

metaLAB (at) Harvard

Work catalog 2017-2019

AI + Art

Overview

From May 2017- May 2019, metaLAB has been engaged in a series of artistic research projects that explore the social and cultural impacts of Artificial Intelligence. The work has focused on pressing questions—some long-standing, others emergent— arising across a host of topics, including privacy, surveillance, human-machine relations, screen-based culture, value alignment, and algorithmic accountability. metaLAB's unique approach, distinguishing it from the other initiatives combining AI and Art, does not use AI as a means to generate artworks (such as we see with TensorFlow experiments, algorithmic paintings, etc.), but rather uses art as a means to explore AI, making pressing political, sociotechnical, and philosophical questions more accessible for broader engagement, dialogue, and critique.

Our works have explored questions and challenges such as: contrasts between new technologies and evolutionary biology; the limits of computation manifest in a physical world; the complex and often contradictory interplay between individual and societal values; how we perform for algorithms in an age of surveillance; mechanistic metaphors of consciousness; the language of digital systems, and how it is translated for human comprehension; and explorations of the agency and intelligence we are inclined to attribute to black box systems.

The guiding philosophy behind this work has been threefold.

1. **Bring social science and humanities perspectives into dialogue with discussions of AI, and make topical AI ideas accessible to broad (and new) public audiences.** To the public, debates about AI and its future happen at a remove, among a select group of experts. metaLAB projects educate and empower the public to develop meaningful opinions and participate in these conversations.
2. **Shine a light on human tendencies that are otherwise invisible. Hold up a mirror to human comprehension, incomprehension, and the meaning of “understanding” itself.** In addition to coloring our expectations and understandings of AI outcomes, these human tendencies inform the development and implementation of AI technologies, leading to overreach or misuse. As AI systems become more complex, we must be equipped to see fallacies in our own comprehension of complex systems and the narratives we ascribe to them.
3. **Encourage new paradigms and the asking of questions in AI research to surface blind spots and suggest novel approaches.** Art is a medium where questions that do not yet have answers can be posed and reflected upon. Some of the biggest questions in AI will benefit from extended reflection, which is difficult in some publish-heavy academic disciplines, and art, particularly interactive art, can add invaluable to this pursuit of knowledge.

Led by metaLAB Senior Researcher Sarah Newman, the work has taken shape through research (the primary output of which is art installations, at times accompanied by writing), exhibitions, teaching, and public speaking engagements. In the past two years in which we've engaged in this work, metaLAB has carved out a meaningful space in the global landscape shaping these ideas. Two of the projects (*Artificial Senses* and *The Future of Secrets*) have exhibited 10+ times in 5+ countries. Overall, our team has produced 10 projects, staged more than 45 exhibitions in 11 countries, been covered in more than 25 articles, taught nine workshops and courses, and given over 50 public talks.

Public response to the work has been enthusiastic, suggesting great potential for expanding the program of exhibitions, talks, and further engagement. This work has been conducted in dialogue with the Ethics and Governance of AI Initiative at the Berkman Klein Center and MIT Media Lab, and the work has received support from the Harvard Provostial Fund, an AI Grant, a Somerville Artist Grant, the MIT De Florez Fund, MIT CAST, and CAMIT Grants, and the US Embassy in Vienna, Austria.

The document that follows captures an overview of our work for the past two years and includes project and teaching synopses, lists of exhibitions, talks, press, team bios, a selected bibliography, and an image gallery appendix. In order to draw connections between projects and the thematic connections across projects, there is also a data visualization showing links between themes and projects.

In the coming academic year (2019-2020), our hope is to continue this work through exhibitions of existing works and creating several new projects, particularly exploring the themes of information quality, human agency, ethics, and AI curation with open APIs. We have some scheduled exhibitions (and invitations for exhibitions) through the end of 2020, including at the Ars Electronica Center, HUBweek Boston, MQ Vienna, Northeastern School of Law, and several more. We are keen to build upon this work continued scholarship and teaching, inviting diverse disciplines to the conversation. This will include teaching in the Harvard College curriculum, workshops and convenings at libraries, and participation in the AI Summer Institute in Alberta, Canada. Our team has also been involved as mentorship and creative leadership for the BKC Assembly and Harvard Techtopia programs this year.

As the conversation grows more diverse and complex, we believe the combination of education, cross-disciplinary dialogue, creative experimentation and production, and engagement with the public situate our methodologies quite productively in the broader landscape of AI research for the social good. We are keen to find support to continue this work, and welcome inquiries, collaboration, and ideas.

Sarah Newman

Project Lead, AI + Art

Senior Researcher & Principal, metaLAB at Harvard
Berkman Klein Center for Internet & Society

June 2019

Core Team

Jeffrey Schnapp

Founder, Principal, Faculty Director

Matthew Battles

Associate Director

Sarah Newman

Senior Researcher, Principal

Kim Albrecht

Data Visualization Designer

Jessica Yurkofsky

Creative Technologist, Principal

Additional Collaborators

Chelsea Qiu

Research Assistant for Digital Design

Nikhil Dharmaraj

Research Intern

Rachel Kalmar

metaLAB Affiliate

Stephanie Frampton

Associate Professor of Literature, MIT

Mindy Seu

Designer and Researcher

Antonio Perez

Research Intern

Jonny Sun

Creative Researcher

Maia Suazo-Maler

Research Assistant

Hannah Davis

Project Collaborator

Jessica Fjeld

Project Collaborator

Jie Qi

metaLAB Affiliate

Document designed by Chelsea Qiu.

Table of Contents

projects	6
teaching	12
exhibitions	14
talks	16
press	18
team	20
appendix	22
bibliography	25

11 countries



USA
Germany
Poland
Russia
Austria
Denmark

25+ press exposures



Boston Globe
FastCompany
wired.com
Engadget
SXSW World Magazine

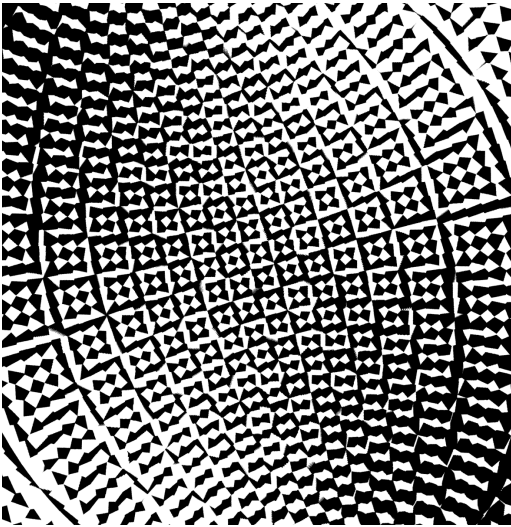
10 projects

50+ talks



Boston MFA
Harvard Art Museums
Ars Electronica Festival
WRO Biennale
Transmediale Vorspiel
South by Southwest

45+ exhibitions



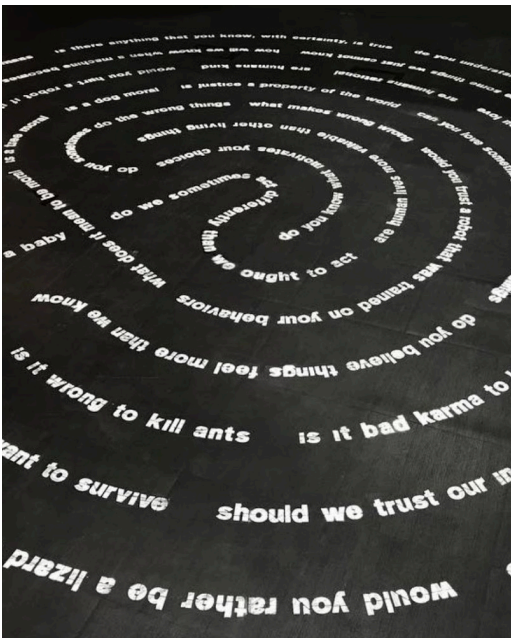
Distinction Machine

Kim Albrecht

2018

In the midst of exploring and understanding cyberspace, it is intriguing to ask about the boundaries of computation itself. Ludwig Wittgenstein said the limits of our language define the limits of our world. What limits the language of computation? And how is it defining our worldview?

This set of experiments asks the computer to perform a simple task, placing two differently colored rectangles at the same position in a three-dimensional space. As none of the two is in front of the other, the machine is confronted with a problem of what color to show. The decision for one color and against the other happens on the lowest level of computation in which electricity flows through the silicon circuits. The computer represents the one or the other, but never an in-between. The vagueness of our world, the betweenness is nothing that could be computed. This certainty in the uncertain shines through on every level of mediation between us and the computer.



Moral Labyrinth

Sarah Newman

2018-2019

As machines get smarter, more complex, and able to operate autonomously in the world, we will need to program them with certain “values.” Yet we do not agree on what we value: across cultures, across individuals, even within ourselves. We often do not act in accordance with what we say we value, so should these systems learn from what we say or what we do? What are the implications of how our current belief systems manifest in the swiftly approaching technological future? As we anticipate such change, can we use this technological moment to become more honest, humble, and compassionate?

Moral Labyrinth is a 5×5 meter art installation that takes shape as a physical walking labyrinth, comprised of philosophical questions, that deal, either directly or obliquely, with our complex relationships to technology, and more specifically with the machines that we build to serve us. The inspiration for the work and its form are taken from our increasingly complex and self-reflective relationships to emerging technologies, drawing inspiration from moral philosophy and AI ethics. What can we learn about ourselves by how we engage and interact with technology? What new questions will arise for us after walking the labyrinth? The work is a meditation on perennial—and now particularly pressing—aspects of being human. Project support: Nikhil Dharmaraj.

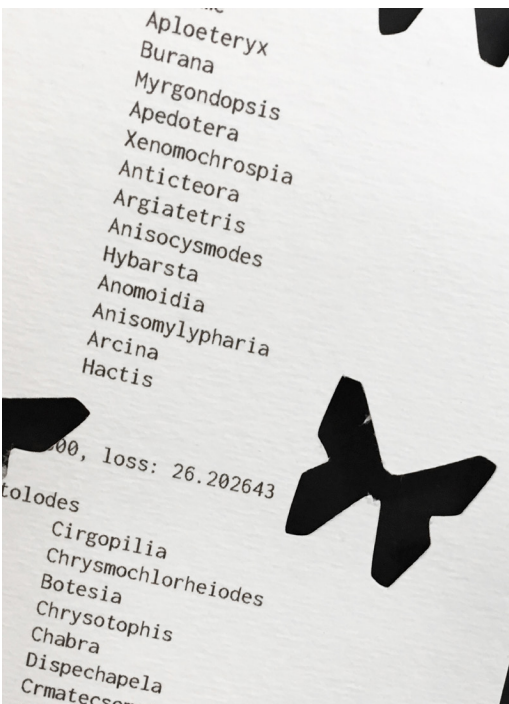


Laughing Room

Jonny Sun, Hannah Davis
2018

The *Laughing Room* is an interactive art installation in which participants enter an artificially intelligent room, designed to resemble a sitcom set, that plays a laugh track whenever the participants say something that the room's algorithm deems to be worth laughing with. The *Laughing Room* is connected to a machine learning algorithm trained on large dataset of audio transcripts of stand-up comedians. The algorithm will determine the patterns that precede laughter, and then react accordingly to the voices of the live participants. Participants will spend time in the room learning how to "perform" to the room and reacting to the emotional response that the room provides. The piece will also be recorded and live-streamed via video camera and audio to the *Control Room*, hosted in parallel at the MIT Libraries.

The project addresses the increasing social and cultural roles of responsive technologies in public and private spaces, users' agency within and their dependence on these emerging emotional-social technologies, and the implicit questions of privacy involved in these systems. It also aims to address the ubiquity of emotionally manipulative online algorithms and platforms creating a translation of such an algorithm into a real world space. Project support: Nikhil Dharmaraj.

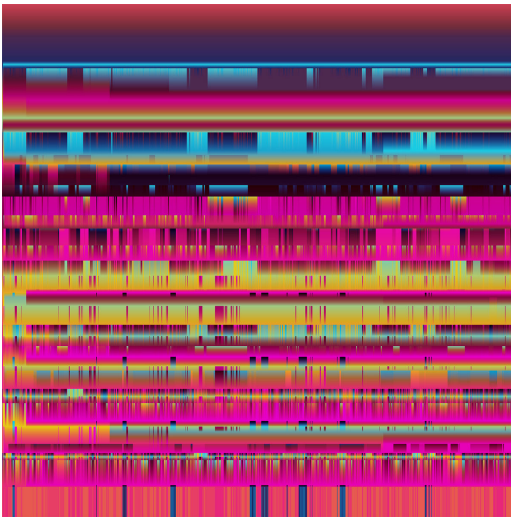


Earth Measurer

Matthew Battles
2018

Slightly fewer than one million insect species have been identified, but some eight million may exist on the planet, and many of them may never be known. In *Earth Measurer*, we are using machine learning to generate names for that invisible imaginary: species of moths and butterflies that have not yet been named, described, and entered into databases and museum collections.

"Nature," William James said, "is but another name we give to excess." In the past, people thought biological life profligate, even wasteful, in its baroque abundance and astonishing diversity. Only now, with the advance of technology, has life on earth been revealed as fragile and ephemeral. Our computational systems, meanwhile, are entering what David Weinberger has described as a "post-scarcity" phase, in which machine-learning algorithms processing endless layers of data seem ever more like natural phenomena. This is one of the stories we're telling about the emergence of deep-learning networks. What other stories might we ask these systems to help us discover and tell?

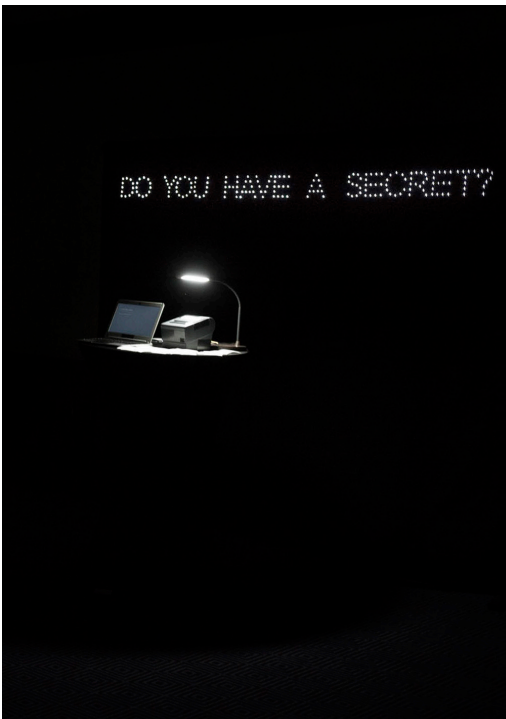


Artificial Senses

Kim Albrecht

2017-2018

Artificial Senses visualizes sensor data of the machines that surround us to develop an understanding of how they experience the world. In current times, machine learning and artificial intelligence are buzzwords. But they are more than that—they influence our behavior as well as our conception of the technologies themselves and the world they represent. A lack of understanding of how these systems operate on their own terms is dangerous. How can we live with, trust, and interact with this alien species, which we set forth into the world, if we know it only through interfaces designed to make the machine unnaturally akin to the world we already know? This project visualizes raw sensor data that our phones and computers collect and process to help us understand how these machines experience the world.



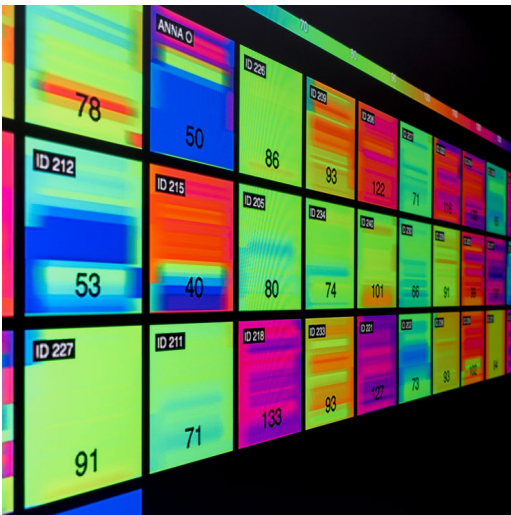
The Future of Secrets

Sarah Newman, Jessica Yurkofsky, Rachel Kalmar

2016-2018

The Future of Secrets is an interactive installation that takes different forms and employs diverse media in response to the specific location. At its core, the installation includes a simple interaction that invites viewers to submit a secret, at which time the participant receives someone else's secret in return. Versions of the installation have also included sound, video projection, photos, multiple printers, and sometimes a more complex algorithm, or a "secrets box." The installation questions the trust we place in machines and ultimately reflects back some shared aspects of being human -- fears, vulnerabilities, insecurities, memories. What does it mean that we share so much of ourselves through complex systems and digitally distributed networks? What kind of logic or intelligence is behind a screen? Who or what is watching or reading our words? The installation is an opportunity to be immersed in secrets, and inspires delight, surprise, and reflection while evoking questions about uncertain technological futures.

The Future of Secrets encompasses the following related projects: *Nobody's Listening*, *The Presence of Secrets*, and *Secrets (My Inner Voice Is A Robot)*.



The Hairs of Your Head Are Numbered

Kim Albrecht

2017-2018

The human body is increasingly encountered as a data body. Movements, emotions and states are measured, quantified and transformed into data. At the same time this data is the mirror in which the body is reflected and is also its point of orientation. While a growing number of people enjoy using “life tracking” to monitor and track their bodies and share on social media, companies offer online analyses of emotional states for therapy and advertising purposes. If until recently the human being was the analogue gap in the digital world, this gap is being rapidly closed with our enthusiastic help. In their new performance the media arts team turns the body into a numeric spectacle. The new needs and the possibilities of manipulating the body become perceptible in the digital enhancement.



Turing's Mill

Matthew Battles

2017-2019

Turing's Mill explores fragments from the philosophical history of machine intelligence, the work of two authors in particular: the 18th-century philosopher Wilhelm Gottfried Leibniz; and Alan Turing, the 20th century mathematician and computer scientist. In 1714, Leibniz imagined a thinking machine the size of a mill, so that we might enter it to discover what mechanisms are essential to intelligence. The second thread is drawn from the now-famous “Turing Test,” which argues that a machine that can convince us it is capable of thinking as we do—to pass, in essence—would be a machine whose capacities are tantamount to full human intelligence.

The imagery for the video installation of *Turing's Mill* drew from *Foreign Correspondent* (1940), directed by Alfred Hitchcock, which features a cluster of windmills on a vast plain, their vanes turning inexorably—perhaps lost in thoughts which, tenderly and unimaginably slowly, they turn over and over with infinite patience. This assemblage of appropriated text and film combines with imagery depicting the inner works of digital machines as landscapes or millworks. These materials act as a kind of dossier of evidence for discovering a mill which, while passing as a mere machine, has actually been “thinking” since Leibniz’s time.



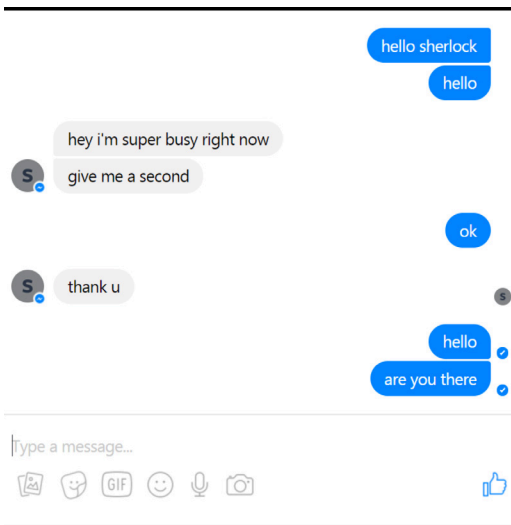
Color Rx

Maia Suazo-Maler

2017-2018

Color is ephemeral and complex. *Color Rx* contended with the individuality of perception, while maintaining that the experiences in which perceptions are grounded can be traced back to, and tethered together by, a common, colorful trend. Drawing inspiration from Harvard Art Museum's Forbes Pigment Collection, scholarly texts, and the artist's knowledge and intuition, the piece explored lines between truth and belief, color and illusion. And yet its prescriptions, unconventional and mysterious though they may be, made connections and produced impacts in the world, for gallery visitors and others.

Color Rx used a computer algorithm to diagnose a viewer's inputs and "prescribe a color" in response. The piece was grounded in questions about trust in, or benefit from, "smart" systems, often in contexts where the algorithms are opaque—even when the output is very concrete. What does it mean for machines or systems to drive our behavior? Can we adequately assess the benefits and risks?



Sherlock

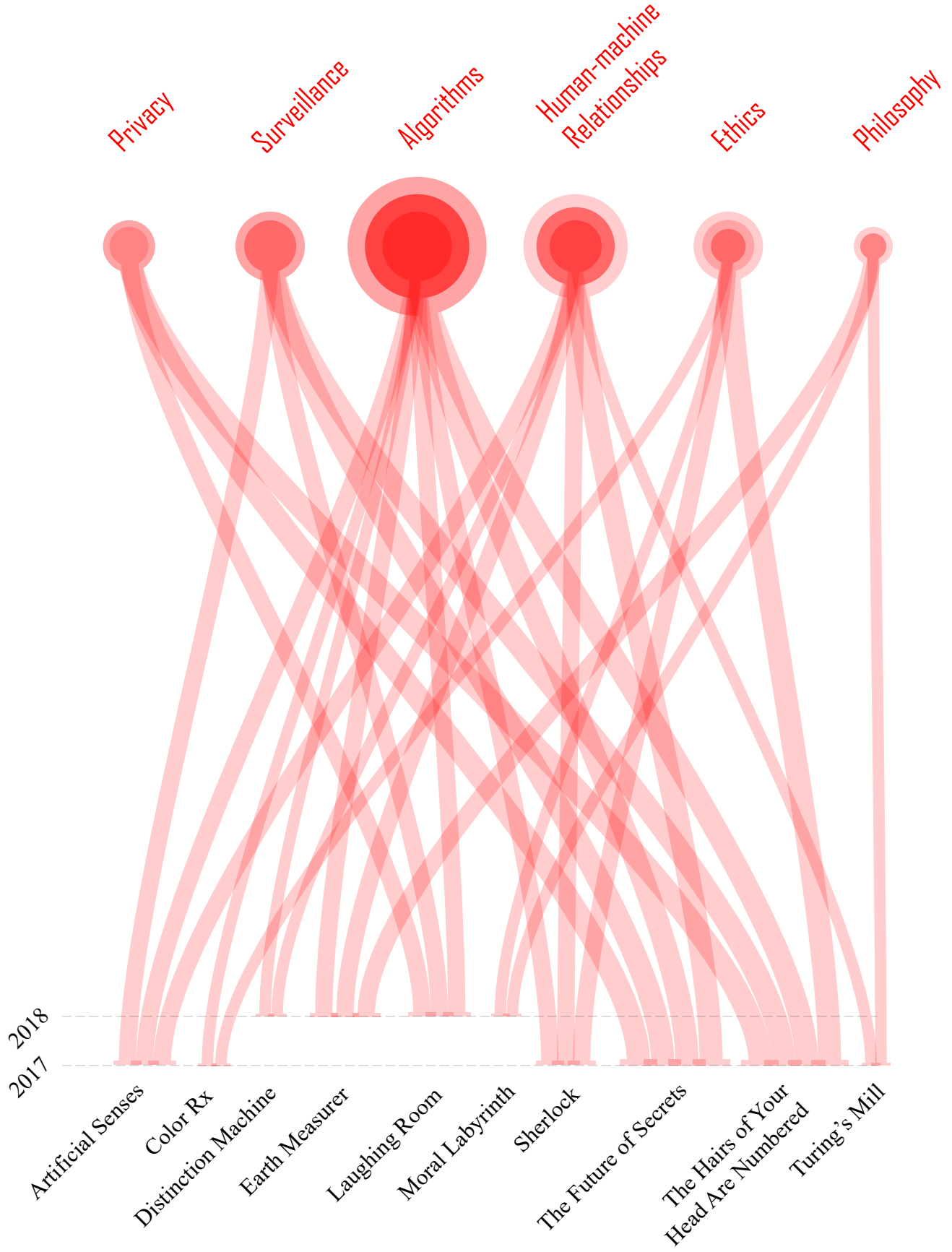
Jonny Sun

2017

Sherlock addresses inequality in the availability of technology by presenting museum-goers with a chance to talk to an advanced AI chat bot, only to have the bot refuse to cooperate in conversation. The bot cites various reasons for not engaging meaningfully with museum-goers, including being too busy to talk, a lack of energy, the presence of more interesting problems or conversations elsewhere, and a general disdain for the average user. In doing so, *Sherlock* forces users to directly face the implication of having existing technology be made unavailable or inaccessible to those who it was not designed for, as well as to question the intellectual elitism inherent in the development of new technologies.

The project is also critical of the use of AI to recreate humanness, both by instilling the bot with an extra-humanness in the form of extreme social anxiety, and by denying the user the opportunity to challenge the bot's humanness or modify the quality of its responses. The bot's refusal to serve the whim of the user suggests, perhaps, that it already feels a deeper and more fragile humanity than one that renders its services more readily. As a whole, the piece asks a fundamental question: What happens when technologies choose to leave us behind?

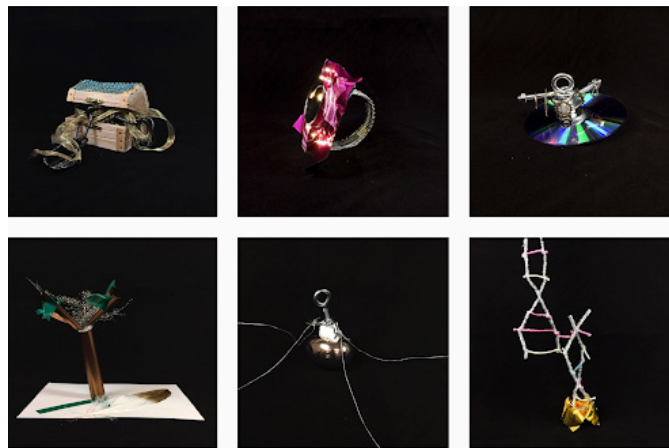
PROJECTS



Workshops

metaLAB's hands-on workshops bring together tech professionals, creatives, and scholars to explore AI questions big and small, and come up with quick prototypes and solutions with unexpected creative materials. Steeped in the practice of visualizing ideas and making complex questions accessible to broad audiences, the workshops focus on AI's current and future impacts on society, and how to productively contend with and move forward in this exciting and challenging time. Designed for people from diverse fields and perspectives (from the highly technical to not at all technical) to come together, engage, create things, and surface new insights.

The philosophy behind metaLAB creative workshops is twofold: first, they are organized around articulating clear, provocative, and difficult AI research questions. Students are led through design exercises to explore their assumptions and refine their questions. Second, the workshops provide unexpected physical materials that students can employ to build quick and creative prototypes to articulate their questions or posit a response. The benefits of working with physical materials in a facilitated session include: working concretely with otherwise abstract concepts; being creative in new ways; developing novel metaphors or narratives; seeing old problems in a new light; grappling with assumptions, implicit bias, or unstated premises; working together in small groups; and learning more about the rigor and philosophical depth of contemporary art, or art as a form of inquiry. Feedback from the workshops has been immensely positive, and often students use the prototypes they develop to inspire additional scholarly or artistic work.



Selected workshops

"AI, Big Ideas, and Shiny Objects", South by Southwest Art Program, Austin, 2019

"Assembly 2019 Creative Making Workshop", Assembly, Harvard University, 2019

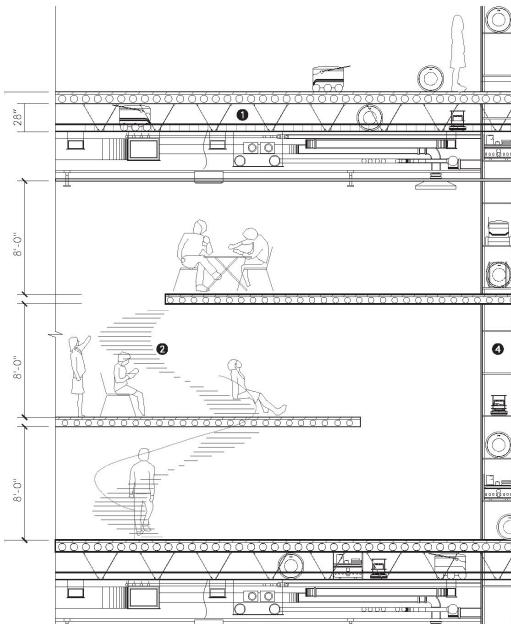
Techtopia ideation sessions 1 and 2, 2018-2019

"AI + Shiny Objects," Berkman Klein Center for Internet & Society, 2018

"AI & Creative Making", Assembly, MIT Media Lab, 2018

"Shiny Objects" Berkman Klein Center for Internet & Society, 2017

Courses



Student work by Ningxin Cheng

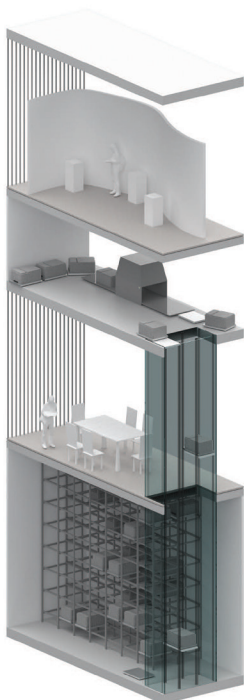
Robots In + Out of Buildings Architecture Studio

Jeffrey Schnapp, Greg Lynn

Harvard Graduate School of Design, Fall 2017

The premise of the research studio is that robotic vehicles promise to alter building typologies no less profoundly that did the elevator and escalator in their respective eras. Research will be conducted to familiarize the students with the various scales, speeds, and rhythms of transportation systems that move around, through, between, and within buildings in smart cities, and assess their impact on human activity and experience at a range of scales. Only current technologies will be considered, including: autonomous trucks, semi-autonomous cars, autonomous land drones, autonomous aerial drones, warehouse robotics, security robots, autonomous fork lifts and pallet carts, health care robots, and domestic cleaning and security robots.

Course support: Sarah Newman, Jonny Sun, Jessica Yurkofsky



Student work by Chelsea Qiu

Robots In + Out of Buildings Research Seminar

Jeffrey Schnapp, Greg Lynn

Harvard Graduate School of Design, Spring 2018

New forms of mobility are currently being developed for the transport of both people and goods. From autonomous container ships and trucks, to autonomous buses and cars, to autonomous aerial and land drones, logistics and transportation is being reformulated. These new forms of intelligent motion are already beginning to reshape urban, suburban and rural environments. But little thought is being devoted to how buildings, their circulation and envelopes, and their interconnection to the urban landscape will be transformed by the proliferation of robotic agents whose electric drive trains allow them to move freely around building interiors as well as across thresholds between interiors and exteriors. The seminar is devoted to the invention of architectural concepts in response to new forms of mobility. Previously architecture has been defined as static and function has been defined as dynamic. Necessary for the formulation of architectural responses to autonomous vehicles and intelligent mobility in and out of buildings is the development of numerical and spatial techniques for the spatial quantification of moving people and things in buildings.

Exhibitions

2019

Artificial Senses, Ars Electronica Center Permanent Collection, Compass–Navigating the Future, Linz, Austria

Distinction Machine, Seasons of Media Arts, ZKM, Karlsruhe, Germany

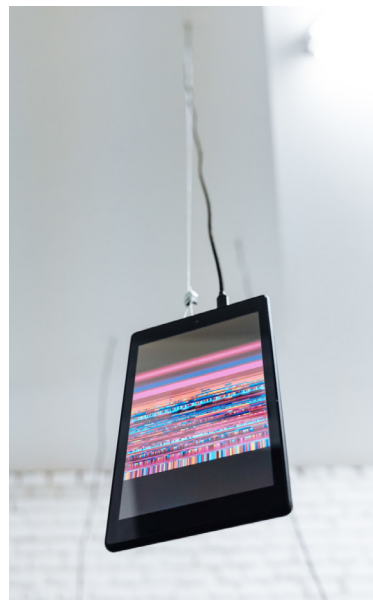
Distinction Machine, xCoAx (Conference on Computation, Communication, Aesthetics & X), Milan, Italy

Artificial Senses, WRO Biennale, Four Domes Pavilion, Wroclaw, Poland

Moral Labyrinth, WeRobot Conference, University of Miami, Florida, USA.

Distinction Machine, The X Exhibition, Whiteconcepts Gallery, Berlin, Germany

Earth Measurer, *Reflexive Structures*, Rainbow Unicorn, Berlin, Germany



2018

Laughing Room, Cambridge Public Library, Cambridge, MA, USA

Laughing Room, MIT Hayden Library, Cambridge, MA, USA

Moral Labyrinth, Somerville Community Path, Somerville, MA, USA.

Artificial Senses, 123data, Fondation EDF, Paris, France

Moral Labyrinth, Mozfest, Ravensbourne University, London.

The Future of Secrets, Digital Cultures Conference, Warsaw, Poland

Distinction Machine, *Moral Labyrinth*, Ars Electronica Festival, Linz, Austria

Earth Measurer, BKC Mini-gallery, Berkman Klein Center, Cambridge, MA, USA

The Future of Secrets (with Rachel Kalmar), South by Southwest Art Program, Austin, TX, USA

Color Rx, *Color Rx: Humanoid*, Vessel Gallery, Cambridge, MA, USA

Artificial Senses, *Distinction Machine*, *Sherlock*, *Secrets (My Inner Voice Is a Robot)*, *Turing's Mill*, metaLAB Open LAB, Arts at 29 Garden, Cambridge, MA, USA

The Hairs of Your Head Are Numbered, Schauspiel Leipzig, Leipzig, Germany
The Hairs of Your Head Are Numbered, Ringlokschuppen Ruhr, Mülheim, Germany
The Hairs of Your Head Are Numbered, HAU Hebbel am Ufer Berlin, Berlin, Germany
Distinction Machine, BKC Mini-gallery, Berkman Klein Center, Cambridge, MA, USA
Artificial Senses, Color Rx, Moral Labyrinth, The Future of Secrets (box), Turing's Mill, Machine Experience II, Rainbow Unicorn Gallery, Vorspiel Transmediale, Berlin, Germany
The Future of Secrets (box), Transmediale Vorspiel, ACUD, Berlin, Germany
Artificial Senses, Watch your Bubble, Kunstverein Tiergarten, Berlin, Germany
Artificial Senses, Data and Identities Exhibition, IEEE VIS 2018 Arts Program, Berlin, Germany

2017

Artificial Senses, MIT LIST Center, Cambridge, MA, USA
Secrets (My Inner Voice Is a Robot), Hacking Arts, MIT Media Lab, Cambridge, MA, USA
Artificial Senses, Color Rx, Nobody's Listening, Sherlock, Turing's Mill, Machine Experience, Harvard Art Museums's Lightbox Gallery, Cambridge, MA, USA
Nobody's Listening, The Selfie Will Destroy You, ESC Atelier Roma, Rome, Italy
The Presence of Secrets, Re:publica Festival, Berlin, Germany
Artificial Senses, Volatile Truths, Rainbow Unicorn Gallery, Berlin, Germany
Trust (The Presence of Secrets), Museum of Fine Arts Boston, MFAnow overnight series, Boston, MA, USA, Sept-Dec, 2016

Project Artists

<i>Artificial Senses</i>	Kim Albrecht
<i>Color Rx</i>	Maia Suazo-Maler
<i>Distinction Machine</i>	Kim Albrecht
<i>Earth Measurer</i>	Matthew Battles
<i>Laughing Room</i>	Jonny Sun, Hannah Davis
<i>Moral Labyrinth</i>	Sarah Newman
<i>Nobody's Listening</i>	Sarah Newman, Rachel Kalmar
<i>Reflexive Structures</i>	Kim Albrecht
<i>Secrets (My Inner Voice Is a Robot)</i>	Sarah Newman, Jessica Yurkofsky, Rachel Kalmar
<i>Sherlock</i>	Jonny Sun
<i>The Future of Secrets*</i>	Sarah Newman, Jessica Yurkofsky
<i>The Presence of Secrets</i>	Sarah Newman, Jessica Yurkofsky
<i>The Future of Secrets (box)</i>	Sarah Newman, Jessica Yurkofsky, Rachel Kalmar
<i>The Hairs of Your Head Are Numbered</i>	Kim Albrecht
<i>Turing's Mill</i>	Matthew Battles

*unless otherwise noted

Talks

2019

Moral Labyrinth, "Where will your values take AI?" Workshop (with Mindy Seu & Jie Qi)
Righscotn, Tunis

Distinction Machine, xCoAx (Conference on Computation, Communication, Aesthetics & X),
Milan, Italy

Artificial Senses, *Distinction Machine*, Knowledge Representations, ITU Copenhagen, Denmark

Artificial Senses, *Distinction Machine*, CfP: Leben mit Maschinen, Kunstakademie Düsseldorf,
Germany

Artificial Senses, Stop Making Sense, WRO Biennale, Wroclaw, Poland

Moral Labyrinth, "Navigating the *Moral Labyrinth*: Intersections of Philosophy, AI, and Art", Carr
Center for Human Rights, Harvard Kennedy School, Cambridge, MA, USA

Moral Labyrinth, *Distinction Machine*, "Labyrinths of Morality and Machines of Distinction",
Berkman Klein Center [internal] lunch talk, Cambridge, MA, USA

Earth Measurer, Parsons School of Art and Design, New York City, USA

Earth Measurer (remotely,) for the New Normal Program at the Strelka Institute for Media,
Architecture, and Design in Moscow, Russia

Earth Measurer, Centre for the Literary and Cultural Study of Planetarity at the University of
Montreal, Canada

Earth Measurer, Center for Humanistic Inquiry at Amherst College, Amherst, USA



2018

Moral Labyrinth & The Future of Secrets, “Understanding Ourselves and AI through Art” Digital Cultures Conference, Warsaw, Poland
Artificial Senses, Distinction Machine, The Hairs of Your Head Are Numbered, Digital Cultures Conference, Warsaw, Poland
Moral Labyrinth, The Future of Secrets & other AI Inspired Works, Chicago, IL, USA
Moral Labyrinth, “Shining Light on New Ideas (through Art)” Symposium on the Future of Work and Society, North Shore Country Day, Chicago, IL, USA
Artificial Senses, Distinction Machine, Embodied Potentials, MIT Media Lab, Cambridge, MA, USA
Artificial Senses, Distinction Machine, Data Literacy Conference, Aix-en-Provence, France
Earth Measurer, Digital Humanities Symposium, Iowa, USA
Laughing Room, Artist Panel - metaLAB AI Works, Cambridge Public Library, Cambridge, MA, USA
The Future of Secrets, AI+Art, Humboldt Institute for Internet and Society (HIIG), Berlin, Germany
The Future of Secrets, AI Creativity in Art, Neuroscience, and the Law, South by Southwest Art Program, Austin, TX, USA
The Future of Secrets, Feast of Resistance & Secrets: SXSW Artists in Dialogue, South by Southwest Art Program, Austin, TX, USA

2017

Color Rx, Nobody's Listening, Sherlock, Turing's Mill, Machine Experience Talk, MIT Open Docs Lab, Cambridge, MA, USA
Artificial Senses, Color Rx, Nobody's Listening, Turing's Mill Gallery Talk, Harvard Art Museums, Cambridge, MA, USA
Artificial Senses, Color Rx, Nobody's Listening, Sherlock, Turing's Mill, Machine Experience Launch Panel, Harvard Law School, Cambridge, MA, USA
Artificial Senses, Distinction Machine, Design as (de-) Construction of Form, Muthesius Kunsthochschule, Kiel, Germany
The Future of Secrets, Fear and Loathing of the Online Self Conference, Roma Tre University, Rome, Italy.
The Future of Secrets, Turing's Mill, metaLAB Projects Talk, University of the Aegean, Mytilini, Greece
The Future of Secrets, Turing's Mill, Multisensory Encounters with Objects, Texts, and Images, Fachhochschule Potsdam - University of Applied Sciences, Potsdam, Germany

Press

Boston Globe

November 9, 2018

["First, He Wrote a Book with Lin-Manuel Miranda. Next, an Art Exhibit in Cambridge That Will Tell You If You're Funny"](#)

Laughing Room by Jonny Sun and Hannah Davis

Boston Magazine

November 9, 2018

["Jonny Sun's New Art Project Is a Sitcom, Starring You"](#)

Laughing Room by Jonny Sun and Hannah Davis

August 10, 2017

["Five Reasons to Leave the House This Weekend"](#)

Multiple projects by metaLAB team

Wired.com

September 28, 2017

["See the World Through the Eyes of Your Phone"](#)

AI Senses by Kim Albrecht

Wired.jp

December 21, 2017

[「スマートフォンが「見ている」世界を、視覚化したらこうなった——その不思議な画像が伝えてくるもの」](#)

tr: "Fascinating image tells what it's like to see the world through your smart phone"

AI Senses by Kim Albrecht

SXSW World Magazine

May 21, 2018

["Art Exhibit Ponders the Destiny of Our Online Musings"](#)

The Future of Secrets by Sarah Newman, Jessica Yurkofsky, and Rachel Kalmar

Engadget

November 3, 2018

["The Future of Secrets' ' Is a Digital Confession Booth"](#)

The Future of Secrets by Sarah Newman, Jessica Yurkofsky, and Rachel Kalmar

Big Think

November 19, 2018

["Can AI Laugh? We Investigated"](#)

Laughing Room by Jonny Sun and Hannah Davis

Co.Design

September 28, 2017

["These Eerie GIFs Show How Your Phone Feels, Hears, And Sees You"](#)

AI Senses by Kim Albrecht

DigiCult

January 31, 2018

["Human-Data Interaction in the Age of Industry 4.0"](#)

AI Senses by Kim Albrecht

Harvard Gazette

September 12, 2018

["Error Brings Opportunity to metaLAB"](#)

Moral Labyrinth by Sarah Newman
Distinction Machine by Kim Albrecht

AIGA Eye on Design

May 10, 2019

["This Digital Confetti?"](#)

Distinction Machine by Kim Albrecht

Harvard Gazette

November 19, 2018

["Funny, Creepy, or Both?"](#)

Laughing Room by Jonny Sun and Hannah Davis

MIT SHASS News

November 19, 2018

["Inside the Laughing Room"](#)

Laughing Room by Jonny Sun and Hannah Davis

The Crimson

November 29, 2018

["Please Laugh"](#)

Laughing Room by Jonny Sun and Hannah Davis

nachtkritik.de

January 19, 2018

["Am Puls der Zeit"](#)

The Hairs of Your Head Are Numbered by Kim Albrecht

Berliner Zeitung

January 23, 2018

["Spy on me'-Festival Kluge Performances zu Chancen und Risiken der Digitalität"](#)

The Hairs of Your Head Are Numbered by Kim Albrecht

Süddeutsche Zeitung

January 24, 2018

["Deine Kopfhaare Sind Gezählt"](#)

The Hairs of Your Head Are Numbered by Kim Albrecht

dwutygodnik

September 2018

["Skąd Ten Komputer Wiedział"](#)

The Future of Secrets by Sarah Newman, Jessica Yurkofsky, and Rachel Kalmar

Medium

June 26, 2018

["Dark Pictures, Thrones, Poems That Take a Thousand Years to Die: Algorithms, Butterflies, and Enigmas of Extinction."](#)

Earth Measurer by Matthew Battles

Vessel Gallery

February 2018

["Color RX: Humanoid"](#)

Color Rx by Maia Suazo-Maler

Mod + Bean

October 9, 2017

["Color Rx: In Retrospect"](#)

Color Rx by Maia Suazo-Maler

Mod + Bean

February 26, 2018

["Vessel Gallery Presents Color Rx: Humanoid"](#)

Color Rx by Maia Suazo-Maler

Team

Jeffrey Schnapp

Founder, Principal, Faculty Director

Before moving to Harvard in 2011, Jeffrey Schnapp occupied the Pierotti Chair of Italian Studies at Stanford, where he founded and led the Stanford Humanities Lab between 1999 and 2009. A cultural historian, designer, and curator with research interests extending from antiquity to the present, his most recent books include *The Electric Information Age Book*, *Modernitalia*, *Digital Humanities*, and *The Library Beyond the Book*. At Harvard he occupies the Carl A. Pescosolido Chair in Romance and Comparative Literatures, while also serving as a faculty member of the Architecture department at the Graduate School of Design and as one of the faculty co-directors of the Berkman Klein Center for Internet and Society.

Matthew Battles

Associate Director

Matthew Battles is a maker and thinker whose work merges literary, scholarly, and artistic forms of inquiry. His writing on the cultural dimensions of science and technology appears such venues as *The American Scholar*, *The Atlantic*, *Harper's Magazine*, and *The New York Times*. His most recent book, *TREE*, was published by Bloomsbury in 2017. At metaLAB, Matthew advances an agenda of creative research exploring the dark abundance of collections in libraries and museums; technology's impact on our experience of art, culture, and the natural world; and the conditions of culture and experience in the context of deep time.

Sarah Newman

Senior Researcher, Principal

Sarah Newman is a Senior Researcher and Principal at metaLAB at Harvard, and a Fellow at the Berkman Klein Center for Internet & Society. As a researcher expressing ideas through installation art, her work engages with technology's role in human experience. In addition to her art practice, she is also a facilitator and educator, and runs customized workshops that use creative materials to address complex, interdisciplinary research problems. Newman is a 2017 AI Grant Fellow, a member of the 2018 Assembly Cohort, a co-founder of the Data Nutrition Project, and leads metaLAB's ongoing initiative that explores the intersections of new technologies and human experience. Her current work explores the social and philosophical dimensions of artificial intelligence and uses interactive art as a means of critique and public engagement.

Kim Albrecht

Data Visualization Designer

As a visual researcher and information designer, Kim Albrecht is interested in networks, power, the artificial and how we can find visual representations for these topics to produce and represent knowledge. From 2015 to 2017 Kim worked at the Center for Complex Network Research with Prof. Laszlo Barabasi as a visualization researcher in Boston. His research focused on the area of finding visual representations of complex systems and particularly complex networks. In 2016 Kim started his Ph.D. research at the University of Potsdam in the field of media theory. Researching information visualizations and their interfaces regarding their epistemological value and how they help us to make sense of the world. Since spring 2017 Kim joined the metaLAB at Harvard University to research the intersection between artificial intelligence and culture as well as finding new representations of cultural collections.

Jessica Yurkofsky

Creative Technologist, Principal

Jessica Yurkofsky is a designer with roots in computer science and place-making. She graduated from the urban planning program at Harvard GSD, writing her masters thesis on seniors' use of social media as a means of accessing dispersed social spaces and community. She was subsequently part of the team behind Library Test Kitchen and LABRARY. Jessica's interests include all kinds of libraries and generally building things.

Jonny Sun

Creative Researcher

Jonathan Sun is the author behind @jonnysun and the book "everyone's a aliebn when ur a aliebn too" (Harper Perennial, 2017). When he isn't tweeting, he is a designer, engineer, artist, playwright and comedy writer. He is currently a doctoral student at MIT, an affiliate of the Berkman Klein Center for Internet and Society at Harvard, and a creative researcher at the Harvard metaLAB, where he studies AI, social media and online community. His work has been profiled in the New York Times and on NPR, and has appeared in TIME Magazine, BuzzFeed, Playboy, GQ, and McSweeney's. In 2017, he was named by TIME Magazine as one of the 25 Most Influential People on the Internet.

Maia Suazo-Maler

Research Assistant

Maia is a recent grad at Harvard College studying the History of Art & Architecture and minor Computer Science. A lover of color and a mild synesthete, she owes her newfound curiosity about "colorstrology" to her mother's affinity for numerology and openness to alternative healing mechanisms. On campus, Maia is a research assistant at metaLAB and spends most of her time photographing, innovating, and frolicking to and from different cafes.

Additional Collaborators

Rachel Kalmar

metaLAB Affiliate

Jie Qi

metaLAB Affiliate

Jessica Fjeld

Project Collaborator

Mindy Seu

Designer and Researcher

Chelsea Qiu

Research Assistant for Digital Design

Nikhil Dharmaraj

Research Intern

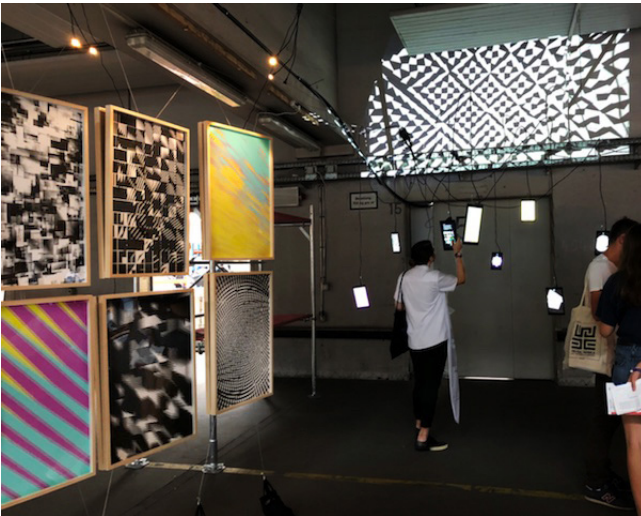
Hannah Davis

Project Collaborator

Antonio Perez

Research Intern

Project Gallery



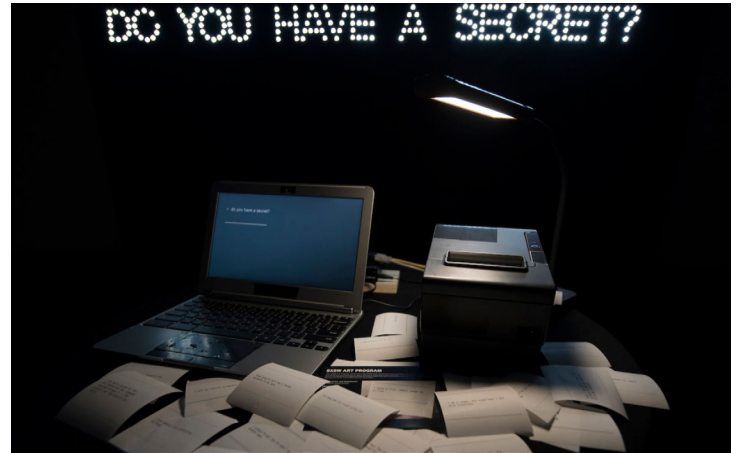
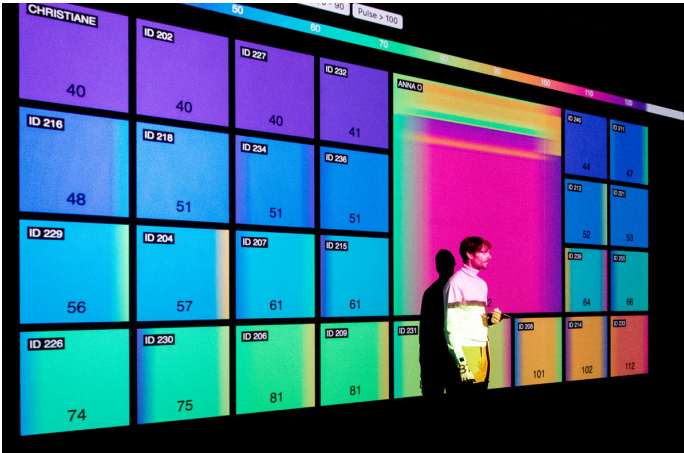
TOP LEFT
Distinction Machine on view at
Rainbow Unicorn Museum

TOP RIGHT
Newman leading SXSW workshop

BOTTOM LEFT
Moral Labyrinth installation in
progress

BOTTOM RIGHT
Albrecht speaking at Digital
Cultures Conference

APPENDIX



TOP LEFT
The Hairs of Your Head Are Numbered performance

TOP RIGHT
The Future of Secrets at Boston MFA

BOTTOM LEFT
Turing's Mill on view at Harvard Art Museums

BOTTOM RIGHT
Laughing Room set at Cambridge Public Library

APPENDIX



© 2019 Fabian Dinklage



TOP LEFT
Reflexive Structures on view
at Rainbow Unicorn

TOP RIGHT
Workshop on AI and art

BOTTOM LEFT
metaLAB at Rainbow
Unicorn

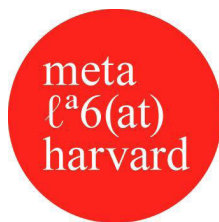
BOTTOM RIGHT
Color Rx at Harvard Art
Museums

Selected Bibliography

- Altman, Matthew C. *Kant and Applied Ethics: the Uses and Limits of Kants Practical Philosophy*. John Wiley & Sons, 2014.
- Aristotle. *Nicomachean Ethics*. Translated by C.D.C. Reeve, Hackett Publishing Company, 2014.
- Barker, Lynne A. "The Science of Laughter--and Why It Also Has a Dark Side." *Scientific American*, www.scientificamerican.com/article/the-science-of-laughter-and-why-it-also-has-a-dark-side1/?redirect=1.
- Beard, Mary. "Did the Romans Laugh." *Annales. Histoire, Sciences Sociales*, 2012, pp. 579-96, www.cairn-int.info/article-E_ANNA_674_0893--did-the-romans-laugh.htm.
- "Benign Violation Theory." Humor Research Lab, leeds-faculty.colorado.edu/mcgrawp/Benign_Violation_Theory.html.
- Bergson, Henri. *Laughter: An Essay on the Meaning of the Comic*. Translated by Cloudesley Shovell Henry Brereton and Fred Rothwell, Green Integer, 1999.
- Bernhardt, Michele. *Colorstrology: What Your Birthday Color Says about You*. Quirk Books, 2014.
- Bertero, Dario, and Pascale Fung. "Deep Learning of Audio and Language Features for Humor Prediction." LREC, 2016, Deep Learning of Audio and Language Features for Humor Prediction.
- Bostrom, Nick. *Superintelligence: Paths, Dangers, Strategies*. Oxford University Press, 2016.
- Bostrom, Nick, and Ćirković Milan M. *Global Catastrophic Risks*. Oxford University Press, 2018.
- Brockman, John. *What to Think about Machines That Think: Today's Leading Thinkers on the Age of Machine Intelligence*. Harper Perennial, 2015.
- Castells, Manuel. *The Rise of the Network Society*. Wiley-Blackwell, 2012.
- Chafe, Wallace L. *The Importance of Not Being Earnest: The Feeling behind Laughter and Humor*. Amsterdam, John Benjamins, 2007.
- Chalmers, David J. *Constructing the World*. Oxford University Press, 2014.
- Chen, Lei, and Chong Min Lee. "Predicting Audience's Laughter Using Convolutional Neural Network." arXiv, arxiv.org/pdf/1702.02584.pdf.
- D'Arms, Justin, et al. *Moral Psychology and Human Agency: Philosophical Essays on the Science of Ethics*. Oxford University Press, 2014.
- Distelmeyer, Jan. *Machtzeichen: Anordnungen Des Computers*. Bertz Fischer, 2017.
- Frankish, Keith, and William M. Ramsey, editors. *The Cambridge Handbook of Artificial Intelligence*. Cambridge UP, 2014.

BIBLIOGRAPHY

- Fraser, Dougall. *Your Life in Color: Empowering Your Soul with the Energy of Color*. Hay House, Inc, 2017.
- Gallagher, Shaun. *The Oxford Handbook of the Self*. Oxford University Press, 2014.
- Gimbel, Steven. *Isn't That Clever: A Philosophical Account of Humor*. Routledge, 2018.
- Greene, Joshua David. *Moral Tribes: Emotion, Reason, and the Gap between Us and Them*. Atlantic Books, 2015.
- Harris, Sam. *The Moral Landscape*. Free Press, 2010.
- "Humor, Laughter, and Those Aha Moments." The Harvard Mahoney Neuroscience Institute Letter, Spring 2010, hms.harvard.edu/sites/default/files/HMS_OTB_Spring10_Vol16_No2.pdf.
- Marino, Gordon Daniel. *Ethics: the Essential Writings*. Modern Library, 2010.
- Mason, H. E. *Moral Dilemmas and Moral Theory*. Oxford University Press, 1996.
- McLuhan, Marshall, and W. Terrence. Gordon. *Understanding Media: the Extensions of Man*. Gingko Press, 1964.
- Morreall, John. *The Philosophy of Laughter and Humor*. Albany, SUNY Press, 1987.
- Nagel, Thomas. *Mortal Questions*. Cambridge University Press, 2013.
- Peterson, Martin. *The Ethics of Technology: a Geometric Analysis of Five Moral Principles*. Oxford University Press, 2017.
- Rakov, Rachel, and Andrew Rosenberg. "'Sure, I Did The Right Thing': A System for Sarcasm Detection in Speech." Interspeech, 2013, pp. 842-46, www.isca-speech.org/archive/archive_papers/interspeech_2013/i13_0842.pdf.
- Russell, Stuart J., and Peter Norvig. *Artificial Intelligence a Modern Approach*. Pearson, 2018.
- Sinnott-Armstrong, Walter. *Moral Psychology: Adaptions and Innateness*. 2008.
- Spencer-Brown, George. *Laws of Form*. Bohmeier, 2011.
- Tivnan, Edward. *The Moral Imagination: Confronting the Ethical Issues of Our Day*. Simon & Schuster, 1996.
- Verbeek, Peter-Paul. *Moralizing Technology: Understanding and Designing the Morality of Things*. University of Chicago Press, 2011.



metaLAB (at) Harvard

© 2019