but unfortunately matches the numbers provided by American Society of Engineering Education, who state that the 19.9% of engineering degrees earned in the past year went to women. Cooper is currently addressing the gender gap by encouraging more female high schoolers to apply, but that does not address the issues within Cooper to those already attending.

That’s where “Let’s Talk” comes in. The sitting board of SWE spoke with Grace Kendall, current Title IX coordinator, and agreed to make “Let’s Talk” less of a safe space and more of an open discussion to bring to light issues that women face as women at Cooper. “We are posting questions that people can answer anonymously and then we will talk about the answers about what could be better at Cooper,” says Pestovski. Though the first few meetings will aim to make students more comfortable talking about these issues, SWE aims to also involve female faculty as sources of inspiration and support as a result of their experiences in the workforce. ♦

The first meeting of “Let’s Talk” will be held tomorrow, April 4, in Room 101 during club hours.

MISSION STATEMENT REWRITE

JUAN JOSÉ GARCÍA (ART ‘20)

On Tuesday March 7, 2017, a campus notice was sent to the Cooper community containing the current draft of the mission statement of Cooper Union. The draft was sent with hopes that it “will generate the kind of discussion and debate that will add to the renewed sense of institutional purpose at this time,” while also aiming to receive input from the community.

The Mission Statement Committee is composed of Monica Abdallah (ChE’17); HSS professor and committee chair Peter Buckley; art professor Leslie Hewitt (Art ‘00); Mauricio Higuera, architecture staff (Arch ‘13); Sangu Iyer, CUAA, (CE ‘99); engineering professor and Middle States self-study liaison Sam Keene; math professor Stan Mintchev; Elizabeth Rivera, Major Gifts, Alumni Affairs and Development; Monica Shapiro, architecture academic administrator; and Kevin Slavin, trustee, (Art ‘95).

The rewriting of the mission statement of the Cooper Union has significant implications: It has been almost three years since the school’s administration historically moved to charge tuition to incoming students and the Committee to Save Cooper Union filed a lawsuit in the New York Supreme Court to block the move.

In the well-documented timeline of the school’s recent financial crisis, there is an evident lack of clarity in the administration’s communication under former President Jamshed Bharucha. The move to tuition became clear to the community through the change in language that the administration used: the disappearance of any mention of free tuition (and its history) in the Cooper Union website, emphasis on words like ‘expansion’ and ‘global’ on behalf of Mr. Bharucha, as well as the progressive change in the literature of documents. For example, the 2001 revision of the mission statement found in course catalogs was replaced with a letter from the former President.

But language can also harbor honest dialog between the administration and the community that it regulates, and the Mission Statement Committee’s current draft is

decidedly aware of the importance of these nuances in language. The end of the first paragraph of the draft reads:

“The institution continues to admit students on the basis of merit and potential, and awards scholarships to all enrolled. The Cooper Union strives to honor Peter Cooper’s vision to provide free education for all.”

It is clear that the current iteration somewhat addresses the historical importance of Peter Cooper’s vision of free education, yet it fails to implement this vision with any certainty that is true to the current state of The Cooper Union.

The mass e-mail does acknowledge the practical need for a new statement: “At the close of the academic year 2015-2016 Bill Mea, then acting President, presented the outlines of work required for strategic planning and for Middle States re-accreditation,” referring to the Middle States Commission on Higher Education, a voluntary, non-governmental, regional membership association in charge of checking the standards for accreditation of its members (of which Cooper is one). Standard I for accreditation with the commission is a clear mission statement as, “the institution’s mission defines its purpose within the context of higher education, the students it serves, and what it intends to accomplish”—again emphasizing the importance of the language used in an institution and its inherent link to the ethical practices within that institution.

Yet, maybe it is precisely that impetus to move forward that might get in the way of the intent of the draft.

Furthermore, the current draft seems to have good intentions, emphasizing that Cooper as an institution will try to return to its founder’s vision of a truly free education. It aims to move past the crisis and projects itself towards an ideal future of Cooper Union. Yet, maybe it is precisely

BE HEARD: STUDENT TRUSTEE VOTING OPENS SOON

BRANDON QUINERE (CE ‘19)

Get those voting fingers ready, another election season is upon us! Student Trustee voting begins Wednesday, April 5, and it all kicks off tomorrow, April 4, at the Student Trustee Forum hosted by *The Pioneer*. Together, our two candidates, Mary Dwyer (ME ‘19) and Irisa Llana (Arch ‘21), will participate in the forum in the hopes of winning the student vote and becoming selected by the Board as our new trustee.

Last year’s election fared much larger, as six students ran for the position. Jacqueline Baum (Art ‘18), Julian Mayfield (Art ‘18), and Clara Zinky (Art ‘18) received the highest number of student votes after a week of voting. The top three candidates successfully moved onto the next round of individual interviews with a committee of the Board of Trustees. The Board selected Mayfield, who joined current Student Trustee Jessica Marshall (EE ‘17). The winner of this year’s election will take the spot on the Board currently occupied by Marshall and serve with Mayfield.

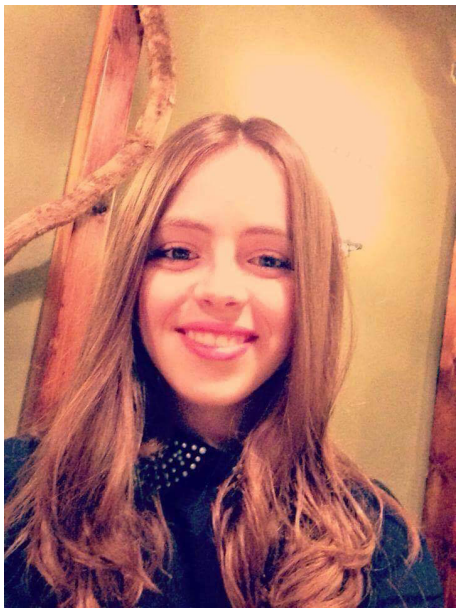
In short, the job of the Student Trustee is to take part in meetings with the Board and its many committees including the Governance, Academic and Student Affairs, and Free Education Committees. Most importantly, however, Student Trustees have the ability to vote in Board discussions. This way, they are able to contribute opinions that keep in mind the best interests of our institution, yet still speak from the perspective of a current student.



Even so, there is no universal mold of a Cooper student considering that we all share different personal experiences, even before joining this diverse community. Llana, an international student from the School of Architecture, sees an opportunity for her student experience, and others like hers, to be reflected on the Board: “Architecture and international students need a representative who will bring their specific concerns to the table, with the goal of getting more included in the Cooper community.”

It is fundamental that students choose whom amongst their peers they would like to receive this important distinction. The appreciation is mutual, as Dwyer sees “something special” in the work of her fellow peers and seeks to encapsulate that in her work as Trustee. “I truly believe Cooper offers a better education than any other institution, and that has a lot to do with the students who go here,” she explains.

Still, the relative shortage of candidates in this year’s election perhaps says a lot about the overall disinterest in Cooper affairs within our student body. It is not too late to change this culture of apathy at Cooper, and it all starts by attending tomorrow’s “Student Trustee Forum!” Use this as an opportunity to get to know your two candidates and ensure that your choice in this year’s election is not just a mindless tap on your phone screen. Be the Ken Bone you’ve always wanted to be, get educated and vote! ♦



Left, Mary Dwyer (ME ‘19) and right, Irisa Llana (Arch ‘21). Photos provided by candidates.

that impetus to move forward that might get in the way of the intent of the draft. It was only roughly five years ago that the school saw itself in the midst of protests, occupations, administrative resignations, and lawsuits. It was about three years ago that charging tuition went from imminent possibility to inescapable reality.

Therefore, the timing of this preliminary sketch for the statement might seem a bit odd and sort of reactionary. The Fiscal Year 2016 Budget and Financial Projections document estimates that the school will not break-even in terms of its assets and deficit until Fiscal Year 2020, and even then the budget says: “...we would need additional revenue or expense cuts beyond FY 20 to cover salary, non-personnel, and debt service increases in order to maintain the full-tuition scholarship model.”

Understandably, there are the practical implications of re-writing a document at the core of the values of the Cooper Union. But perhaps the idea of creating new language to describe the school’s purpose has

the potential to entertain a certain action of “glossing-over” the very real problems that it faced back then and the problems it faces now—an action that lead Cooper to the lack of clarity that fiercely distanced the administration from the community; an honest human fault of haste, in an urge to return to normalcy.

Maybe then, it is valuable to clearly and explicitly recognize the flaws in the previous choice and negligence of a specific language, before trying to find a new one that appropriately suits the Cooper community. Or it is also possible that the dialogue and communication in the school is not contingent on the language used to delineate the ethical and professional objective of the institution. Instead, the issue at hand might be a need for awareness of how and why we, as a community, choose the words we do. Nonetheless, the rewriting of the statement is an important event in the ongoing history of the Cooper Union. Regardless of whether it is celebrated or questioned, the rewrite is definitely an event that needs to be acknowledged. ♦

THE HOUSE OF THE SUICIDE

SAM JIANG (ME '19)

Ominous black spikes point skywards in Cooper Square Park—it’s impossible to miss the new additions to the Cooper skyline: The House of the Suicide and the House of the Mother of the Suicide, also known as the Jan Palach Memorial. Based on the designs of John Hejduk, a Czech-American architect who served as Cooper Union’s founding Dean of Architecture from 1975 to 2000, the two installations blend sculpture and architecture, with the black structure—the Mother—containing a tiny room with a tiny window that forever watches over her Son.

The Martyr

In 1968, the Soviet Union invaded Czechoslovakia, stomping out Alexander Dubček’s liberal reforms and marking the end of the Prague Spring. In 1969, Jan Palach, a Czech university student, committed suicide by self-immolation in Wenceslas Square as a protest of the Soviet occupation and the demoralization of the Czech people, who had grown to accept their fates at the hand of the Soviets. His sacrifice galvanized the resistance: Jan Palach’s funeral escalated into a massive protest against the Soviet occupation, with at least two others following in Palach’s footsteps, also committing suicide by fire. David Shapiro, who was also a professor of architecture at Cooper, wrote a poem commemorating Palach, titled “The Funeral of Jan Palach”. It was from this poem that Hejduk drew his inspiration for the House of the Suicide; Shapiro’s poem is emblazoned on a plaque at the base of the sculpture.

The Memorial

Hejduk originally conceived of the project in 1980, with the intention of creating a permanent installation in Prague. It wasn’t until 1986 that the first iteration of the sculpture was completed by students at the Georgia Institute of Technology in Atlanta. In 1991, the House of the Suicide finally came to Prague: Hejduk’s second iteration of the project, a temporary installation, was dedicated to the people of Czechoslo-

vakia and installed in the palace gardens at Prague. However, the wooden sculpture did not last long: the sculpture was dismantled several years later, damaged by a combination of poor maintenance and environmental deterioration. Plans for a permanent installation had been in the works ever since the original was dismantled. However, due to a series of delays, it wasn’t until 2015—a decade and a half after Hejduk’s passing—that a permanent version of the memorial installed in Prague’s Jan Palach Square.

At Cooper

When the pieces of the memorial first appeared in front of the Foundation building, there was much speculation over the nature and the meaning of the strange, black spikes. Over the next two weeks, a team of students and alumni constructed the wooden scaffolding and installed the metal walls and spikes, completing the memorial to Jan Palach. The installation also doubles as a memorial to John Hejduk himself who, despite being a notable figure in the history of the Cooper Union, passed away without any widespread recognition. The installation will be on display in Cooper Square Park until June 11, 2017. ♦



Photos by Zheng Alex Liu (ChE '20).

MARCH MADNESS

MATTHEW GRATTAN (ChE '19)

No basketball was played at the third annual “3-Minute March Madness,” which took place on March 28, 2017 in the Rose Auditorium. Instead, Cooper faculty presented their ongoing research and projects. The event, hosted by Associate Dean of Research and Graduate Programs Anita Raja, publicized what professors do when they’re not teaching and what opportunities are available for Cooper students interested in research.

The presenters had only 3 minutes to share their ideas: some finished early and other ran overtime. Yes, there was a buzzer.

Topics ranged from Professor Yecko’s research on time-dependent stochastic flows in the CoFPHe lab to Professor Shlayan’s work on intelligent transportation systems. Professor Smyth showed a video of his device for intuitive rotational control for 3D images—one of the working prototypes was made from a 3D printed housing, opti-

cal sensors, and a ping pong ball. Professor Kwong presented a method of modeling a building’s response to an earthquake but with much less computational effort.

A number of the presentations focused on sustainability. Professors Marano and Sidebotham presented their work with Totem, a device that integrates solar power and energy storage with wireless communications all while updating our aging power grid. Professor Cumberbatch presented a sustainable live-in lab for multiple locations around the world, and Professor Medvedik pitched his research on beta-carotene enhanced edible crickets. It turns out that crickets are a far less energy demanding to produce compared to common sources of protein like cows.

The event brought a sizable crowd, and students were encouraged to contact the professors if any of the presentations peaked their interest. ♦

BUY HIGH, SELL LOW: FAST FOURIER TRANSFORMS IN OPTIONS

PADRAIC McATEE (ME '19)

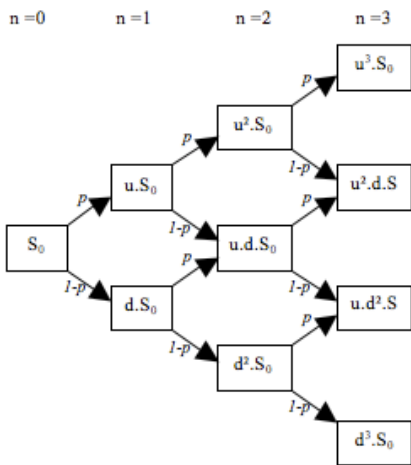
Some of you engineering types should have learned about Fourier transforms. Some of you might even know that they can be done quickly in what are called fast Fourier Transforms (FFT). But I bet you didn’t know how FFTs are used everyday in finance to find the value of an option. We will keep the math to a minimum for the purposes of this article.

We start with an option, a financial instrument used to “bet” on the changing price of an asset such as stock in a company. The true mechanic of this agreement is the option holder’s ability to buy (call) or sell (put) the asset at a constant price over the life of the contract, regardless of the real time movement in the asset’s value. For example, if you expect the price of Apple’s stock to increase, a call option would give you ability to purchase a share during the life of the contract for the price specified when it was issued. The future price, or strike price, will be higher than the option price, giving you the ability to make a profit equal to the difference between those values. Put options work similarly but for the case in which you expect the value of an asset to decrease.

The use of options begs for a better way to predict the possible values of an options contract at the strike time. Using a bit of probability and statistics we can generate a binomial tree of possible price paths for any asset.

We assume that the price of the asset can go either up or down by fixed factors $u>1$ and $d<1$ such that u and d are multiplicative inverses of each other. If we obtain an options contract at $n=0$ for the price of S_0 that is exercised at $n=3$ time steps when the strike price is K , we can find the difference $K - S_3$ and work backwards from the last time

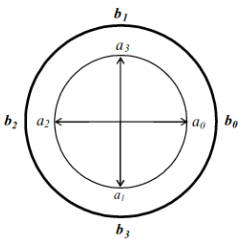
step to determine the value of the option at each parent node based on what are known as state prices for the up and down movement.



At this point, I can only hope my audience has been reduced to at least the EE’s and other mathe-masochists, yearning to know how Fourier transforms, let alone fast Fourier transforms, fit into this picture. We begin with a simplified version of what is known as cyclic or circular convolution where a, b and c are n dimensional vectors:

$$c = a \circledast b,$$

$$c_j = \sum_{k=0}^{n-1} a_{j-k} b_k.$$



This process is best thought of as two concentric circles: one with the entries of b in order going counterclockwise and the other with the entries of a , in order, clockwise. By summing the scalar multiplications of each aligned entries, we have the j^{th} entry of c where a_j and b_0 are aligned. By rotating the a circle counterclockwise to the next alignment and repeating the sum of products for all n entries, we obtain the complete c vector. If we take the a vector to be the struck value of the option at the last time step and the b vector as the up and down state prices padded with zeroes, performing the cyclic convolution for each time step gives us the same result as the working backwards process in Binomial Options. The real magic happens when we see how the Fourier Transformation turns this complex, time consuming algorithm into a simple product.

$$\mathcal{F}(a \circledast b) = \sqrt{n} \mathcal{F}(a) \mathcal{F}(b).$$

Assuming you won’t be caught doing these calculations by hand, they are best done using MATLAB, Mathematica or other software containing prepackaged algorithms to perform the transformation in its fast form. Unfortunately I won’t have enough room to go into great detail on FFT, but I think I’ve made my point. ♦

I’m sure some of you will need more than a one line proof so to speak. Read more on all of this below:

- Cerný, A. (2004). *Introduction to FFT in Finance*. Princeton University Press.
- Cox, J. C.; Ross, S. A.; Rubinstein, M. (1979). *Option Pricing: A Simplified Approach*. Journal of Financial Economics.

MUSEUM REVIEW: THE ITALIAN-AMERICAN MUSEUM

GABRIELA GODLEWSKI (CE '19)

Little Italy, a small neighborhood in lower Manhattan, is full of the Italian American community’s rich history of living in New York City. A big part of this history stems from the waves of Italian immigrants who came to America in the 20th century, bringing their culture and traditions with them. Related memorabilia that show the Italian American culture throughout the 20th century are celebrated in the cozy Italian American Museum, located on the corner of Mulberry and Grand, a short and scenic walk from the Cooper Union.

The museum is located in a building known as the Banca Stabile (pronounced ban-ka stuh-BEE-lay), an old, two-story renovated bank with the family name “Stabile” emblazoned proudly above the door. The building is itself a part of the exhibition, as it serves as a symbol of the immigrant success story that was the Stabile family history. Patriarch Francesco Rosario Stabile immigrated to New York City in the 19th century and founded the Banca Stabile.

To the Italian American community, the Banca Stabile was more than just a bank. It especially serviced Italian immigrants with a phone to help communicate with their families back in Italy. If a member of the community wanted to return to Italy, the Banca Stabile sold them the steamship tickets. The Stabile family became so successful that they owned a series of buildings including the Banca Stabile in Little Italy that is, to this day, known as the “Stabile Row.” In 2008, Dr. Joseph Scelsa, president of the Italian American Association, bought the bank and moved the Italian American Museum to its current location. As homage to the Stabile family and their legacy, much of the building is from the original construction, including the floorboards, walls, and vaults of the former bank.

I came across the Italian American Museum purely by chance. I intended on visiting

another museum, but tickets were sold out, so I went looking for another. Luckily, the Stabile name on the stark-white building and the display of Italian American celebrities drew me right in. Admission is free, though a \$7 donation is recommended. Before touring the two-room museum, we saw a short video that explained the history of the museum and gave a brief tour of some notable exhibitions.

At first, I was disappointed by how small the museum was—two rooms, of which only one displays memorabilia. However, the objects exhibited were truly fascinating. On display were old Italian passports, genuine Sicilian puppets, a ransom note from the notorious Black Hand, a handmade wedding dress from the early 20th century, and much more. Some of the objects on display were from Dr. Scelsa’s own family history. Though the number of items on display is low, each exhibit is fascinating and full of information and history. In the other room, work by artists of Italian heritage was placed on display, demonstrating how the museum continues to support the modern Italian community as well as paying homage to the old.

Though my time spent there was brief, it certainly wasn’t wasted. The Italian American Museum shows so much history through fascinating displays in a building with an intriguing past. I highly recommend taking a break from your studies and taking a walk to Little Italy to check the place out. It’s a cozy museum with a lot to offer, and if you’re lucky, you could even pet the museum cat. ♦

The Italian American Museum is located on 155 Mulberry St., open 12 noon - 6 p.m. on Fridays, Saturdays, and Sundays.

If you have a suggestion for the next museum I should visit, email The Pioneer at pioneer@cooper.edu

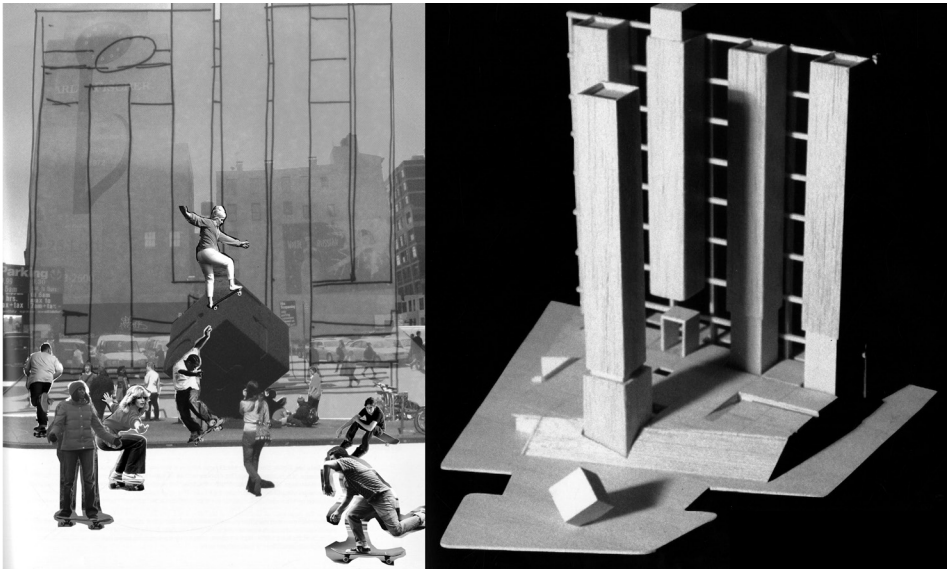


Photo by John Tronolone (EE '19).



ARCHI-SKATE TWO

AUSTIN RICHARD MAYER (Arch '18)



Above collage and model by architect Diane Lewis found in her 2007 book Inside-out: Architecture New York City published by Charta Books. The image on the left has been altered by the author.

As a preface, I want to note the hyperactivity of the oversized urban characters of Astor place. Specifically, the boxing of Peter Cooper, the disappearance and reappearance of The Cube, the inflation of the Koons’ balloon dog, the running of Haring’s green man, the spinning blue wall of bikes and the resurrection of Hejduk’s Suicide Houses. As interior and exterior, Astor Place is an urban theater operating on a few scales: We find ourselves at a possible intermission of an urban drama written centuries ago.

For now, we turn our archi-skate gaze to find the original Astor Place show person: the Alamo, the Astor Place Cube, or just The Cube. Intended to be temporary, the 1967 public sculpture by artist Tony Rosenthal has become permanent. Hear that House of Suicide. Temporary gone permanent.

This 4D urban compass once spun up its own gravity waves from an autonomous traffic island lined in New York City steel curbs. The island attracted skateboarders from all over the world every Sunday morning for a church-like skate session called Slappy Sundays. It offered a low-impact, curb riding skate style, fitting for young and old alike.

The recent renovation of Astor Place into a large sidewalk like plaza places the Alamo within reach of the blue-glass-luxury-condo-Chase-Bank-shoebox-base like building and in triangulated association with the sculptures resembling a big red dog and a large green man. I remember my Mom saying something like, “you are who you hang around with”. What was once a symbol of collective draw has become another ornament of corporate developmental architecture. I offer the dark reading that the Alamo has become a 3D Chase Bank logo. Seriously, when read as an architectural plan the Chase bank logo is a spinning cube.

I’ll halt my banter against contemporaneity and shine light on a proposed project for Astor Place by Cooper alumna and faculty member Diane Lewis—the sexual anarchist of architecture, if I dare say. Complete details of the project can be found in her 2007 book *Inside-out: Architecture New York City* published by Charta Books. Instead of seeing the current “sculpture for living” sitting on top of the Chase Bank, we can meditate on the four slender towers containing Cooper art and architecture studio space, resting on an elevated public Noguchi sculpture park, with a ground-level revenue-generating parking lot kind of project that still one day might be. ♦

SPRING BREAK SNOW!



Buildings and Grounds worked tirelessly to clear snow over spring break. Shoveling the sidewalks was “a real challenge,” said Carmelo Pizzuto, Director of Facilities, who provided the photos.

WORD SEARCH

OLIVIA HEUIYOUNG PARK (ME ‘19)

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

MILES OF MOVIES: LIFE

MILES BARBER (CE ‘18)

Life is about a group of scientists at the International Space Station (ISS) who discover cellular life from soil samples on Mars. This lifeform is studied and nurtured aboard the ISS, growing rapidly. But when one of the scientists shocks it in an attempt to revive it after an accident, it attacks. The rest of the film is about how the remaining scientists try to contain this creature and ultimately try to survive.

Life is a competently made film: The performances are fine, the production value is pretty high, the effects and sound design are all very good. What holds this film back is its lackluster writing, which never seeks to add anything new to a premise that has been spawning films for over thirty-five years. There are moments of suspense, for sure, and the film is entertaining in its own right, but I really couldn’t tell you one thing this film does better than *Alien*, a film similar in both premise and execution.

There are plenty of themes that this film could have explored just from its premise. Will creatures do whatever is necessary to survive? What does the discovery of advanced alien life mean for humanity? How

will humans react to the introduction of a potentially more advanced species? These questions may have been explored more deeply in other movies, but *Life* and *Alien* both go for more of a thriller-type of approach to executing this premise.

There is only one scene in this film that stood out as particularly impressive, and it had to do with a change in temperature within the ISS. It suddenly gets quite cold, and the actors really look as if they were trying to speak in frigid temperatures. Colder temperatures affect speech quite a bit, which was very accurately reflected in this film. While this might seem inconsequential, I was impressed and it stood out from what was otherwise a fairly standard film.

Overall, *Life* was an entertaining film that was just a little too familiar. It’s lack of creativity was a bit of a letdown, as I was hoping for a little more than just the “monster movie” this film is. You will likely be entertained while watching it, only to forget it within a week. ♦

Grade: C+

TED X COOPER UNION



Nina Tandon, CEO and co-founder of EpiBone, delivers the keynote address at TEDxCooperUnion in the Great Hall on April 1, 2017. Photo by Winter Leng.

- Beautiful, fragrant, colorful frequently exchanged with significant others
- F = -kx, but also a season
- Opposite of coldness, something a lot of us lack.
- It’s acidic sometimes. Wind blows it around your umbrella.
- Blue + yellow, spinach, Starbucks
- Usually bees & wind carry this.
- Sniffle, runny nose, & cough, your immune system is over-reactive.
- A month but also a variant of walking
- A month for fools.
- Small, succulent, they’re usually made into jams or eaten with yogurt. Some are poisonous.
- Vegetables but sweeter and better; healthy but also high in sugar
- Small, annoying, can bite you
- Outdoors, lots of dogs, benches, trees

- Gathering at 13. when the weather is nice, involves sandwiches, fruit, etc.
- Keeps you warm, dry
- Flowy garment of clothing, has variety such as body-con, casual, floor-length, etc.
- Flip flops but better
- Cold and nice, could share, but why not just have scoops or even tubs by yourself?
- Another word for 1., but could also be a name
- Something that winter lacks, blocked by clouds and tall buildings
- The color of the sky
- Place you can grow lots of things, from vegetables to flowers
- In the sky after rain, pot of gold
- Something you do in lake, pool

OLI’S SWEET MESS: BOBA GUYS

OLIVIA HEUIYOUNG PARK (ME ‘19)

Chewy, round black balls with hot or cold drinks. Thick Straws. Boba was first invented in the 80s in a restaurant called “春水堂 (chun- shui` tang)” in Taiwan. Coming from the west coast, the word “boba” is more familiar and correct to me than “bubble” tea or even “pearl” milk tea. My Taiwanese friends tell me, however, that all three names are perfectly acceptable. “Pearl” (珍珠) milk tea is the literal meaning of “bubble” tea, “bubble” (泡沫)tea has pretty old usage, and “boba” (波霸) is a slang that translates to “big boobs” because the drink was advertised by an actress in Hong Kong with large breasts.

Most of the shops here in NYC called these drinks with the drink name + “tapioca” which I wasn’t really used to ordering because I always ordered “boba.” That’s when I heard about “Boba Guys,” a San Francisco based local shop founded by two friends, coming to East Village. I knew there was one in Clinton Street, but it was too far and I never really had the chance to go after visiting their second pop-up at Tea People at the Lower Manhattan HQ (LMHQ) back in October 2015. I instantly fell in love with Boba Guys then despite their limited menu of 3 drinks, as their tapioca was chewy and their drinks were just perfect. Every time I went and ordered a drink with tapioca in one of the abundant shops near Cooper, I craved and missed Boba Guys’ perfect drink.



Photo by Wentao Zhang (ChE ‘19).

One downfall is that their drinks ARE pretty expensive (they range from \$5-8 depending on size, add-ins, drinks) which is understandable because of their high quality ingredients and prime locations in NYC and SF. Nonetheless, this place is constantly packed with long-lines, and I have been impressed by every single new drink I’ve tried here. I look forward to trying all of their new drinks, and I hope you have a chance to treat yourself to some of the “highest quality bubble milk tea in the world.” ♦

Boba Guys Greenwich Village is located at 11 Waverly Pl. They’re open from 12-8 p.m. but closed Mondays and Tuesdays.

The founders, Bin and Andrew, were two friends who worked together at the bag company Timbuk2 and started Boba Guys as a pop-up shop with Ken Ken Ramen, a shop in San Francisco. Now Boba Guys has five locations in San Francisco and two locations in New York, and plans to expand to different locations are underway. Their goal and motto is “next level quality,” as they brew only real tea with tea leaves, use locally sourced milk (Straus Family Creamery in San Francisco, Battenkill Valley Creamery in New York City) and use house made syrups and add-ins such as almond pudding and grass jelly.