The Brown Institute

Annual Report

2015-2016

A year in the life…
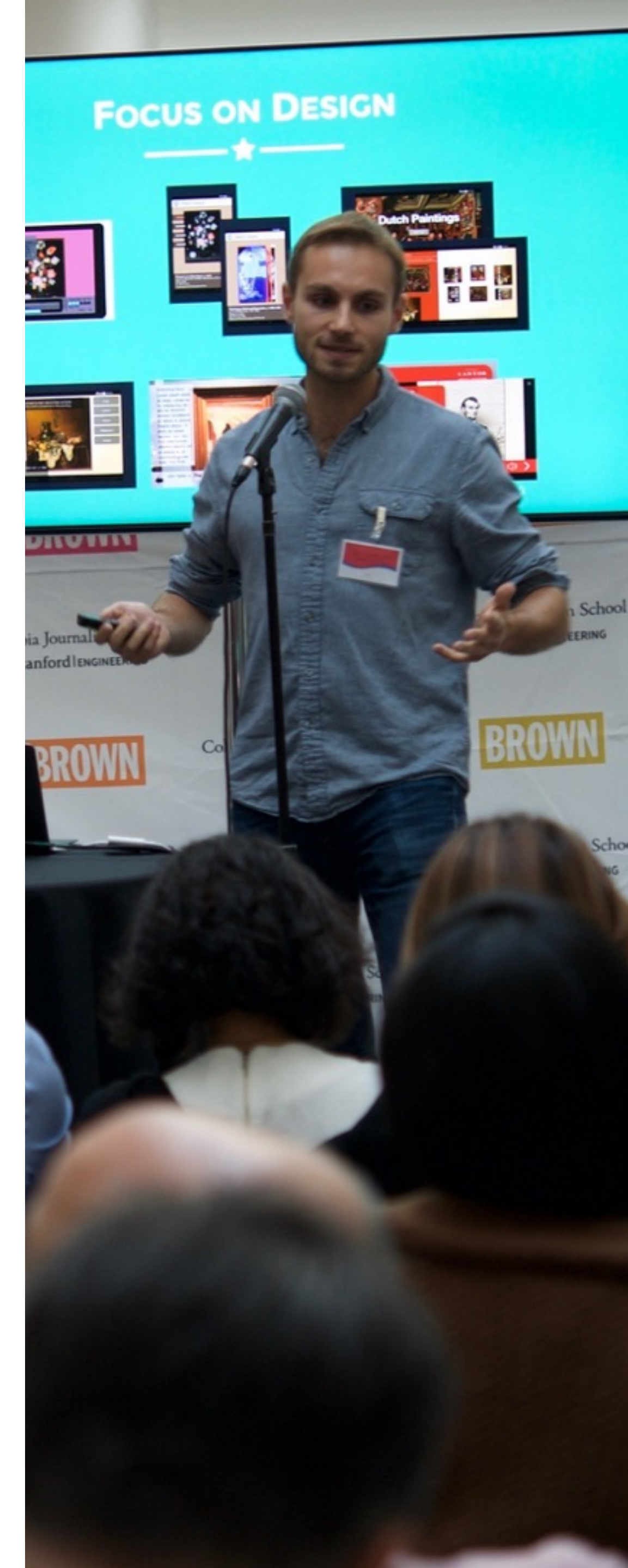
Michael Krisch
Deputy Director
Columbia

Ann Grimes
Chief Program
Development Officer
Stanford

David Riordan
CTIO
Columbia

Allison McCartney
Associate Program
Developer, Stanford

Rosalie Yu
Creative Technologist
Columbia

Kelly Yilmaz
Program Manager
Stanford

Mark Hansen
Director
Columbia

Maneesh Agrawala
Director
Stanford

Institute staff

This year, we welcomed four new staff members to the Brown Institute, funded in part by the generosity of the Foundation.

Allison McCartney is the Associate Program Developer at Stanford. She recently graduated from Stanford University with a master's degree in journalism, specializing in computational and data journalism. In 2014, she was one of two AP-Google Journalism and Technology scholars, and in 2015 she received a Magic Grant for OpenContractors. Allison has been the editor of PBS NewsHour Extra, and her work has appeared in media outlets including MOTHERBOARD, SFGate.com, Entrepreneur Magazine and KQED.

Ann Grimes is the Chief Program Development Officer at Stanford. She is a former staff writer and editor for The Wall Street Journal where she covered technology and business. As Deputy Bureau Chief in San Francisco, she oversaw the newspaper's coverage of Silicon Valley during the 1990's dot-com boom and bust. While at Dow Jones & Co., she also worked on developing new media strategy. Earlier, Grimes was on the editorial staff of The Washington Post. As the Deputy National Editor responsible for coverage of the federal government, she ran a national news section that covered the political spectrum. Starting out, she wrote about social issues in Chicago and contributed regularly to The New York Times.

David Riordan is our new Chief Technology Innovation Officer at Columbia. He joined us from Mapzen where he headed the product team working on geospatial search. Prior to Mapzen, David helped launch the New York Public Library's first "Labs" division, an institutional platform for creatively reimagining the future of humanities research. At the NYPL he helped fashion new tools for unlocking the value of deep, historical archives -- tools that opened the library's collections to the public, engaging people in the acts of creating and making sense of data.

Rosalie Yu is our new Creative Technologist at Columbia. She is an artist, designer, and a former Research Fellow at NYU Tisch's Interactive Telecommunications Program, ITP. The cornerstone of Rosalie's work is the use of emerging photo- (depth photography, photogrammetry) and 3D-technologies. Rosalie's works have been exhibited at the Queens Museum and New York Hall of Science, and featured in the Creators Project and Wired Magazine.

Allison, Ann, David and Rosalie join our other staff members, **Michael Krisch** (Deputy Director at Columbia) and **Kelly Yilmaz** (Program Manager at Stanford). The team has been working extraordinarily well both within and between our institutions and has had some incredible successes this year. Together they planned a joint "on-boarding" program for our 2016-2017 grantees, and created the first ever Brown Institute Media Innovation Showcase.

There are only great things ahead!

A year in the life…

Our Magic Grants and Fellowships are the main focus of the Brown Institute. We spend a great deal of time nurturing and adapting these programs, placing special emphasis on fostering truly unique projects, and especially projects that bridge Columbia and Stanford Universities.

Thanks to a range of events and outreach efforts, we are building strong ties to the research and creative communities on each coast. As a result, our Magic Grant teams are incredibly diverse, defying the prevalent demographics found in technology-heavy or content-only programs, and our proposals have been rapidly improving in number and novelty.

Before we describe our grants from 2015-2016 — with a peak ahead to 2016-2017 — we review the special events designed and sponsored by the institute. You will see…

**Bicoastal programs** that bring our universities together,
Training sessions that introduce our students to new ways of thinking,
Special guests, inspiring designers, technologists and journalists,
Hack and design events that mix disciplines around a theme, and
Conferences that connect Brown to professional communities.

These activities have been crucial in helping establish the institute as an important resource on both campuses, inviting students and faculty to think about new ways to find and tell stories.
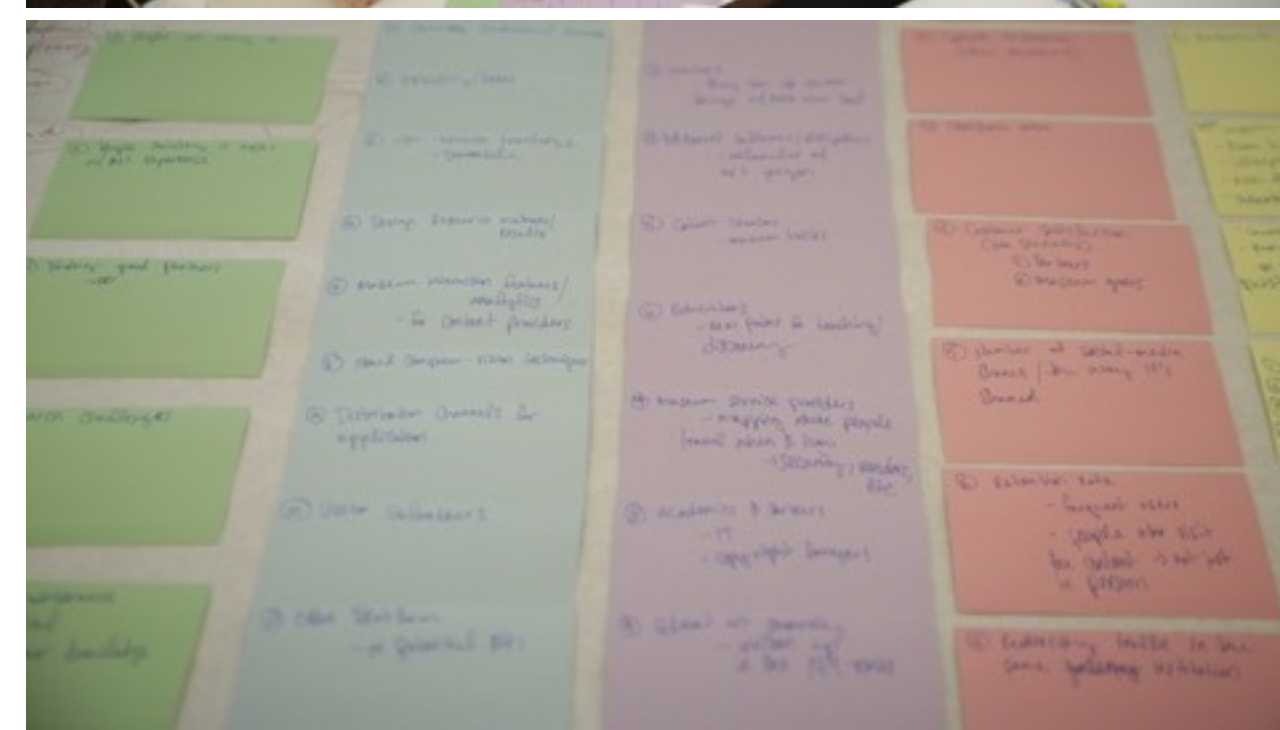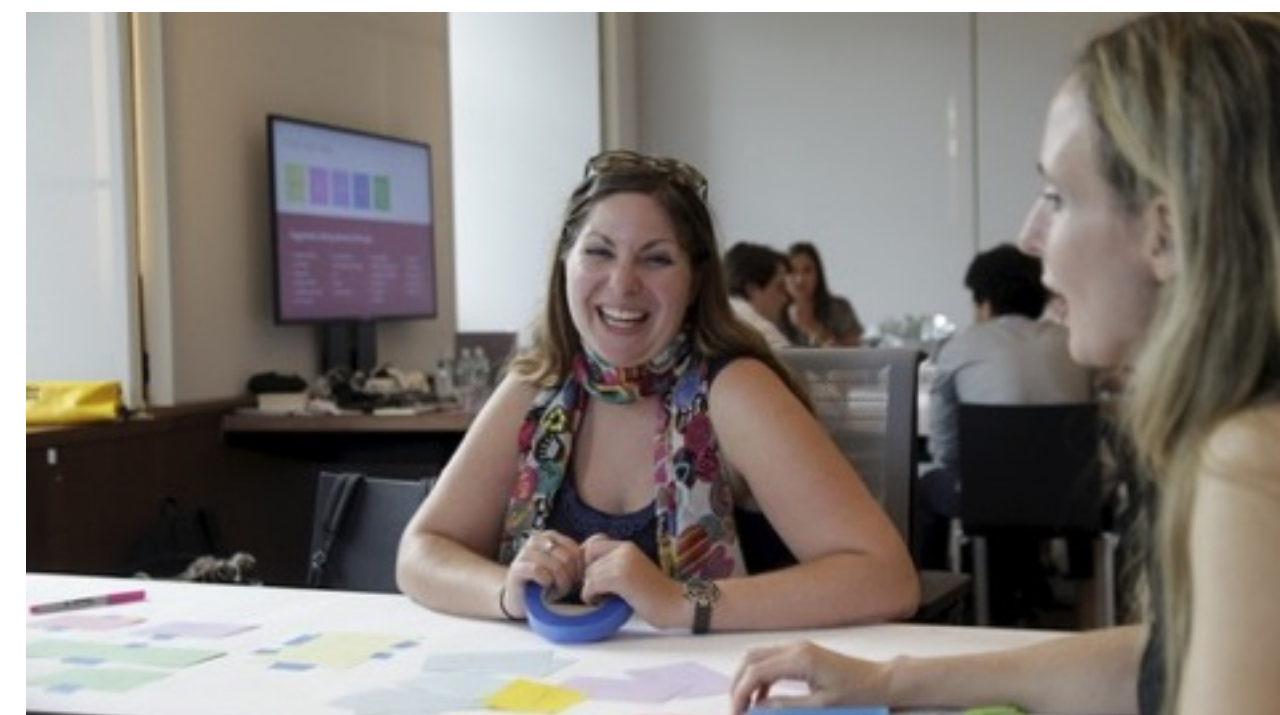
Bicoastal Events — The Media Innovation Showcase
6-9pm, September 29, 2016

More than 200 people turned out for the first annual Brown Institute Media Innovation Showcase at Stanford University. The event recognized the innovative work of 12 Magic Grant teams and Brown Institute Fellows from the 2015-2016 cohort who presented and demoed their projects—some for the first time.

"Watching our projects presented one after the other, it was hard not to feel pride in what our teams have made," said Mark Hansen, Director of the Brown Institute at Columbia University. "The Brown's would have been impressed by their creativity, their impact. It was an extraordinary evening."

This year, the staff at Brown worked between institutions to rehearse our grantees and create what was a superb event. The Showcase will be a yearly affair, moving from coast to coast and introducing both the Stanford and Columbia communities to the truly unique work happening at Brown.

BROWN INSTITUTE

MEDIA INNOVATION
SHOWCASE 2016

Join the Brown Institute as we celebrate a
stellar year of media innovation.

The Stanford Daily

Brown Institute showcase features tour guide drones, defense contract database

September 30, 2016   0 Comments   **Tweet**   **Like 7**

Fangzhou Liu
Desk Editor

From drones acting as tour guides to mass-analyzed cookie recipes, the projects on display at the Brown Institute's first ever Media Innovation Showcase were anything but conventional. Funded by Brown's yearlong Magic Grants, interdisciplinary teams from Stanford and Columbia pioneered new techniques for every step of the storytelling process, from research tools for journalists to new ways of telling a story.

The Brown Institute was established in 2012 as a new collaboration between Stanford University and Columbia University's School of Journalism. Longtime Cosmopolitan editor-in-chief Helen Gurley Brown endowed the institute so that students at her late husband David Brown's alma maters — Stanford ('36) and Columbia — might work on new endeavors in media innovation.

Stanford Brown director Maneesh Agrawala said in his opening remarks: "Tonight, I am super excited to present the projects we supported over the past year. They feature lots of new technologies, new storytelling techniques, as well as new and interesting stories."

Bicoastal Events — Media Innovation Base Camps

"Are you passionate about the role that emerging technologies can play in the future of storytelling and journalism? Do you have a story that can only be told using technology outside the scope of traditional media? Base Camp is for you!"

Starting in 2014, the Brown Institute for Media Innovation at the Columbia Journalism School and the School of Engineering at Stanford University hold two annual Media Innovation Base Camps taking place at Columbia University in the Fall and at Stanford University in the Winter. The Media Innovation Base Camp offers a great starting point for entrepreneurial students who want to explore the interplay between story and technology, creating new ways to inform and delight.

For each Base Camp, we assemble a cohort of 12-15 students from each campus. In November, engineering students from Stanford travel to New York to work with journalism students at Columbia, and in January we flip, sending Columbia students to the Bay Area. Each cohort, a mix of engineers and journalists, will learn about interdisciplinary collaboration, exploring new forms of storytelling.

Our goal with Base Camp is to introduce students to a design process customized for journalistic innovation, with a potential byproduct being a new idea that might lead to a one-year "Magic Grant" project. Brown Institute Fellows, industry experts, and faculty will be on hand to provide feedback, guidance, and support. Students don't need to have a fleshed-out idea to apply for these events — the Base Camp is designed to give them space to develop their ideas, collaboratively.

Summary for 2015-2016

In 2015-2016 we had well over 200 applicants for our two Base Camp events. Many of our Base Camp attendees went on to propose Magic Grants, and two projects, Open Contractors and Re(ef)Source, were eventually awarded bicoastal Magic Grants!

We include the ad for the 2016-2017 Base Camps on the following page.

Brown Institute Base Camp

ARE YOU PASSIONATE ABOUT THE ROLE THAT EMERGING TECHNOLOGIES CAN PLAY IN THE FUTURE OF STORYTELLING AND JOURNALISM? DO YOU HAVE A STORY THAT CAN ONLY BE TOLD USING TECHNOLOGY OUTSIDE THE SCOPE OF TRADITIONAL MEDIA?

FUNDING FOR PROJECTS RANGES UP TO $150.000 FOR STANFORD OR COLUMBIA TEAMS AND UP TO $300,000 FOR BICOASTAL TEAMS.

BASE CAMP APPLICATIONS DUE DECEMBER 4

APPLY NOW ➜

Fall Base Camp

November 12-13, 2016

Columbia University
New York, NY

Winter Base Camp

January 14-15, 2017

Stanford University
Stanford, CA

DATA VISUALISATION

PANEL / AUG 28, 5PM
GIORGIA LUPI

WORKSHOP / AUG 29
AMANDA COX

TRANSPARENCY SERIES

MAPPING AND CARTOGRAPHY

SEMINAR SEP 25, 5PM
LAURA KURGAN

WORKSHOP SEP 26, 10AM–5PM
DEREK WATKINS

TRANSPARENCY SERIES

MACHINE LEARNING & COMPUTATIONAL JOURNALISM

SEMINAR / OCT 16
CHASE DAVIS
NEW YORK TIMES

WORKSHOP / OCT 17
HILARY PARKER
ETSY

BRWN.CO/TX
TRANSPARENCY SERIES

ILLUSTRATION

PANEL / NOV 13
STEVE BRODNER
ILLUSTRATOR
SOOJIN BUZELLI
ASSET INTERNATIONAL
LEN SMALL
NAUTILUS

WORKSHOP / NOV 14
ELLEN WEINSTEIN
ILLUSTRATOR

TRANSPARENCY SERIES

NETWORKS

SEMINAR / DEC 4
GILAD LOTAN
BETAWORKS

WORKSHOP / DEC 5
BURAK ARIKAN
GRAPH COMMONS

BRWN.CO/TX
TRANSPARENCY SERIES

NEWS PRODUCTS

SEMINAR / FEB 5
RUS YUSOPOV
VINE

WORKSHOP / FEB 6 & 7
KAREEM AMIN
BRETT MARTIN
NICOLAE RUSAN

TRANSPARENCY SERIES

SENSOR-DRIVEN JOURNALISM

SEMINAR / FEB 26
ALLISON BURTCH
SCHOOL FOR POETIC COMPUTATION

WORKSHOP / FEB 27–28
TOM IGOE
NYU

BRWN.CO/TX
TRANSPARENCY SERIES

TYPOGRAPHY

SEMINAR / APR 8, 5PM
PAULA SCHER
PENTAGRAM

WORKSHOP / APR 9–10, 10AM–5PM
CRAFTING TYPE

BRWN.CO/TX
TRANSPARENCY SERIES

Training Sessions — The Transparency Series

To prepare our students for interdisciplinary collaboration, both sides of the institute offer events that introduce students to people and ideas that live on the fringes of journalism and engineering practice — neutral territory where we can examine the basics of how stories are told and the role that technology plays.

As an example, in 2015-2016 we introduced the Transparency Series at Columbia. The Transparency Series is a unique set of seminars and hands-on workshops that bring new technology and design ideas to the Columbia Journalism community. Our goal is simple — help students learn new ways to find and tell stories, new ways to inform and entertain. Each topic will commence with a Friday evening panel discussion followed by a Saturday workshop led by well-known journalists and technologists.

Participation in the 2015-2016 Academic Year

Total Seminar Attendance: 480
Total Workshop Attendance: 193
Unique Workshop Attendance: 130
Number of students who attended 3 or more sessions: 23

Breaking into the curriculum

Building on our Transparency Series on Mapping and Cartography, we were awarded one of Columbia's **Collaboratory Grants for 2016-2018**. These funds are offered annually by the Provost to help forge truly interdisciplinary classes. Brown's project, receiving $150,000, examines maps not just for visualization, but also as important additions to a reporting practice, helping to structure complex information. Our grant is joint with colleagues in the School of Architecture (Architecture being the disciplinary home for mapping at Columbia). Ultimately, we will develop a set of modules for use in our regular reporting curriculum — from a fringe beginning in the Transparency Series to core modules.
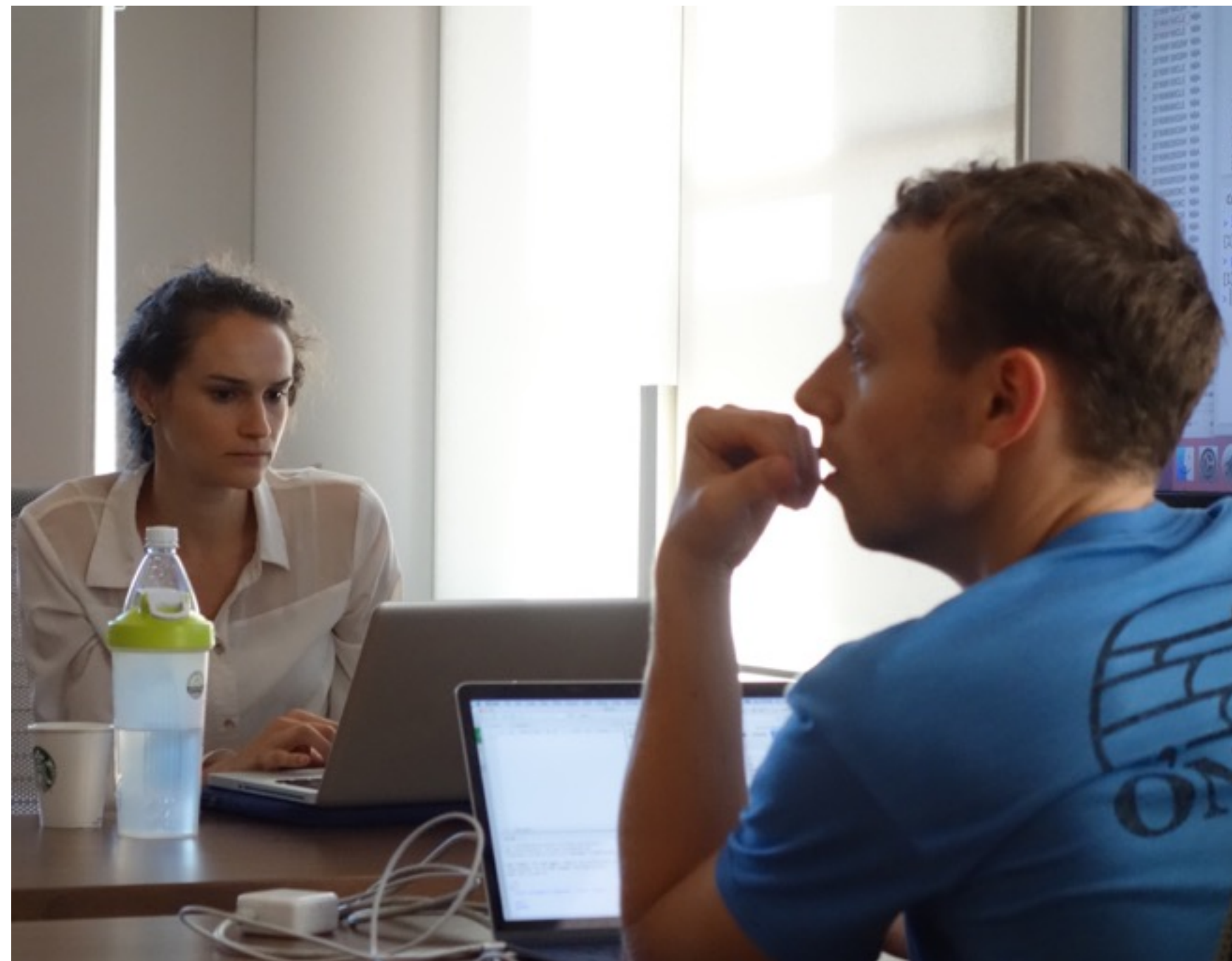
TRANSPARENCY SERIES

FALL 2016
POLLING
MAPPING &
CARTOGRAPHY
VIRTUAL REALITY
ILLUSTRATION

SPRING 2017
REPORTING ON
ALGORITHMS
NEWS PRODUCTS
VISUALIZATION
NETWORK ANALYSIS
DOCUMENTS AS DATA

COMING SOON!

THE BROWN INSTITUTE FOR MEDIA INNOVATION

Training Sessions — The Transparency Series

At the left we present a rough schedule for the Transparency Series for 2016-2017. Some of the topics have returned from 2015-2016, while others are new, chosen to respond to the current technological needs of our journalism students.

On the next page, for example, you will find the advertisement for the 2016-2017 session on Opinion Polls, led by a senior political analyst and a data journalist from FiveThirtyEight.com. This event took place in September 2016, long before polls became an issue in the national election, and ultimately helped our students make sense of the events to come.

OPINION POLLS

PANEL
FRI SEP 23, 5:30-6:30PM
CO-ORGANIZED WITH REUTERS

WORKSHOP
SAT SEP 24, 10–5PM
HARRY ENTEN & NEIL PAINE, FIVETHIRTYEIGHT

Announcing the first event in the 2016-2017 Transparency Series
A panel and workshop on opinion polls

Join us in the Brown Institute for a Friday night discussion on polling and its importance in the presidential race. As the 2016 election nears, we pore over opinion polls looking for subtle (or not so subtle) clues about how things will fare on November 8. We say Clinton is ahead because most of the polls have her ahead, yet there are polls that have Trump ahead. Which polls are right? Or reliable? To journalists, of course, the polls themselves aren't the story, they help tell us a story. The narrative power of polls extends far beyond a single number on a given day. Taken collectively and in combination with other data, we can tell deep stories about the nature of our public's opinions.

The first workshop in the Transparency Series takes you through techniques for looking at one or more polls over time. Your instructor is Harry Enten, a senior political analyst at FiveThirtyEight. He will be assisted by his colleague Neil Paine, another talented data journalist and sportswriter. The day-long workshop will present tools and strategies for working with polls — starting at the very beginning with simple random samples, and leading to the detailed models that are employed today. All the while, we will emphasize how to find and tell interesting, novel stories with polls. No prior experience in statistics or data analysis is needed.

Bios: **Harry Enten is a senior political analyst and writer for FiveThirtyEight,** a data journalism website. He studies polling and demographic trends to try and tell readers who and why candidates and parties win and lose elections. Previously, he was a writer with The Guardian in New York. Harry graduated from Dartmouth College. At Dartmouth, he started his own blog Margin of Error, where he blogged about political statistics. **Neil Paine is a senior sportswriter at FiveThirtyEight**, with writing on all of the major American sports. Before joining FiveThirtyEight, Neil was a Basketball Analytics Consultant for the Atlanta Hawks and also worked for Sports Reference LLC. Neil is a graduate of Georgia Tech.

TRANSPARENCY SERIES

THE BROWN INSTITUTE FOR MEDIA INNOVATION

Special Guests — Brown Institute Distinguished Media Innovator

Every year, the Brown Institute seeks new ways to connect research with leading media innovators, and we are happy to announce that we named DJ Spooky, aka That Subliminal Kid, Paul D. Miller, as the Brown Institute at Stanford's Distinguished Media Innovator for 2017.

DJ Spooky's work ranges from creating the first DJ app to producing an impactful DVD anthology about the "Pioneers of African American Cinema". According to a New York Times review, "there has never been a more significant video release than Pioneers of African-American Cinema."

The prolific innovator and artist also created 13 music albums and is about to release a fourteenth. Called "Phantom Dancehall", it is an intense mix of hip hop, Jamaican ska and dancehall culture. Paul D. Miller will engage in Brown-related collaborations all year, and his residency will culminate in a week-long series of lectures, workshops and performances at Stanford University starting April 10, 2017.

Stanford and Columbia Brown Institute Lecture series

DJ Spooky's lectures are part of the new Brown Institute Lecture series at Stanford, which we launched in 2016 with Internet pioneer and founder of archive.org Brewster Kahle.

The Columbia side of the Institute also runs a vibrant series of seminars, workshops and panels. Our Fall Speaker Series began in 2014 with Bruno Latour. In 2016, the Brown Institute welcomed Joanna Coles, Hearst's first Chief Content Officer. Coles spoke to about 100 students on the lawn outside the Mathematics Building on the Columbia Campus.

Just a week before her visit, Coles was promoted from Editor-in-Chief of Cosmopolitan, a position she held since 2012, to the head of content at Hearst. We asked her about her time as a journalist, an editor and now as a collaborator with technology firms. Coles spoke of her experiences with platforms like Snapchat, Twitter, Facebook and Google.
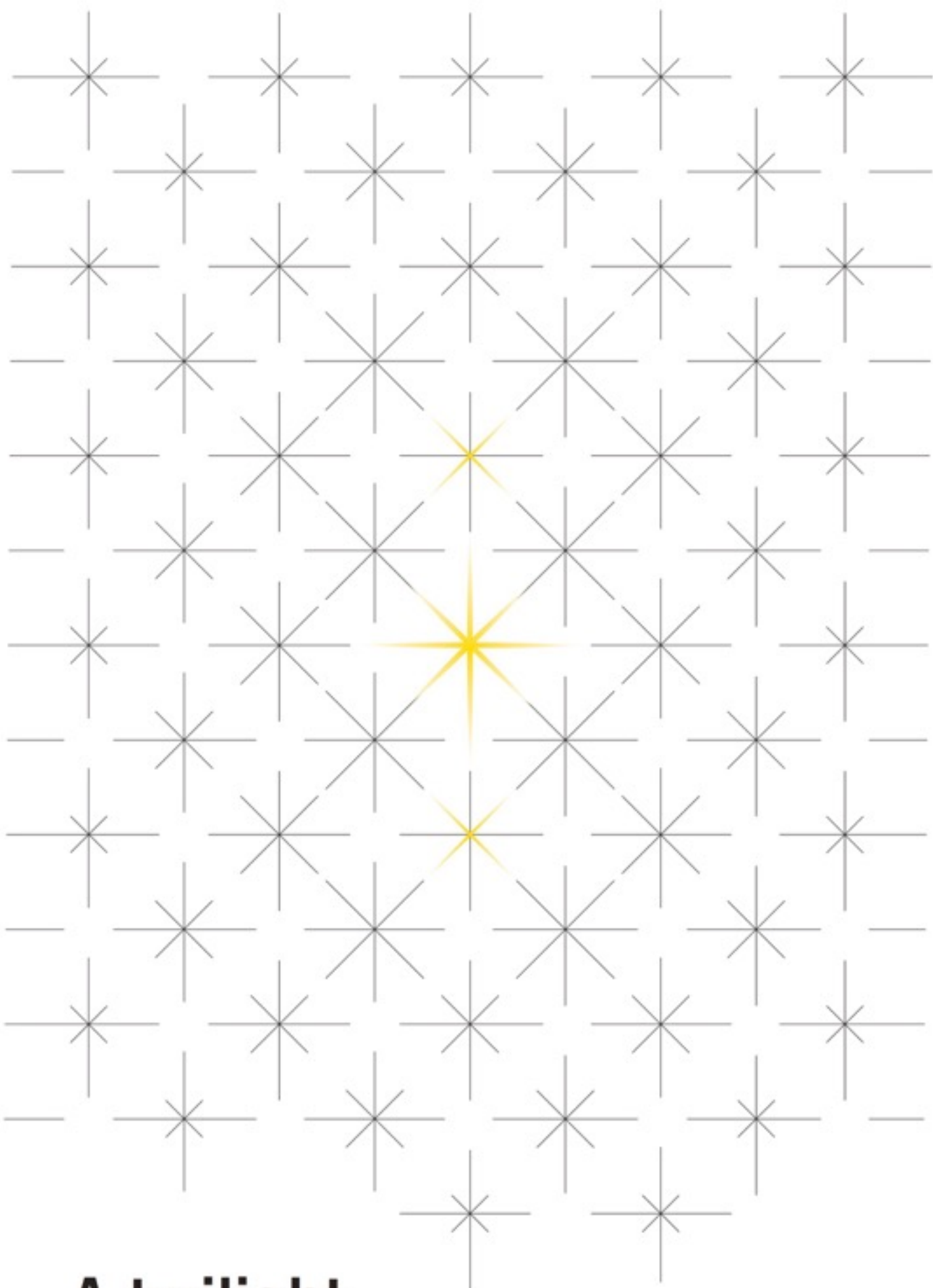
A twilight
conversation
with

EDITOR-IN-CHIEF
COSMOPOLITAN

JOANNA
COLES
@JOANNACOLES

THE BROWN INSTITUTE
FOR MEDIA INNOVATION

Fall Lecture
Series

Thursday
September 15
at 5:30pm

Furnald Lawn
(in front of
Pulitzer Hall)

Hack events and design workshops

This year, The Brown Institute at Columbia sponsored hack events with **Newscorp**, **voxgov.com** and **MINDS International**, a consortium of news agencies like the AP and PA. At each event, practitioners challenged interdisciplinary teams — from journalism, statistics, computer science, data science, and political science — to think about large, unwieldy data sets.

The winning projects found a balance between narrative and data analysis, something the Journalism School's dual degree students (dual with Computer Science) and data concentrators do easily now.

Total Attendance for all three events: 140 students from across campus

Example hack event — MINDS

For the MINDS Innovation Challenge, four teams presented at the organizations annual conference in NYC last April. One team focused on quotes appearing in the AP and built a database indexed by topics and entities. Another team tried to use AP meta-tags to surface national stories of relevance to local towns and communities. The winning presentation from the April meeting was awarded a one-week trip to London to present their project to the Board of Directors of MINDS.

"One of the goals of the [MINDS] agencies is to find innovation. What better place to find those ideas than at a university, working with students who are exposed to new technologies, new platforms, and new ways of thinking about problems," said Francesco Marconi, Manager of Strategy and Development at AP. "I was very impressed by the quality of work the students delivered in such a short period of time and their understanding of the challenges news agencies face."

On the next page we present an ad for a hackathon that took place this last October on Social Media and the Election — a joint effort between Journalism, Quantitative Social Science, Data Science, Statistics and Computer Science.

Announcing the Brown Institute's first Hack event for 2016-2017
Elections and Social Media Hackathon

Interested in politics, social media, and big data? The Brown Institute for Media Innovation, the Data Science Institute, and the Departments of Political Science and Statistics are sponsoring a Hackathon on October 29 and 30 (9am-5pm) where students and faculty at Columbia will analyze data from the web site voxgov.com to help us better understand the 2016 elections. voxgov does multiple daily scrapes of government internet sources and makes the information it obtains available in a massive searchable database. The data that voxgox will provide include over 1 million documents from all contested U.S. House, Senate, and gubernatorial races, as well as the presidential race. The documents include social media content from Facebook, Twitter, and YouTube and official campaign press releases. This data offers the opportunity to study the dynamics of elections in new ways. Social media represents a vast new frontier in how candidates for political office interact with potential voters. Yet we know almost nothing systematically about how candidates and campaigns are using this new mode of interaction, nor do we know much about how social media might be changing the nature of elections in democracies.

One of the goals of the Hackathon is to advance our understanding of the role that social media plays in elections. With data provided by voxgov, teams of students from programs in data science, journalism,political science, and statistics will explore a range of questions in an attempt to better understand the dynamics of the 2016 elections. Potential questions for exploration include fundamental ones regarding amount and variation in social media activity, as well as more complex questions such as how the tone of the race has shifted in response to domestic and international events. How do the candidates compare in terms of the language they are using? Which candidates have been the most positive and which have been the most negative? Which candidates have been the most issue-oriented and how are they speaking about the issues? Which candidates are driving the conversation and why? What can we learn about the popularity and viability of the candidates through social media activity involving "retweets" and "likes"? These questions will be addressed using the modern tools of data science, with a key focus on producing visualizations that help to distill an enormous amount of information into displays that are accessible to broad audiences. The collaboration with voxgov promises to be an innovative way to showcase the interplay between journalism, data science, political science, and statistics and to demonstrate how such interdisciplinary efforts can give us new perspectives on political and social phenomena.

Exploring the interface between journalism and computing

Sept. 30 - Oct. 1, 2016 in Stanford, California

WATCH VIDEOS FROM THE SYMPOSIUM   READ SUMMARY COVERAGE

Conferences — The Computation+Journalism Symposium

Data and computation drive our world, often without sufficient critical assessment or accountability. Journalism is adapting responsibly—finding and creating new kinds of stories that respond directly to our new societal condition. The Computation+Journalism Symposium is a two-day conference exploring the interface between journalism and computing. The Brown Institute has been the principal organizer behind the event since 2014, with Columbia Journalism School playing host in 2014 and 2015.

The symposium is a celebration and synthesis of new ways to find and tell news stories with, by and about data and algorithms. It is a venue to seed new collaborations between journalists and computer and data scientists: a bazaar for the exchange of ideas between industry/practice and academia/research.

Journalists working today routinely encounter social and political systems that are driven by new technologies. To critique their operation, a journalist needs an understanding of computation — of the consequences of classification and counting, of the collection and analysis of data, and of the accountability of algorithms. Far from virtual, inert quantities, data and computation exert real forces in the physical world, shaping and defining systems of power that will play larger and larger roles in people's lives.

Journalists, "the explainers of last resort," need to adapt responsibly — finding and creating new kinds of "stories" that respond directly to new technologies, whether that "story" be a piece written in English or in Python, a data visualization, an API or database, an immersive virtual experience, or a sensor drone deployment.

Computation+Journalism is a forum for discussing the ways journalism is and should be adapting in the face of new technologies. We want to hear from journalists with an interest in, or experience in, developing new technologies or applications, and from data and computer scientists working in news, or storytelling broadly, and collaborating or hoping to collaborate with journalistic organizations.
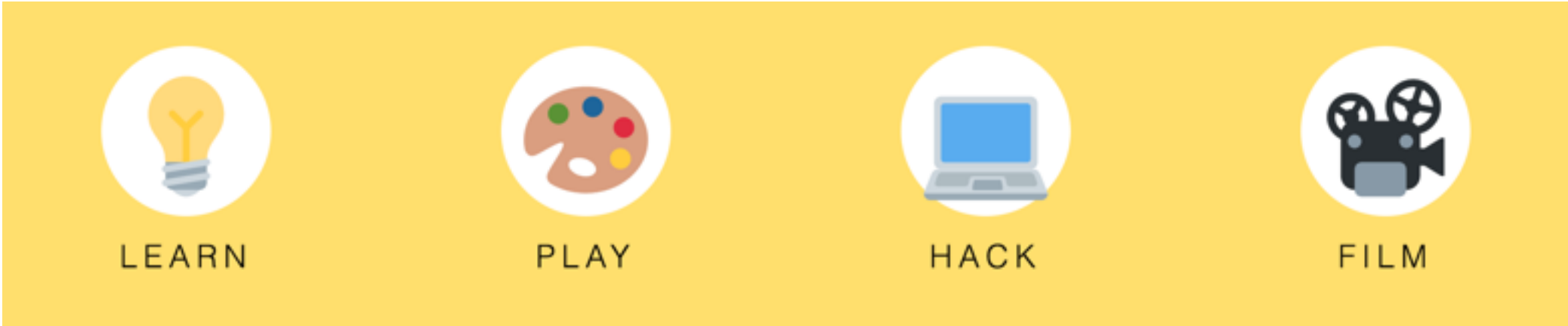
Conferences — Emojicon

This year, we also helped organize a design event at the first-ever emojicon. While it might seem frivolous, emojis are changing the way we communicate and new emoji proposals have started reaching areas like disaster preparedness and alerting. From emojis for science to politics and basic communication, our main interest was in how emoji will change journalism.

This conference is also a good example of how Brown can advance storytelling around closed institutions, in this case the opening-up of the Unicode Consortium, the committee behind emoji and the Unicode language encoding standards.

11:20 am	**Designing Emoji** ✍️
	➢ Main Stage
	RACHEL BEEN (Google)
	Designing emojis involves awareness of culture, readability, and brand. Learn the thought process, considerations, and system behind designing emojis at Google, most specifically a behind-the-scenes look at how the professional female emojis were created. Read More →
	LEARN

11:40 am	**Emoji by the Community** 👫👭👬
	➢ Main Stage
	OPEN MIC 🎤 ()
	emojiRequest: Open call to audience members to pitch an emoji at the podium and with members of the emoji subcommittee present and cast your vote at emojiRequest (requires login). Read More →
	LEARN

10:15 am	**What is the Unicode Consortium?** 🕵️
	➢ Main Stage
	MARK DAVIS 🍱 (Founder and President, Unicode Consortium and Emoji Subcommittee)
	An inside look 🔎 at the organization that defines emoji. How did it take on that role, and what's the process for new emoji? An audience AMA will follow. Read More →
	LEARN

4:40 pm	**The Art of Shade** 🌱👀🌱 **: Race, Subtext, and Emoji**
	➢ Main Stage
	LATOYA PETERSON (Deputy Editor of Digital Innovation at ESPN's The Undefeated)
	Visual communication is open to interpretation. But why do some people see a high five and others see praise hands? Is 💯 a high score or a plainly told truth? And is your friend suggesting a coffee meeting or serving some shade? This talk will explore alternate definitions for emoji from a cultural perspective. Read More →
	LEARN

On Religion

*Reframing
the Narrative
Through
Experimentation*

The Star, the Crescent, the Cross, the Void:
Oscar Castillo (photographer) in
collaboration with Karim Baouz (writer)

The Un/Holy Land:
Tanya Habjouqa (photographer) with
Dimi Reider (writer), and Muhammad
Jabali (writer/creative technologist)

Religion in the Border Regions of Iran:
Sasha von Oldershausen (writer) and
Foroogh Farhang (anthropologist)

Mapping the Spirit:
Kameelah Rasheed (photogrpher/
artist) and Corey Tegeler (creative
technologist)

The Blood and the Rain:
Yael Martinez (photographer)
and Orlando Velazquez (engraver/
graphic artist)

An initiative produced
by Magnum Foundation
with support from the Henry Luce Foundation, *The Revealer* from NYU's Center
for Media Culture and History, and The Brown Institute for Media Innovation

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Partnerships — The Magnum Foundation

The Brown Institute has been reaching out to journalistic, technological and cultural institutions around New York City and the Bay Area. Through partnerships, we can explore a much larger set of problems than we can alone, helping us engage our communities in new ways. At Columbia, we have been working with the Magnum foundation for three years — this year's projects involve mixing story, technology and photography, with an underlying theme of social justice.

Luce program. The Magnum Foundation and the Brown Institute are developing a pilot initiative to facilitate the production and distribution of creative, interdisciplinary and multi-platform, visual documentary projects that will explore religion within a range of international social, political, and cultural terrains. Especially within the context of today's politicized, visual discourse on religion and religious extremism, it is critical to foster a nuanced understanding of our complex world through in-depth, visual investigations.

Photography, Expanded: Immersive Media Lab. The Magnum Foundation and The Brown Institute for Media Innovation offered the next in the series of "Photography, Expanded" labs, this event focused on the narrative potential of immersive media. How can media makers use immersion as a tool to build empathy, engage communities, and forward social change? How does immersing your viewer in content change the nature of the story you are telling? How can we evaluate which stories are best suited for an immersive experience? And how does this mode of experiencing a story change how photographers approach planning, creating, and distributing stories?

"**Women on the Outside**" is a multimedia installation that debuted at this year's Photoville festival. The installation is shaped by the experiences of women who bear the financial and emotional costs of supporting incarcerated loved ones. When someone is incarcerated, female family members often pick up the pieces. They care for children, scrape together commissary money, and make the long drives to maintain ties. They are the rock.

"Women on the Outside" brings together photographs, text, video, and data to paint a portrait of Kristal, founder of a van service that shuttles women from Philadelphia to various prisons in Pennsylvania. Through interviews with Kristal and her riders, we have a glimpse into what it takes to stay connected to partners, friends, and family members behind bars. (Michael Krisch contributed two detailed data visualizations using inmate records obtained from the Pennsylvania State Prison System.)

We offer an image from the exhibition on the next page together with some of the media coverage.

ART & DESIGN

Photoville: Bigger, and Covering the Waterfront

By DANIEL McDERMON   SEPT. 22, 2016

Kisha Bari

Left, photos from Brian Finke's "The Science of Taste," and right, Robin Hammond's "The New Europeans," both presented by National Geographic. Kisha Bari

ALMOST everything is bigger at this year's edition of Photoville, the annual Brooklyn photography festival that runs through Sunday in Dumbo. Even the beer garden.

Now in its fifth year, Photoville presents a dizzying array of exhibitions for free, centered this time on the waterfront under the Brooklyn Bridge. Fifty-three shipping containers have been converted into exhibition space, filled with work by hundreds of photographers. Additional displays, by the likes of National Geographic, are on view outdoors.

The focus is largely, but not exclusively, documentary, often with an undercurrent of activism: These images resist the pose of neutrality.

Strolling through the space, you can see famous names in photography mix with less familiar ones, which makes Photoville a good place to discover new work. "Breaking Point," a group show by Kamoinge, a 50-year-old collective of African-American photographers, depicts the crisis of American inequality and racism. A solo exhibition of work by the photographer Oded Balilty tracks competitors in Israel's first transgender pageant. And "Women on the Outside," organized by the Magnum Foundation and the Brown Institute for Media Innovation, explores the effects of incarceration by turning the focus to the burden on those women left behind when men are in prison.
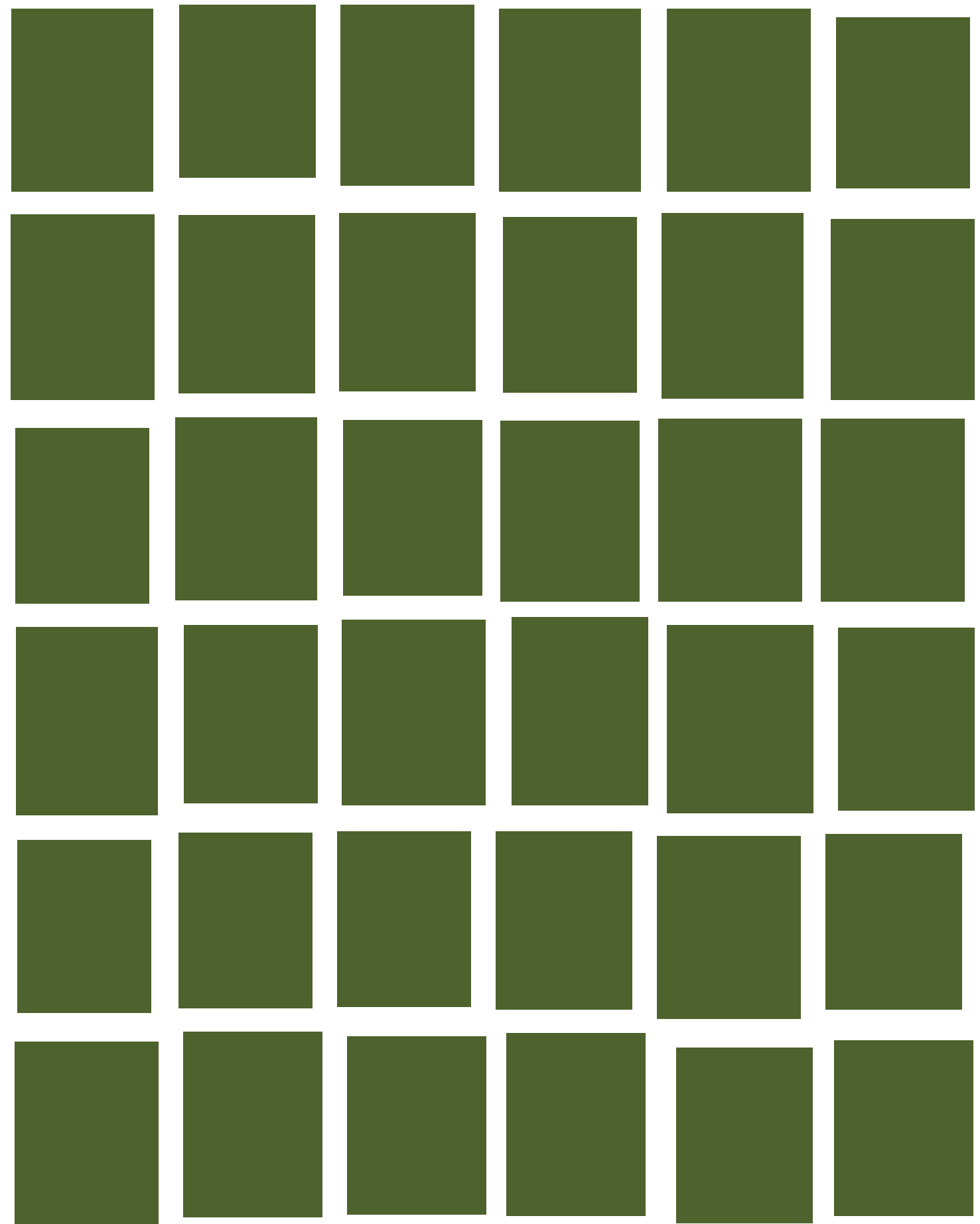
1 evening:

FEBRUARY 24, 7 P.M. THE PUBLISHER'S FLOOR OF THE HEARST BUILDING 300 WEST 57TH STREET

DINNER · CONVERSATION · COLLABORATIONS · IMAGINING NEW KINDS OF STORYTELLING
WE HOPE YOU CAN ATTEND · RSVP AT BROWNINSTITUTE@COLUMBIA.EDU BY FEBRUARY 10

Partnerships — The Interactive Telecommunication Program at NYU

From sending students to ITP Summer Camp to an upcoming design event brining data visualization to broadcast, ITP has become a trusted partner in bringing technology to Columbia journalism.

The Brown Institute requests the pleasure of your company at a unique dinner to be held February 24th on the Publisher's Floor of the Hearst Building, 300 W 57th Street, at 7pm.

This dinner represents the first mingling of two programs -- Journalism at Columbia University and the Interactive Telecommunication Program (ITP) at NYU. ITP is a media art and design program, with Masters students who create new storytelling technologies: from data visualization to 3d printing, to installations, to sensors and physical computing, to "big screens" and sound art. Their theses result in lovely, often technologically startling, stories.

The TBS Chair of ITP, Dan O'Sullivan, and I think that mixing our two cohorts could produce something really wonderful -- ITP, with its emphasis on new technologies, and CJS, with its emphasis on narrative and journalistic practice. The dinner will include 20 thesis students from each program. You will meet and talk about your work, new directions in non-fiction storytelling, and explore what you might learn from each other. It will be a special evening.

Our goal is nothing more than a delicious meal and stimulating conversation.

I hope you can join us! Please let me know as soon as you can.

On the next page we present an image, peaking ahead at upcoming projects with ITP — this is a live streaming VR platform that Brown deployed in NYC to cover the presidential election.

The Cantor Center for the Visual Arts

The Brown Institute at Stanford partnered with the Cantor Arts Center to mount a special exhibition devoted to Art++, a 2014-2016 Magic Grant. The installation featured objects ranging from a 17th-century Dutch landscape painting to a 20th-century Nigerian textile that were chosen specifically for their capacity to highlight the potential of Art++, an augmented reality (AR) application.

The AR graphics provided visitors with insights into the long and complex history of an image, explain the processes involved in art conservation, or even offer a panoramic view of an actual site replicated in an image.
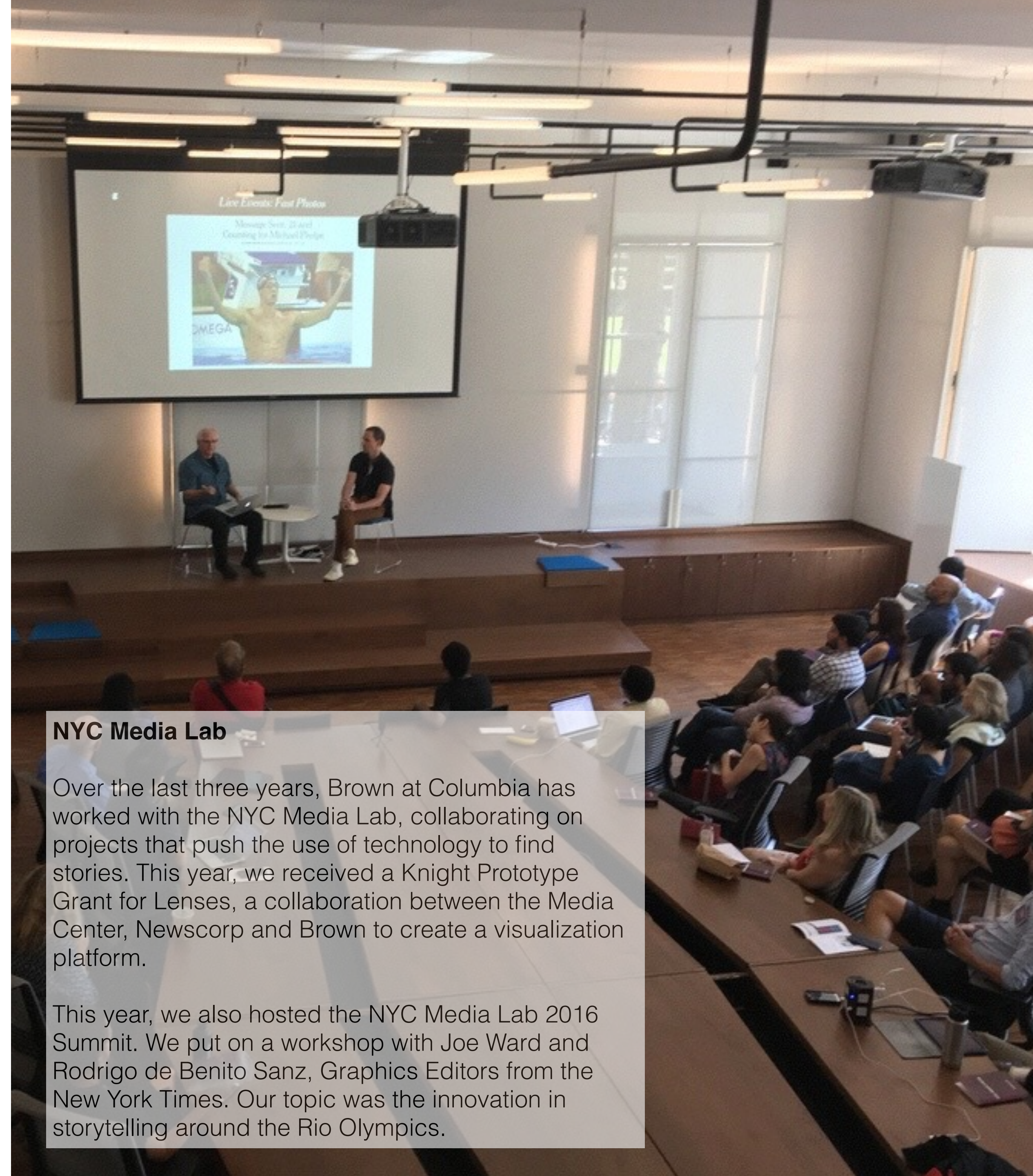
NYC Media Lab

Over the last three years, Brown at Columbia has worked with the NYC Media Lab, collaborating on projects that push the use of technology to find stories. This year, we received a Knight Prototype Grant for Lenses, a collaboration between the Media Center, Newscorp and Brown to create a visualization platform.

This year, we also hosted the NYC Media Lab 2016 Summit. We put on a workshop with Joe Ward and Rodrigo de Benito Sanz, Graphics Editors from the New York Times. Our topic was the innovation in storytelling around the Rio Olympics.

Partnerships — The UNDP — Building Better Climate Stories

The Untapped Potential of Climate Science, Data Science and Journalism Partnerships

The science leaves no doubt: human activity is profoundly altering the Earth's climate, and the social, geopolitical, and human implications of these changes are already being felt by developed and developing countries alike. The threat posed by climate change is a story that touches almost every aspect of human experience, but journalists struggle to incorporate its impacts in a way that is scientifically rigorous and compelling to a broad audience. While researchers produce a great deal of data about the existence and effects of climate change, very little of it is readily available to a nonspecialist audience in a user friendly platform.

Through these partnerships, scientific models and predictions will be combined in a nuanced way with local experiences of weather and climate, with unique economic, political and cultural conditions, and with special aspects of the local natural and built environments. The resulting stories cast climate and weather as characters, as stressors that can send people from their homes in rural villages into cities, can upend local economies, and can shape political discourse. If climate is a story that cuts across human experience, then it should be a presence in stories about economics, politics and even culture.

UNDP Climate Action Hackathon in Zambia. Brown and UNDP's Programme on Climate Information for Resilient Development in Africa (CIRDA) invited software developers, mobile application gurus and innovation specialists to Livingstone, Zambia from March 15-17 to participate in the Climate Action Hackathon. This exciting event generated ideas and early prototypes for mobile and online applications to provide climate and weather information, realtime reporting, to protect the lives and livelihoods of vulnerable African communities adapting to climate change. Brown sent Michael Krisch, Allison McCartney and Brown Magic Grantee Caellin Barr to the hack event.
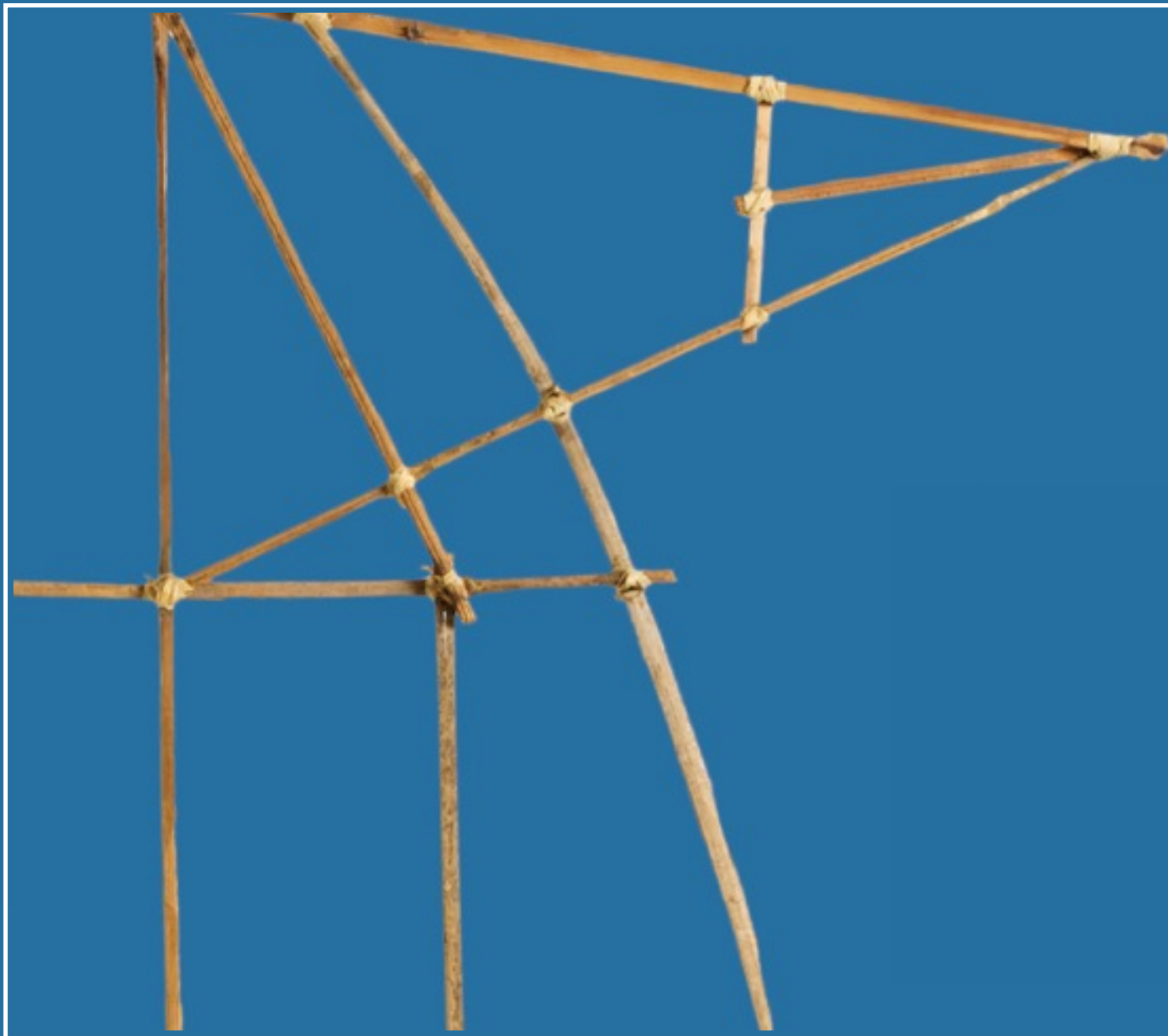
A taste of
WHAT'S COMING
a climate data dinner

Creative Expression.
Scientific Models.
Crisis Reporting.
...ts of Resilience.

New forms of storytelling about Climate Change, informed by a mix of environmental jounalsim, anthropology, climate science and food science.

A partnership between Brown, The Met Museum and the Red Cross

First Course

Sweet Potato Leaves Pesto on Crostini with Oven -Dried Cherry Tomatoes

"No-waste" cooking, using leaves.

Second Course

Fonio Croquettes Stuffed with Spiced Parsley (Rof)

Fonio is an ancient grain, drought resistant and rich in protein.

Third Course

Avocado Blinis, Trout Caviar and Toasted Grasshopper

Dessert

Coconut Rice Pudding with Honey Roasted Mealworms

New Space for the Brown Institute at Stanford

We are designing a space for the Brown Institute at Stanford so that the community of students, postdocs and faculty affiliated with the Brown Institute can actively engage in thinking, making and demonstrating new ways of capturing, creating and viewing media.

The 645 sq. foot space will be located on first floor of Gates Hall with large floor-to-ceiling windows and direct access to the courtyard patio so that scholars from all over the campus can check out the exciting work of the Brown Institute. We expect the physical renovation to begin in 2017.

A) WEST **B) NORTH** **C) EAST** **D) SOUTH**

② / A3.2 — **INTERIOR ELEVATIONS**   SCALE: 1/4"=1'-0"

① / A3.2 — **BROWN INSTITUTE PLAN**   SCALE: 1/4"=1'-0"   REFERENCE NORTH 16 DEG OFF TRUE

③ / A3.2 — **BROWN INSTITUTE FLOOR FINISHES**   SCALE: 1/4"=1'-0"   REFERENCE NORTH 16 DEG OFF TRUE

④ / A3.2 — **FOLDING DOORS**   SCALE: NTS

OFFICE 176 — 138 SF
OFFICE 174 — 507 SF

FLAT SCREEN TV
PODIUM
WHITE BOARD

PROJECT LOCATION

GRAPHIC SCALE   4 8 12 16 20
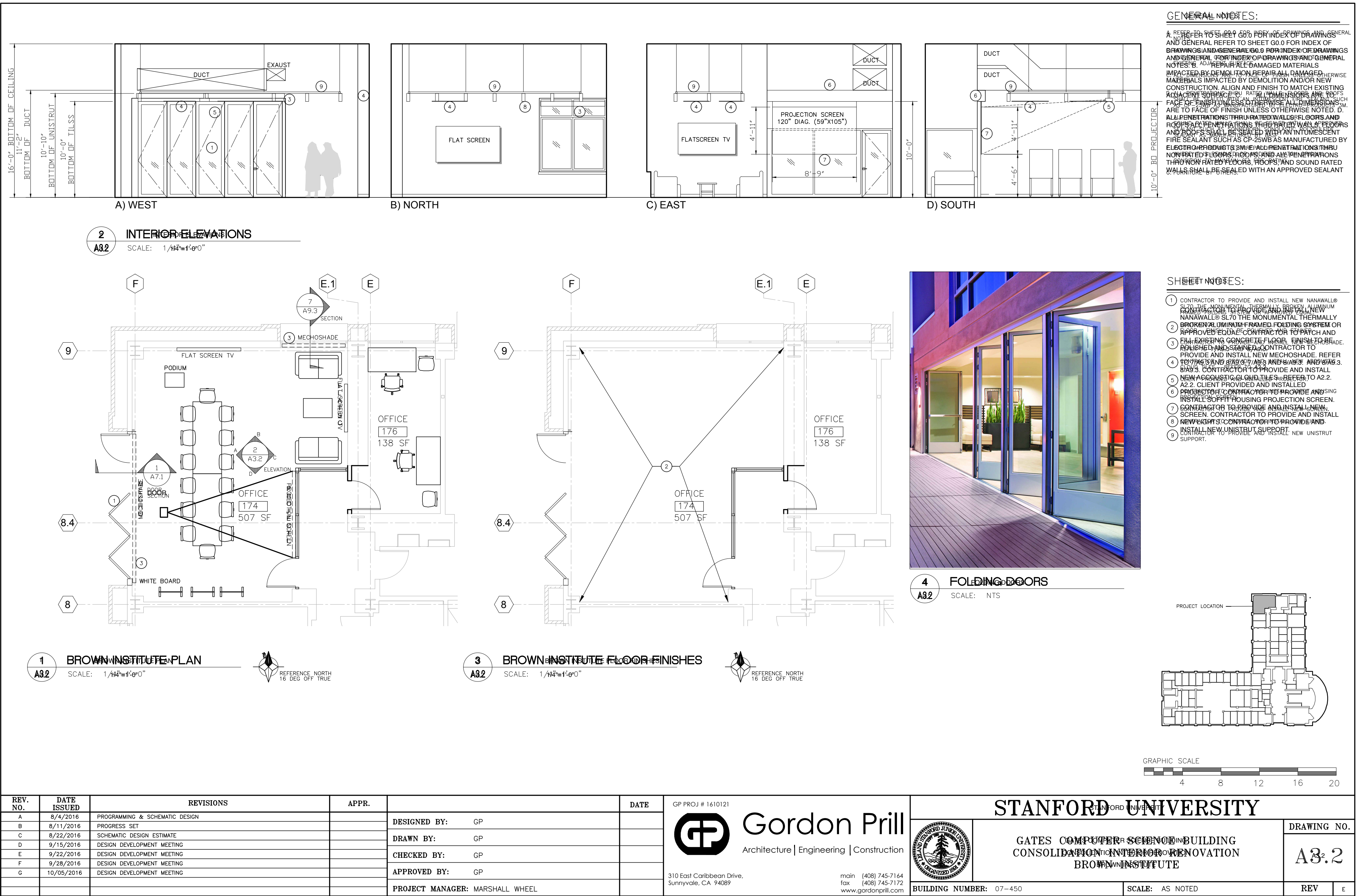
Sample of media and awards

Our projects are gaining visibility — from academic papers in top-notch journals and conferences to mentions in the mainstream media. Our grantees and fellows are often writing for or are quoted by news organizations — from The Washington Post to The Guardian to the New York Times.

Our grantees are also winning awards. **Reframe Iran** was an Official Selection for the Kaleidoscope 2016 World Tour and was Grand Prize Winner at the VR World Forum held in Geneva

Cannabis Wire was one of nine recipients of the first Made in NY Entrepreneur Innovation Grants.

Of the 24 scholarships offered by The International Women's Media Foundation, three went to 2016-17 Brown Institute grantees **Marcelle Hopkins**, **Juanita Ceballos** and **Jika Gonzalez**.

FRONTLINE

FRONTLINE, Brown Institute to Release "On the Brink of Famine," a Virtual Reality Documentary Filmed in South Sudan, on Facebook 360

Immersive Documentary Will Be Released in Stages, With Full Film Debuting March 1

The PBS investigative series FRONTLINE and the Brown Institute's exploration of virtual reality (VR) in journalism continues today with the release of the first in a new series of 360-degree Facebook videos. Filmed on the ground in war-torn South Sudan, the series — On the Brink of Famine – transports viewers inside a hunger crisis that few people in the Western world are aware of.

On the Brink of Famine is supported by FRONTLINE and by a "Magic Grant" from David and Helen Gurley Brown Institute for Media Innovation, a collaboration between Columbia and Stanford Universities. The Ford Foundation also support development of the project via its funding for FRONTLINE's Enterprise Journali and via a Ford Foundation JustFilms Fellowship at the Made in NY Media Center by IFP.

The project is an immersive, up-close look at life in South Sudan, where more tha million people are going hungry and at least 40,000 are near starvation as a resul devastating civil war. The human catastrophe captured by the filmmakers is mad more urgent by a recent report from the United Nations warning that the people South Sudan are facing unprecedented levels of food insecurity, with the number expected to peak this summer.

FRONTLINE, which is based at WGBH in Boston, and the Brown Institute will rele immersive documentary in stages. In the first On the Brink of Famine story, publis FRONTLINE's Facebook page, viewers are taken on a critical mission to deliver fo plane to those trapped in the swamplands of South Sudan.

In a second 360 video experience, coming to FRONTLINE's Facebook page later this week, viewers will visit the country's largest displaced persons camp — where more than 120,000 people have fled to escape the violence.

The full documentary, which also includes a look inside a clinic where Doctors Without Borders cares for children suffering from acute malnutrition, will be available on FRONTLINE's Facebook page starting Tuesday, March 1.

NiemanReports

Why Cannabis Coverage Needs to a Serious Beat

As cannabis is legalized in a growing number of states, the need for in-de reporting is urgent

ResponsibleOhio, a pro-marijuana legalization group, gives out promotional materials to college students in 2015. Roughly 200 million Americans currently live in a state with some form of legalized cannabis John Minchillo/AP Photo

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VOICE

The Most Striking Images to Check Out at Photoville

BY SIDDHARTHA MITTER   FRIDAY, SEPTEMBER 23, 2016 AT 10:30 A.M.

Women on the Outside

The Instagram feed @EverydayIncarceration aggregates images that illustrate the impact of mass incarceration in America. For their first original project, curators Lisa Riordan Seville and Zara Katz, and photographer Zora J. Murff tagged along with Kristal Bush, a young woman from Philadelphia who runs a van service that takes mothers, sisters, and partners to visit inmates in state prison. Large-format portraits and interview-based texts tell each woman's story; a video from the journey – basically, a road movie – conveys the bonds, and moments of joy, that take shape amid this new kind of family.

Photoville is on view through September 25 at Brooklyn Bridge Plaza.

Zora J.Murff/@everydayincarceration

The New York Times

ART & DESIGN

Photoville: Bigger, and Covering the Waterfront

By DANIEL McDERMON SEPT. 22, 2016

Kisha Bari

ALMOST everything is bigger at this year's edition of Photoville, the annual Brooklyn photography festival that runs through Sunday in Dumbo. Even the beer garden.

Now in its fifth year, Photoville presents a dizzying array of exhibitions for free, centered this time on the waterfront under the Brooklyn Bridge. Fifty-three shipping containers have been converted into exhibition space, filled with work by hundreds of photographers. Additional displays, by the likes of National Geographic, are on view outdoors.

The focus is largely, but not exclusively, documentary, often with an undercurrent of activism: These images resist the pose of neutrality.

"I love all photography," said Sam Barzilay, one of Photoville's three ...ders, "but I feel like we have an opportunity to tell people about things ... need to know and give them a way to act upon them."

...ing through the space, you can see famous names in photography mix ...ess familiar ones, which makes Photoville a good place to discover ...work. "Breaking Point," a group show by Kamoinge, a 50-year-old ...tive of African-American photographers, depicts the crisis of ...can inequality and racism. A solo exhibition of work by the ...grapher Oded Balilty tracks competitors in Israel's first transgender ...t. And "Women on the Outside," organized by the Magnum ...ation and the Brown Institute for Media Innovation, explores the ...of incarceration by turning the focus to the burden on those women ...hind when men are in prison.

...vent is organized by United Photo Industries, which produces other ...: art events like the Fence, a scrolling outdoor photography show that ...rently on view in Dumbo (and in four other cities across the country). ...s of workshops, talks and other events are also on offer. The aim is to ...a community where photographers can show their work, make connections and build skills.

Last year, Photoville presented work by Ruddy Roye, a Brooklyn-based photographer with a wide following on Instagram. Last week, Mr. Roye opened his first solo exhibition, at the Steven Kasher Gallery in Chelsea.

And Photoville offers a very practical advantage for photographers who want to show in New York.

"Renting a gallery for a week costs you thousands and thousands, and I guarantee you wouldn't get more than a thousand people," said Laura Roumanos, another founder of the event. At Photoville, she said, "you're going to reach tens of thousands."

But enlarging the beer garden wasn't (only) to satisfy the thirst of visitors, Dave Shelley, another founder, said. The space, which also serves food, is intended as "a place to sit, commune, meet new people and discuss what you've seen. And then go back."

The Stanford Daily

The Cantor teams up with augmented reality for Art++ exhibit

September 16, 2016   0 Comments   Tweet   Like

Christina Pan

Augmented Reality (AR) makes another appearance as Stanford students have created a mobile AR app for the Art++ Technology and Art Lab on exhibit at Cantor Arts Center from July 13 to Sept. 26.

The Art++ exhibit is an experiment investigating the potential of AR within the museum context. The app itself identifies artwork using a camera and provides extra visual information about the identified piece. Although the exhibit is not the first to adopt a museum-oriented AR app, it will help determine the future of AR within the museum going world, according to Art++ curatorial assistant Maria del Carmen Barrios-Giordano '13.

"Augmented reality is likely going to be a technology with widespread uses," said Bernd Girod, professor of electrical engineering and founding director of the Brown Institute for Media Innovation. "It's a part of the future museum experience [too]."

When visitors enter the 11' by 18' gallery, they receive a tablet with the Art++ app. On the walls of this small gallery are a diverse set of artworks, ranging from a historic painting of the Alhambra to an Andy Warhol print of Mao Zedong. When visitors scan a piece with the tablet's camera, they will be given extra information through pictures and slideshows. AR technology superimposes the visual information onto the artwork itself, allowing for more direct comparisons. For instance, when an artwork depicting a room with many antiques is scanned, the app superimposes a picture of the actual antique on top of its appearance within the painting.

"[The exhibit] tells interesting stories about the artwork that would ordinarily not be told in a regular museum setting," Barrios-Giordano said.

Instead of providing just textual information about a scanned artwork, the app uses technology to enhance the visual experience, according to Barrios-Giordano. Another piece depicts a gallery full of artwork, including a small rendition of the famous painting Venus of Urbino. When the app identifies the painting of the gallery, the app shows a picture of the actual Venus of Urbino.

The Stanford Daily

Brown Institute showcase features tour guide drones, defense contract database

September 30, 2016   0 Comments   Tweet   Like 7

Fangzhou Liu
Desk Editor

From drones acting as tour guides to mass-analyzed cookie recipes, the projects on display at the Brown Institute's first ever Media Innovation Showcase were anything but conventional. Funded by Brown's yearlong Magic Grants, interdisciplinary teams from Stanford and Columbia pioneered new techniques for every step of the storytelling process, from research tools for journalists to new ways of telling a story.

The Brown Institute was established in 2012 as a new collaboration between Stanford University and Columbia University's School of Journalism. Longtime Cosmopolitan editor-in-chief Helen Gurley Brown endowed the institute so that students at her late husband David Brown's alma maters — Stanford ('36) and Columbia — might work on new endeavors in media innovation.

Stanford Brown director Maneesh Agrawala said in his opening remarks: "Tonight, I am super excited to present the projects we supported over the past year. They feature lots of new technologies, new storytelling techniques, as well as new and interesting stories."

2015-2016 Magic Grants

Our projects this year benefited tremendously from the Brown Institute community. Many of the projects faced similar reporting and design challenges (our two data platforms, for example), while others made use of the same technologies (our drone projects are good examples). We also had a much more aggressive schedule of All Hands meetings that promoted mixing between groups and provided feedback and mentoring by members of Stanford and Columbia's research and creative communities. Here we give a short comment on each project and will provide some slides on the pages that follow.

On the Brink of Famine — Our first partnership with PBS FRONTLINE, a 360-video on the famine in South Sudan. The VR film and its two trailers have collectively attracted 4.6M views. It has been screened at the UN and other venues. Marcellle Hopkins from the team is now at the New York Times, leading their Daily 360 effort.

Art++ — This project finished with an exhibition at The Cantor Art Center, an event which was well attended by the public and inspired enthusiasm for the application of AR. It was a phenomenal capstone for this project.

OpenContractors — This team has added new data and new computations to their platform, making it an incredible resource for journalists and researchers. There are hints that data journalism outlets like ProPublica are interested in helping keep it going after their Magic Grant funding cycle.

Cuba Interconnectada — After a successful trip to Cuba, the team has incredible data about the ad hoc networks operating on the island. They are currently pitching their story with Wired.

G:Drone — This project has completed a number of fantastic user studies and conducted a fantastic demo at our Media Innovation Showcase. The team has delivered on their belief that drones should have more natural interfaces than joysticks.

Mapping Monuments — The team of a journalist and an architect has taken some exquisite drone footage of the Spomeniks, Tito-era monuments built throughout the former Yugoslavia. The team has also completed a research effort that helps fill in some of the lost history of these monuments.

Humor Tools — Lydia Chilton's project has become an excellent example of hybrid creative practices. Can an algorithm help us write humor? Lydia is staying on this year as a Fellow with the Stanford side of the Institute and will actually be joining Columbia's Computer Science Department next Fall!

Nueva Nación — This team has now worked with almost every ministry of the Panamanian government. Their platform is so effective that some ministers have even asked for access — access to their own data. The team is working on pulling stories from the data, and has already had impact around the country's teen pregnancy debate. Anna Menendez is remaining as a Fellow on the Columbia side of the Institute.

2015-2016 Magic Grants

The slides on the following pages were taken from the 2016 Media Innovation Showcase at Stanford. We present them here to give you a sense of the variety and breadth of our work, but refer you to the video of the event. In a few short minutes, you will see our 2015-2016 grantees and fellows explaining what they've done and why it's important. No amount of presentation in this document can match that experience.

You can find the video at
https://www.youtube.com/watch?v=v0ls0uqU3bY

Over 4.6M views

Initial releases (trailer and feature) with FB and Arte

Screenings at:

United Nations Headquarters

Istanbul Film Festival

Re:publica Berlin VR Festival

Facebook Developers Conference

MIT Virtual Reality Conference

GPHI2 (Humanitarian Conference)

International Center of Photography

PBS Annual Showcase

And elsewhere…

VR 101 Workshops held at:

ART++

Augmenting art with technology

Jean-Baptiste Boin

TELLING STORIES
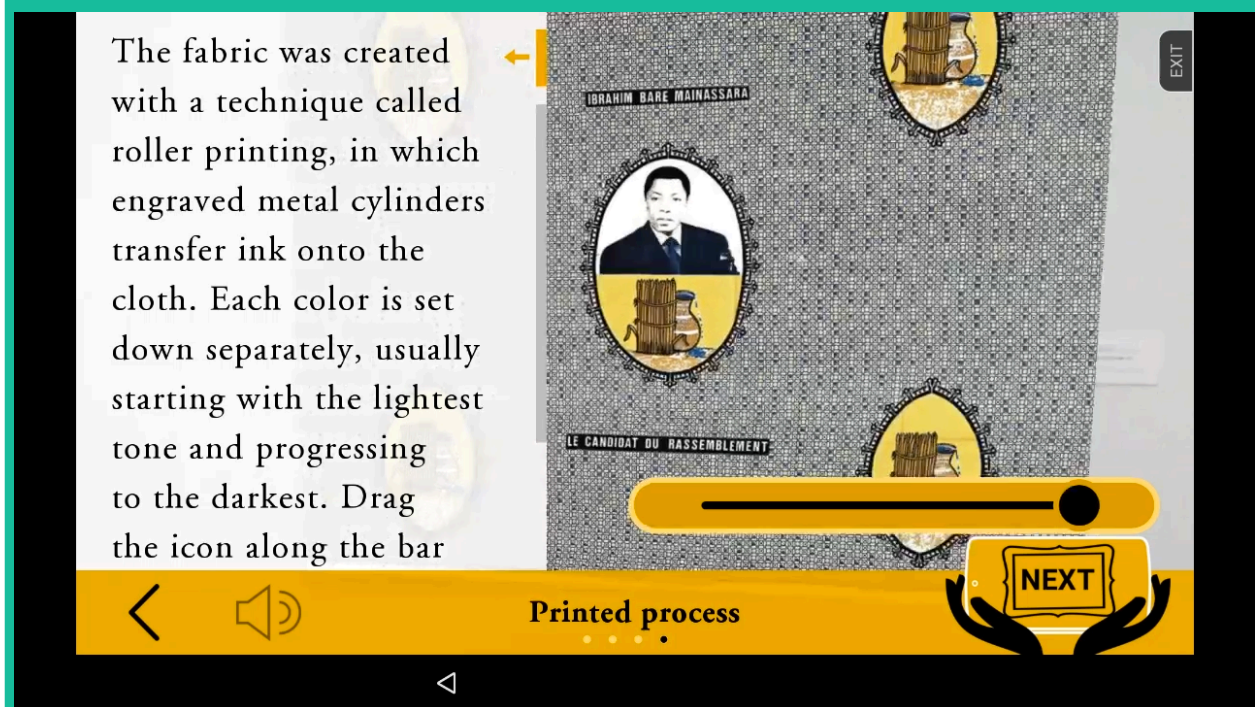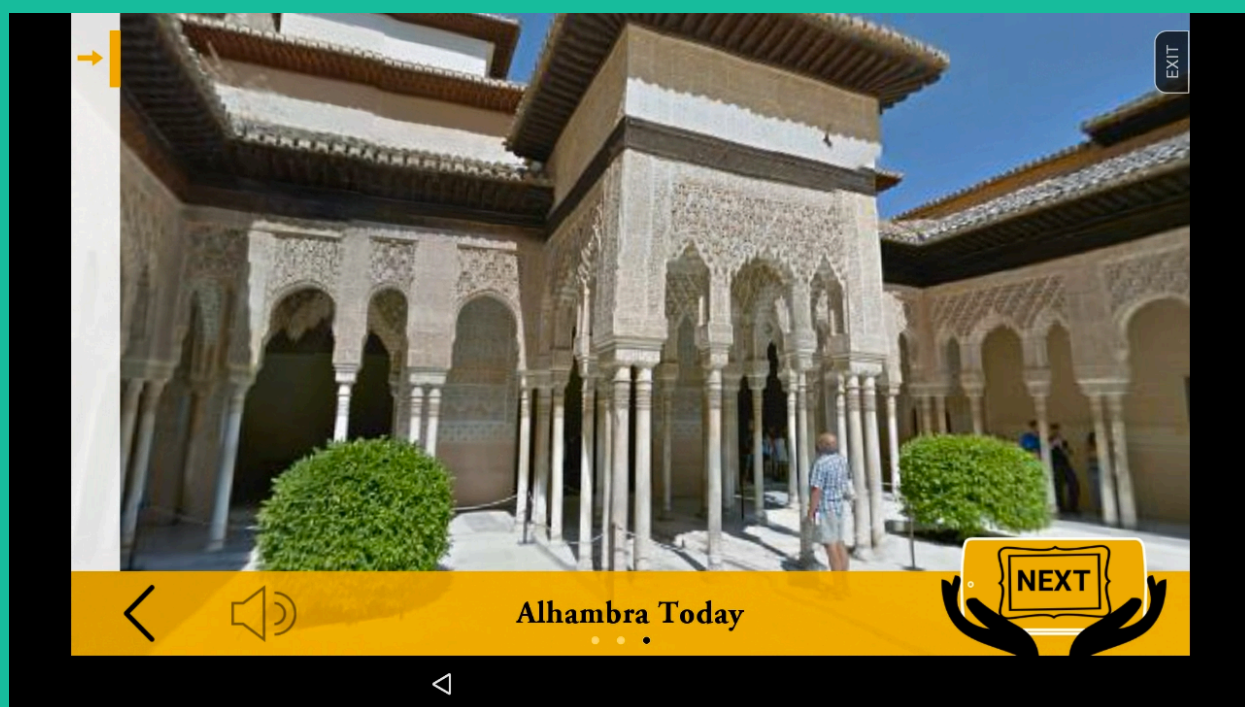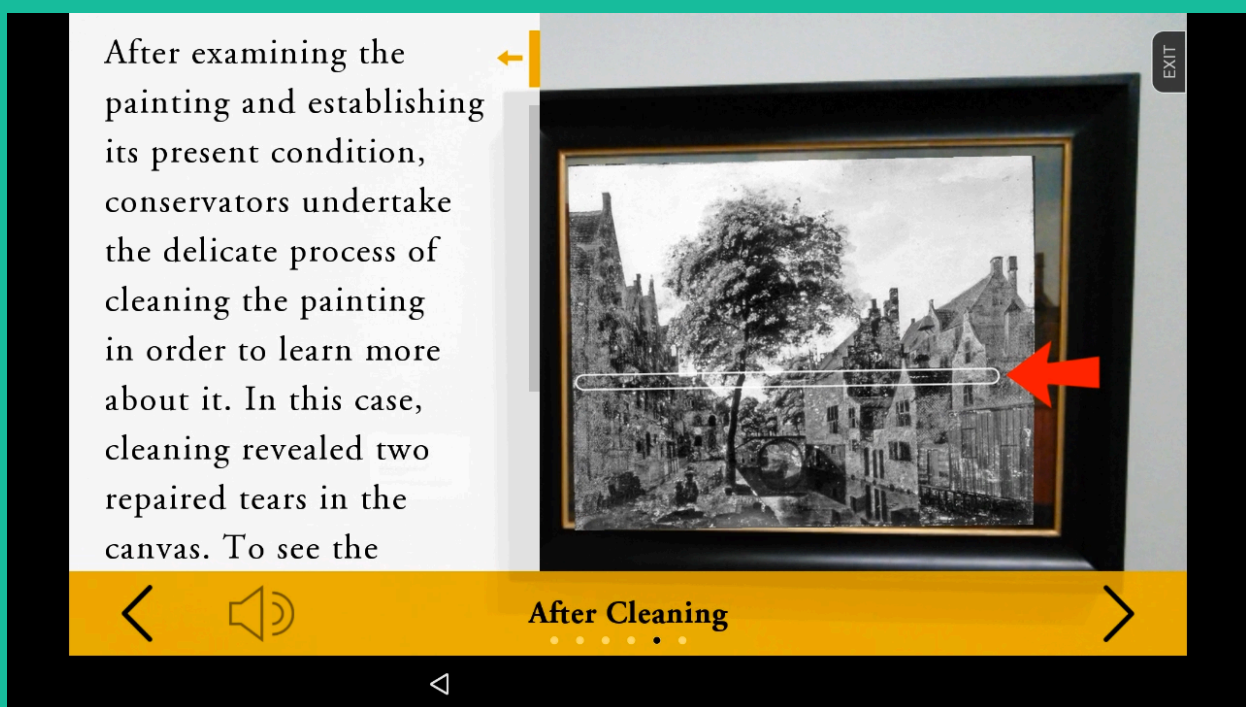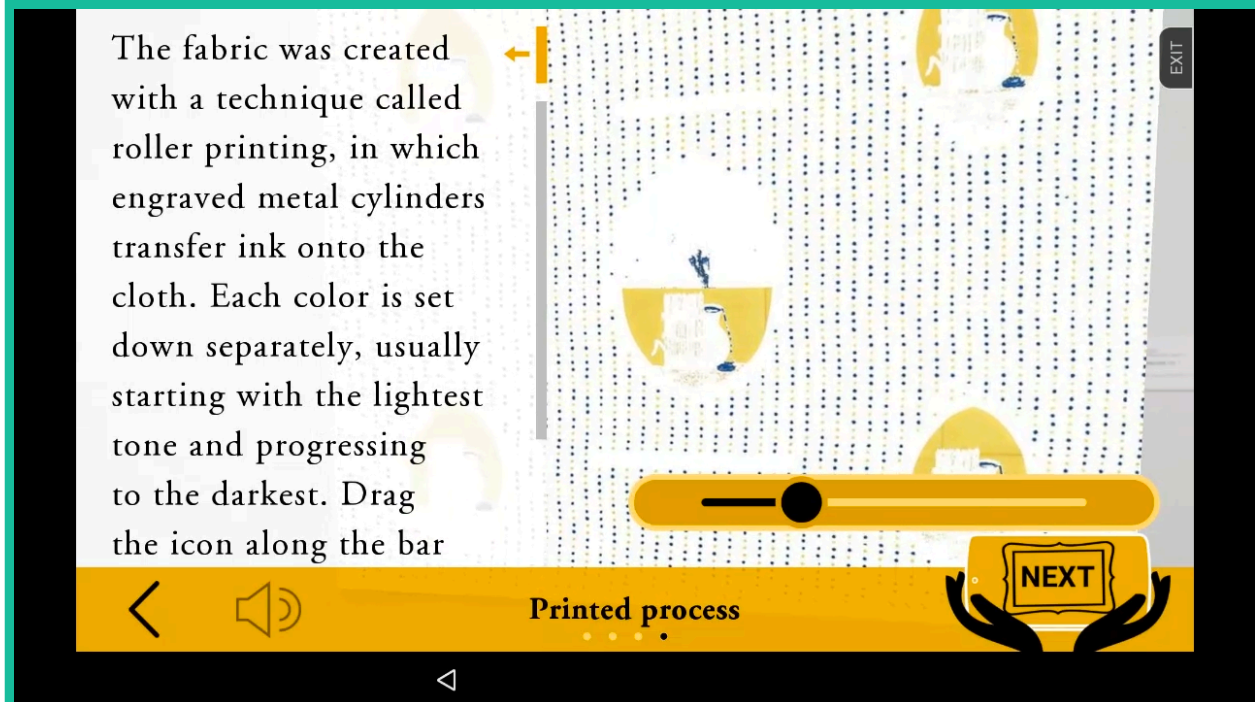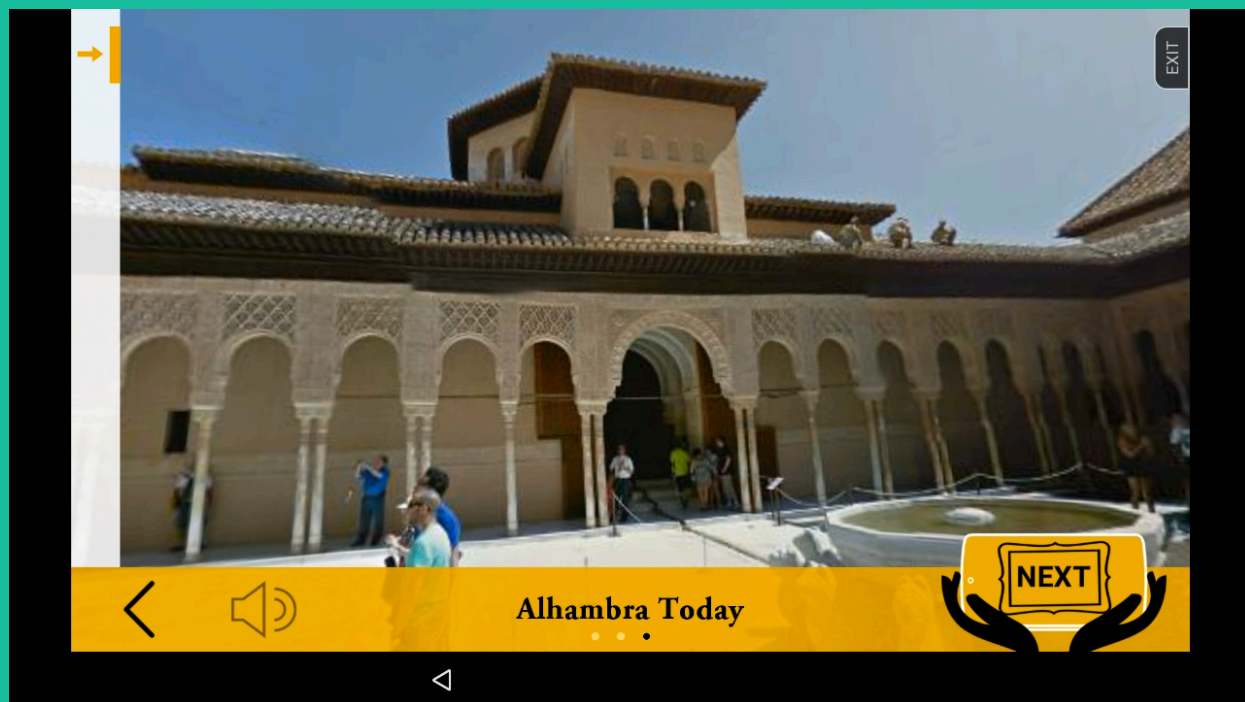
Overlay

Panorama

Series

FOCUS ON DESIGN
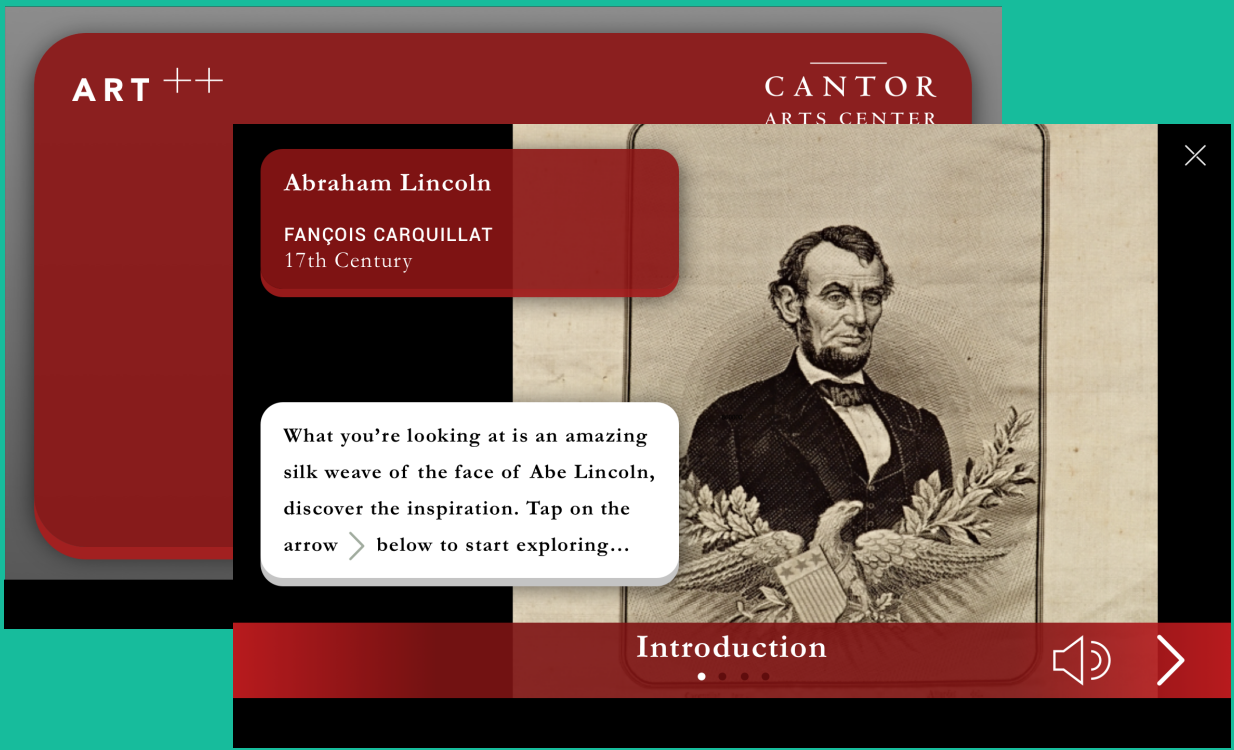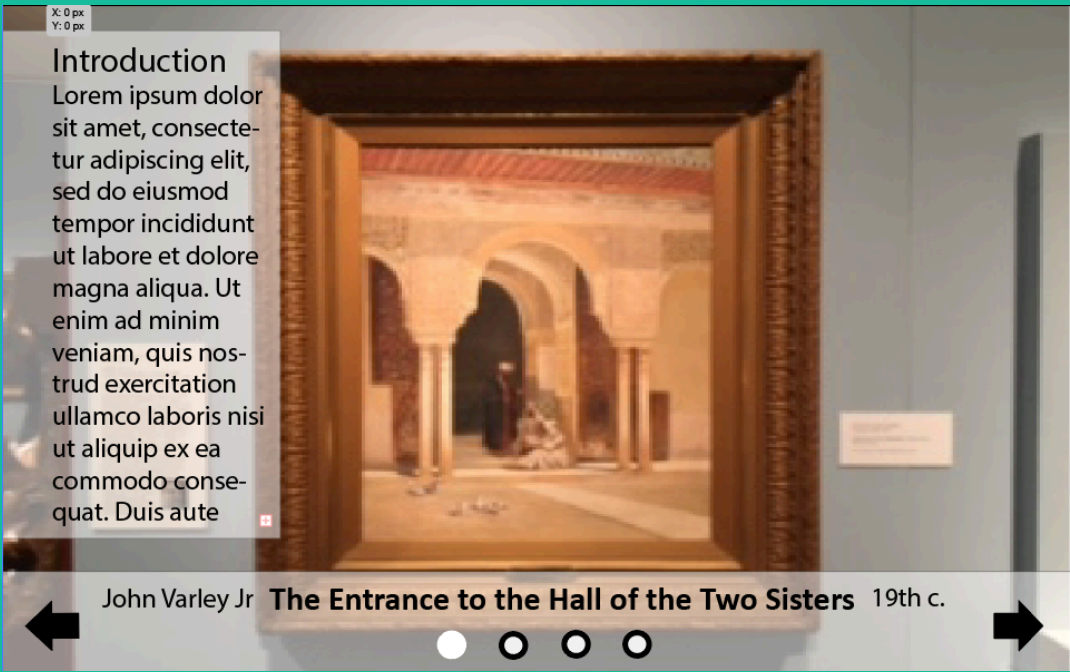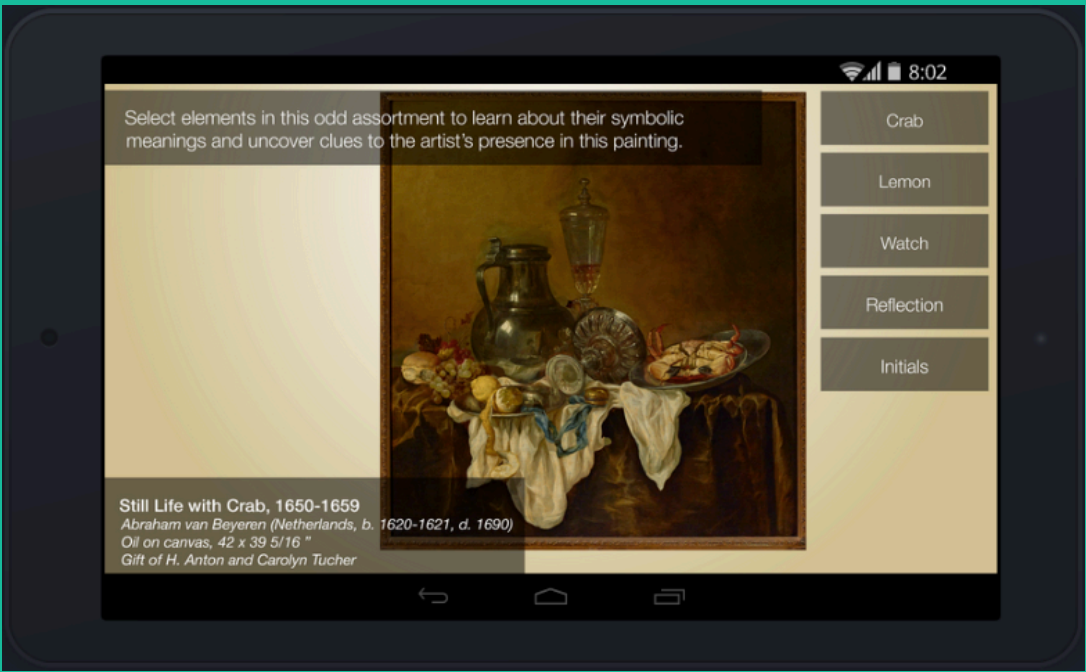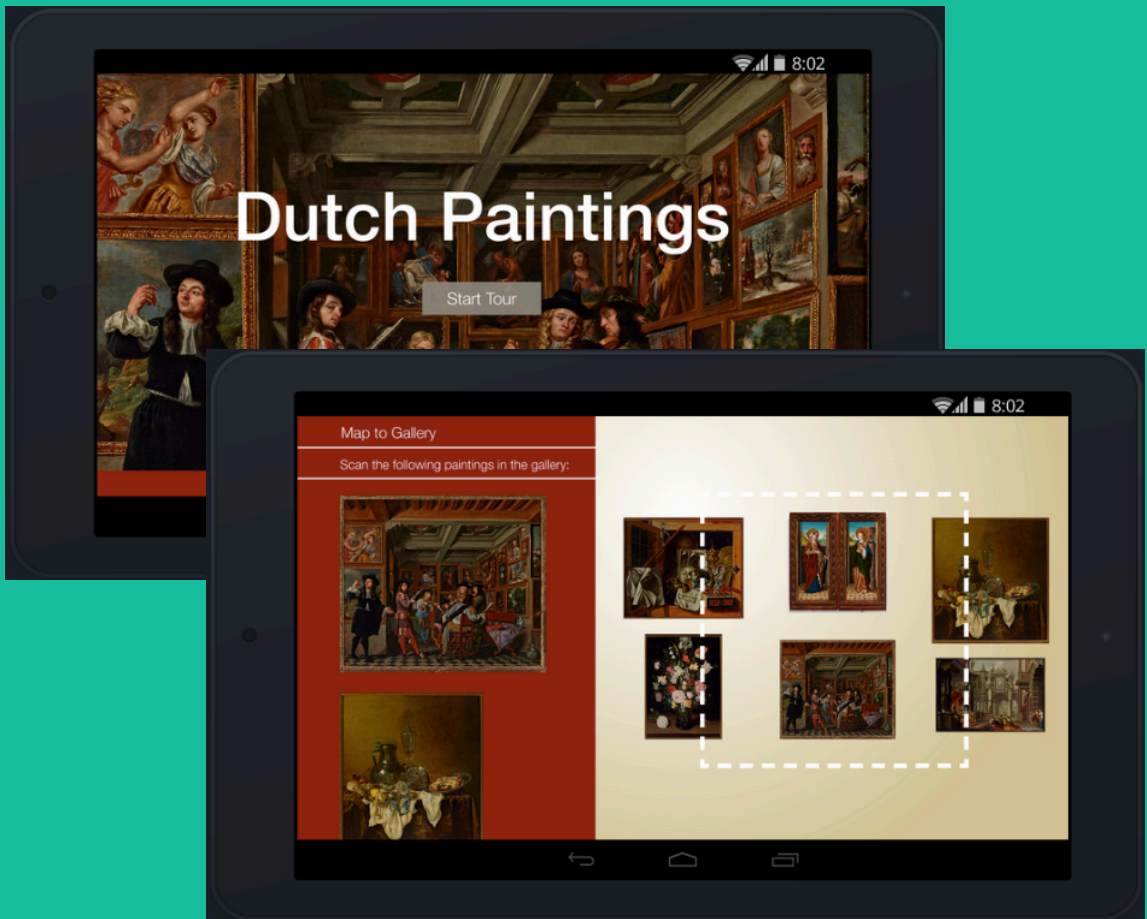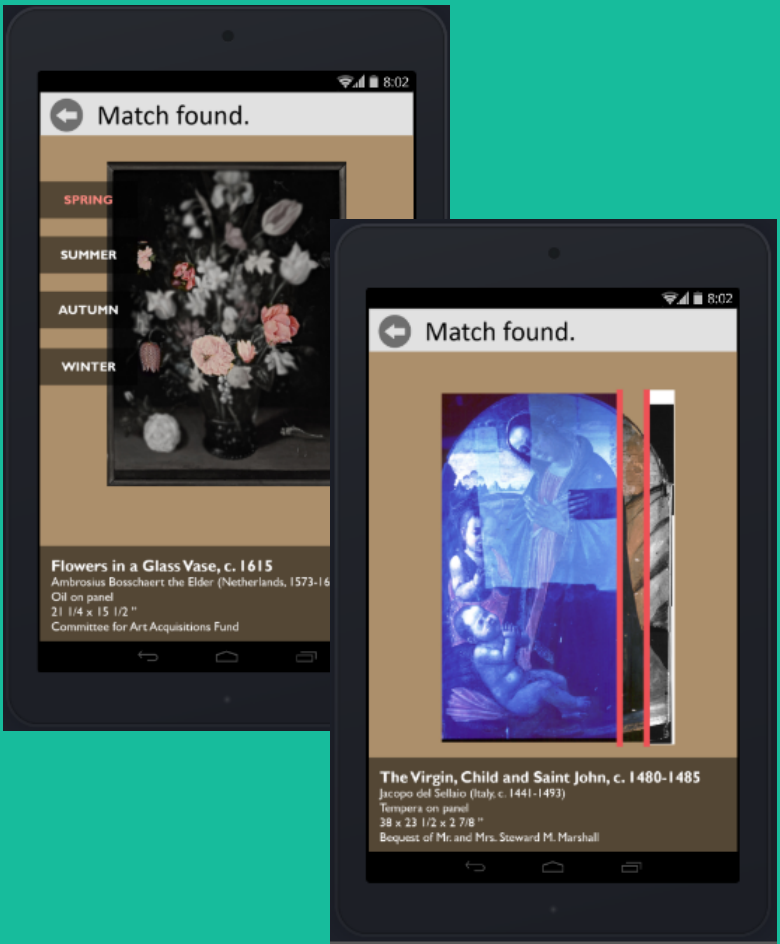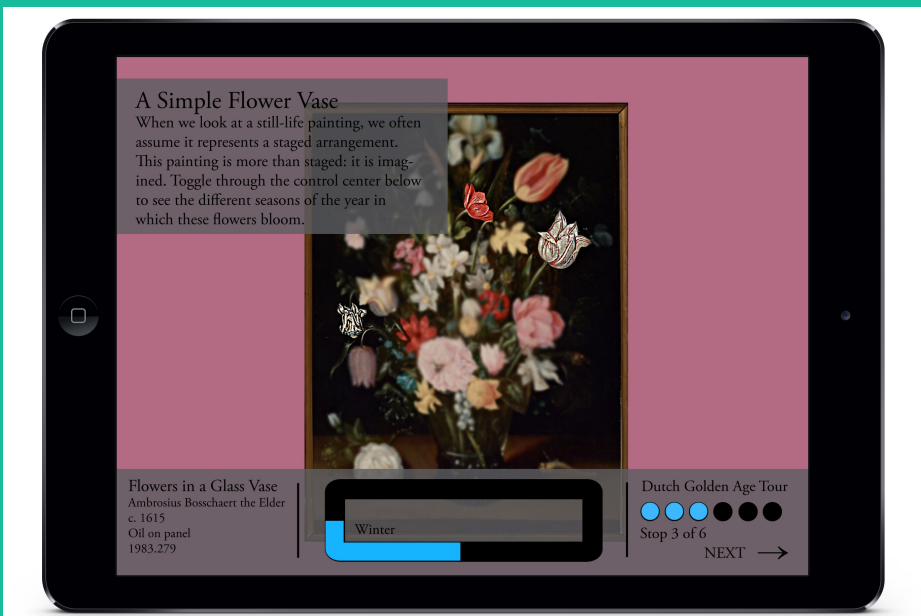
THANKS TO THE TEAM!

—————⭐—————

- Maricarmen Barrios
- Skanda Shridhar
- Anna Toledano
- Colleen Stockmann

- Bernd Girod
- Connie Wolf

And others…

2015-2016 Magic Grant Project

open contractors

A web application for exploring and analyzing Department of Defense procurement data.

Allison McCartney & Alexandre Goncalves
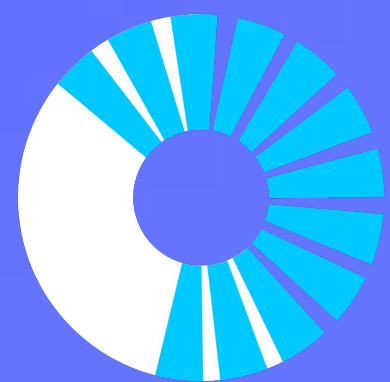
The Problem

- Lots of data available, but few ways to dig deeply into it.
- Stories go untold because of this lack of accessibility
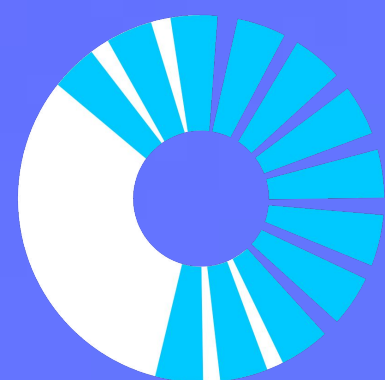
Our Solution

- Creating a web application for exploring and analyzing the past 15 years of defense procure data
- Building a clean, relational database out of static CSVs to reveal new insights into the data

CUBA - AN ISLAND OF CONNECTIONS

- Project about new ways that Cubans connect to the world and the rest of the world connects with Cuba
- Cuban entrepreneurs are taking advantage of small openings in the Revolution, and in the process fundamentally changing Cuban society
  - El Paquete
  - Revolico
  - SNET
  - Legitimate WiFi hotspots

CUBA INTERCONECTADA - GOING FORWARD

- Worked with NYT's Damien Cave to help craft a story
- Just met with Patrick Farrell and WIRED, hopefully publishing a longer online multimedia package
- Roughly 50 hours of video, including on camera interviews from across Cuba and throughout the States with the architects of these networks
- Packet-sniffed official WiFi hotspots, noted the devices that Cubans use to connect
  - Visualizing it with some open source tools and the help of Brown
- Speed tests from throughout Havana and Matanzas
- Scrapped Revolico - Cuba's Craigslist, may still get access to all of their data
- Terabytes of official strains of El Paquete

Guide:Drone

Team: **Jessica Cauchard**, Amy Chen, Jane E,
Tommy Fang, James Landay, Michelle Park,
Kevin Zhai

@jessicacauchard
Stanford Computer Science

Currently, drones are used primarily for filming, farming, search and rescue, entertainment, and product delivery. The team will explore human-drone interaction through the use of drones as tour guides. This is a challenging research topic as it encompasses fields such as proxemics, the distance between the drone and the person or the group (social sciences), calculating the best path for the drone (computer vision), how users communicate with the drone (HCI), how the drone responds to users (HCI), and having the drone take pictures or movies of the visitors (computer vision). The G:Drone team is comprised of Dr. Jessica Cauchard and Jane E.
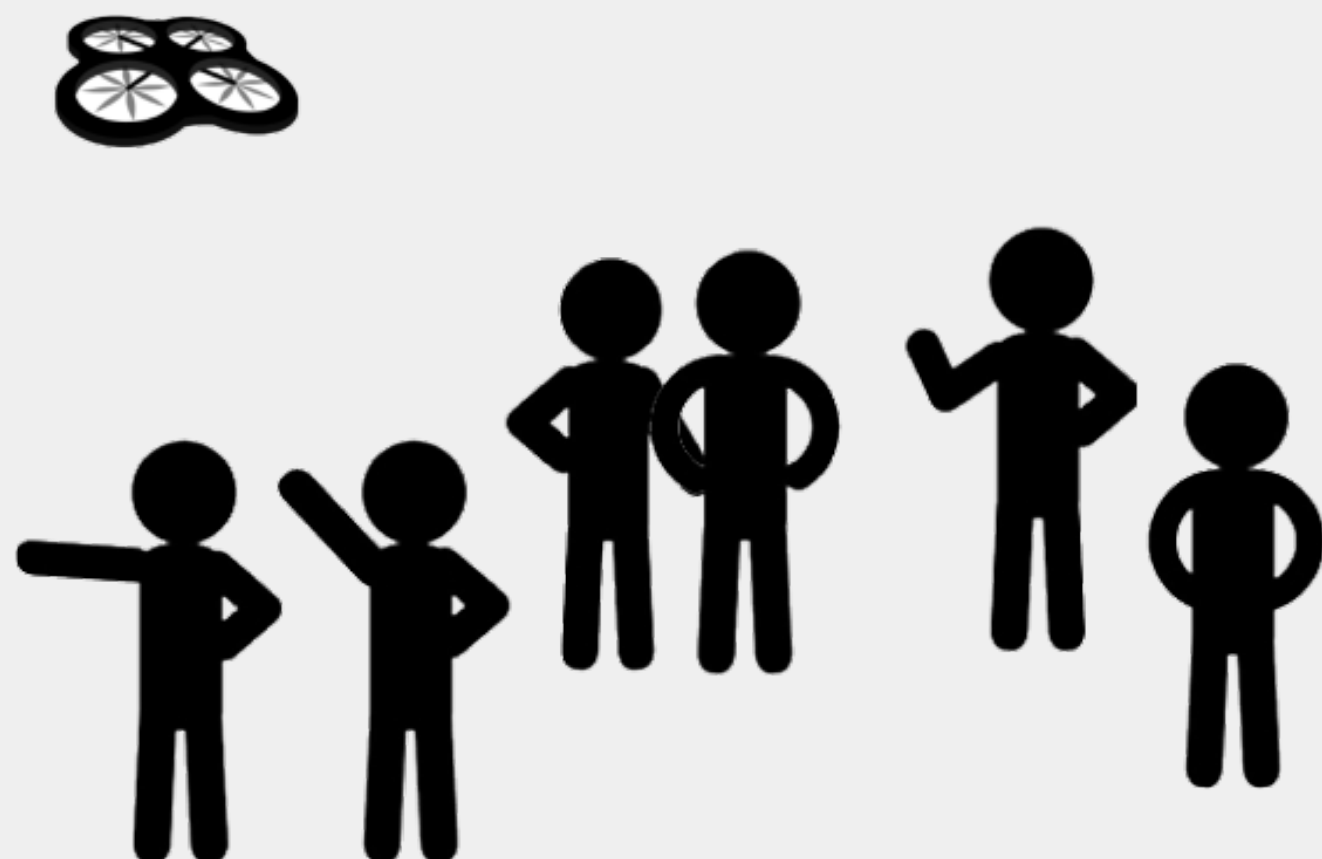
MAPPING MONUMENTS
&
MEMORY

Across The Former Yugoslavia

Mark Thomann and Jorgen Samso Nielsen
Brown Institute for Media Innovation
Columbia University
2016-2017

1110 miles
6 days
5 nights
21 hours of sleep,
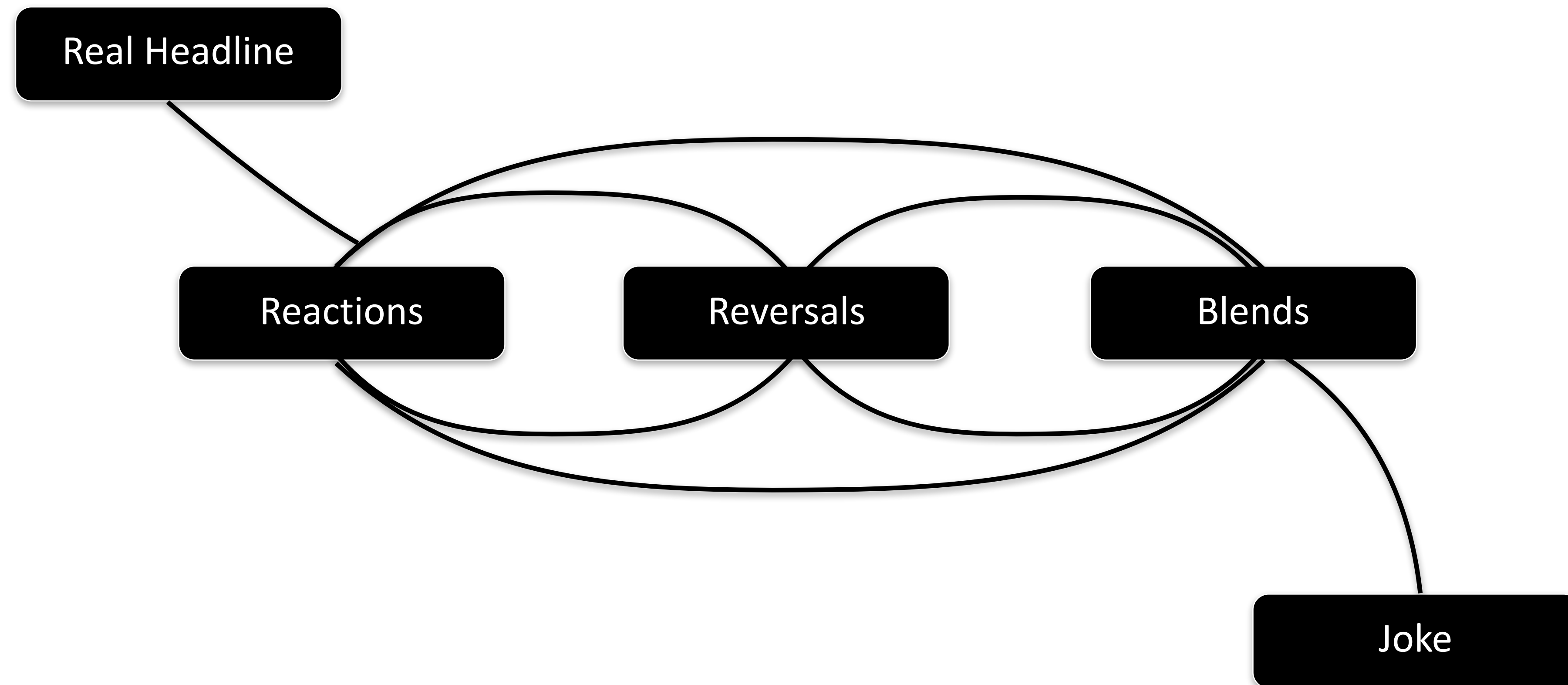35+ hours of driving,
20 espresso breaks
7 Spomeniks

Humor should be something anybody can write

nueva nación

Open data platform for data-driven storytelling

Annie Mendez, Alfonso Grimaldo, Gaspar Garcia de Paredes

2015-2016 Threshold Grant

Science Surveyor is our first Threshold Grant. The project began by examining why quality science reporting is so hard, especially on deadline. In response, the Science Surveyor team then built a platform, a series of visualizations, that helps a reporter quickly make sense of a new publication — Is this an active area of research or is it waning? Is the paper part of a consensus or is it a fringe result? Who should the reporter call? Who are the important voices in this field?

All of these questions are addressed beautifully by Science Surveyor. It is a sophisticated mix of Natural Language Processing, data visualization and interface design, brought together by experienced science reporters.

The slides on the pages that follow give you a sense of the project, but we again refer you to the video of the Media Innovation Showcase. Science Surveyor is the first to present.

You can find the video at
https://www.youtube.com/watch?v=v0ls0uqU3bY

Science Surveyor

CONTEXT ON DEADLINE

Columbia University

Marguerite Holloway
Dennis Tenen
Grga Basic
Laura Kurgan

Stanford University

Dan Jurafsky
Dan McFarland
Raine Hoover
Will Hamilton
Vinodkumar Prabhakaran
David Jurgens
Minkyoung Kim
Sebastian Munoz-Najar Galvez

Case Studies

Methane released when plants decompose

Living plants release methane, a potent greenhouse gas

Brain scans do not detect autism

Brain scans detect autism

Coffee protects against Alzheimer's in mice

Coffee protects against Alzheimer's in people

Adult bird brains produce new neurons

Adult primate brains produce new neurons

Optogenetics used to trace Parkinson's pathway

Optogenetics is used to reverse depression in mice

Bacterium uses arsenic, a toxic metal, to grow

Science Surveyor
CONTEXT ON DEADLINE

Science Surveyor
CONTEXT ON DEADLINE

TITLE:

Methane emissions from terrestrial plants under aerobic conditions

AUTHORS:

Keppler, Frank; Hamilton, John T G; Braß, Marc; Röckmann, Thomas.

ABSTRACT:

Methane is an important greenhouse gas and its atmospheric concentration has almost tripled since pre-industrial times. It plays a central role in atmospheric oxidation chemistry and affects stratospheric ozone and water vapour levels. Most of the methane from natural sources in Earth's atmosphere is thought to originate from biological processes in anoxic environments. Here we demonstrate using stable carbon isotopes that methane is readily formed in situ in terrestrial plants under oxic conditions by a hitherto unrecognized process. Significant methane emissions from both intact plants and detached leaves were observed during incubation experiments in the laboratory and in the field. If our measurements are typical for short-lived biomass and scaled on a global basis, we estimate a methane source strength of 62-236 Tg yr(-1) for living plants and 1-7 Tg yr(-1) for plant litter (1 Tg = 10(12) g). We suggest that this newly identified source may have important implications for the global methane budget and may call for a reconsideration of the role of natural methane sources in past climate change.

Who to Call?

Highly cited authors doing similar work:

Name	Email	Institution
"Crutzen, PJ"	astrid.kaltenback@mpic.de	"Max Planck Institute for Chemistry, Mainz"
"Brenninkmeijer, CAM"	carl.brenninkmeijer@mpic.de	"Max Planck Institute for Chemistry, Mainz"
"Christensen, TR"	torben.christensen@nateko.lu.se	Lund University
"Weiss, RF"	rfweiss@ucsd.edu	"Scripps Institution of Oceanography, San Diego"
"Chapin, FS"	terry.chapin@alaska.edu	"University of Fairbanks, Fairbanks"
"Miller, BR"	ben.r.miller@noaa.gove	"National Oceanic and Atmospheric Administration, DC"
"Sitch, S"	sitch@pik-potsdam.de	"Potsdam Institute for Climate Impact Research, Potsdam"
"Cao, MK"	weboffice@igsnrr.ac.cn	"Chinese Academy of Sciences, Beijing"
"Schlesinger, WH"	schlesingerw@caryinstitute.org	"Cary Institute of Ecosystems Studies, Millbrook, NY"
"Neue, HU"	presse@uni-halle.de	Martin Luther University Halle-Wittenberg

Science Surveyor
CONTEXT ON DEADLINE

Top 10 words defining the field:

ecosystem, flux, plant, climate, emission, atmospheric, carbon, forest, co2, soil

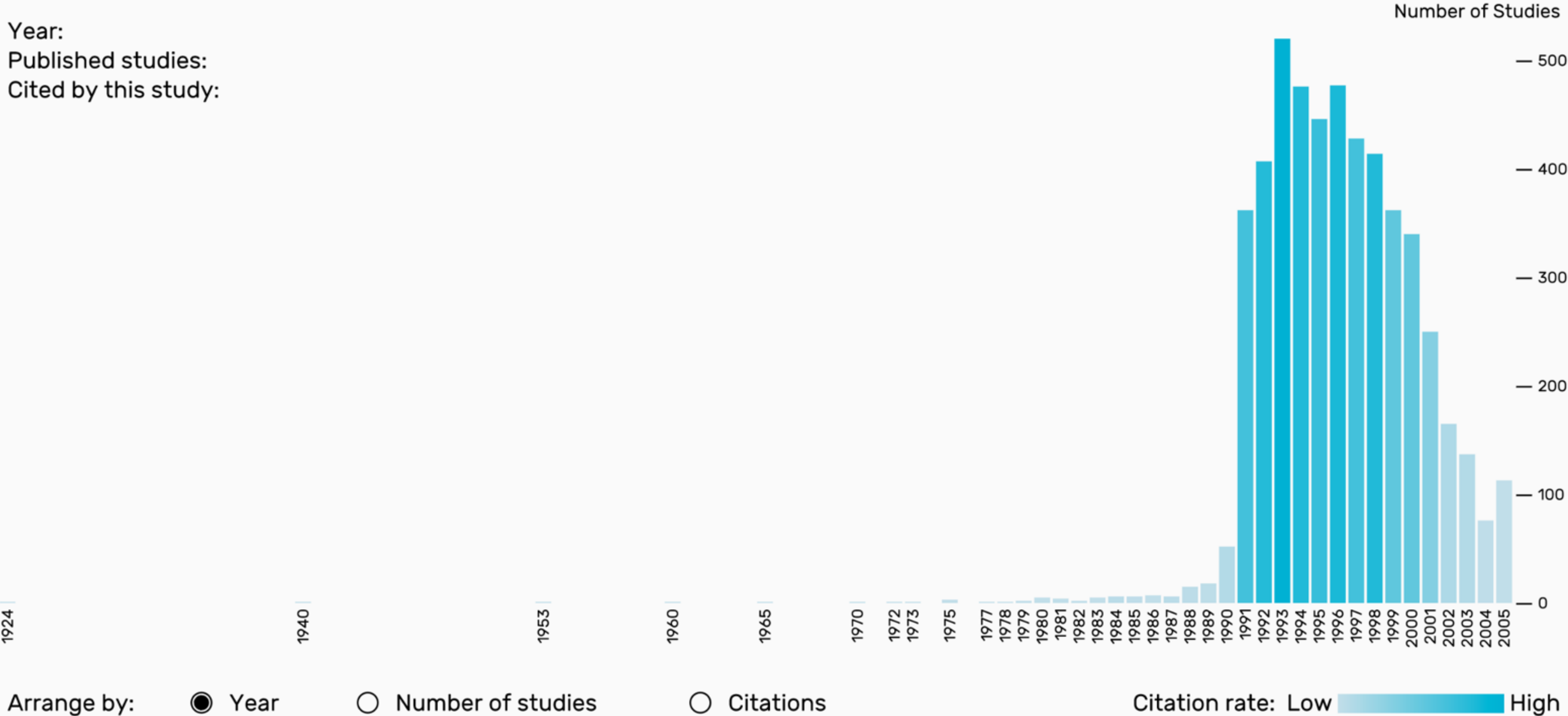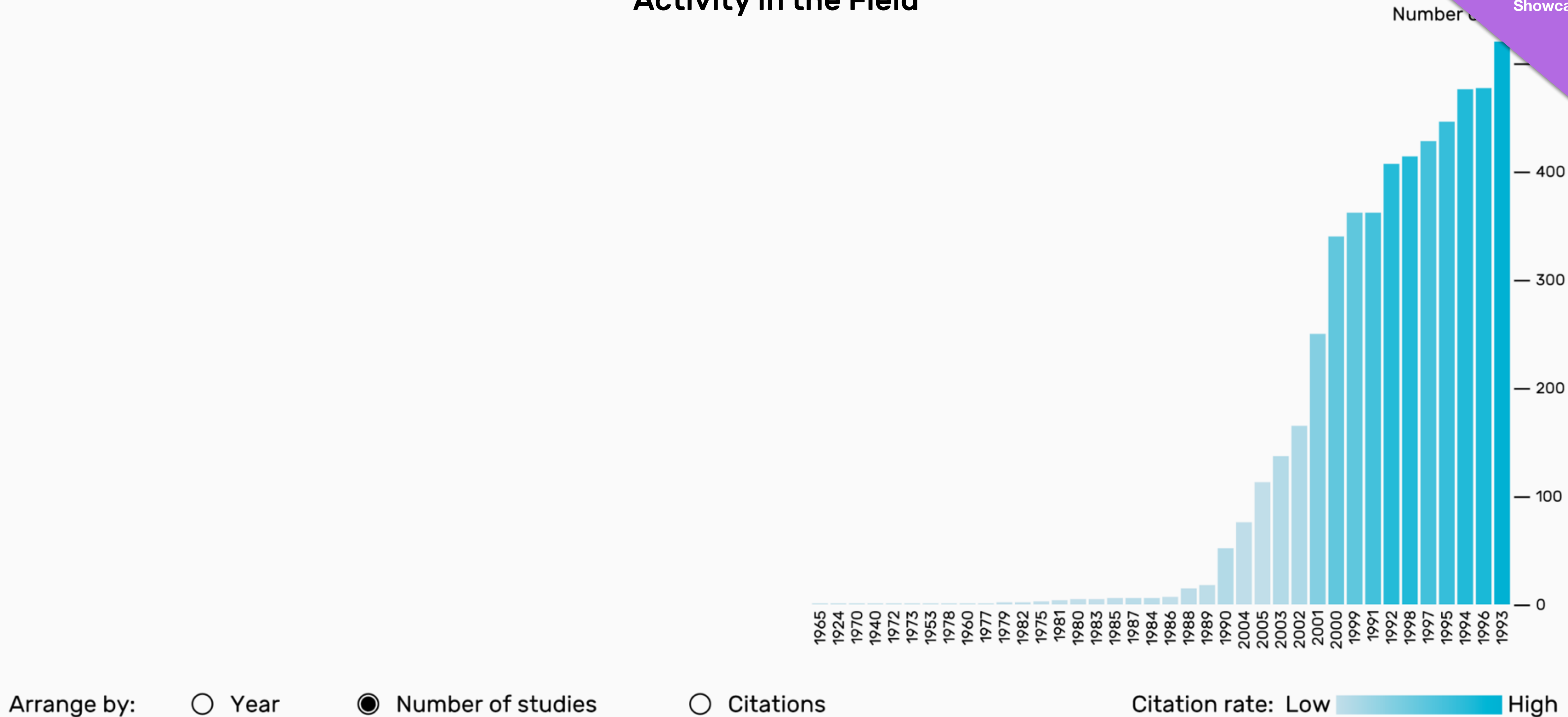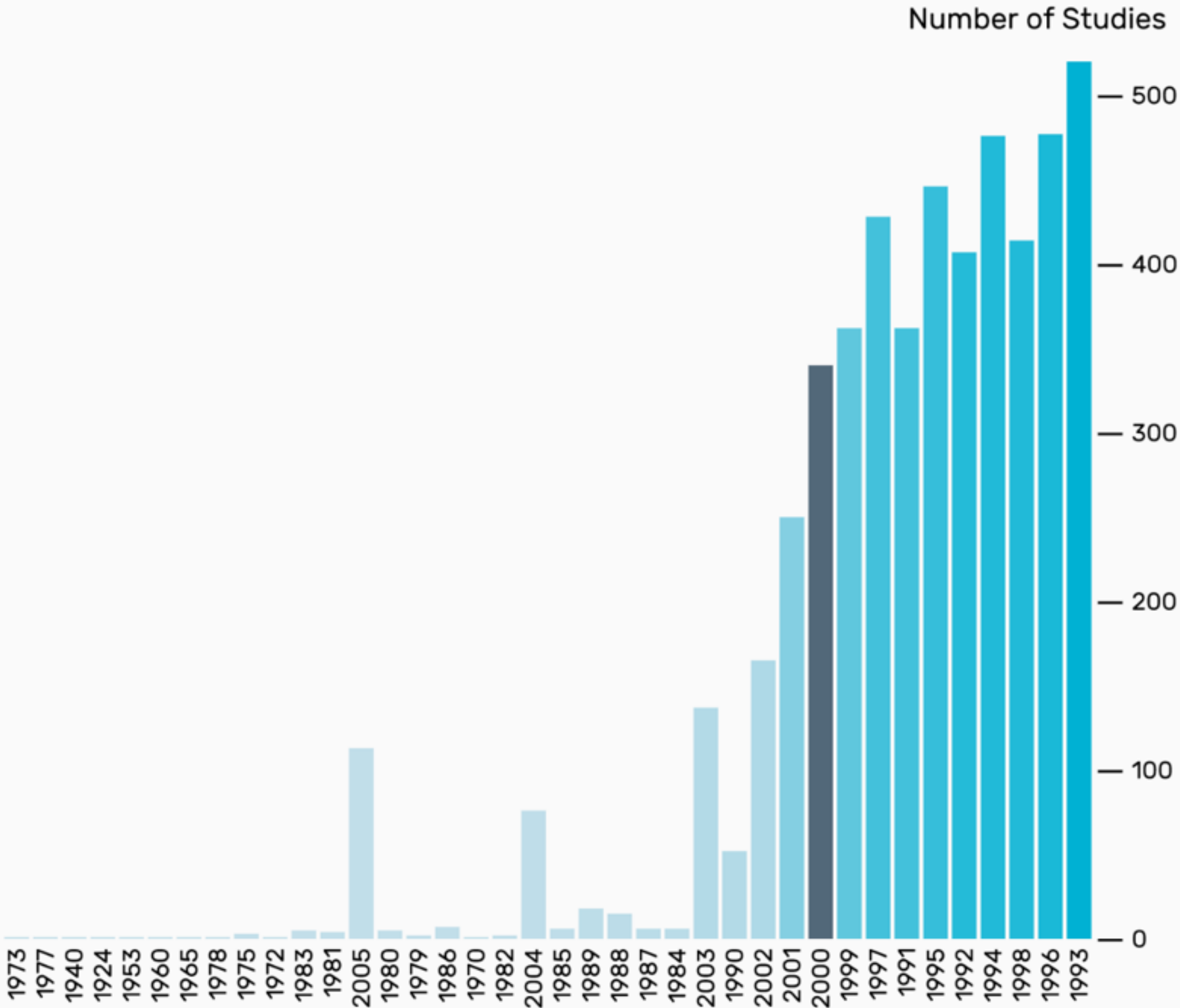**Science Surveyor**
CONTEXT ON DEADLINE

Activity in the Field

Top 10 words defining the field: **ecosystem, flux, plant, climate, emission, atmospheric, carbon, forest, co2, soil**

Year: **2000**
Published studies: **340**
Cited by this study: **3**

Number of Studies

Arrange by: ○ Year   ○ Number of studies   ● Citations

Citation rate: Low ▬▬▬ High

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CONTEXT ON DEADLINE

Studies You Might Want to See

Five most cited studies in the context:

The NCEP/NCAR 40-year reanalysis project	1996
MODELTEST: testing the model of DNA substitution	1998
MRBAYES: Bayesian inference of phylogenetic trees	2001
"INTCAL98 radiocarbon age calibration, 24,000-0 cal BP"	1998
EXTENDED C-14 DATA-BASE AND REVISED CALIB 3.0 C-14 AGE CALIBRATION PROGRAM	1993

Five most cited studies in recent years:

Reconstructing past climate from noisy data	2004
"Intramolecular, compound-specific, and bulk carbon isotope patterns in C-3 and C-4 plants: a review and synthesis"	2004
Highly variable Northern Hemisphere temperatures reconstructed from low- and high-resolution proxy data	2005
Detection of methane in the atmosphere of Mars	2004
Historical climate change and speciation: neotropical seasonally dry forest plants show patterns	2004

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Looking ahead
2016-17 Brown Institute Magic Grants

We received nearly 50 applications in the 2016-2017 granting cycle, with a record number of bicoastal projects. In all, we funded seven, two bicoastal (one coming from Base Camp). Here was our timeline.

Proposal submission deadline: March 7, 2016

Announcement of finalists: March 18, 2016
Presentations by Columbia finalists: April 18, 2016
Presentation by Stanford finalists: April 22, 2016

Announcement of winners: April 29, 2016
Projects start: September 2016 (or Summer 2016)

The groups have started working and we will report back periodically on their progress. Each year, projects get deeper and more interesting!

Re(ef)source — We will distribute cameras designed to capture fluorescence and multispectral images to scuba divers in Florid in order to mine data from images of coral that can help us gauge the health of reefs in the area. This innovative idea combines new imaging modalities, crowd sourced data collection and analysis in a new way that will provide a model for participatory storytelling and citizen journalism in environmental reporting. Environmental reporting typically relies on scientific and government reports. The team will add a new dimension to climate change stories by empowering journalists to deploy their own sensors and tools to collect data directly from the environment, enabling a new type of environmental interview. Instead of relying on experts, they are turning the environment itself into a source. (Bicoastal)

The Comprehensive Database of Investor Ownership ad Governance — The first-ever public, free data on the institutional owners of America's largest companies — and whether and how they serve as setters of average Americans' savings. After developing a complete dataset of institution holdings for each quarter from 1998 through 2014, the team will then turn to the governance of those investors. They will extract the information from Form ADV, creating for each institution a unique set of governance indices over time. The institutional governance index will summarize information on the advisor's management, customer characteristics, and regulatory, civil, and criminal fraud history. (Columbia)

GenderMeme — How much media do we read that is written from a male perspective? A lot. Do we wish that we could hear more diverse voices in the media we consume? Yes. And can we do something about that? We believe so. GenderMeme is a product that takes in a stream of articles, and picks gender-balanced articles, from which it makes a magazine. (Imagine Flipboard, but with a newsfeed that has been designed for gender diversity). To do this, we will first perform a large-scale analysis of news stories, in order to understand it better, and we will also create a "thermometer" that summarizes the state of the media in real time. (Stanford)

Formalinfree — Tackling food adulteration in Bangladesh - Providing real-time updates about the food quality in the markets in Bangladesh. High demand and low transparency means that manufacturers can hasten ripening processes with carbides and sellers can preserve fish in formaldehyde, and have little trouble finding buyers. While there is a move to protect consumers with "Mobile Courts," news on government raids is delivered to the public very late. This project will help quantify, monitor and relay information about food adulteration. (Columbia)

We Can — A Geography of New York Canners - Oral history, illustration, "analog data visualization," and sensor driven tracking, creates an immersive web platform to narrate the world of canners, people making a living collecting cans and bottles on the street. (Columbia, on hold pending visa issue.)

1000 Cut — From Harlem to SoHo. A collaboration between the Cogburn Research Group at Columbia University's School of Social Work and the Virtual Human Interaction Lab at Stanford University to leverage advances in virtual reality technology to create visceral experiences of racism, examining the psychosocial and physiological impact of an immersive racism experience. Our latest project in VR, this explicitly incorporates new research methodologies from Social Science to produce a sophisticated, technically innovative take on questions of empathy in VR, a topic that is given too little actual research. (Bicoastal)

RoughCut, a tool to help video teams in their initial stages of production. A video editor must have access to good footage to build an initial video sequence, called a rough cut — this project, a hybrid of drone technology and machine learning, addresses the key challenges of making a rough cut, planning, capturing, and annotating footage, finding relevant video clips, and pairing audio and visual content.