Editor-in-Chief Saimon Sharif (ChE '15) Asst. Editor-in-Chief Chae Jeong (ChE '16) Assoc. Editors Joseph T. Colonel (EE '15) Caroline Yu (EE '15)

IllustratorsJake Potter (ME '16) Laura Quan (CE '15)



Anamika Singh (Art '17) Kevin Sheng (EE '18) Anushree Sreedhar (ChE '18) Ruchi Patel (ChE '18) Brenda So (CE '18)

Pranav Joneja (ME '18) Monica Chen (CE '18)

Photographers Jenna Lee (ME '15) Vincent Wai Him Hui (Arch '15) Howie Chen (EE '16) Christine Huh (Arch '18) Winter Leng (ChE '18)

NOVEMBER 3, 2014 Volume 94, Issue #4 pioneer.cooper.edu pioneer@cooper.edu

"MOSES! PENCILS! EXCELSIOR!"

KEVIN SHENG (EE '18)



Photo Credit: Vincent Wai Him Hui (Arch '15)

On Monday evening, October 20th, David Shields, Associate Professor and Chair of the Department of Graphic Design at Virginia Commonwealth University, gave a special guest lecture to a Rose Auditorium packed with Cooper students and members of the public. Titled "Moses! Pencils! Excelsior!" the lecture spanned two centuries of wood type history, from the early 1800s to today. Letters made out of wood have been used to print for centuries around the world due its availability and printing qualities. Shields, however, focused mainly on its influence in America.

A former Design Custodian of the Rob Roy Kelly American Wood Type Collection at the University of Texas Austin, Shields covered an incredibly broad range of topics related to wood type's rapid proliferation during the 19th century. He began with the tools and manufacturing methods that made this explosion in popularity possible. The lateral router, introduced by Daniel Wells in 1828, allowed letter to be cut

far more quickly and precisely than with a knife, which was the predominant method of the time. The pantograph, a device used to produce identical copies of drawings, was introduced into the process by William Leavenworth in 1834. By combining the router with the pantogram, wood types could be mass-produced.

Shields also talked about the men who made this mass production possible, the men behind the booming 19th century wood type industry. Edwin Allen, William and Samuel Day, John Cooley, William Morgans, Ebenezer Webb, and William Page all created successful wood typeprinting operations across the United States. However, the most important figure was James Edward Hamilton. In 1880, he introduced the holly wood type, which significantly reduced the costs of production. With this economic advantage, Hamilton dominated the wood type market. By the early 1900s, the Hamilton Mfg. Co. had acquired all of their competitors, including all of the operations men-

(8 continued on back)

THE COLD WAR **GALLERY**

ANUSHREE SREEDHAR (ChE '18)



Photo Credit: Vincent Wai Him Hui (Arch '15)

One of the most influential and lasting wars in history, the Cold War drew to an uneasy close in the late twentieth century. On November 9, 1989, the Berlin Wall came crashing down, leaving remnants of the Cold War strewn over all of the nations involved. The Berlin Wall symbolized the Cold War, standing as an object associated with destruction. Therefore, artists from United States, Latin America, Europe, and former Soviet republics took the task of representing the Cold War ideologically in different material and conceptual manners. Some of these worldrenowned artists include Yuri Avvakumov, Aziz + Cucher, Kim Beck, Constantin Boym, Camel Collective (Anthony Graves and Carla Herrera-Prats), Sasha Chavchavadze, Christoph Draeger, Deyson Gilbert, Francis Hunger, Szabolcs KissPál, Angelo Plessas, Lisi Raskin, Dread Scott, Dolsy & Kant Smith, Société Réaliste, and Michael Wang). Their works are now presented in the gallery at the New Academic Building (41 Cooper Square).

One wall of the gallery is

covered with pictures of barred terrain with a white, model-size watch tower held in the view. This watch tower represents the strategically placed observation desks located in West Berlin, where people were able to observe the patrol paths of armed border guards. "The watch tower served its purpose through its palpability in the community - it didn't need to be visibly there for people to see but it was just understood, as was the political tensions surrounding the Cold War. Taking its historical context and manifesting itself in a monument form and putting it in these areas of restriction materializes the overall concept," remarked Kelsey Mitchell (Art '18).

The norm of a tangible monument has slowly started to fade. The modern take of commemoration includes one like Ekaterina Rybolovleva's, the 22 year old daughter of Russian oligarch Dmitry Ribolovlev. In February of 2012, Ekaterina Rybolovleva bought a penthouse apartment next to Central Park West for 88 million dollars. Her ironic

(† continued on back)

INTERVIEW WITH THE NEW DEAN OF **STUDENTS**

MONICA CHEN (CE '18)

The Cooper Pioneer had an opportunity to chat with the newly appoint Dean of Students, Christopher Chamberlin.

The Cooper Pioneer:

How has your job description evolved throughout the last few years from Head of Residence to Associate Dean of Students to Dean of Students? **Christopher Chamberlin:** My responsibilities have grown and evolved. When I first came to Cooper, I was

working specifically within the Residence Hall and as time went on I began to get more involved in other areas of Cooper as opportunities arose. Over a year ago I was asked to assume some additional responsibilities as the Associate Dean of Student Affairs. In that role I was continuing to oversee the Office of Residence Life but I also oversaw the medical and mental health services, student judicial committee, and student organizations and government. As the Dean of Students, I am now responsible for the areas noted above plus the Center for Career Development and overall program development and growth as well as student advocacy and support.

TCP: What is the main responsibility of Dean of Students?

CC: I view my main responsibility as supporting the needs of the Cooper Union students as it relates to their success here at Cooper and

their growth as young adults and new professionals in their respective fields. For most, college is both an experience and a process that coincides with a period of substantial personal identity development and overall growth and development as a person. I view my job as making sure that our students have as many as tools as possible to successfully navigate through these experiences. I also believe we have an obligation to provide opportunities for students to learn when they make a decision that may not be in concert with their vision of the person they want to be.

TCP: Is there a next step after Dean of Students? **CC:** I am honored and truly privileged to be here at The Cooper Union working with the most amazing students, faculty and staff. My next steps are to continue in this role and make a positive impact on the lives of our students.

TCP: What do you hope to achieve by the end of the year as Dean of Students? **CC:** I hope that over this year we are able to grow and develop our programs and our outreach. By the end of this year I'd like to see more students aware of and taking advantage of the programs we offer and I'd like to see those programs grow in numbers. I want my office to be known as (* continued on back)



JAKE POTTER (ME '16)

EPISONE MIMETEEM



As I sat alone with my chicken fandwich, I sensed a dark presence ...





"THE LONG EMERGENCY" LECTURE

ANDY JEONG (EE '18)

On Thursday October 23rd, social critic James Howard Kunstler hosted a lecture on "The Fate of Cities in the Long Emergency" at the Great Hall, supported by Cooper Union's Institute for Sustainable Design. In this lecture, he covered some challenges introduced in his book The Long Emergency (2005)—economic and social dislocations, wishful thinking and techno-narcissism, relations between energy and capital creation, and a posttechno-industrial future.

The lecture began with several interesting points on some converging catastrophes of the 21st Century: he presented an article by IEA (International Energy Agency) whose title read "US to overtake Saudi as top oil producer," and a quote from President Obama, "we have 100 years of shale gas," which are both falsely stated. In fact, while in the past it cost \$0.4 million to produce a thousand barrels per day, today it costs \$6-12 million for a hundred barrels per day for 3 years. These days, 2 barrels of oil are needed to procure 3 barrels of oil as output.

Throughout the lecture, he highlighted the concept of delusional thinking, which most people practice due to their belief in technology's superior capability. However, this is "completely off the charts." As he explained, people have great confidence in the currently-thriving and strong industries that they believe are permanent installations. According to Kunstler this wishful idea stems from currently prospering industries, and this type of thinking as well as economic distress

(§ continued from front) tioned previously, essentially gaining complete control over the market. Over the next decades, they systemized the industry and introduced several new technologies, such as the die-cut method. They remained as the dominant force in the industry until the end of the century.

As expected, Shields also discussed the typefaces themselves. He talked about various scaling techniques, and explained the reasoning behind creating typefaces in specific shapes. He also talked, at length, about the primary sources that led to our contemporary understanding of these designs, exhibiting several specimen catalogues containing dozens of tiny variations on one basic design. He presented a catalogue of beautiful chromatic wood types by William Page, and explained the layering techniques required to create the

mount at the same rate.

As a result of this propensity, he points to another consequence -the financialization of the economy. This is an idea people first falsely think: that getting something in return for nothing is okaynot true. As consequences, large volume of frauds has occurred, banking started to fail, and the culture, economy and prospects of the future have been ruined. Fewer large trades and disturbances in finances and currency that may lead to the end of the global economy are certainly not desirable.

Kunstler also suggested that energy does not equal technology, as most might assume. As an example, he referred to most American airlines using 40% of their operating costs solely on fuel, despite huge technological advances. These two are heading in different directions, he said.

But, as he points out, a solution is not really a solution; according to the current model, it is still keeping what we already have and not really changing. People have mistakenly interpreted current models as permanent, and those models need to be reformed from their temporary conditions. He emphasizes the downsides of the energydebt-finance relationship—his point of view reminded that the downside of energy use is debt repudiation, thereby impairing the economy. He hopes to turn his opinion on this change into a political point urging changes to take place as soon as possible, as he discusses in his book in detail. ◊

brilliant and vibrant prints. He discussed the fetishization of these wood type designs and the influence they have on modern typography.

He ended the lecture by talking about secondary sources and the accounts of those who actually worked on the wood types. Through these personal accounts, we can discover "not only what company made what, but find out the actual living beings and what they were making." These wood types are not simply artifacts to be admired for their aesthetic qualities. Each and every one of these designs contains a human element, one filled with a rich history and reflective of the American experience as a whole.

This event was part of the Herb Lubalin Lecture Series, presented by Type@Cooper. For more details and future events, visit coopertype.org/lectures. ◊

COOPER UNION TRANSITIONS TO THE COMMONAPP

PRANAV JONEJA (ME '18)

will continue to be at the core

of the application. Students

from all three schools would

agree that Cooper's admission

process is one of a kind. Many

artists still recall the minutiae

of their home-test and the

architecture studio-test is

unmatched by any other in-

stitution. Moreover, part II of

the application, the free-form

essay portion, is common to

all three disciplines, but still distinctive of Cooper Union's

core ethos and attitudes

With regards to the shift

to the CommonApp, this

second, "meaty" part of the

completed in the exact same

manner: it will be sent sepa-

rately; written by applicants

under the same guidelines;

and entirely devoid of word

that the content of part II

CommonApp's own essay

requirements in the eyes of

Still, members of the Cooper

community are also skepti-

cal about the timing of this

Lipton, the CommonApp

has been on the table for 5

years. The CommonApp

organization requires that

colleges have their affairs in

order at least 8 months prior

attempts were made to join

the CommonApp last year,

environment surrounding the

charging of tuition precluded

these efforts. So, the transition

was postponed for one more

was able to meet the deadline

for this year, confirming the

shift in January 2014. With

seniors who have expressed

strong interest in the Cooper

Union and over 200 prospec-

tive students in attendance at

the Engineering Preview, the

school is poised for the appli-

cation cycle this year with the

CommonApp. ◊

2,756 current high school

year. The admissions office

the tense and tumultuous

to the application cycle. While

transition. According to Dean

the admissions office.

limits. Dean Lipton confirmed

will take precedence over the

application will continue to be

toward learning.

Cooper Union will admit students using the Common Application beginning with the Class of 2019. While the current freshmen class will no doubt remember the CommonApp for the infamous technical issues that plagued its systems last year, most other students may recall that the CommonApp, as its name suggests, is a unified application to colleges across the nation, involving basic applicant data and a selection of common essays. With the rumors that Cooper Union is joining the ranks of CommonApp schools, the Cooper Pioneer sat down with Mitchell Lipton, Vice President of Enrollment, and John Falls, Associate Dean of Admissions.

Cooper's previous application process involved a jumble of pieces, some of which were mailed by post and others that were sent by email. In many cases, the various application forms needed to be made available in more than one format, creating redundancies and confusion. This required a tremendously inefficient process John Falls refers to as "turning piles into files"; consolidating dozens of documents for thousands of applicants.

Instead, offering the CommonApp means a single, unified system that applicants are already familiar with. Furthermore, applicant data is already in one place by default, making the process easier for both applicants and admissions staff alike. Dean Lipton sums it up very simply as "one app: The CommonApp".

Many are now wondering if this change will result in an application process that is radically different to what they remember. The admissions office, however, emphasizes the contrary: the essence of the application will remain virtually unchanged. The home- and studio-tests

(**continued from front)
an office where students can
come to get their questions
answered and be pointed in
the right direction; if we can't
resolve an issue for a student
we will get them the resources
and/or connections they need
to get it resolved.

TCP: Is there anything you are currently displeased with that you wish to change as DoS?

CC: I'd like to see more resources go towards diversity initiatives here at Cooper. I have some plans that I hope to be able to begin to implement this year that will allow us to do some broader programs campus-wide that address the

diversity of cultures, heritages and identities that exist here at Cooper and in the world at large.

TCP: What has been your

greatest difficulty thus far in your new position?

CC: My greatest challenge so far has been trying to get everything done. There is a lot that goes on behind the scenes and a lot of things we do to support our students that happen every day that people often don't see. I have a lot of ideas and there are a lot of new initiates that I want to see come to fruition and my challenge is prioritizing the initiatives and getting them all

off the ground.

SUMMER EXPERIENCES: HOWIE CHEN (EE '16)

CHAE JEONG (ChE '16)

The Cooper Pioneer interviewed current students from the art, architecture, and engineering schools about their summer experiences. The interviews will be published as a series. We hope they will serve to highlight the diverse achievements of our student body.

 $\label{eq:cooper_Pioneer:} \textbf{The Cooper Pioneer:}$

Where did you work?

Howie Chen: This summer, I was an undergraduate researcher for the FREEDM (Future Renewable Electric Energy Delivery and Management) Systems Center through CAPS - the Center for Advanced Power Systems at Florida State University.

TCP: What was your daily routine?

HC: I spent weekday mornings at the CAPS office, either reading and annotating past FREEDM research papers for background knowledge for my project, or working through tutorials and test cases to familiarize myself with RSCAD, a real-time power system drafting and simulation environment. Afternoons were spent with my graduate mentor working on a number of things for his experiments for the FREEDM Hardwarein-the-Loop project. These included debugging and modifying the operating system code for the smart grid model, running simulations and collecting power migration and test packet delay data through a virtual network, and writing MATLAB scripts. I spent most of my free time in Florida exploring the neighboring areas of Tallahassee or with friends at the FSU/FAMU/TCC Intervarsity chapter.

TCP: What was the best part about your internship? **HC:** The best part of my

work this summer was the fact that I was able to expose myself to several different aspects of an industry or research career in electrical engineering. I never would have imagined being able to work with software, network security, power electronics, and control systems, all within the same summer experience.

TCP: How was it different from what you've done thus

HC: The work I contributed to and saw at CAPS was definitely at a much higher level in terms of novelty and $complexity-I\ remember$ it took me about two weeks of reading and talking to my colleagues to just gain a high-level, conceptual understanding of the Hardwarein-the-Loop testbed, which consists of real hardware components "in-the-loop" of software simulations to create a real-time demonstration of a virtual smart grid. It was also pretty cool knowing that some of what I was working on could eventually be implemented "in the real world", and that it wouldn't just affect my grades or my performance at a competition, unlike any projects I've worked on for classes or a club activity.

TCP: What do you feel was the biggest takeaway from the experience?

HC: I think my experience this summer really opened my eyes to and gave me interest in the work of a graduate-level researcher in an engineering-related field. It also exposed me to some fields within electrical engineering that I otherwise would have never considered, and has piqued my interest in pursuing a graduate degree after my studies here at Cooper.



Photo Credit: Vincent Wai Him Hui (Arch '15)

(† continued from front)
take on commemoration
involves building the floor
plan of her penthouse out
of black, polished graphite
in her apartment in Central
Park. This representation of
vast and empty space mocks
the quick demise of the "free"
victory post Cold War into a

semi-criminal oligarchy.

Please visit the gallery during in the New Academic Building for more information on the various different art forms presented. This exhibit runs from October 7,2014 until November 7, 2014. ◊