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PRESS/ REVIEWS

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Renny Pritikin on Rhonda Holberton

MAY 9, 2023

by Renny Pritikin

> "...the Gregorian chants entered people's bodies and rearranged their DNA, so that they were part of everything around them...Everything was splendid and everything was equal." –Louise Penny *The Beautiful Mystery*

L to R: Lilium Candidum, 'Rosa Madame A. Meilland' and Alstroemeria (Night 1 and II); No Seams to Match on Digital Urban Camouflage

Rhonda Holberton doesn't swoon with pantheistic ecstasy like the monks Penny refers to above. But the title of her ICA San José show, *A Knotted World,* comprised of works from four prior series, suggests how our lives are made of interdependent aspects: our bodies, nature, and the digital world. A concurrent show of new work, *Two Handfuls of Silver Dust*, at CULT Aimee Friberg in San Francisco, focuses on collaborations between the artist and various AI systems.

In an essay for the ICA show, Holberton argues that technology is the liaison between "humans and our physical world." Even so, technology has not reduced violence or divisiveness. Instead, it's destabilized everything. Her 3D animation, *Best of Both Worlds,* projected into a small alcove, depicts a model—the artist—moving through a set of Vinyasa yoga positions. The body, barely more than a black silhouette, appears abstract, distressed and blatantly artificial. Her skin and body parts are sometimes absent, as if the video signal had failed. When translated through computation, the body is misunderstood, misrepresented, and abused; the surrounding landscape is false and unimportant. According to the artist, the piece represents the internal breakdown of her own auto-immune disordered body, thereby connecting global maladies to those experienced by individuals.

All The Actors Have Withdrawn, 2014, video projected on acrylic, 14 x 20"

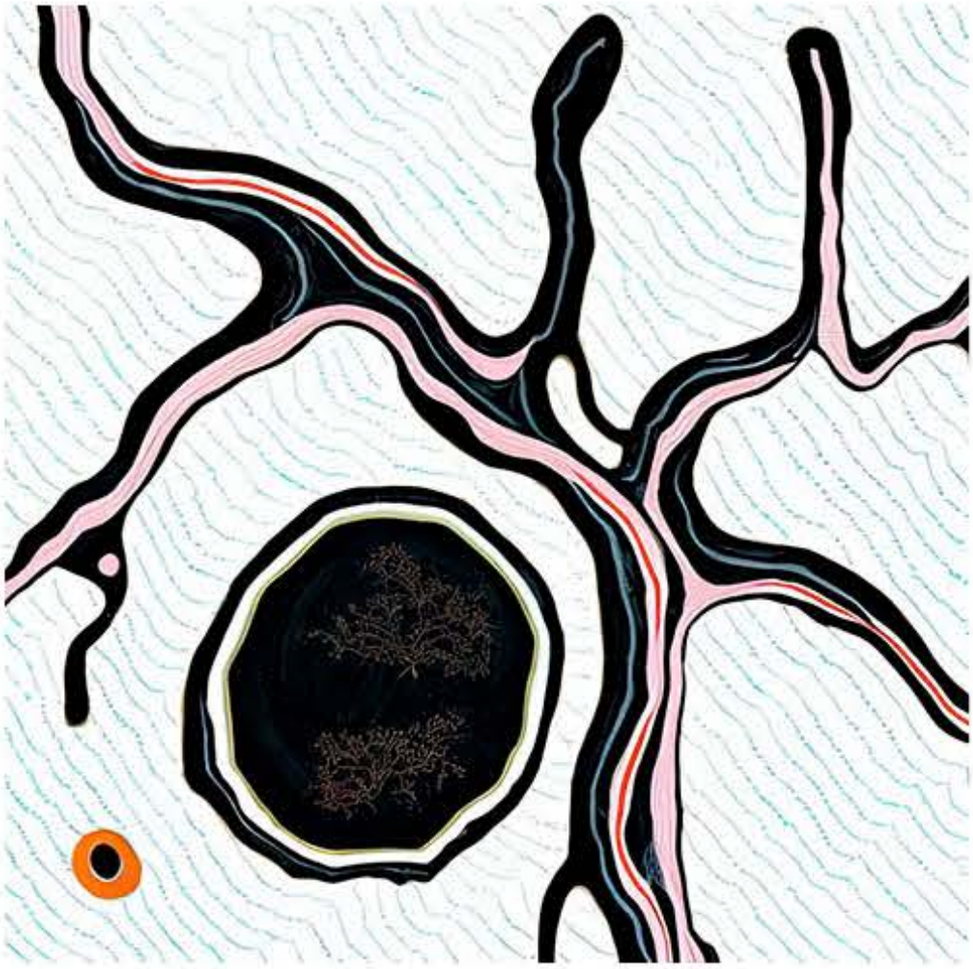
Comprised bodies are also central to two digital prints, *All the Actors Have Withdrawn* and *Still Life (Vanitas).* The first depicts two female bodies (the artist's) dramatically enmeshed and simultaneously exploding. Projected on a small acrylic rectangle, they evoke mortality and decay, like figures from Pompeii captured in death. The second, executed in the manner of Dutch still life paintings, portrays two contemporary women having tea, their bodies reduced to white shells. Protestant-influenced 17th-century vanitas paintings, which held that life was merely a prelude to death and worldly success is merely transitory, are, in Holberton's view, unconsciously echoed in today's self-aggrandizing social media posts. More corruptions of the still-life tradition appear in a pair of fractured, almost cubist photographs of flowers, *Lilium Candidum, 'Rosa Madame A. Meilland' and Alstroemeria (Night 1 and II).*

Digital Urban Camouflage, a design Holberton created, covers the gallery walls in a pattern suggesting sedge, transformed to invoke the diminution of nature into decorative wallpaper: one of many references Holberton makes to military origins of the technology that now dominates life. Like *The Best of Both Worlds*, this also embodies an unmentioned autobiographical reference: Holberton's father worked in military intelligence. A silk sculpture, *No Seams to Match*, hangs from the ceiling, a "soft" re-creation (a la Oldenberg) of a bunker, another military reference that, again, demonstrates how technology links humanity to nature: silk exists at the capitalist nexus of human ingenuity, animal biology and early biotech.

Best of Both Worlds (still) 2016, digital animation, 12:11

Two Handfuls of Silver Dust, the title of Holberton's exhibition at CULT Aimee Friberg, was the only salvageable line in a poem written by an AI program (ChatGPT) from her prompts. The poem is a rhyming bit of doggerel, so bad it undercuts any fears of AI displacing writers and artists. In fact, the whole

exhibition is, in part, a tongue-in-cheek mockery of technoparanoia. Such disdain merely demonstrates how artists have always glommed onto innovations they think they can use. I remember how video was kidnapped from television's clutches in the 1970s and how exhibitions of work made on fax machines were held in the 1980s. (I own a fax made by Robert Gober.) The difference with AI-generated art is that it ostensibly negates authorship, though I am skeptical about that. Does giving a machine access to every scanned image actually upend the traditional artist-implement relationship? We'll soon see. Given the way that Holberton cajoles the AI systems she works with to produce anything interesting casts doubts on such fears. It feels akin to the mental process I employ to write this sentence.



Thgil Tsal, 2023, single channel digital video, 2:45 (looping)

Consider the additive process by which she creates the works in this show. The artist begins by feeding her short text to the DALL-E AI system – including phrases like "what it means to create life" and "humanity's relationship to the future of life." She then asks the system to design sculptures "inspired" by that text. The results, based on a database of twelve million sculptures, are familiar, dull amalgamations based mostly on the human body. Holberton shows two such works fabricated in bronze and glass: small abstract forms made of handsome materials that, in the end, are unremarkable. A computer also wrote sci-fi-like prose pieces following the same prompts. For these, Holberton instructed the AI system to make a painting from lines of the AI-generated text, e.g., "a gold spine floating in the sky growing roots, hovering above a silk sheet." She then reworked the painting, showing five 60 x 48-inch examples printed with UV-cured acrylic pigments augmented with her own hand-painted gestures in gesso on wood panel. They're more interesting than the sculptures, but they feel haunted by the ghosts of other artists: *Shimmer Black* could have been painted by Brice Marden; *Last Light* brings to mind some of Francis Bacon's pinkish, fleshy flourishes.

Holberton added one additional twist. She instructed a computer to make five short, constantly morphing abstract video animations, each using a different painting as the source. As the videos evolve, they extrapolate on the theme of evolution expressed in biological, veiny, viscous imagery. Something about light emanating from a hi-res, colorful and cartoony image stimulates my brain's calming alpha waves to take over. I have nothing against pure rollicking fun, especially if it all takes place at the borderline where the ramifications of her research and humor overlap with serious inquiry about the nature of the creative process. The show points to one possible future for visual art huddled just over the horizon.

# # #

Rhonda Holberton: "A Knotted World" @ ***Institute of Contemporary Art San José*** *to August 13, 2023.*

"Two Handfuls of Silver Dust": Rhonda Holberton @ ***CULT Aimee Friberg*** *to June 17, 2023.*

Images courtesy of the artist and CULT Aimee Friberg.

About the author: Renny Pritikin was the chief curator at The Contemporary Jewish Museum in San Francisco from 2014 to 2018. Before that, he was the director of the Richard Nelson Gallery at UC Davis and the founding chief curator at Yerba Buena Center for the Arts beginning in 1992. For 11 years, he was also a senior adjunct professor at California College of the Arts, where he taught in the graduate program in Curatorial Practice. Pritikin has given lecture tours in museums in Japan as a guest of the State Department, and in New Zealand as a Fulbright Scholar, and visited Israel as a Koret Israel Prize winner. The Prelinger Library published his most recent book of poems, Westerns and Dramas, in 2020. He is the United States correspondent for *Umbigo* magazine in Lisbon, Portugal.

Comments

Jennifer says
MAY 21, 2023 AT 2:15 PM

Great article!

SFSU's MFA Exhibition 2023

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RHONDA HOLBERTON | PRESS

Group Exhibition: Show Me as I Want to Be Seen Contemporary Jewish Museum

Feb 7, 2019–Jul 7, 2019

Water Striders, 2015 (installation view, foreground). Platinum cure silicone, nylon power mesh, and polyurethane foam. The Italian Navigator Has Landed in the New World, 2014 (installation view, background). Single-channel HD color digital animation. Photo by Johnna Arnold.

Assistant Curator Natasha Matteson of the Contemporary Jewish Museum included 9 pieces of my work in a group exhibition of 10 contemporary examining presentation of self and fluidity of identity in conversation with artist and writer Claude Cahun (1894–1954) that ran from Feb 7, 2019–Jul 7, 2019. The exhibition is accompanied by a 112-page, fully illustrated hardcover catalog published by The CJM.

In addition to the installation and catalog, the museum also produced a video interview with me, asked me to give a presentation of my work to the museum's directors and staff, and published a conversation I had with the director of marketing on the museums' website.

Curatorial Statement for the Exhibition
How do we depict "the self" if it is unknowable, inherently constructed, and ever-changing? How does the concept of portraiture shift when categories are in crisis and visibility itself is problematic? Jewish thought on performed and fluid identity can be interpreted in the Book of Esther in the Hebrew Bible, an archetypal story of an empowered declaration of Jewish identity. Likewise, the Talmudic notion of svara is a potent entry-point to Jewish practices of self-determination, themes that animate Show Me as I Want to Be Seen.

Taking the work of French Jewish artist and writer Claude Cahun (1894–1954) and her lifelong lover and collaborator Marcel Moore (1892–1972) as its starting point, Show Me as I Want to Be Seen examines the empowered representation of fluid and complex identity. Cahun (born Lucy Schwob) and Moore (born Suzanne Malherbe) were pioneers in their bold representations of an unfixed self. This exhibition positions their work in dialogue with ten contemporary artists working in painting, sculpture, photography, video, and 3-D animation. The contemporary artists in the exhibition—Nicole Eisenman, Rhonda Holberton, Hiwa K, Young Joon Kwak, Zanele Muholi, Toyin Ojih Odutola, Gabby Rosenberg, Tschabalala Self, Davina Semo, and Isabel Yellin—also address notions of the opaque, constructed, and shifting self.

Press Extracts

A Probing Look at How We Perform and Present the Self, Harry Tafoya, Hyperallergic
"Rhonda Holberton is uniquely attuned to the weirdness and multiplicity of performed selves online and offers some of the show's best work with her uncanny, half-scanned animated pieces."

Show Me as I Want to be Seen @ CJM, Square Cylinder
Tirza True Latimer, Associate Professor and Chair of the Visual and Critical Studies Graduate Program at California College of the Arts
"FOIL, one of my favorite pieces (again by Holberton), takes aim at state sponsored systems of surveillance and control. Research conducted by the CIA in the early 1990s acknowledges human scent as a highly accurate biometric, more failsafe than fingerprinting, facial recognition or retinal scanning. Holberton created FOIL, a fragrance line distilled from smelly T-shirts donated by friends. She bottled the fragrances in atomizers, which can serve to mask a person's signature scent and foil this form of olfactory surveillance."

Artists Explore Self with Nuance and Complexity, SF/Arts
Jean Schiffman, Arts Journalist
"Rhonda Holberton's large digital animations are particularly unsettling: In one, a headless, fragmented and disintegrating body is doing yoga asanas; Holberton scanned her own body to create a model, then animated it. "She's posing questions about whether and how we might be able to represent ourselves in virtual space with avatars," points out Matteson."

Gender fluidity & mutable identity, Bay Area Reporter
Sura Wood, Arts & Culture Critic
"Oakland artist Rhonda Holberton is represented by nine installations, each more fascinating and mind-boggling than the next. Too bad there weren't more. Among other things, she envisions a world where the human body is obsolete, a relief or a disaster, depending on one's point of view, but at least there'd be no hay fever. For the digital animation "The Ground Was Never Stable in the First Place" (2015), she tried on football padding and riot gear, 3-D scanned her body, then animated the scan walking forward, combining movement of soldiers marching and fashion models strolling down the runway. The result: a plaster-white, robotic space soldier of indeterminate gender, wearing breastplate armor and arm and shin guards, its face half-blown off a la "The Terminator" on a bad day. Soulless and unstoppable, it strides relentlessly toward the viewer. Even spookier is "The Italian Navigator Has Landed in the New World" (2014), for which Holberton also used keyframe animation techniques similar to puppetry or stop-motion. Headless, missing part of an arm, and the flesh-tone of raw chicken, a limber figure resembling a ripped egg carton goes through the paces of a virtual yoga routine, a spectacle disturbing in a way that's difficult to overstate."

'Beneath This Mask, Another Mask': Identity is Unfixed in CJM's 'Show Me', KQED Arts
Sarah Hotchkiss, Visual Arts Editor, KQED Arts
"Rhonda Holberton's Just This One Thing—part of the show but only visible to those who have the wherewithal to scroll through the Oakland-based artist's Instagram feed—skewers the spare, ecru-hued "Instagram aesthetics" of influencers' lifestyle posts.

A croissant, a stack of baskets, handmade ceramics—Holberton creates the images by 3D-scanning actual objects and staging them in virtual space. In a quick scroll-by, the digital fabrications appear innocuous, ordinary. Only close inspection reveals them to be oddly pixelated approximations. Tagging each image #stilllife, along with hashtags like #rainydays or #sundaymorning, Holberton launches these interruptions into the stream of "real" Instagram posts, themselves approximations of actual lives."

'Show Me as I Want to be Seen' examines artistic and gender identity, SF Chronicle
Charles Desmarais, Art Critic for the San Francisco Chronicle
"Rhonda Holberton, who lives and works in Oakland, makes a particularly strong showing with works that make coldly poetic use of video and digital media."

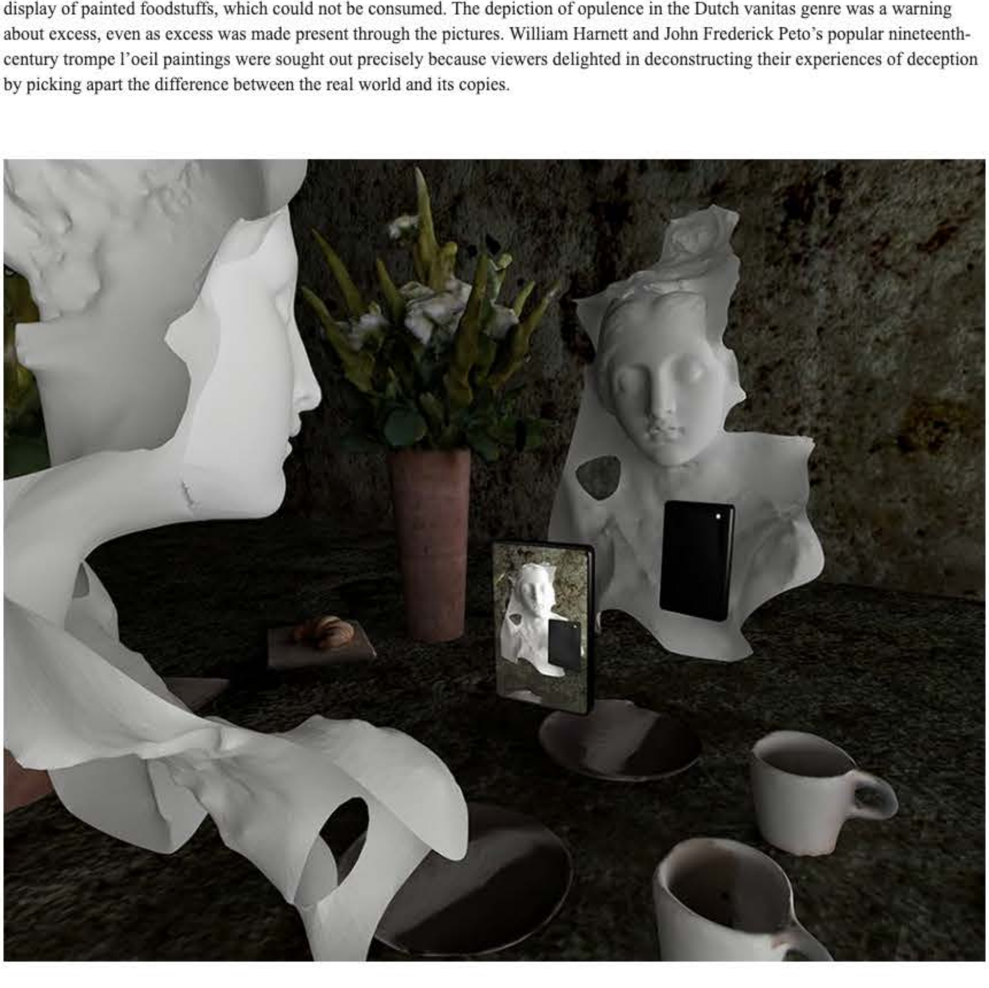
LINK TO FULL ARTICLES (PDF)

As Rhonda Holberton talks about her process–describing with her hands the arrangement and heft of the objects that appear in her images–it's hard not to think of those things and that space as real. But everything, from the objects themselves to the flawlessly diffuse lighting and cool white marble ground, is digitally produced. Holberton makes 3D scans of real objects, then places them in virtual spaces of her own creation using Blender, an open source software suite. Her recent series, *Still Life*, braids together the real and virtual worlds so tightly that it becomes nearly impossible to separate one from the other.

In the twenty-first century, most people navigate between real and virtual worlds dozens, if not hundreds, of times daily. We project ourselves into GPS maps, have face-to-Facetime conversations, wear Snapchat filters like masks, or send avatars to explore virtual spaces online. We don't often mistake the stuttering of a Skype call or the low-resolution of a picture on Instagram with failures of perception in the real world. But, Holberton's presses on these limits in representation, challenging us to recognize digital noise, to make meaning from it, rather than filtering it out. The 3D scanning process is often imperfect, so while her creation of the surrounding space is utterly convincing, the image of the original object displays glitches. The artifacting in her images makes literal the raggedness of this movement between the real and the virtual; it is this haphazard, improvisatory character that tips her images into the uncanny. They are too close to real.

> **THE QUESTION RAISED BY HOLBERTON'S WORK IS NOT JUST LOOK HOW MUCH THESE PICTURES LOOK LIKE EACH OTHER, BUT LOOK HOW MUCH THE REAL WORLD *HERE* LOOKS LIKE THE REAL WORLD THERE AND THERE AND THERE.**

The genre of still life painting, to which the title of Holberton's series alludes, has historically demonstrated a cunning awareness of the differences between things themselves and their images. The Roman xenia motif symbolized a host's generosity through a display of painted foodstuffs, which could not be consumed. The depiction of opulence in the Dutch vanitas genre was a warning about excess, even as excess was made present through the pictures. William Harnett and John Frederick Peto's popular nineteenth-century trompe l'oeil paintings were sought out precisely because viewers delighted in deconstructing their experiences of deception by picking apart the difference between the real world and its copies.



It is harder to identify the gap between still life in the contemporary vernacular and the things these images represent. The images that inspired Holberton–minimalist stagings of art books, succulents, and ceramics found in publications like Cereal and Kinfolk–seem merely to be beautiful photographs of covetable objects. Yet, unlike Harnett or Peto admirers, viewers of Holberton's images on Instagram are often stumped by her "Still Life" pictures. Some commenters read the pixelation or artifacting as a unique ceramic glaze, even as bits of apparently three-dimensional objects crumble in front of their perfect white backgrounds. While recent criticism has focused on social media's sleight of hand, where messy, unfiltered life is distilled into enviable images, what Holberton's work brings most startlingly to light is the very constructedness of contemporary life itself. Baudrillard would agree that there are few surprises IRL; walking into boutique hotels, staged homes, and restaurants around the world seems more and more like Instagram come to life. They have become living images of themselves.

The question raised by Holberton's work is not just look how much these pictures look like each other, but look how much the real world here looks like the real world there and there and there. Doesn't that make my little shrine to potted succulents or kilim carpets as much a reproduction as any photograph? The more layers of mediation that Holberton inserts between the putative real object and her image of it, the less any of these distinctions seem relevant. Is this cute little hand-woven basket one that Holberton owns? Or is it a picture of one found online? And, most importantly, where can I buy it? Holberton's dissembling images, that pixelated glaze that seems a cross between Heath ceramics and sci-fi horror, reveal the yawning emptiness that retail therapy struggles to fill.

www.rhondaholberton.com

Written by Kim Beil

Kim Beil is the Associate Director for ITALIC, an interdisciplinary arts program at Stanford University, where she also teaches courses on the history of photography. She received her PhD and MA in Visual Studies from the University of California, Irvine and her BA in Comparative Literature from Brown University. Her writing appears regularly on Artforum.com, in x-tra: contemporary art quarterly, Visual Resources, and Afterimage.

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Contemporary Art Magazine

Transfer Gallery, 1030 Metropolitan Ave, Brooklyn, NY 11211

Rhonda Holberton: Still Life

Title : Rhonda Holberton: Still Life installation view
Credit : Photo by Dan Bradica, courtesy of the artist and CULT Aimee Friberg Exhibitions

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Rhonda Holberton: Still Life
Transfer Gallery
7 April - 26 May, 2018
Review by Grace Storey

'Still Life' is the second iteration of San Francisco-based artist Rhonda Holberton's exhibition - first presented at CULT | Aimee Freiburg Exhibitions in 2017 - featuring a networked video installation, prints captured from augmented reality simulations, wallpaper embossed with textures derived from CGI techniques, gold dust mined by hand, and video tracking a swarm of mosquitoes housed in the artist's studio. Contrary to the exhibition's title, which suggests a state of stasis, Holberton's work oscillates between analogue and digital, animate and inanimate, in order to destablise the notion of these binaries, and explore the possibility of a third space.

'Still Life (Vanitas)' (2017), is an archival pigment print of a digital simulation which draws a parallel between capitalist systems of exchange, the currency of digital aesthetics and 17th Century Dutch still life painting commissioned by the mercantile class, which can be regarded as some of the earliest social imagery. Holberton's still life depicts a fragmented bust modeled on a mannequin salvaged during the liquidation of clothing manufacturer American Apparel, who gazes at her reflection through the screen of an iPad. The protagonist is positioned against a backdrop which mirrors the wallpaper covering the gallery walls, and is surrounded by a vase of flowers, a lone croissant, and a weighty 3D printed mug, copies of which are displayed on shelves opposite. Unlike the hand thrown original by ceramicist Eric Bonnan, part of a set purchased for the artist's partner, the copies, entitled 'Vessels', have a rough, uneven texture, as a result of the inaccuracy of the 3D scan. Holberton's quivering objects do not carry a single meaning, but rather, exist as allegories which carry a coded memory of their personal, material and cultural history.

In two performative works titled 'Dust to Dust' (2017), Holberton uses her body to 'engage corporeally with a global metabolism represented in the concept of the Anthropocene / Capitalocene.' She asserts that 'the metaphors and histories of material things cannot be divorced from globalised networks of digital technologies, the environment, religion and politics.' In the first work, Holberton utilises technology to live-stream a scourge of mosquitoes bred from her own blood. This action alludes to the threat to fertility posed by the Zika virus, and the migration of mosquitos as an indicator of Climate Change, challenging the conception of an omnibenevolent Mother Earth. By inserting herself into a local system indexical of a much larger system, Holberton's diptych alludes to Timothy Morton's concept of the Hyperobject; something too large and complex to be understood by a single human processor. This micro / macro relationship is also at play in the second work, which comprises 5 grams of gold displayed within a vitrine, panned by Holberton from the Californian landscape. Referring to the frequent association of 20th Century gold rush pioneers and Silicon Valley as the epicentre of the 21st Century US tech economy, the work draws attention to a male-centric entrepreneurial ideology, and questions the role of physical labour in an increasingly dematerialised society.

While Holberton's practice frequently incorporates performance, seen by way of objects and simulations which evidence a discontinuity between the visual sign and its meaning. This constant fluctuation between physical and digital generates a hybrid space, which permits a consideration of the abject, the gendered body, and the conception of labour within contemporary society, invoking Homay King's idea of 'Virtual Memory', whereby he contends that virtuality is not a contranym, but rather, can be regarded as a metaphor to navigate lived experience. Likewise, the traces of past and future images which reverberate throughout Holberton's body of work coalesce at the site of presentation to propose a new reality inhabited by the viewer.

Transfer Gallery, 1030 Metropolitan Ave, Brooklyn, NY 11211

Rhonda Holberton: Still Life

Title : Rhonda Holberton: Still Life installation view

Credit : Photo by Dan Bradica, courtesy of the artist and CULT Aimee Friberg Exhibitions

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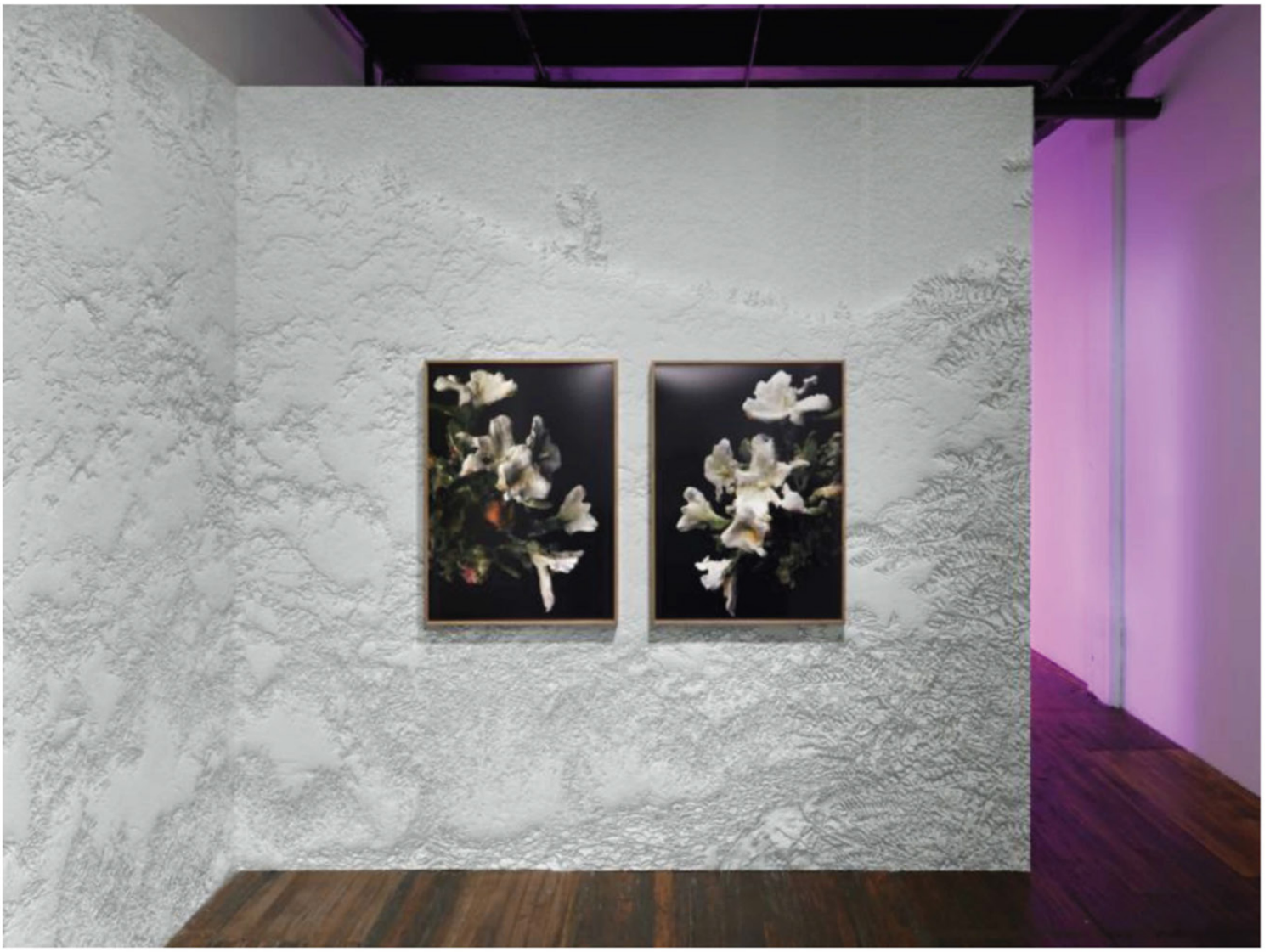

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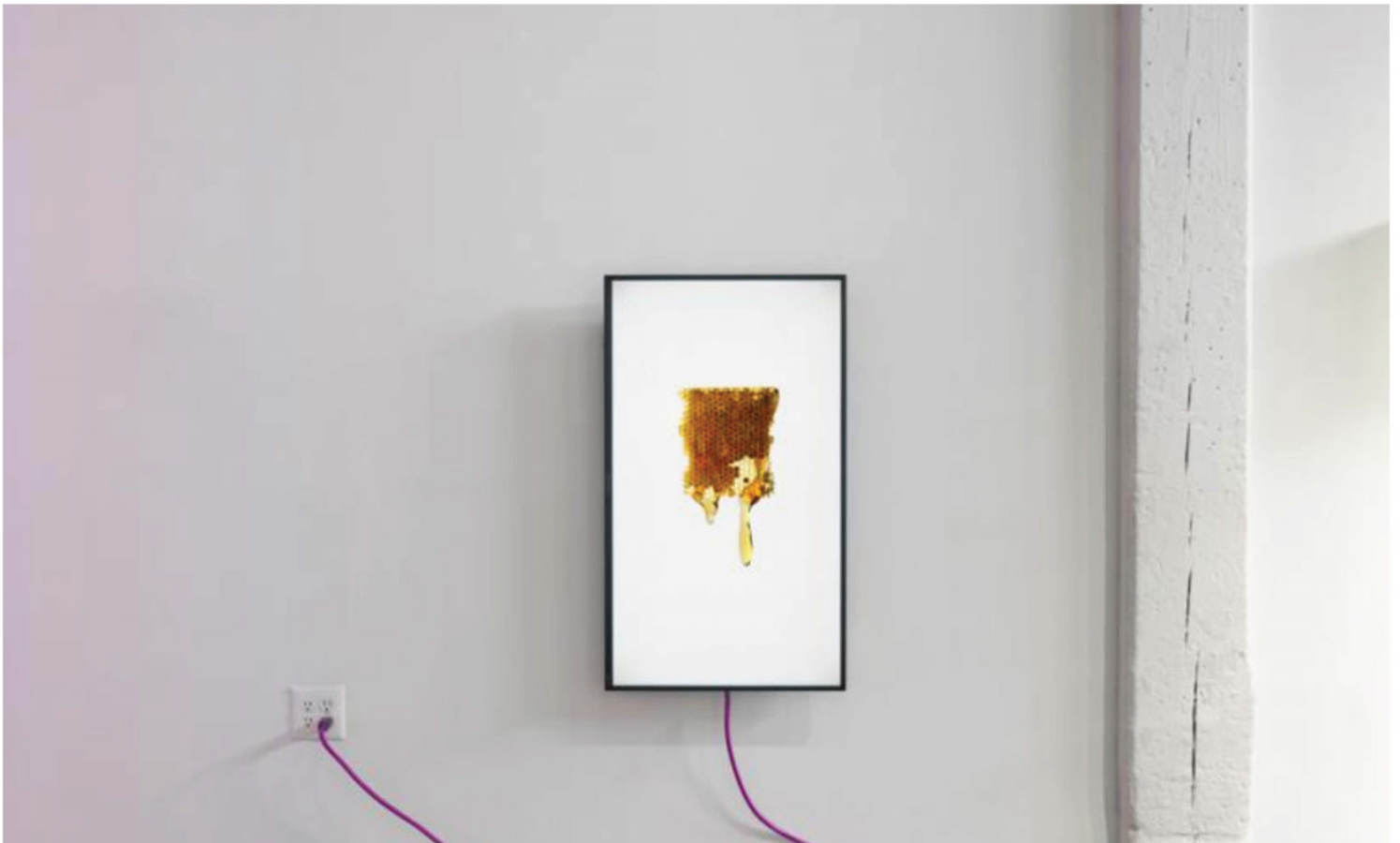

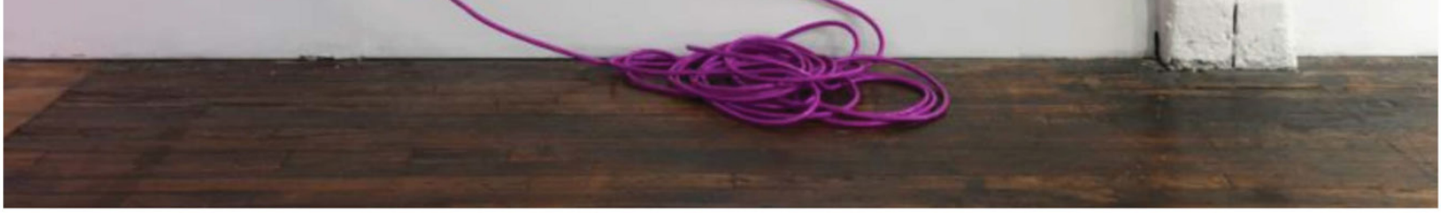

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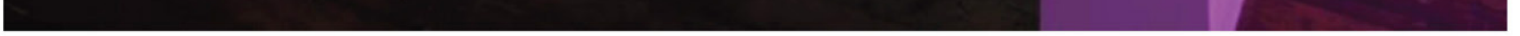
- 

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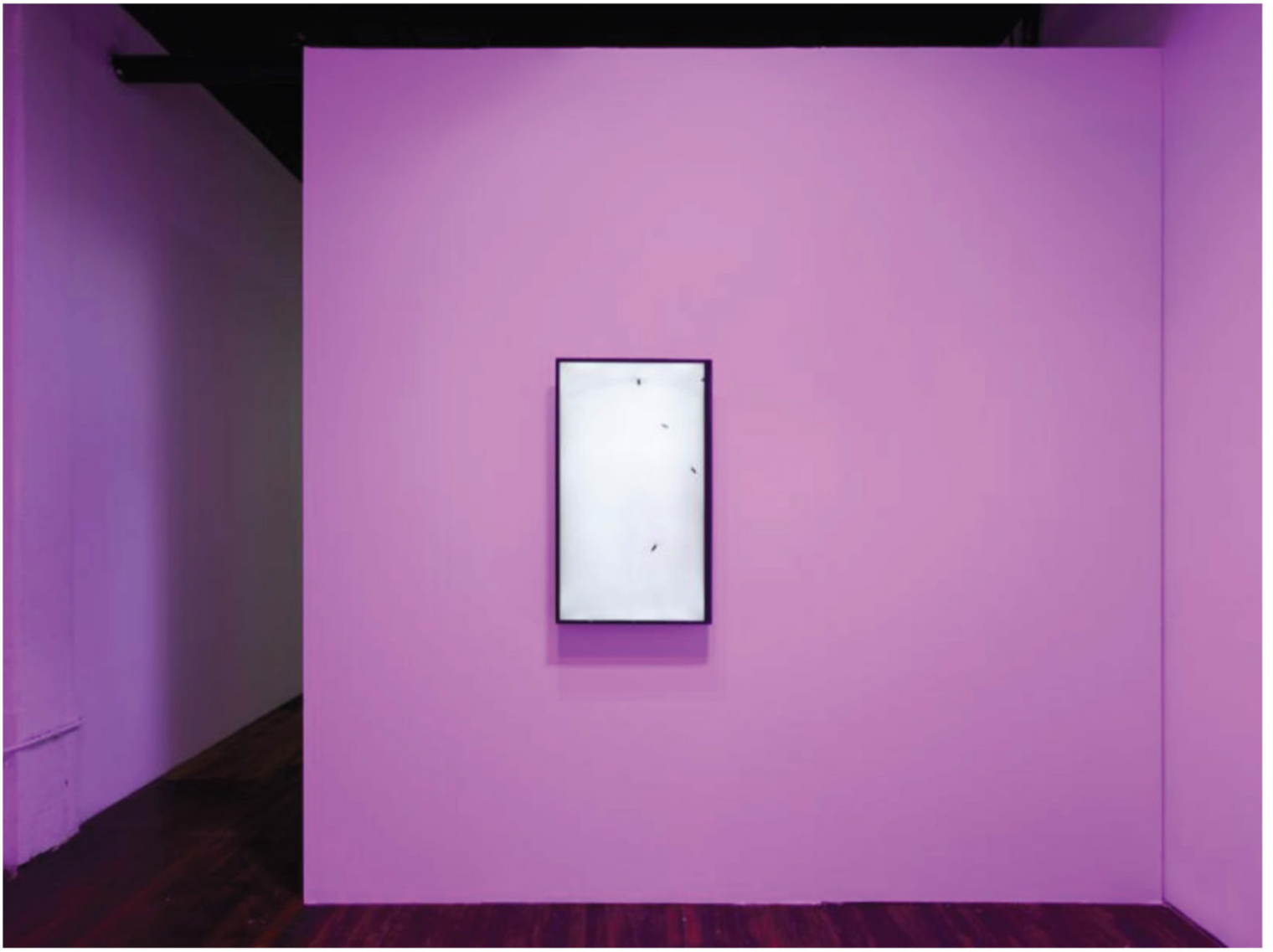
- 

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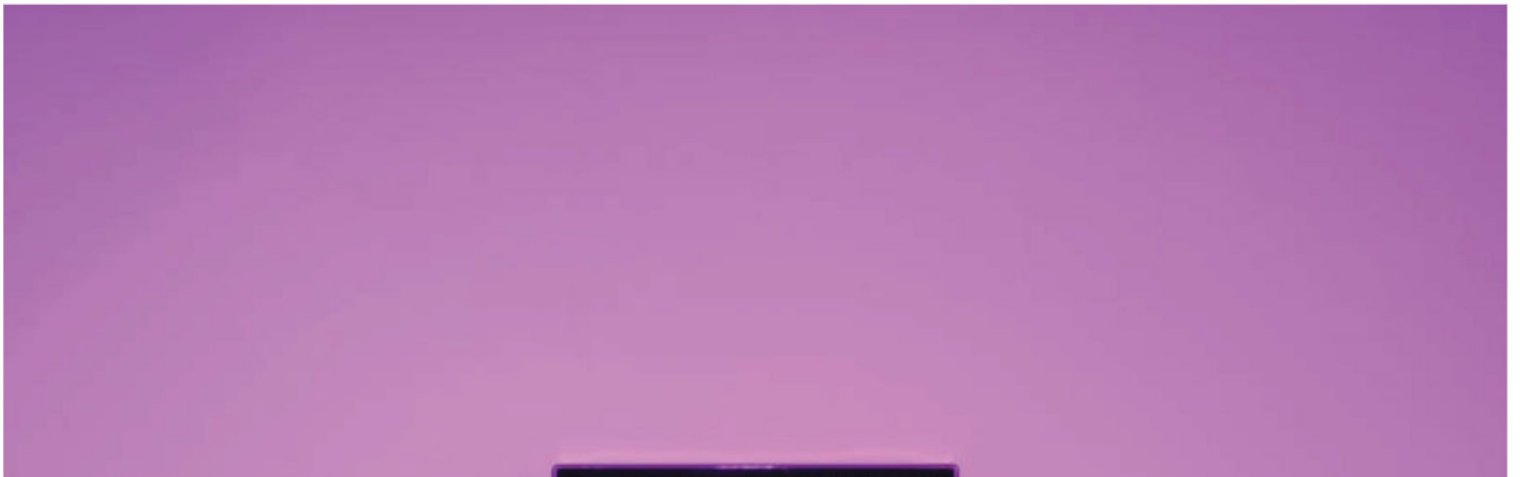
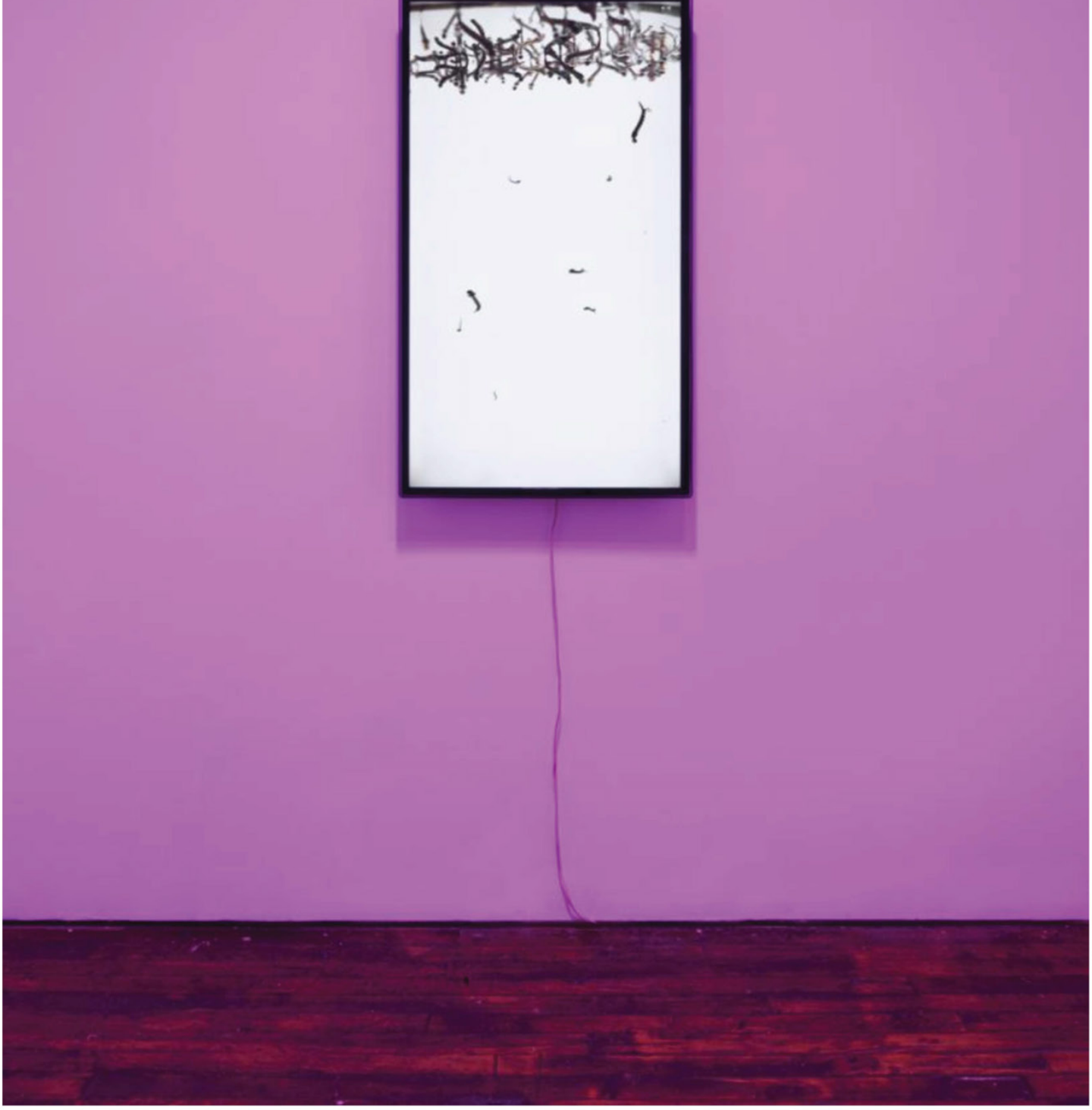


- 

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Credit : Photo by Dan Bradica, courtesy of the artist and CULT Aimee Friberg Exhibitions

Published on 24 May 2018

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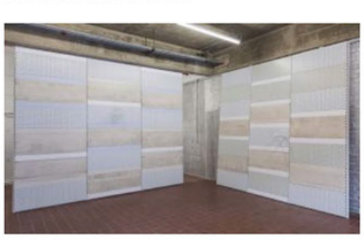

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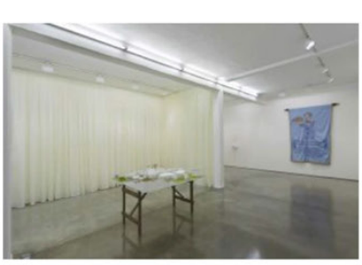

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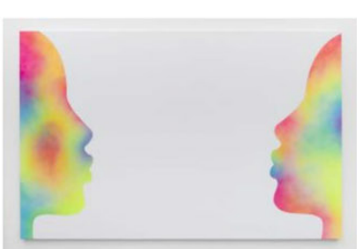


Eddie Peake: People

Art in America

FIRST LOOK

Rhonda Holberton. *>QR CODE< (FOIL)*, 2014, fragrance in glass atomizers, 6 by 1½ by 1½ inches each.

Rhonda Holberton

by Ceci Moss

RHONDA HOLBERTON examines military practice in order to consider how technology is used to view, read and track humans. In her earlier works, Holberton, who lives in Oakland, Calif., attempted to collapse the distance between herself and obscure sites of nuclear testing and research. For *As Close As I Can Get* (2012), part of the body of work she produced while pursuing an MFA at Stanford, she rolled soft resin beneath the gates of Lawrence Livermore National Laboratory (LLNL). The pliant material cured into long rods imprinted by the pavement and the gates. To make *Displaced Holes* (2012), the artist dug large holes in the earth at LLNL and similar locations and cast them in foam and plaster. This process allowed her to map largely cordoned-off places through their physical impressions, an investigation that led the artist to elaborate other means of accessing the sites and the surveillance tools of the military-industrial complex.

For her 2014 solo exhibition "YOU BECAUSE FREE INSTANTLY NEW" at Pro Arts in Oakland, Holberton rerouted technologies developed for military purposes into everyday items. Her perfume *>QR CODE<* (*FOIL*), 2014, for example, uses CIA-developed methods of detecting genetically unique human scents to distill a fragrance from T-shirts worn by anonymous volunteers, that would cloak the scent of the wearers, making them undetectable to olfactory surveillance. Across a large wall of the gallery, Holberton affixed repetitive black-and-white wallpaper with a pattern that, when printed on streetwear, would help people hide in an urban landscape. In front of this wall stood two identical mannequins wearing unisex clothing made from a fabric complementary to this visually dazzling display, their silhouettes suggesting bodies beneath the camouflage. By integrating dubious techniques of tracking or disguise into mundane items such as clothing and perfume, Holberton signals the subtle ways in which military research filters into civilian life, posing a threat of pervasive military control through biopower. ○

CURRENTLY ON VIEW
"You Are Something That the Whole World Is Doing," at the Berkeley Art Center, Berkeley, Calif., through May 3.

CECI MOSS is assistant curator of visual arts at the Yerba Buena Center for the Arts, San Francisco. See Contributors page.

James Cordas and Rhonda Holberton, Cold Storage, 2015. Installation view. Image courtesy of the artists and City Limits. Photo: Kristine Eudy

LEORA LUTZ — DECEMBER 19, 2015

City Limits is presenting Rhonda Holberton and James Cordas, featuring their new work as a two-person show; the pairing juxtaposes both quiet and loud visual and sensory experiences—singularly titled *Cold Storage*. The room is a bit crowded, so seeing the two for their individual merits is difficult. Not that there needs to be the same number of pieces by each artist, but leaving space to breathe between the two would have been beneficial for visitors to be able to experience the work more fully. The work of each artist is in conversation with the other, but more evident at first are their differences.

Holberton's work is more subtle, visually speaking, in her predominantly white color palette and several understated sculptures, whereas Cordas's works incorporate a rainbow of colors, spatially dominating sculpture, as well as an audio piece that overshadows the entire space and therefore the whole show. Both artists also include film in their work: Holberton's monochromatic white film of one subject occupies one wall, whereas Cordas offers two films of multiple images on two monitors. Additionally, the gallery chose to, with the approval of the artists, scatter the floor with fluorescent light tubes in order to illuminate

the space from below, rather than from above, so that the space was dimmer than usual and more conducive to viewing the films in conjunction with providing ambient lighting for the sculpture. These can be somewhat easily mistaken as art objects, creating some confusion amongst the work.

Rhonda Holberton, A Fallen Pixel: #3, 2015. Polyurethane foam, plaster, acrylic paint (Printed from stock 3d model), 18 x 10 x 10 in. Image courtesy of the artist and City Limits. Photo: Kristine Eudy

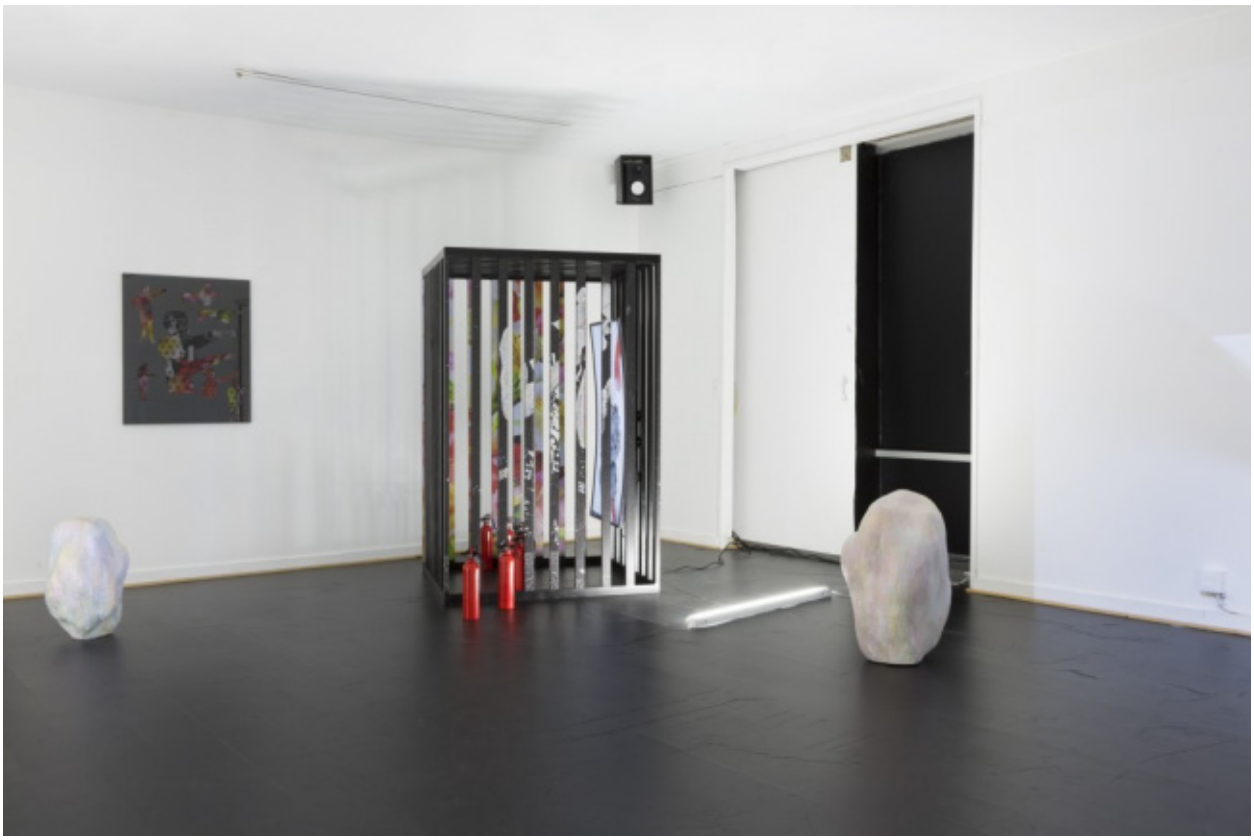
There is potent work here that utilizes digital source materials and tangible objects. Holberton's series *A Fallen Pixel*consists of three sculptures, each created using the same downloaded object from a publically sourced website (which Holberton prefers to leave anonymous) and made on a 3D printing device. This unobtrusive shape is iterated in graduating sizes from 28" to 22" to 18," echoing notions of public accessibility, fair use, and commodification. Upon some Internet sleuthing, I learned that there are at least four dozen sites that offer files (basically templates) for making objects on 3D printers. There are also over 35 sites where people can share, buy or sell file creations, and display the things they make and accumulate friends and followers who also enjoy or make 3D files and objects. Holberton has chosen a rock for her object—which is humorous to say the least, and at once too strange to laugh at. The title implies that the works could have fallen from the sky, as if during a meteor shower or alien invasion. They

are coated with plaster and painted with white iridescent pastel sheen, accented by shades of mint green and pale lavender, reiterating a science fiction quality as if they are relics from another planet's landscape brought back from space exploration. These qualities are in keeping with her history of engaging with the intersection of nature and military operations, particularly the sites of nuclear testing. In doing so, she explores human destruction of Earth, and the pervious dealings of volatile measures that are taken to protect the populace.

Rhonda Holberton, N-O U-N-R-E-A-L T-H-I-N-G E-X-I-S-T-S, 2015. Powder coated steel, polyester resin cast, acrylic mirror, media player, 66 x 12 x 12 in. Image courtesy of the artist and City Limits. Photo: Kristine Eudy

Projected on the largest wall of the gallery is her film *Knights of the Sky*, which includes footage of sand dunes from the POV of the camera operator walking over and down the crests of sand. The title references WWI combat aerial fighter aces (though a reference to the simulator game of the same name created in 1990 is also an interesting interpretation). Holberton's film is projected on an entire wall, creating an immersive effect as the camera jostles slightly, bobbing so that the viewer can share in the journey. For Holberton, sand dunes are desolate and contemplative but are also politically charged sites

for testing weapons and surveillance. Nearby, her sculpture *N-O U-N-R-E-A-L T-H-I-N-G-E-X-I-S-T-S* features a clenched fist in polyester resin, as if in defiance against government or military violence. Holberton's poetic works are simple yet powerful statements about government control that require one to read between the lines—like haiku for insurgent radicals.



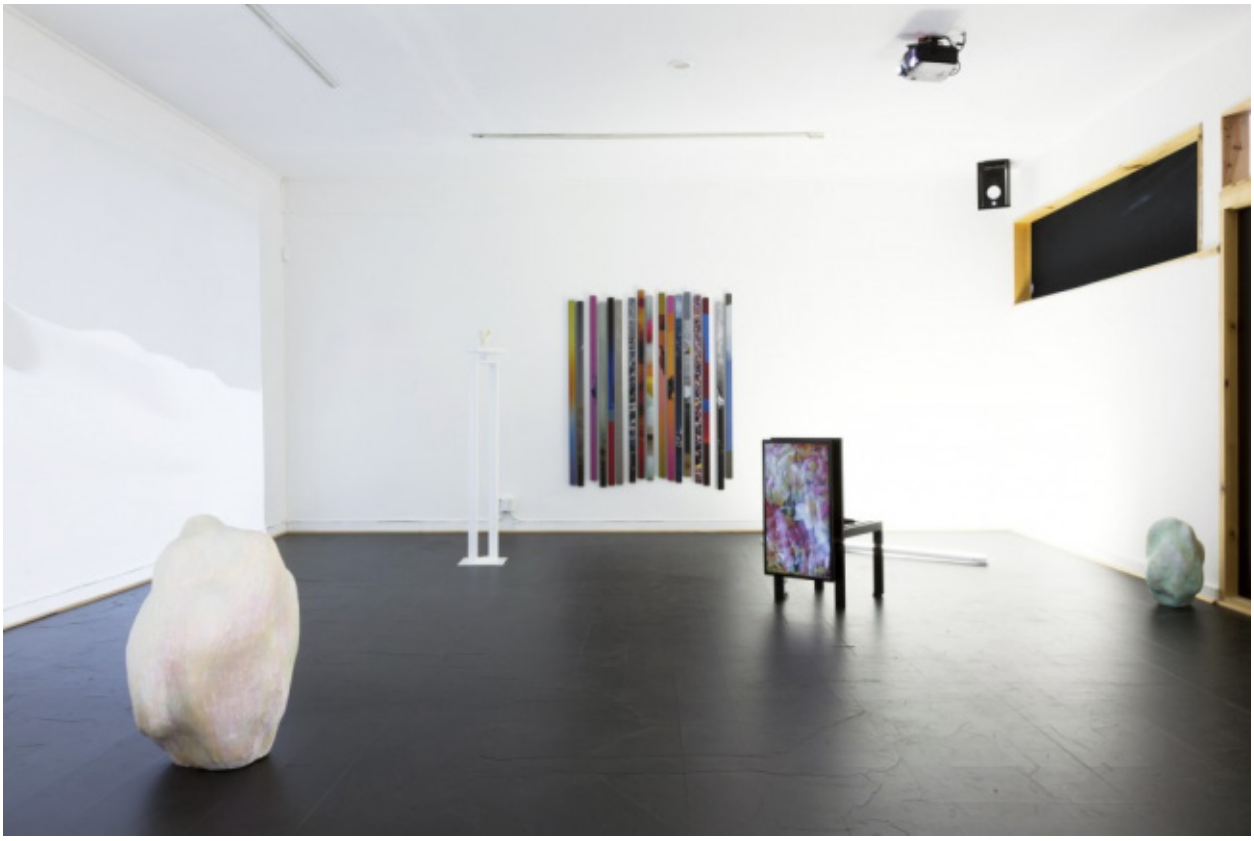
James Cordas and Rhonda Holberton, Cold Storage, 2015. Installation view. Image courtesy of the artists and City Limits. Photo: Kristine Eudy

Meanwhile, Cordas's elephant in the room is the cage-come-jail-cell sculpture that includes panel strips printed with imagery, a monitor inside showing a 23-minute looped video, and a row of small red fire extinguishers that lead from the inside out. Titled *A mason jar full of wasps*, the video inside features arms painted bright red reaching into a jar with a drowned wasp, including cuts to a mangled wasp nest being handled without gloves—a dangerous innuendo. The sound is foreboding and urgent, with loud shrieks and white noise hushes. Another sound work, WW *Alien 3* (1992) and includes a monologue performed by Charles Dutton during a eulogy scene. The audio has been completely altered using a granular sampler that alters the sound to create a loop. In an email exchange with him, Cordas shared that the first music CD he purchased as a youth was the *Alien 3* soundtrack, bypassing the popular skater punk, grunge, and Brit-Pop of the '90s for something that scared him—prompting him to seek answers as to why he was, and clearly still is enamored by the orchestration of Goldenthal's music.

James Cordas, Chair, 2015. Brushed steel, LED monitor, book, James Gendron, perforated vinyl, chair, 36 x 23 x 17 in.; human, 5 ft. 11 in. Image courtesy of the artists and City Limits. Photo: Kristine Eudy

The act of sampling music is a regular practice for Cordas, whether with music, images, or language—and he more frequently has been working on collaborations, including writing and reading poetry. For this show Cordas invited writerKevin Killian to rewrite poet James Gendron's *Sexual Boat (Sex Boats)* (2013), into a limited edition hard-bound book, which includes several solid single-color pages that act as an artist interlude by Cordas. During the opening reception, Gendron himself sat in a piece titled *Chair,* which includes an embedded video monitor that screens over 100 original photos of lily imagery, also reiterated on the jail cell bars. Gendron stared at the monochromatic pages during the exhibition in order to alter his vision perception of light after staring at color. Throughout Cordas's work, there are multiple layers of repetition, be it bars, flashing imagery, or painted, perforated surfaces. Thematically, Cordas grapples with many emotions of love, of color perception, feelings of containment and ritual, as well as issues of altered states of awareness.

Together, Cordas and Holberton reconsider the roles people play in relation to each other, be it through government control or with language and imagery, each using their own very personal interests to channel these ideas. Conceptually, they both tap into the frightening world of information sharing that blurs public and private space. Aesthetically, the work is disparate on the outside, but in the end it is the human condition that they both seek. Their work is loaded with complex backstories that are not easily accessed without inquiry (or further research)—not unlike the privacy many people seek in their own lives.



James Cordas and Rhonda Holberton, Cold Storage, 2015. Installation view. Image courtesy of the artists and City Limits. Photo: Kristine Eudy

TEMPORARY

Temporary Art Review
Rhonda Holberton at Royal NoneSuch Gallery
E. MAUDE HAAK-FRENDSCHO
December 15, 2014

Rhonda Holberton, in her exhibition *The Italian Navigator has Landed in the New World* at Royal NoneSuch Gallery, "imagines the body as seen by the machine on the other side of the screen." Utilizing the hollowed out forms of casts, imagery of the silicon molding of the CPR dummy Resusci Anne, and body scans of herself animated into yoga practice, Holberton addresses mediations between body and mind, through technology and across time. Through material and technological reproductions of bodily forms, she problematizes how bodies are sensed—and known.

From the gallery window pristine white casts of limbs and other body sections are arranged like a collection displayed for emerging doctors, a display I imagine might be called "Best Practices in Osteopathic Medicine" in that context. Holberton titles the work *Something of the Same Feeling to Everyone*. The cast-encrusted body is echoed in a projection on the rear wall of the gallery, a single-channel video created using Microsoft's Kinect technology, which uses infrared dots for position tracking and facial recognition. For *The Italian Navigator has Landed in the New World*, Holberton scanned her body to create a 3D model, later animated to recreate her yoga practice. It's jarring to watch; no smooth Vinyasa, just halting and modulation on a loop. The incompletely rendered Holberton is headless, handless, and dons a cast that breaks open, revealing no body inside, when moved in positions that exceed the boundaries of the cast—a trick reserved solely for the realm of the virtual.

Adjacent in the gallery is a large photographic reproduction of a partial face, a stack of silicon molds, in fact, of a CPR dummy. Holberton tells us in the exhibition statement that Resusci Anne, the name of the training mannequin, has been in production and use since 1958. The face belongs, ironically, to L'Inconnue de la Seine, an unidentified woman who drowned in the River Seine near the end of the last century. In circulation and reproduction so long, she has the most kissed face of all time; she is known, and now belongs to all of us. Through the distance of reproduction and the intimacy of mouth-to-mouth, she has found a name but not an identity.

These medical technologies are not neutral in their masking of the unknown and broken aspects of our fragile bodies. Always striving for an ideal state of health—a set-up that denies a range of bodies, and death—the biomedical model in general, and it's support technologies specifically, continue to study and train for medical health interventions through body reproductions and artifacts. The technologies to facilitate a functioning body as breathing, whole, unbroken also impart distance from actual bodies, from actual breath, skin, and bone. The armature can be described and articulated, but can it really be known?

Holberton cuts to the quick; the technology she uses is tellingly called PrimeSense, for Microsoft Kinect. "Sense" has taken on new connotations in new technology. It's no longer the sole purview of people to perceive their worlds; the television show *Shark Tank* tells me that sensor technology is the future, and a good one to invest in. What does that mean for the primacy of our embodied sense experience? Or closer: who knows it better, your body or the machine? Historically, philosophical debates have privileged one or the other, sense knowing versus abstract or theoretical knowing. There is a gap between the two, one beautifully addressed by poet and software engineer Maged Zaher from his book *If Reality Doesn't Work Out*: "In my fantasy, you are / In the distance between the mathematical model and the physical object / This accurate inadequacy this inadequate accuracy." The reproductions made by a computer may be credible, but they can't universally capture embodied experiences for the infinitely diverse set of humanity. There is a space between embodied sense knowledge and the sensor knowledge of medical technologies.

Flopped on the middle of the gallery floor is a normative white person BandAid flesh colored yoga mat. It is laid out with a twist in the middle of its flesh, and is the thickness, density, and texture of human skin. It is somehow quite disturbing to imagine touching it, in a way that actual skin-to-skin contact is not. It's an alienated production of a part dissociated from the rest of its non-being. The visceral reaction to this oversized skin flap perfectly captures the tensions that Holberton explores: alienation from our bodies and loss of identity to reproductions of our physical selves.

Rhonda Holberton: The Italian Navigator has Landed in the New World *is on view at Royal NoneSuch Gallery in Oakland, CA through December 14th, 2014.*
Images courtesy of Royal NoneSuch Gallery. Photos: Rhonda Holberton

DAILYSERVING
AN INTERNATIONAL PUBLICATION FOR CONTEMPORARY ART

Rhonda Holberton: YOU BECAUSE FREE INSTANTLY NEW at Pro Arts Gallery

Amanda N. Simons

September 14, 2014

Pro Arts Gallery in downtown Oakland is currently host to *YOU BECAUSE FREE INSTANTLY NEW*, a 2 x 2 Solos exhibition of work by Rhonda Holberton, curated by FICTILIS.[1] Mere footsteps from the former epicenter of Occupy Oakland's nightly clashes with police, Holberton's work serves as a critical commentary and an eerie reminder of the (sometimes camouflaged) structures of authority that govern civilian life. The exhibition is a series of visual iterations on military technology, consumer culture, and concealment, in the form of textiles, video and sound installations, computer-aided sculpture, and product design.

Rhonda Holberton. *YOU BECAUSE FREE INSTANTLY NEW*, 2014; installation view; Pro Arts Gallery, Oakland, California.

All the Actors Have Withdrawn (2014) is a digital video projected onto a frosted acrylic panel placed upright on a pedestal. The video depicts a gray-toned, three-dimensional rendering of what appears to be three nude female figures melding into a single conjoined form. Arms, elbows, and fists protrude outward at various angles in combat-like stances. The image rotates upon a central point to reveal a 360-

degree view of this grainy, broken, and disintegrating form frozen in space. While the pedestal, figurative form, and rotation at first call reference to classical bronze sculpture, the momentum of the rotation suggests a deeper intent that challenges classical conventions. With less emphasis placed upon the aesthetics of the object, *All the Actors Have Withdrawn* depicts, rather, a violent conflict carefully paused at an opportune moment.

But the piece itself is only half the experience. The projector from which the video emanates is mounted above the piece and is directed at the viewer. Its lens is carefully taped to reveal just a slit of light that shines and flickers uncomfortably downward. As I stood there, I found myself conflicted. Instinct and experience said to move away from the voyeuristic projector lens, at the risk of being unable to experience the work, but the video's movement called me to stay put. Such a conflict raises the question, at what point do we sacrifice our personal privacy for the sake of participating in or even simply experiencing contemporary culture? Or, in light of contemporary government surveillance, are we even afforded such a choice today?

Like the content it addresses, Holberton's work is surprisingly subtle and strategic in its execution. The exhibition's carefully curated objects —flowing ponchos, perfume bottles, and digitally rendered wallpaper—reference our everyday lives with a comfortable familiarity. With time, the initial ease one might feel dissipates as the camouflaged works reveal themselves: video masked as reality, war marketed as fashion, and an installation that brands gallery-goers not as passive recipients of the works' messages, but rather as active participants, implicated by their very presence in the space.

YOU BECAUSE FREE INSTANTLY NEW *is on view at Pro Arts Gallery, Oakland, California, through September 19, 2014.*

Amanda N. Simons is an artist, writer, and educator who lives in Oakland. She received an MFA in Studio Art and an MA in Visual and Critical Studies from California College of the Arts, and is the Exhibition Coordinator for San Francisco's Queer Cultural Center.

[1] FICTILIS is the collaborative practice of Andrea Steves and Timothy Furstnau.

Copenhagen Institute for **Futures** Studies
Instituttet for **Fremtids**forskning

Issue 3/2015

GLOBAL SCANNING REVIEW

INCLUDED INSIDE

This issue looks at augmenting creativity, collectingalgorithms,regressiveinnovation, biological concrete, knowledge multipliers, crayon therapy, unfinishedness, digital hygiene, micro-moments, earthscrapers and the underground, the smell of security, sentient workspaces and much more.

FUTURE OF
SOCIETY & GOVERNANCE

DESIGNING BY DATA

Taking mass-customisation to a new level with data and the power of the crowd

Swedish architecture firm Tham & Videgård have been commissioned by property agency Hemnet to design the most sought-after home in the country using data. The 'Hemnet Home' project is an experiment in the use of consumer data to lead architectural design. Drawing on statistics and analytics collected by Hemnet, the designers were able to find the most desirable size, price and layout of homes in Sweden. 86,000 online property advertisements were measured in terms of popularity, with 200 million user clicks analysed. The result is a new home archetype 'for everyone by everyone'. The use of individual data to lead design is being taken to new heights. Projects such as this look at the power and wisdom of the crowd to determine designs that will be well received. Tracking online behaviour and observing desire lines allows organisations and governments alike to analyse and gain insights into consumer-citizen preference and potentially improve the user experience or citizen journey. *Source Link*

DIGITAL HOSPITALS

Full digitsation enables the optimisation of resource and increase user satisfaction

Toronto will soon open the first fully digital hospital in North America. It was designed with the efficiency of an airport in mind and will enable a smooth flow of data, people, and materials. The construction has been based on five principles – lean, green, digital, patient care, and community. Digital capabilities bring interoperability to improve efficiency, accuracy, reliability and safety, while the unrestricted flow of information provides access to care providers, patients, and community partners. Some of the features include voice recognition for immediate bedside charting, robotic blood testing completed within minutes instead of hours, immediate charting of diagnostic images, allowing real-time remote consulting with experts 24/7, robotic delivery of non-narcotics and suppliers, and patient ability to order food, control lights, use the phone and access materials online through a centralised panel by the bedside. *Source Link*

THE SMELL OF SECURITY

New security considerations with the proliferation of bio-information

Rhonda Holberton is an American artist who, as a part of her creative production, developed a perfume called FOIL. The scent is derived from t-shirts worn by three complete strangers. Rhonda has done this by using techniques, deployed by the CIA and the FBI that can detect human beings by their scent. The idea of the perfume is symbolic. Rhonda wants to put attention on the fact that anyone can spray on the perfume and adopt someone else's scent to mask their own. There are parts of a scent that remain completely unique and unchanged for each individual throughout life. Now researchers are trying to find out what part of the human odour can be broken down into a specific DNA, using biometrics. If this method can be standardised, odour can be used as a part of a personal ID. *Source Link*

BIOLOGICAL CONCRETE

Improving the sustainability of urban centres with new materials

Henk Jonkers is a microbiologist at Delft University of Technology, who is working on a concrete with built-in bacteria that can fill in cracks as they form. The bacteria are packaged in minuscule pellets, which together look like a fine, white powder. These pellets contain dormant Bacillus and/or Sporosarcina bacteria, as well as their food source, calcium lactate. The powdery substances are then mixed into wet concrete before it gets poured into place. When a crack forms and water seeps in, the bacteria "wake up," and start eating the food. As a result, the bacteria excrete hard limestone filler, which fills in the crack and prevents the water from doing more damage (such as rusting the steel bars that are present in a lot of concrete structures). While many forms of concrete start breaking down after 20 to 30 years, these bacteria can stay dormant for 200 years without food, thus extending the life of a concrete structure for decades past its expiration date and saving money. *Source Link*

YOU BECAUSE FREE INSTANTLY NEW
By Leora Lutz

Rhonda Holberton's exhibition *YOU BECAUSE FREE INSTANTLY NEW* politicizes identity and desire. The title takes its cue from a list of the five most influential marketing words in the English language.[1] The scene presented in the gallery is reminiscent of a retail store, and as with advertising, there is something of a dream being offered here: an augmented reality that is newer and more necessary than the present. In this case, militant police states and one's personal identity and privacy collide with basic instincts to survive—and to be loved.

In general, Holberton's investigative art practice remediates technology and human interaction, situating historical events, procedures or techniques as groundwork to create narratives that shift perception. To compare, some artists and projects that come to mind are Trevor Paglan's *Invisible: Covert Operations and Classified Landscapes*, which documents clandestine military operations and Michelle Jaffe's *Neural: Soul Junks,* which takes a poetic audio stance on corporate political influence. Additionally, Holberton acknowledges Sanaz Mazinani's work as a counterpart to her own work, where the body acts a means of activism and Mai Thu Perret's psychological ensemble installations.

Holberton's work falls into the category of conceptual work that implements actual findings as a means for discovering plausible hidden agendas, activating speculation and intervening on known truths. Her sculpture, film and installations have centered on conceptual networks within environmental concerns, particularly military encroachment in everyday lives, the mystery of the cosmos and the space between materiality and the cerebral.

Throughout her varied approaches one element is constant: location. How one locates themselves in the scenarios that Holberton creates is the crux of her diligent outcome. *YOU BECAUSE FREE INSTANTLY NEW* is no exception with its selection of considerations that questions the very nature of politics and the body as a subject of consumption.

The retail setting of Holberton's 2 x 2 Solos exhibition at Pro Arts prompts the viewer to metaphorically buy into what it is being "sold." The commodification of art is nothing new, as the philosopher Herbert Marcuse pointed out in his essay, "Art as Form of Reality" (1969). But rather, "From the position of today's rebellion and refusal,"—which still rings true today—"art itself appears as part and force of the tradition which perpetuates that which is, and prevents the realization of that which can and ought to be." In essence, art is a camouflage of reality. As Marcuse continues: "in this universe, the work of art, as well as of anti-art, becomes exchange value, commodity: and it is precisely the Commodity Form, as the form of reality, which is the target of today's rebellion."[2] By presenting the double entendre of object commodification available for purchase within the context of a fictitious society, Holberton invites the viewer to exchange the here and now with the notion of a not so distant future.

For this particular exhibition, Holberton draws from military combat ideology and objects, such as operational manuals and camouflage. She offers up these solutions as survival alternatives in the utopic/dystopic scenario she has constructed. The multi-media assortment of works including sculpture, film and audio, contain elements of the figure, alluding to people navigating the politically charged social landscape. In preparation for such dark habitation, helpful audio files guide the listener to think about how to approach an issue, be it love or other covert operations. Garments are presented to blend into the hostile metropolitan surroundings while custom fragrance is offered to ensure one's existence. Moody silhouettes of tree shadows cast on the sidewalk are projected through the window, shifting viewers' perception of the locale. A large dream catcher fashioned in the manner of a parachute remains a hopeful symbol for the delicacy of aspirations. Together these works weave a complex and overlapping conceptual quandary of the relationship humans have with the environment and with one another.

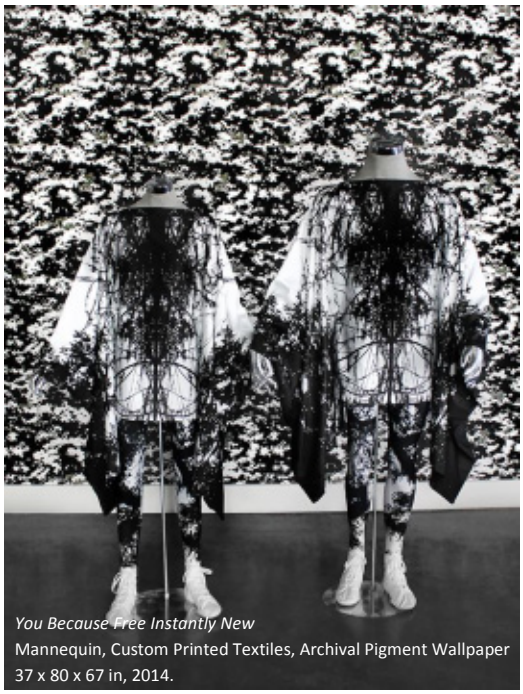
Now We Have Division
Sound-Focusing Speaker, MP3 Player
00:44:21, 2014.

By coupling military components with human conflicts of self-worth and desire, Holberton integrates real and actual things and spins them toward science fiction story-telling. To use the adage: *Reality is stranger than fiction.* Holberton has situated the viewer within a story where they themselves are the protagonists who find themselves struggling with belonging in a place where the choice to conform or become radically invisible seems inevitable. The science fiction theme is pronounced in the audio work *Now We Have Division*, installed above a cushioned bench. The concept is similar to the hypnodædia in Aldous Huxley's *Brave New World,* which involved the conversion of text into soothing voices that subliminally influenced the listener. Using similar technology available in text to speech applications, Holberton transliterated hundreds of phrases from self-help books and military operation manuals into a convincing woman's voice. The phrases are carefully chosen yet delivered at random to coincide with what the viewer sees in the gallery while sitting on a bench listening:

Power-struggle, like any addiction, intensifies over time. A single interaction between two people might now affect an entire department. Balance security and synchronization. Insufficient security may compromise a mission. Excessive security will almost always cause the mission to fail because of inadequate coordination. There are three categories of products associated with PSYOP and/or propaganda: white, gray, and black.[3]

Against one wall of the exhibition is the signature piece of the show, *You Because Free Instantly New (An Army of Lovers).* The subtitle, *Army of Lovers* references a speculative resistance movement. In this scene, as Holberton notes, "civilians are agents of capital and soldiers of resistance."[4] Two mannequins, one male and one female, are set in front of a wall covered in black and grey-tone Digital Camouflage wallpaper. Digital Camouflage is designed so that the people wearing it will blend into the silvery angles

and asphalt laden metropolitan landscape. The mannequins wear identical, unisex garments similar to the purposeful homogeneity and efficiency necessary for soldiers to wear. The garments' fabric pattern is generated from photographs that Holberton took at Point Reyes. The contrast between the natural patterns against the digital wallpaper implies the poetic juxtaposition of humans' imposition and destruction of nature. Traditionally used for hunting or for combat, the purpose of camouflage takes a socio-sexual turn when perceived in conjunction with other works.



You Because Free Instantly New
Mannequin, Custom Printed Textiles, Archival Pigment Wallpaper
37 x 80 x 67 in, 2014.

All of the Actors Have Withdrawn is a grey scale video of three bodies engaged in a variety of street combat poses,

All The Actors Have Withdrawn
Rear Projection Video on Acrylic
14" x 20", 2014.

locked in a shattering embrace. Layered across each other, the poses could be any movement—combat, dance or copulation. The bodies are collapsing and disintegrating like crumbling marble, suggesting the falling of tradition and normativity. The provocative and sexually charged scenario romanticizes both sex and combat-violence—both are overtly physical acts that require bodies to touch each other.

In contrast, the sculpture titled *toward_a_more_pure_profile* suggests an idealized human exchange, albeit tinged with loss. The structure is comprised of two three-dimensional scanned, CDC routered foam models of Holberton's vertically bisected torso that have been adhered together. Here, the coupling melded into one body signals the idealized notion of romance—each one sacrificing their individual identity to be conjoined as a single pair.

toward_a_more_pure_profile, Polyurethane Foam
37" x 37" x 24", 2014.

Conversely, *FOIL* is the name of a professionally packaged "perfume" that Holberton created using an alcohol distillation process that gleans individualized scents comprised of a person's DNA. Modeled after military scent detection technology, *FOIL* replicates a product that is meant to safe-guard one's identity. Political theorists Michael Hardt and Antonio Negri posit, "The question is really how the body of the multitude [the public] can configure itself as a telos."[5] Telos, as in teleology, is the study of an object's intention or purpose. Just as with any strategic operation, foiling one's opponent through appropriation gives "power adequate to the destruction of the enemy and the

construction of a new society."[6] On the coinciding title sheet for the exhibition, Holberton replaced text information for *FOIL* with a QR code.

FOIL, original scents derived from distilling garments worn by anonymous individuals, 1.5" x 1.5" x 6", 2014.

Visitors can scan the code, which leads to the title of the actual piece: *AN ARMY OF LOVERS*, which is taken from a book co-authored by David Buuck and Juliana Spahr of the same title. The characters of their story attempt to reconcile capitalism through corporeal experimentations and performative activities.[7] Attune to the strangeness of their book, the society that Holberton proposes has converted identity into a product, reiterating the notion that one could be instant, though never free, and never new.

YOU BECAUSE FREE INSTANTLY NEW draws attention to the conflicts of personhood, place and ardor. The history surrounding the venue of Pro Arts happens to be completely aligned with Holberton's continued investigation with government activity as a means to address the unpredictable and immobilizing aspects of everyday life. Pro Arts is located in Frank H. Ogawa Plaza, directly opposite City Hall, in Oakland, California; the same plaza where citizens gathered for the Occupy Movement. The Occupy website states: "The purpose of our gathering is to plan actions, mobilize real resistance, and defend ourselves from the economic and physical war that is being waged against our communities."[8] Somewhere in this science fiction that Holberton has presented lies the proposition that reality is nearer than comfort zones may allow, and acceptance of all that is possible is inevitable.

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[1] Gregory Ciotti, "The Five Most Persuasive Words in the English Language," *Huffington Post* (December 12, 2012).
[2] Herbert Marcuse, "Art as Form of Reality" in *Art and Liberation,* ed. Douglas Kellner (London: Routledge, 1969), 148.
[3] The bibliographic list for the appropriated text includes:
Taking the War Out of Our Words by Sharon Strand Ellison;
Army Doctrines published by the Federation of American Scientists, including "ATTP 3-34.39 (FM 20-3)/MCRP 3-17.6A: Camouflage, Concealment, and Decoys" and "FM 3-05.301(FM 33-1-1)/MCRP 3-40.6A: Psychological Operations Tactics, Techniques, and Procedures;"
Buddha's Brain: The New Neuroscience and the Path of Awakening Inquiring Mind by Rick Hanson, PhD; and *Hope and Healing: Peaceful Parenting in an Uncertain World* by Naomi Drew & Arthur Caliandro.
[4] Notes from the artist.
[5] Michael Hardt and Antonio Negri, *Empire* (London: Cambridge: Harvard University Press, 2000), 404.
[6] Ibid.
[7] David Buuck and Juliana Spahr, *An Army of Lovers* (San Francisco: City Lights Books), 2013.
[8] *Occupy Oakland,* occupyoakland.org/about/

All images courtesy of the artist, http://www.rhondaholberton.com/
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PUBLISHED INTERVIEWS

TIME TUNNEL

BRUCE NAUMAN'S *CORRIDOR INSTALLATION WITH MIRROR—SAN JOSE INSTALLATION (DOUBLE WEDGE CORRIDOR WITH MIRROR)*

Virtual Time Tunnel: Andrew Blanton and Rhonda Holberton Discuss the Student-Led VR Project Inspired by Bruce Nauman's ***Corridor Installation with Mirror—San Jose Installation (Double Wedge Corridor with Mirror)***

The Natalie and James Thompson Art Gallery at San José State University (SJSU) is committed to inspiring visitors to explore the past, present, and future influences of art on our daily lives. We challenge conventional assumptions through scholarly research and public programs, champion diversity through the presentation of an expansive range of object-based and process-oriented genres, and facilitate an ongoing dialogue that diminishes the distance between studying and creating works of art.[1]

With the reinstallation of Bruce Nauman's *Corridor Installation with Mirror—San Jose Installation (Double Wedge Corridor with Mirror)*,[2] our intent was to provide a visitor experience that was as similar as possible to the original installation of this piece, which was first built in this very space in 1970. As such, the corridor itself may be too narrow for all visitors to access. Mindful of our mission to provide a range of cultural experiences for our diverse audiences, to ensure that all visitors can experience this exhibition—and also to contextualize the corridor in the language of contemporary Silicon Valley—our students developed a virtual reality (VR) installation inspired by Nauman's physical installation that all visitors could experience in the adjacent Theta Belcher Gallery.

The original impulse for the creation of the *Time Tunnel VR Installation*[3] and the intentions of SJSU were threefold: to create an entirely accessible experience for all gallery visitors; to offer the opportunity for students (under the guidance of faculty) to gain hands-on experience in collaborating in the application of the technical and artistic elements of VR to an experiential work of art created by another artist forty-eight years earlier; and to recontextualize the original installation by Bruce Nauman in the language of Silicon Valley, which has emerged to literally surround the SJSU campus in the years since that 1970 installation.[4]

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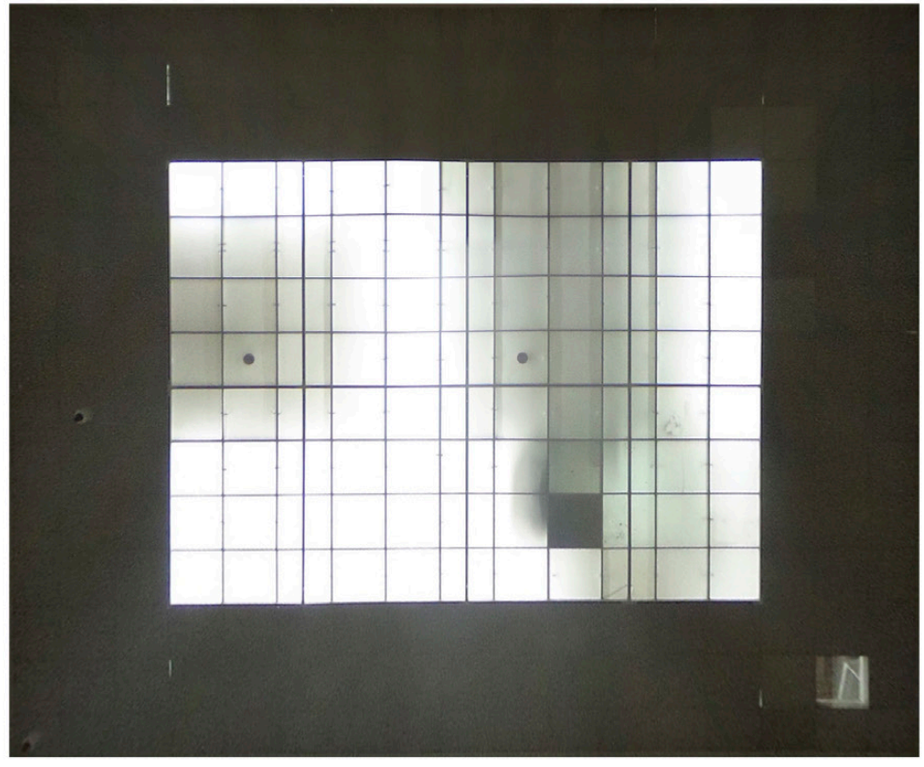
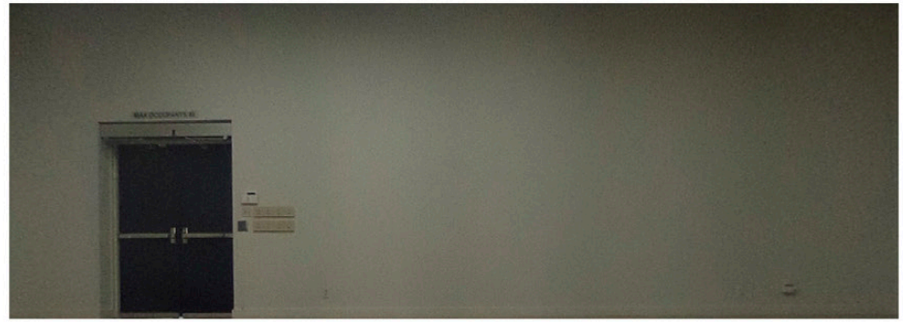
[1] The author of this text is Jo Farb Hernández, Director of the Natalie and James Thompson Art Gallery, Department of Art and Art History, San José State University

[2] Bruce Nauman (b. 1941, Fort Wayne, Indiana), *Corridor Installation with Mirror—San Jose Installation (Double Wedge Corridor with Mirror)*, 1970, wallboard and mirror, dimensions variable; 120" x 336"x 72" (304.8 cm x 853.4 cm x 182.9 cm) as installed at San José State College, 1970, Solomon R. Guggenheim Museum, New York, Panza Collection, 1991, 91.3829.

[3] Blanton, Andrew, Rhonda Holberton, Roya Ebtehaj, Kevin Nguyen, Cassidy Pong, Tyler Stannard, Michelle Tam, and Don Vo, *Time Tunnel VR Installation*, 2018, virtual reality installation, dimensions variable, San José State University, San José, CA.

[4] The authors of this text include Dore Bowen, Associate Professor of Art History and Visual Culture, Department of Art and Art History, San José State University; Keith Daly, Cross-Disciplinary Artist and Alumnus of San José State University; Jo Farb Hernández, Director of the Natalie and James Thompson Art Gallery, Department of Art and Art History, San José State University; and Aaron Wilder, Curator and Exhibition Catalog Managing Editor, Natalie and James Thompson Art Gallery, Department of Art and Art History, San José State University





Time Tunnel VR Installation Project Team

FACULTY ADVISORS

Andrew Blanton is a media artist and percussionist. He received his BM in music performance from the University of Denver (2008) and a masters of fine arts in new media art from the University of North Texas (2013). He is currently an assistant professor of Digital Media Art at San José State University in San José, California, where he teaches data visualization. His current work focuses on the emergent potential between cross-disciplinary arts and technology, building sound and visual environments through software development, and building scientifically accurate representations of complex data sets as visual and sound compositions. Blanton has advanced expertise in percussion, creative software development, and developing projects in the confluence of art and science.

Rhonda Holberton is an Oakland-based artist. Her multimedia installations make use of digital and interactive technologies integrated into traditional methods of art production. Holberton received her MFA from Stanford University and her BFA from the California College of the Arts. She was a CAMAC Artist in Residence at Marnay-sur-Seine, France, and was awarded a Fondation Ténot Fellowship in Paris, France. Holberton has recently exhibited at the San José Institute of Contemporary Art, FIFI Projects Mexico City, the San Francisco Arts Commission, and the Berkeley Art Center. Her work is in the collections of the San Francisco Museum of Modern Art, the McEvoy Foundation, and notable private collections.

PROJECT LEAD

Roya Ebtehaj is an artist and educator. She received her BA degree in photography in her hometown of Tehran, Iran. After working as a professional in the field of media for more than eight years, she moved to Silicon Valley and is currently pursuing her MFA degree in Digital Media Art at San José State University. Ebtehaj's work incorporates a wide range of cutting-edge technologies that include virtual and augmented reality, creative coding, digital video, and modern web application designs. In the *Time Tunnel VR Installation*, she collaborated with a group of students as a team leader and guided them through the process of ideation and development.

STUDENT ARTISTS

Kevin Minh Nguyen was born in San Francisco and attended San José State University to study Digital Media Art. Nguyen's main expertise is in game design and pixel art; however, he also works broadly with virtual reality, augmented reality, Photoshop, and game development. For the *Time Tunnel VR Installation*, Nguyen worked on scripting the mirror, setting the lights, and organizing the space in Unity.

Cassidy Pong was born and raised in San José, California, and was a third-year undergraduate student at San José State University pursuing a BFA in Digital Media Art during the *Time Tunnel VR Installation*. Her practice focuses on depicting and illustrating topics based on personal experiences to address uncomfortable situations that much of society does not want to acknowledge. She works in a variety of media ranging from traditional art and sculpture to digital practices, such as photography, 3-D modeling, and video editing. Pong helped model the VR space for the *Time Tunnel VR Installation* and assisted in testing the user experience before installation.

Tyler Stannard, a digital media artist, received his BFA degree in Digital Media Art at San José State University. Stannard uses his interest in game design and development to uncover the relationship between the digital realm of video games and humanity, as well as the resulting effects. His work integrates a wide scope of media and contemporary technologies using industry-leading game engines to blur the edge between digitality and reality. In the *Time Tunnel VR Installation*, Stannard's role was designer/programmer and virtual reality specialist. His role in the project was to focus on the core virtual reality mechanics, user experience, and scripting.

Michelle Tam recently graduated with a BFA in Digital Media Art from San José State University. She is experienced in 3-D modeling and texturing. Her interests are creating 3-D environments and interactive experiences using media such as games and virtual reality. Some of her recent projects include the use of virtual reality to tell a narrative of her experiences as an Asian American. She created textures and maps for the *Time Tunnel VR Installation*.

Don Vo is a Digital Media Art and Mathematics student at San José State University. Vo worked for a clothing company as a character designer before attending college. Vo's interests include 3-D modeling, 3-D animation, video gaming, and stop-motion animation. For the *Time Tunnel VR Installation*, Vo provided support in modeling certain objects in the VR environment.

Reflecting on the entire *Time Tunnel* exhibition, the faculty advisors for *Time Tunnel VR Installation*, SJSU Assistant Professors of Digital Media Art Andrew Blanton and Rhonda Holberton, took the opportunity to discuss the experience of advising a team of students to actualize a VR installation inspired by Nauman's *Corridor Installation with Mirror—San Jose Installation (Double Wedge Corridor with Mirror).* They explored how this unique artistic application of VR relates to the nature of the art viewer experience, the limitations of both physical perception and technological capabilities, and some of the consistent underlying questions of Bruce Nauman's artistic career.

RHONDA HOLBERTON: I find Nauman's corridor very tender, in a way, because it necessitates the presence of another viewer in a way that his other [corridor] pieces don't. You need another person to understand what is happening mechanically.

ANDREW BLANTON: To understand what you are seeing?

RH: Right, to understand that what you are seeing [in the mirror at the end of the hallway] is not yourself, that it is another person. There is a reliance on another body to be the third-point referent. What if we try to conceptually reflect [Nauman's *Corridor Installation with Mirror—San Jose Installation (Double Wedge Corridor with Mirror)*] in the way that we construct the essay? How could two points of view converge, and what would that look like?

AB: On the one hand, we should frame the prompting in the work. We were initially asked to address the accessibility of the Nauman corridor. Principally, would there be a way for those in wheelchairs to also be able to participate in the work? But really, in the end, what I found to be one of the most interesting things about it was the relationship between the work, the viewer, and the external virtual installation. In a way, we were able to create what felt like a very natural extension of the work into the virtual world. That was a bit unexpected. But because the work in some way is thinking very carefully about viewership, that's very naturally extended into virtual reality and the complications of viewership in simulated environments.

RH: Right, the thing about Nauman's [corridor pieces] is that the body is at the heart of the practice. So, of course, through the development of the project, there are these conceptual conceits that reveal themselves that are in line with his original intent, but there are other places where the [VR installation and physical installation] diverge. It reminds me of the mirror at the end of the wedge as a site for reciprocity but also a site of divergence, in a way like the physical and virtual versions, trying to find the overlap. Where is that overlap? I think it happens where you get close enough to the thing to figure out where you are in it. For the physical installation, that happens in the "nose," when you make that turn around the sharp bend. In the VR installation, it happens both when you put the headset on … no, not when you put it on. I'm saying that because I knew what to expect when I put it on. For most viewers, it probably happens when you take it off.

AB: Yeah.

RH: Right, that moment when you understand the virtual space well enough to exit, it's another kind of unveiling.

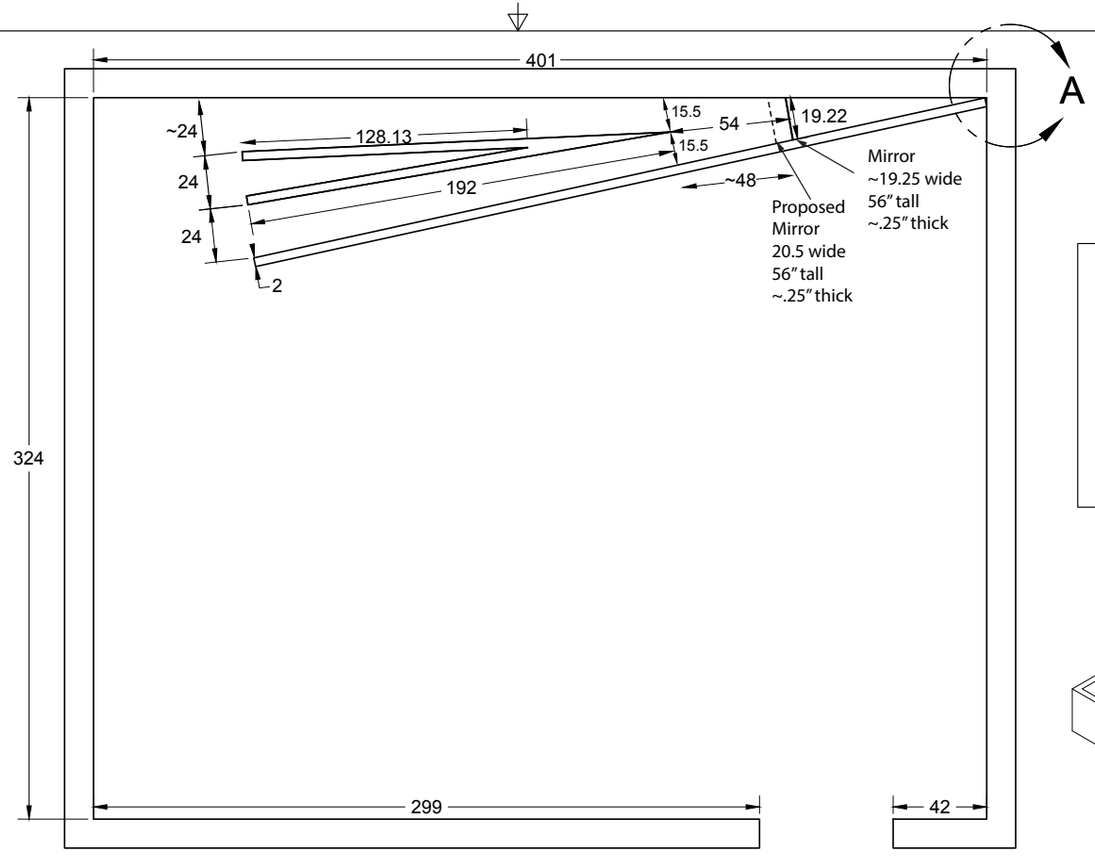
AB: The other complication is that, in the physical installation, when another person was in the space, the paradigm for interaction completely changed for me. Like when you are walking down the corridor with someone else walking in front of you. Then they turn the corner, but you can still see their back. It's hard to explain why that experience is so particular, but it really stuck with me. Being in virtual space is really different. There is an important intimacy with our reflections in mirrors that is lost in virtual reality, principally because the data for the position of our body are almost nonexistent in these systems. This is totally different in the physical installation. The shape of the corridor provides this uniquely phenomenological experience in many ways that are totally tied to our connection with our physical bodies.

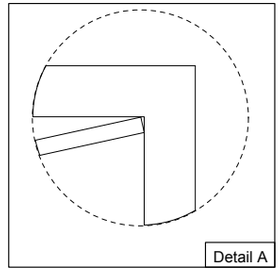
RH: You have to stretch your arm out to try to see your reflection, to try to see both sides, but you can never quite catch it.

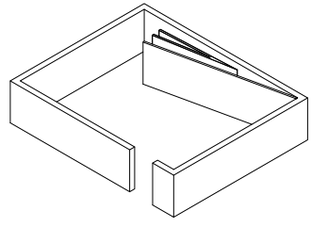
AB: Yeah, but in VR our response to the reflection question was to create an avatar for the [viewer that could be reflected in the mirror]. There's also the attendant who helps the viewer into the VR headset, but who would always be masked as soon as the viewer put the headset on. The viewer was always being observed in the space.

RH: There's always a third-party observer.

AB: Right.







NOTES

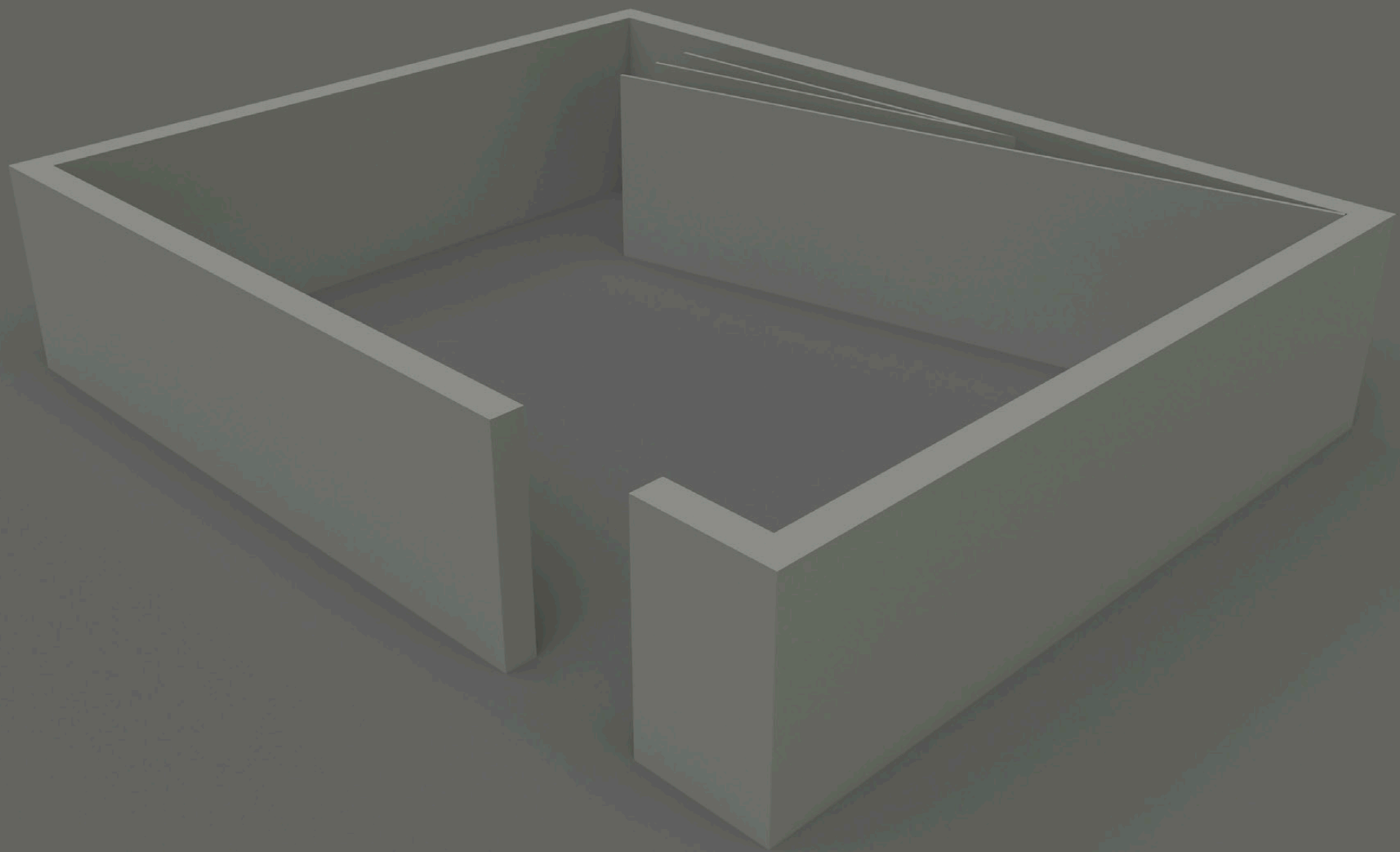
Studs (vertical elements) are 2x4in

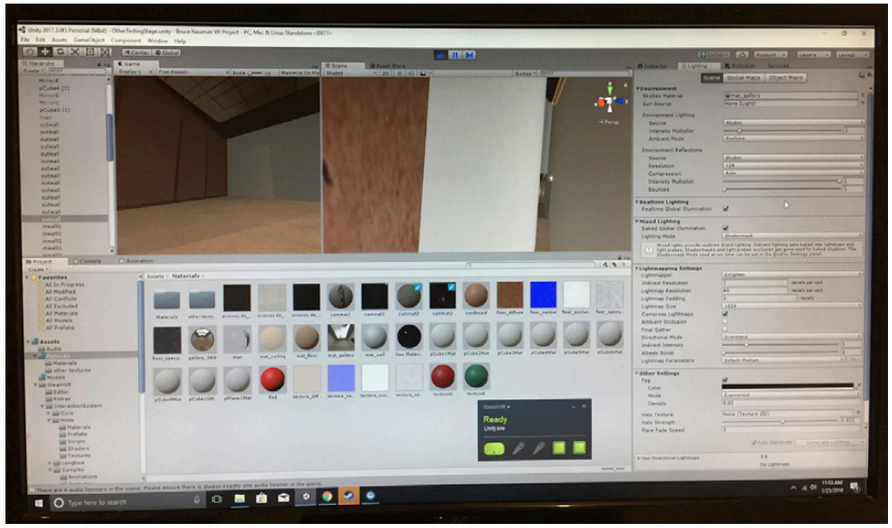
Top & Bottom Rails are 2x2in

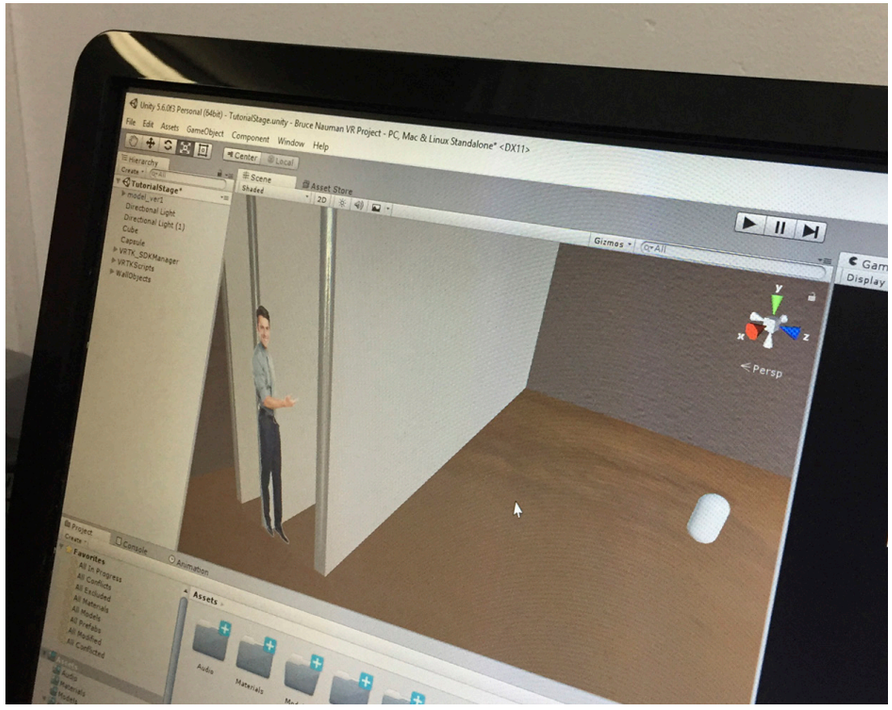
1/2″ Drywall on inside of corridor walls only

See Tony May Sketches for construction details

	PROJECT NAUMAN_VR			
	TITLE CORRIDOR WITH MIRROR: SJ INSTALL			
APPROVED	SIZE B	CODE n/a	DWG NO 20171216c	REV C
CHECKED				
DRAWN Rhonda Holberton 12/17/17	SCALE 1:50	WEIGHT n/a	SHEET 1/1	







RH: That's actually really interesting too, the intimacy of the other. Something that I've always found in VR in institutional settings. There's usually someone there to explain to you how it works but also put the device on you. You need a guide, kind of like a shaman, into virtual space. Someone to literally take care of your body phenomenologically while you have this completely psycho-retinal experience.

AB: A physical guide into the virtual space.

RH: Yeah, because the body becomes—even able bodies become—completely cleaved from their sense of a natural flow of physical proprioception. I know that I flail, that I've almost fallen down, in VR. You completely lose sense of your body in space in a way that doesn't happen in movies, in screen space. That doubling or uncoupling of self from expectations of causality in physical reality is at the heart of much of Nauman's work. The sense of splitting of self within space and then reuniting with self that happens in the "nose" of the V of the physical installation also happened for me when the students were building the VR environment. During development, they had come up with an iteration of the VR project where you could walk out of the door in the reconstruction of the physical gallery and across the hall into the gallery that housed the VR installation where you were physically standing. The students had placed virtual sculptures that they created in the room, and while it wasn't appropriate for this project, that kind of flipping of the conceptual conceit of physical reality was exactly the kind of cleaving that happened for me in the "nose" of the V in the physical corridor. I'm kind of sad we lost that.

AB: It's amazing how navigating a known [physical] space in VR gives you a sense of familiarity, but also a sense of distance. A kind of third space where you don't know exactly what will happen. Like when the students built the exact replica of the gallery, then built the adjacent rooms and hallways because they wanted to explore that physical-virtual interplay, that was really amazing and really at the heart of what is interesting pedagogically—as a teacher, that was so cool to see. I like this idea of cleaving. I agree; there was a really interesting aspect of the corridor where the standard interaction, what we expect to happen in physical space, is suspended. And that was all compounded by the extending of the physical space into the virtual space. Like you could be in the adjacent gallery in virtual space but then navigate virtually across the hall into the space that we were occupying. It's funny, because it's quite technically involved, but I wonder if this type of intervention will seem technically banal in fifteen years. The novelty of the work gave me a sort of *Hole in Space*[5] feeling, but I do think the connection to the physical installation of the Nauman corridor was also just very interesting conceptually. That was certainly my primary interest in working on the installation. The extension of the digital space was a really nice way for the students to explore some of those boundaries and what they could mean in virtual space. The digital installation really evolved to something unique at that point.

RH: Yeah, to use an overused term, it's the uncanniness of the unknown known; it's another one of those V points; the ability to both experience the virtual and physical thing. For Nauman, it was really important that your perceptual sense of self in physical space completely changes when you enter into the corridor—it's dampening the physical waves that are making sound in your eardrums—that the corridor narrows down to a point where you have to turn your body sideways to fit through to the end. Those are beautiful performative moments that [Nauman] discusses in relation to conversations he had with the choreographer Meredith Monk in 1968, where he really honed in on a sense of self that comes from action. A sense that you can't get from just thinking about yourself or your body. What is the difference that is left between the expectation of the experience and the enactment of it?

AB: Which really relates to what we are doing. Some points there that are really interesting to me are that we purposely chose not to deal with sound [in the VR installation]. The sound has a lot to do with our sense of space and volume, so that compression of sound and space where you have to turn sideways in the physical installation is something that we lost in the virtual iteration. In the VR experience, you have the retinal experience,

[5] Galloway, Kit, and Sherrie Rabinowitz, *Hole in Space*, 1980, public communication sculpture in New York City, http://www.medienkunstnetz.de/works/hole-in-space/.


Center
Local
Scene
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Shaded
2D
Game
Display 1
Free Aspect
Scale
Top
Inspector
Lighting
Occlusion
Services
Transform
Position
Rotation
Scale
Slide Settings
Maximum Speed
Deceleration
Falling Deceleration
Speed Multiplier
Custom Settings
Body Physics
Console
Animation
Animator

which is really dominant, but that decoupled from the auditory experience is really strange.

RH: I think that dominance of the retinal versus somatic feedback is a great jumping off place for our students (and for us as artists). One of the wonderful things about this project was being able to have the physical installation next door to the virtual installation. In many ways, that proximity revealed the difference more than it exposed alliances or similarities. One of those differences, like you said, was the sound component. One jumping off point is the ways that you might be able to cross wires and represent that acoustic dampening through visual or synesthetic approximation of haptic feedback in VR.[6] There are many devices built for VR that make use of the relatively weak somatic sensory processors. There are egg-shaped chairs that approximate motion, where you can lean to move in a direction, but just engaging the hip muscles produces that synesthetic moment; it feels like walking when coupled with visual cues from the headset that tell you that you are moving through space in a walking-like way. Another example is the handheld controllers that vibrate when you touch something; the feedback to the brain interprets the vibration as a sense of pressure. It's the same way that Apple fakes the sense of a button being pressed on the trackpad with a vibration, it kind of works—or at least passes. As long as the retinae are engaged and there are enough indicators to corroborate the sensorial feedback, we are not really sampling at a high enough rate to understand that the vibration we feel isn't pressure, that it's just haptic feedback. There's a lot of creative space in that difference or mixing of signals. We were trying to play it very close to a one-to-one recreation for the purposes of this installation, but I think that's where things could really open up and where our students got really strange and creative. Their imagining of what would happen when you walk out of the recreation of the physical installation across the hallway and into the VR recreation of the room, that the viewer would actually be physically standing in. That's beautiful, not necessarily the point of the piece, and so we took it out of the final iteration, but it's not entirely outside of Nauman's conceptual framework either.

AB: Right, to return to your point about having the virtual installation one door down from the physical installation, the poetics really became more apparent to me after the physical installation was completed. There's a decoupling that was really important, really beautiful. Feeling those differences between the two spaces, and understanding what those differences were, was incredible. At some point, we really hit it, where it was like "Oh, this is really close to the physical installation." But the virtual installation is slightly different in these really interesting ways. We had a day where we were playing with scale. All of a sudden, the virtual avatar was way too small, and the corridor in the Thompson gallery became really enormous. [In VR] you can affect these spaces in weird ways. The students really ran with the idea of realistically representing not just the gallery but the rest of the building and where we would be standing. The modeling of the two rooms became a device for them to conceptually start to wrap their heads around the project.

RH: I think that part is really important. In terms of the planning phase, that was something I really tried to highlight: build the mockup first and then figure out what needs to go in it. [The students] wanted to start with discussions about the design of the avatar, but I think you really need to get into the VR space before you can start designing assets. You maybe need a headset or a head reference for the reflection, but hands are the things that really give you the sense of embodied experience. I think it was just a couple months later that the research came out of Japan that proved you don't really need anything other than hands and feet for embodied experience in VR.[7] I think that, for artists, it's much quicker to get to those places, like

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[6] See Willoughby Sharp, "Interview with Bruce Nauman." *Avalanche*, no. 2 (Winter 1971): 22–31; reprinted in Kraynak, ed., *Please Pay Attention Please*, 133–54.

Bruce Nauman: When the corridors had to do with sound damping, the wall relied on soundproofing material which altered the sound in the corridor and also caused pressure on your ears, which is what I was really interested in: pressure changes that occurred while you were passing by the material. And then one thing to do was to make a V. When you are at the open end of the V there's not too much effect, but as you walk into the V the pressure increases quite a bit, it's very claustrophobic...

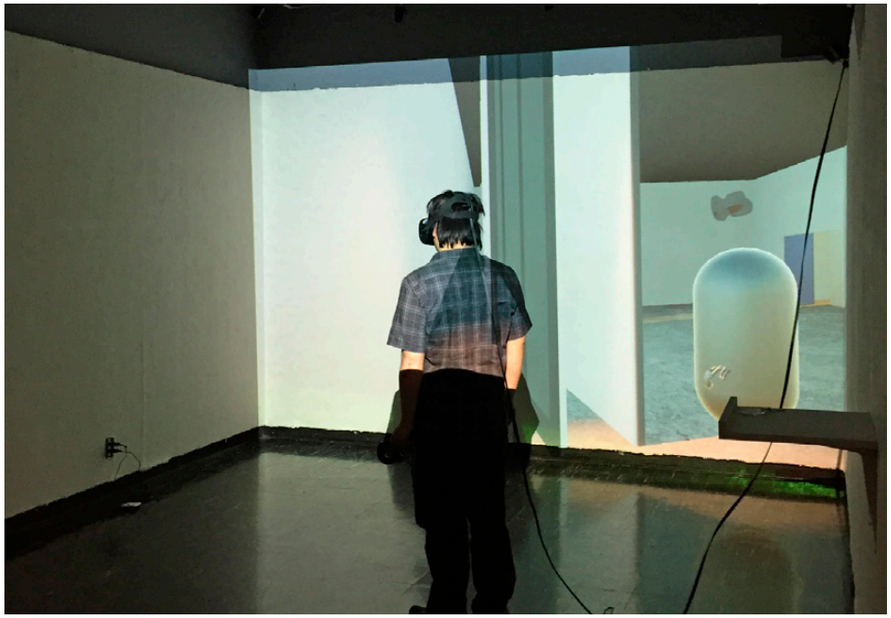
Willoughby Sharp: Pressure is also felt on the spectator's own body. Does that come from your ears?

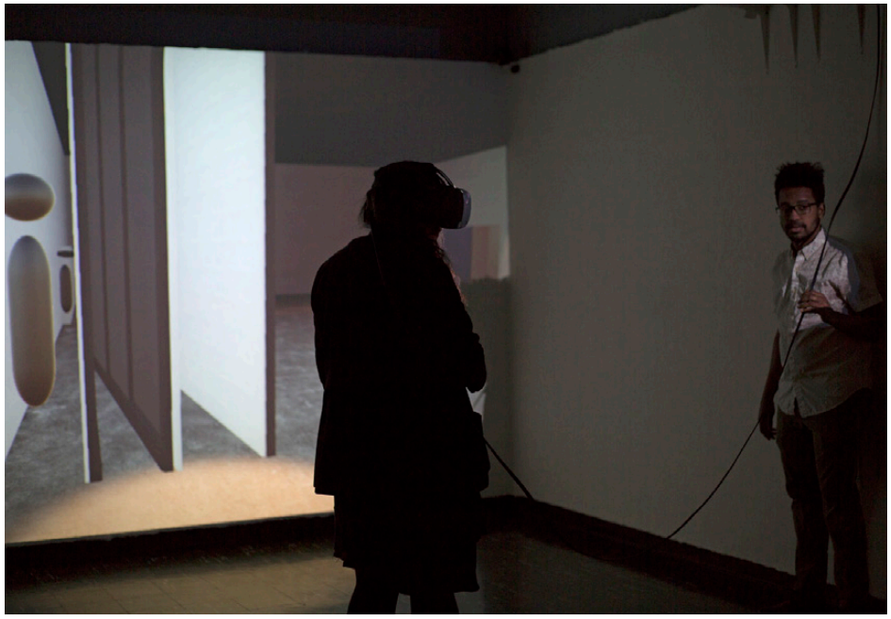
BN: It has a lot to do with just your ears.

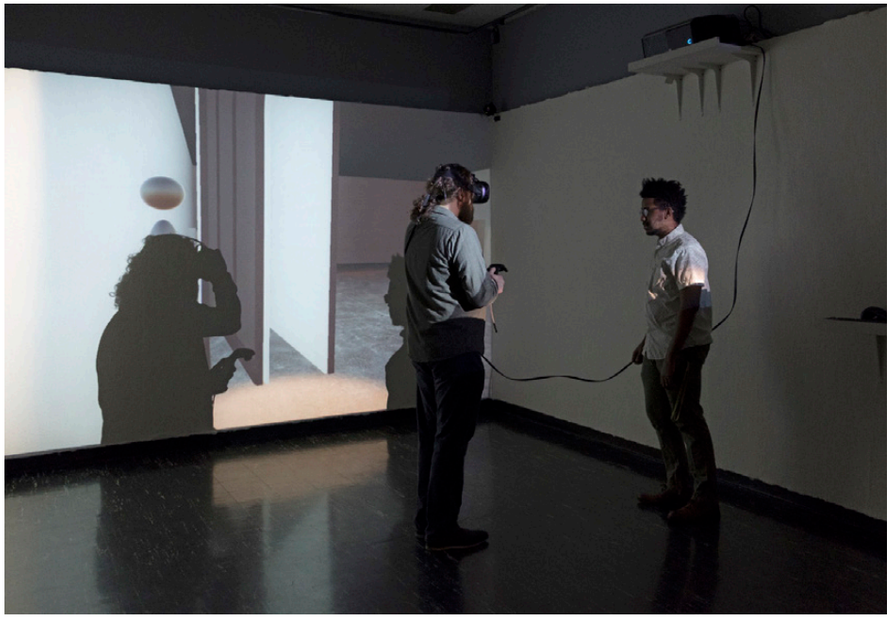
WS: So space is felt with one's ears?

BN: Yeah, that's right. (pg. 134)

[7] Kondo, Ryota, Maki Sugimoto, Kouta Minamizawa, Takayuki Hoshi, Masahiko Inami, and Michiteru Kitazaki. "Illusory body ownership of an invisible body interpolated between virtual hands and feet via visual-motor synchronicity." *Scientific Reports* 8 (2018). https://www.nature.com/articles/s41598-018-25951-2.







"What are the most efficient ways to do the thing that I want to do? What happens if I play with this aspect, or what does it feel like when this other thing happens?" So in terms of the beautiful poetics between the virtual and physical spaces, those brilliant moments started to expose themselves once the students started to actually build the thing. It didn't happen in planning phases. It's kind of like the way a painter would lay down a stroke and then address the way the stroke relates to the canvas as a whole. I think artists using VR in an intuitive or creative way can tell us a lot about what VR is and what it can do.

AB: Yes, and there is some really interesting research happening right now in terms of bodily experience and VR. Some researchers at Stanford were experimenting with adding a third arm and trying to get their participants to learn how to use it.[8] I'm not sure if those researchers are familiar with the work of Stelarc, but it seems like a nice extension of his *Third Hand* work.[9] It also makes me think of that work *Gender Swap* by BeAnotherLab, where embodiment through the eyes of someone else is explored through VR.[10] It's a really unique challenge to have to take on both the technical and artistic challenges of a work like this. For instance, one of the other interesting technical challenges that came up was the building of the mirror. And the mirror becomes a really interesting question: "What is a mirror in virtual reality?" In physical space, a mirror is a reflection of light rays off a glass surface, so if you have a virtual camera that is reflecting virtual light rays back into itself in virtual space, can you see that mirror? Those are all really complex calculations that are a bit unnecessary. In VR, it is easier to just duplicate the scene instead of having a reflection of virtual light rays. You can just build a second room that physically mirrors all of the actions that are happening in the first. So, the mirror in virtual space becomes something more like an actually mirrored 3-D space, like all of the actions in one space are duplicated and seen through a small portal that is the mirror.

RH: Well, I guess that also has to do with the limitations of the technology. The question isn't "Is it easier?" but "Is it more computationally efficient?" That computational efficiency effects sampling and refresh rates, which turn into a lot of other things in VR. Like how nauseous do you get inside of it? How real does it look? How many other things can happen at the same time? How quickly can you move without dropping frames? I think it's a really weird question, such an *Alice in Wonderland* question. Is it better to create a surface that can computationally reflect our own? Or is it better to create a backwards world that we peer into to understand our own? In many ways, this is kind of Nauman's question too. In the interview he did with Willoughby Sharp after the original installation of *Corridor Installation with Mirror—San Jose Installation (Double Wedge Corridor with Mirror)* at San José State College, Nauman talks about his use of video as a kind of electronic mirror.[11] The mirror is both a reflection and a splitting of self. You see this in a lot of his other work, when he's filming himself trying to pull his cheek out to stretch out the surface of his body or walking around the square.[12,13] He's tracing a topology, tracing the space where the body meets the reflection of the body vis-à-vis technology (and I would submit that a mirror is technology).

AB: It seems to fit so nicely into this provocation that we had for the students: How do we recreate this space and what does the recreation look like? What are the spanning differences between the recreation of space? What is the mechanism for the recreation, and how does that fit philosophically with the initial endeavors that Nauman was exploring? In some way,

[8] Lang, Ben. "Stanford Studies Control Schemes for Three-Armed Avatars in VR." *roadtovr.com* (November 17, 2016). https://www.roadtovr.com/why-have-2-arms-when-you-could-have-3-stanford-studies-control-schemes-for-three-armed-avatars-in-vr/.

[9] Stelarc, *Third Hand*, 1980–1998, performance, http://stelarc.org/?catID=20265.

[10] BeAnotherLab, *The Machine to Be Another*, 2013–present, experiential work, http://www.themachinetobeanother.org/.

[11] See Sharp, "Interview."

Willoughby Sharp: Did you consider using a video system in the San Jose piece?

Bruce Nauman: Well, in this piece the mirror takes the place of any video element. In most of the pieces with closed circuit video, the closed circuit functions as a kind of electronic mirror.

WS: So you are really throwing the spectator back on himself. That's interesting. I hadn't realized the similarity between the mirror and the video image before. Is there a natural extension into video from a certain situation, such as this piece? Or didn't you even consider that?

BN: I didn't consider it. The mirror allows you to see some place that you didn't think you could see. In other words you are seeing around the corner. (pg. 150)

[12] In 1968, Nauman produced a series of holograms, titled *Making Faces*, in which he contorted and stretched his face into a series of exaggerated gestures.

[13] *Walking in an Exaggerated Manner Around the Perimeter of a Square* (1968), 16-mm film transferred to video (black and white, silent), 10 min.

this idea of a mirror that is a portal into a data-reflected room furthers the V or the wedge in the work.

RH: Right. Well, again, that split of self. That split happens in all of his corridor pieces. I've experienced one of the first corridor pieces he did.[14] It's a single corridor created by two freestanding walls. The space between the walls is narrow like the double wedge is at the end of the V, so you are forced to walk sideways down the entire length. It felt more like a journey or a passageway to create a performance. The subtle shifts in material and perspective split the self in a way that narrows the distance between the mind and the body. It brings you closer to yourself by forcing you to focus on your movements in relationship to the material environment. Something must have happened for him during the perimeter pieces, where he was walking the square. Something at the corner, like at that moment where he turned to walk on another plane, there was also a possibility of becoming something other. This is a lot of speculation on my part, but take *Going Around the Corner Piece* (1970). In this work, Nauman took the perimeter he had drawn on the floor of his studio and extruded it vertically. He built four walls that met to create a freestanding square. At each corner, he mounted a video camera. Underneath each camera was a monitor that showed the live feed from the previous wall, so that every time you turn the corner you are chasing the ghost of the image of yourself. In a similar iteration, in *Live Taped Video Corridor* (1970), he creates another narrow corridor that butts into a wall with two televisions stacked on top of one another at the end. The two screens look identical, but as soon as you enter into the corridor you start to see yourself from behind on the top screen. When you get close enough to apprehend yourself properly on the screen, you are far away from the camera and small on the screen. So, in addition to surveilling yourself from behind, you are always chasing the apprehension of the image of yourself. If you turn around to face the camera to try to see yourself as you normally expect to in reflections, your image disappears. In both of these works there are these amazing points of difference in terms of phenomenological experience of the rendered space; you are constantly trying to reconcile the splitting of self through image. It's really easy in the fantastic experience of VR space to lose yourself in visual sensorium and have a completely retinal experience of space.

AB: Because the image is all encompassing.

RH: Exactly. But what we had was a really boring environment. I mean, boring in the best way. It wasn't a very interesting thing to look at: drywall and normal building materials.

AB: Well, I do think that—let's call it the simplicity of the design—was a really important part of what made the work so powerful. The core of Nauman's idea was really a reflection of the viewer's perception, sort of where we started with this idea of accessibility being at the heart of the work. It's somehow accessible because it's externalizing each participant's experience with the work, or at least highlighting the experience. The technology involved with virtual reality is really the exact opposite in many ways, like the user's reality is hidden and removed to construct another world. For that reason, it becomes a bit tricky to highlight the user's perceptual interaction with the work, but I think we were able to do so in certain ways. Like in the physical installation, you have your own physical presence in the space, and it's a very felt experience.

RH: Right, so what happens is this kind of splitting of cognitive self, or this reciprocity of recognition of self. So, you can only really acknowledge yourself as body in two ways: one, because of the banality of the image, and two, because of the double mirroring in both your reflection in the VR model and the reflection of the physical encounter with the physical installation. It's really asking a lot of the viewer to be able to combine these experiences.

AB: In a room that is adjacent to the physical installation.

RH: Yeah, you are asking the viewer to reconcile embodied memory, but also a kind of embodied projection of that embodied memory into the simulation. It's doing a lot of weird things.

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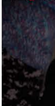
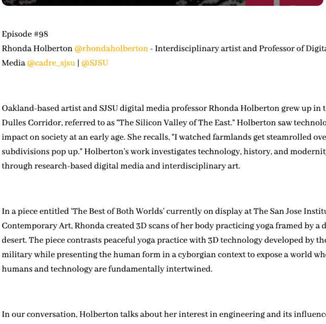
[14] Bruce Nauman, *Green Light Corridor*, 1970, on display at the Museum of Contemporary Art, San Diego, 2011.

Episode #98 -Rhonda Holberton - Interdisciplinary artist and Professor of Digital Media





Episode #98
Rhonda Holberton @rhondaholberton - Interdisciplinary artist and Professor of Digital Media @cadre_sjsu | @SJSU

Oakland-based artist and SJSU digital media professor Rhonda Holberton grew up in the Dulles Corridor, referred to as "The Silicon Valley of The East." Holberton saw technology's impact on society at an early age. She recalls, "I watched farmlands get steamrolled over, and subdivisions pop up." Holberton's work investigates technology, history, and modernity through research-based digital media and interdisciplinary art.

In a piece entitled 'The Best of Both Worlds' currently on display at The San Jose Institute of Contemporary Art, Rhonda created 3D scans of her body practicing yoga framed by a digitized desert. The piece contrasts peaceful yoga practice with 3D technology developed by the military while presenting the human form in a cyborgian context to expose a world where humans and technology are fundamentally intertwined.

In our conversation, Holberton talks about her interest in engineering and its influence on her work, what it means to be a steward of creation and the digital world, and her moral obligation to 'leave this place better than it was when she arrived.

Catch Holberton's show at ICA San Jose until August 13th, and prepare to ponder the modern world and your role in it. @icasanjose

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Episode #29 Usha Srinivasan, Founder and President of Sangam Arts

Founder, and President of Sangam Arts Usha started reconnecting with native forms of art from her home country, which led her into the local arts and culture scene.

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Episode #39 Karen Kienzle - Director of the Palo Alto Art Center

Karen Kienzle is Director of the Palo Alto Art Center and oversees this vital community organization's vision, budget, marketing efforts, and staffing. Karen brings more than 15 years of experience in arts administration to the Art Center and a Lecturer San Francisco State University's museum program.

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Episode #54 - Elizabeth Jiménez Montelongo

Elizabeth Jiménez Montelongo is a visual artist, poet, teacher, and 2021 Creative Ambassador with the Office of Cultural Affairs for the City of San Jose.

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Speculative Portraits, SFMoMA

San Francisco Museum of Modern Art April 9–September 5, 2022

I was one of five artists included in an exhibition at San Francisco Museum of Modern Art.

After being rescheduled several times due to the pandemic, Speculative Portraits opened at the San Francisco Museum of Modern Art April 9–September 5, 2022. During the exhibition run, SFMOMA received 223,525 visitors. The exhibition featured 5 artists. Tanya Zimbardo, the exhibition curator, included my digital animation, *Best of Both Worlds*. In her letter of recommendation, Zimbardo explains, " Holberton's digital animation expands on a long tradition in media art and photography of artist performances for the camera. The addition of her work to the SFMOMA collection strengthens our representation of digital media and women artists who have been pioneers in incorporating new technologies into the production of their work."

Curatorial Statement

From DNA to human emotions, Speculative Portraits explores how contemporary artists are drawing from technology and scientific research to expand on ideas of portraiture and identity. Spanning from digital animation to sculpture, this focused presentation brings together select works by Heather Dewey-Hagborg, Lynn Hershman Leeson, Rhonda Holberton, Mika Tajima, and Gail Wight.


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Intangibly Concrete
SPECULATIVE PORTRAITS ENVISIONS
NEW MODES OF PORTRAITURE

Intangibly Concrete

SPECULATIVE PORTRAITS ENVISIONS NEW MODES OF PORTRAITURE

Encounter bold works that expand ideas of what portraiture can be—from animation of human emotions to an archive of an artist's work encoded in DNA.

Featuring contemporary artists Heather Dewey-Hagborg, Lynn Hershman Leeson, Rhonda Holberton, Mika Tajima, and Gail Wight, *Speculative Portraits* explores how artworks that draw from scientific research or technology can expand how human identity and expression are depicted.

For Tanya Zimbardo, assistant curator of media arts and exhibition curator, Hershman Leeson's *Room #8* (2006–18), a major new acquisition, served as a key point of departure for the presentation; the work marks the conclusion of the artist's 12-year investigation into the biological nature of identity. The resulting installation consists of two vials contained within a mirror box through a lab door window. One vial contains the artist's archived work "coded" within synthetic DNA created with Twist Bioscience, the other a custom antibody created with the help of biomedical researcher Dr. Thomas Huber of Novartis Labs that features amino acids in its molecular structure that spell out "LYNN HERSHMAN." As Hershman Leeson reflects in a 2020 *Artforum* interview, "If you think of artists as antibodies, going into a toxic space of culture and trying to identify the diseased parts and heal it, that's a life project. I've been fortunate that I've lived long enough to be

able to use DNA to make some sort of haiku of my life. While the vials containing DNA and antibodies in *Room #8* are physically small, they represent much of what I've ever lived and most of what I've thought."

Radical Love (2016) by Heather Dewey-Hagborg, meanwhile, underscores how advancements in DNA phenotyping—a technique most common in crime analysis and forensics—can entrench gender identity stereotypes. Through a collaborative process with whistleblower and transgender activist Chelsea E. Manning, the work consists of two 3D-printed faces based on an analysis of DNA from hair clippings and cheek swabs Manning sent to the artist from prison. Dewey-Hagborg created two life-sized face masks, one that was algorithmically gender-neutral, and one that was assigned female. The differences in the two portraits underscore the biases and misconceptions behind these purportedly objective techniques.

Other pieces in the exhibition include Mika Tajima's *Human Synth (Los Angeles)* (2019), a projected animation that mines social media feeds in Los Angeles and then displays the collective sentiment of a population in real time, by making it visible in the mesmerizing form, shape, hue, and speed of digital smoke. "Tajima brings together here old and new forms of prediction, the ancient method of smoke divination with predictive sentiment analysis," says Zimbardo.

Gail Wight likewise reflects on emotional states, but gestures to the psychopharmaceutical industry and its role in claiming that various mood enhancers and cures can be found by altering neurochemistry. Wight revisits *One Hundred Links (for Rousseau)* (1992/2022) for this show, an early poetic piece that presents an array of neurotransmitters in tests tubes labeled with a state of mind, terms derived not only from drug companies, but also from literature and folklore.

Through Microsoft 3D Kinect scanning technology, Rhonda Holberton renders a pixelated figure that goes through various Vinyasa yoga poses in a virtual landscape. The transitions in the digital animation *Best of Both Worlds* (2016) parallel our experience of switching between selves in front of a computer screen. While the psychic shifts in digital space can feel traumatic for some, Holberton believes it also increases awareness of the fluidity of identity.

The works in *Speculative Portraits* explore the intersections of art, technology, and science to reflect on how we understand and present our biological and digital selves. The exhibition "creates an intergenerational dialogue, including three Bay Area artists in the show who have pioneered new forms of media," says Zimbardo. It complements artistic approaches to portraiture and connections between science and art featured elsewhere at the museum this spring. Take this opportunity to see human identity and thought manifested in ways you may have never seen before.

Speculative Portraits is on view April 9 through September 5 on Floor 7. Learn more at **sfmoma.org/speculative-portraits**.

Opposite: Heather Dewey-Hagborg, **Radical Love**, 2016

Collection SFMOMA, Accessions Committee Fund purchase; © Heather Dewey-Hagborg; photo: courtesy the artist and Fridman Gallery, New York

Above: Rhonda Holberton, **Best of Both Worlds**, 2016 (still)

Collection SFMOMA, purchase through a gift of Nion McEvoy; © Rhonda Holberton, photo: courtesy the artist and CULT Aimee Friberg Exhibitions, San Francisco

Left: Lynn Hershman Leeson, **Room #8**, 2006–18 (detail)

Collection SFMOMA, Accessions Committee Fund with additional support from Pam Kramlich and Kim Anstatt Morton; the Ruth Nash Fund; and purchase, by exchange, through a gift of Peggy Guggenheim; © Lynn Hershman Leeson; photo: Franz Wamhof; courtesy the artist

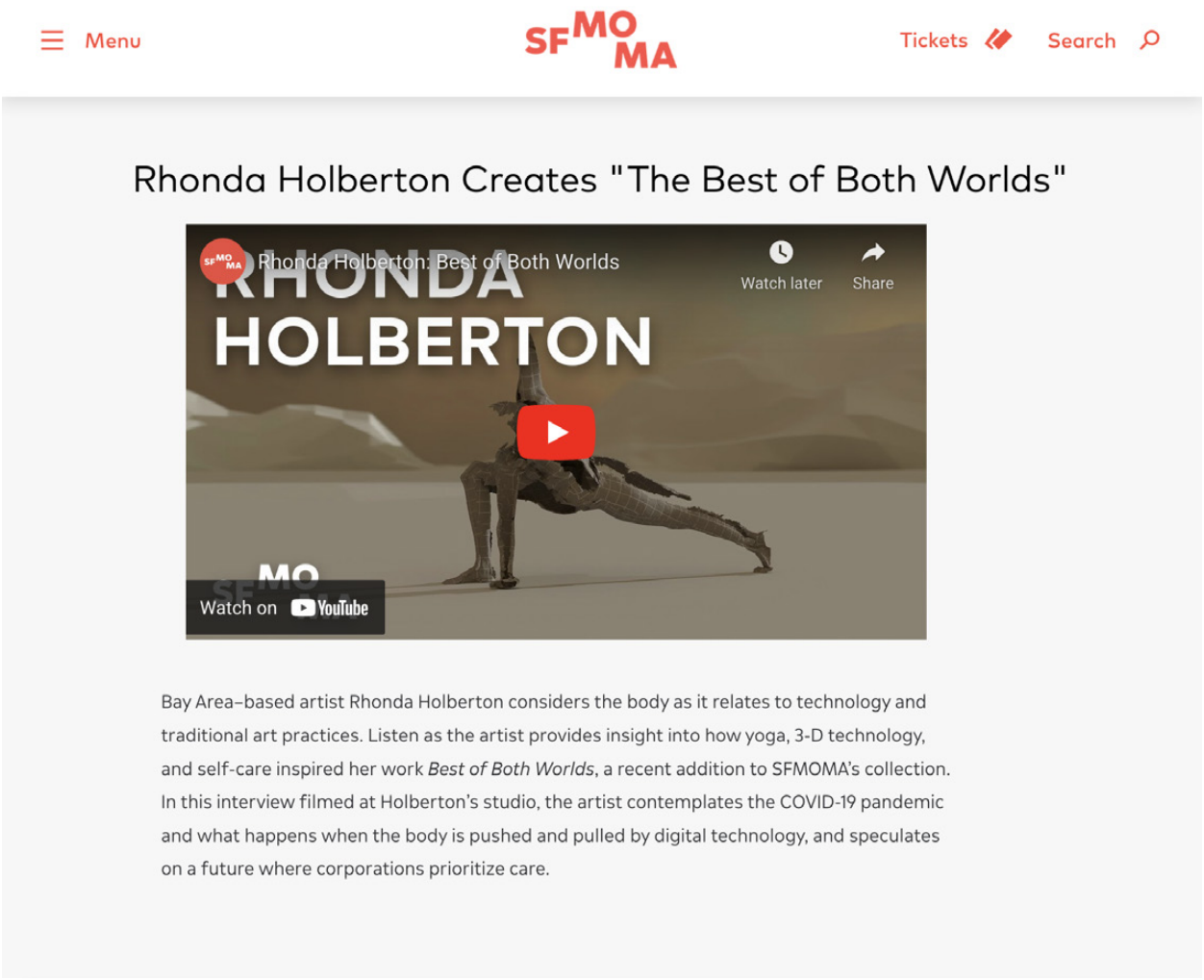
Rhonda Holberton
Born 1981, Falls Church, Virginia, U.S.; based in Oakland, U.S.
Best of Both Worlds
2016
Single-channel HD video, silent, 9:46 min.

Wall Text

The transitions in Best of Both Worlds parallel how individuals shift between physical and virtual selves, performing different identities in front of a computer screen. Using Microsoft's Kinect 3D technology, Holberton scanned her body to make a 3D model of a human figure. The artist then animated this form going through a Vinyasa yoga sequence as if it were a means of repair. While not a self-portrait, this artwork was informed by Holberton's experience of early symptoms of an autoimmune disorder: "I was thinking about the changes in my body as expressions of the ways technology, internalized notions of productivity, and expectations of performance on social media were doing harm to the biological body."

Exhibition Media

As a part of the exhibition, SFMoMA produced an interview with me in my studio and published it on their website (https://www.sfmoma.org/watch/rhonda-holberton/). Curator Tanya Zimbardo discusses my participation in her letter of reference, “Holberton’s commitment to participating in opportunities like artist talks and conversations, and museum-produced on-camera interviews can together be considered as part of her larger public service and public scholarship.”



Screenshot of my interview on SFMoMA’s website: https://www.sfmoma.org/watch/rhonda-holberton/

Educational & Service Connections

In Fall 2018 I sponsored Tanya Zimbardo, assistant curator SFMoMA, for the Thompson Gallery Tues Night Lecture Series. As part of the series, I helped students in my Art 107 class put together an exhibition of Augmented Reality artworks in the student galleries that responded directly to concepts outlined in her lecture, *Artist Walks in the Bay Area Art*. In Fall 2020, I invited Tanya to a discussion in my ART 210 Graduate Seminar in Digital Media Art class. The class focused on alternative exhibition spaces and practices. The topic of the class was in large part a response to the pandemic, but was also responding to my research projects focused on VR & AR exhibitions and archiving.

I asked Tanya to write the letter to contextualize SFMoMA's institutional role and the framework of the Speculative Portraits exhibition. I was surprised and humbled to read the four-page letter she sent which does that, but also addresses my teaching practices and some of the service oriented projects as well. I do my best to send out regular research updates to my colleagues at other institutions, which feature some of the public facing work I've done at SJSU. I saw Tanya on the Zoom Participant list for some of the events, but had no idea she was even aware of some of the other activities that she discusses in the letter. It was clear from her letter that the work I'm doing at SJSU has made an impact on her, I'd like to think that this is an example of some of the rippling effects the work we are doing at SJSU is having outside of the university;

"Holberton belongs to a generation of artist educators who are clearly dedicated to fostering a more diverse and inclusive field of new media. Holberton is among those who are addressing these biases and gaps in how media art histories are taught. While students of Holberton may not necessarily go on to produce work in a similar vein, I believe that in addition to her course design and mentorship, Holberton's artistic practice provides an inspirational model for many – to start with where you are, to draw from lived experiences and relationships to belongings and surroundings. Holberton has pursued opportunities for her classes to gain firsthand experience with leading arts professionals of different generations, including through SFMOMA's higher education offerings of class discussions.

[...]

In 2018, former SJSU faculty member Dore Bowen and guest co-curator Constance M. Lewallen reinstalled Nauman's corridor piece *Bruce Nauman's Corridor Installation with Mirror - San Jose Installation (Double Wedge Corridor with Mirror)* in the Natalie and James Thompson Art Gallery where it was first built and installed at San Jose State College in May 1970. Since the gallery space is precisely as it was when Nauman installed his V-shaped corridor in its far corner, the exhibition offered viewers the unique opportunity to experience firsthand this artwork as the artist originally conceived it. This case study was complemented by a virtual reality corridor in the exhibition, a different type of perceptual and somatic experience that directly engaged student groups in its creation and experience, which was led by faculty Andrew Blanton and Holberton.

Through a virtual public program moderated by Holberton in 2021, *The Future of Alternative Art Exhibitions* (part of SJSU *Wish You Were Here Design Contest*), she and the panelists extended these ideas around exhibition-making online in a post-pandemic context. I was likewise incredibly impressed by the recent collaboration she led between her class and the San José Museum of Art team on the occasion of its exhibition *Hito Steyerl: Factory of the Sun* (2022). Accessed through a QR code and online, *The Identity Factory* posed key questions and user participation within the online platform New Art City. It provided an innovative approach to interpreting and expanding on ideas of an artwork for a museum public, while serving to introduce SJSU students in a meaningful way to a community-oriented museum and an internationally renowned artist. ”

Group Exhibition: Show Me as I Want to Be Seen Contemporary Jewish Museum

Feb 7, 2019–Jul 7, 2019

Assistant Curator Natasha Matteson of the Contemporary Jewish Museum included 9 pieces of my work in a group exhibition of 10 contemporary examining presentation of self and fluidity of identity in conversation with artist and writer Claude Cahun (1894–1954) that ran from Feb 7, 2019–Jul 7, 2019. The exhibition is accompanied by a 112-page, fully illustrated hardcover catalog published by The CJM.

In addition to the installation and catalog, the museum also produced a video interview with me, asked me to give a presentation of my work to the museum's directors and staff, and published a conversation I had with the director of marketing on the museums' website.

The exhibition was well received and several art historians and critics wrote reviews specifically addressing my work in news publications, art journals, and magazines. Charles Demeriais, Art Critic for the SF Chronicle, wrote of my work, "Rhonda Holberton [...] makes a particularly strong showing with works that make coldly poetic use of video and digital media," for the San Francisco Chronicle. Tirza True Latimer, Associate Professor and Chair of the Visual and Critical Studies Graduate Program at California College of the Arts wrote about my work for the art journal Square Cylinder, "FOIL, one of my favorite pieces (again by Holberton), takes aim at state sponsored systems of surveillance and control." Harry Tafoya wrote for the art magazine, Hyperallergic, "Rhonda Holberton is uniquely attuned to the weirdness and multiplicity of performed selves online and offers some of the show's best work with her uncanny, half-scanned animated pieces."

Curatorial Statement for the Exhibition
How do we depict "the self" if it is unknowable, inherently constructed, and ever-changing? How does the concept of portraiture shift when categories are in crisis and visibility itself is problematic? Jewish thought on performed and fluid identity can be interpreted in the Book of Esther in the Hebrew Bible, an archetypal story of an empowered declaration of Jewish identity. Likewise, the Talmudic notion of svara is a potent entry-point to Jewish practices of self-determination, themes that animate Show Me as I Want to Be Seen.

Taking the work of French Jewish artist and writer Claude Cahun (1894–1954) and her lifelong lover and collaborator Marcel Moore (1892–1972) as its starting point, Show Me as I Want to Be Seen examines the empowered representation of fluid and complex identity. Cahun (born Lucy Schwob) and Moore (born Suzanne Malherbe) were pioneers in their bold representations of an unfixed self. This exhibition positions their work in dialogue with ten contemporary artists working in painting, sculpture, photography, video, and 3-D animation. The contemporary artists in the exhibition—Nicole Eisenman, Rhonda Holberton, Hiwa K, Young Joon Kwak, Zanele Muholi, Toyin Ojih Odutola, Gabby Rosenberg, Tschabalala Self, Davina Semo, and Isabel Yellin—also address notions of the opaque, constructed, and shifting self.

Press Extracts About My Work (Full-lengths articles included in Press Section)

A Probing Look at How We Perform and Present the Self, Harry Tafoya, Hyperallergic
"Rhonda Holberton is uniquely attuned to the weirdness and multiplicity of performed selves online and offers some of the show's best work with her uncanny, half-scanned animated pieces."

Show Me as I Want to be Seen @ CJM, Square Cylinder
Tirza True Latimer, Associate Professor and Chair of the Visual and Critical Studies Graduate Program at California College of the Arts
"FOIL, one of my favorite pieces (again by Holberton), takes aim at state sponsored systems of surveillance and control. Research conducted by the CIA in the early 1990s acknowledges human scent as a highly accurate biometric, more failsafe than fingerprinting, facial recognition or retinal scanning. Holberton created FOIL, a fragrance line distilled from smelly T-shirts donated by friends. She bottled the fragrances in atomizers, which can serve to mask a person's signature scent and foil this form of olfactory surveillance."

Artists Explore Self with Nuance and Complexity, SF/Arts
Jean Schiffman, Arts Journalist
"Rhonda Holberton's large digital animations are particularly unsettling: In one, a headless, fragmented and disintegrating body is doing yoga asanas; Holberton scanned her own body to create a model, then animated it. "She's posing questions about whether and how we might be able to represent ourselves in virtual space with avatars," points out Matteson."

Gender fluidity & mutable identity, Bay Area Reporter
Sura Wood, Arts & Culture Critic
"Oakland artist Rhonda Holberton is represented by nine installations, each more fascinating and mind-boggling than the next. Too bad there weren't more. Among other things, she envisions a world where the human body is obsolete, a relief or a disaster, depending on one's point of view, but at least there'd be no hay fever. For the digital animation "The Ground Was Never Stable in the First Place" (2015), she tried on football padding and riot gear, 3-D scanned her body, then animated the scan walking forward, combining movement of soldiers marching and fashion models strolling down the runway. The result: a plaster-white, robotic space soldier of indeterminate gender, wearing breastplate armor and arm and shin guards, its face half-blown off a la "The Terminator" on a bad day. Soulless and unstoppable, it strides relentlessly toward the viewer. Even spookier is "The Italian Navigator Has Landed in the New World" (2014), for which Holberton also used keyframe animation techniques similar to puppetry or stop-motion. Headless, missing part of an arm, and the flesh-tone of raw chicken, a limber figure resembling a ripped egg carton goes through the paces of a virtual yoga routine, a spectacle disturbing in a way that's difficult to overstate."

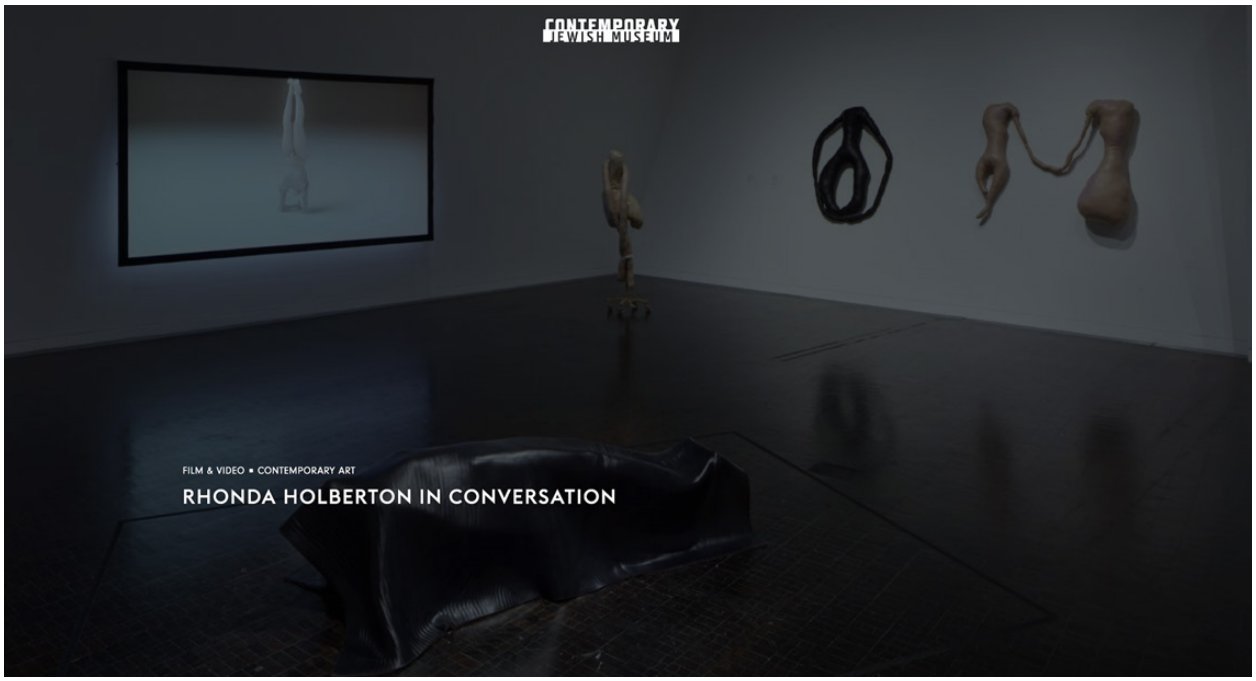
'Beneath This Mask, Another Mask': Identity is Unfixed in CJM's 'Show Me', KQED Arts
Sarah Hotchkiss, Visual Arts Editor, KQED Arts

"Rhonda Holberton's Just This One Thing—part of the show but only visible to those who have the wherewithal to scroll through the Oakland-based artist's Instagram feed—skewers the spare, ecru-hued "Instagram aesthetics" of influencers' lifestyle posts.

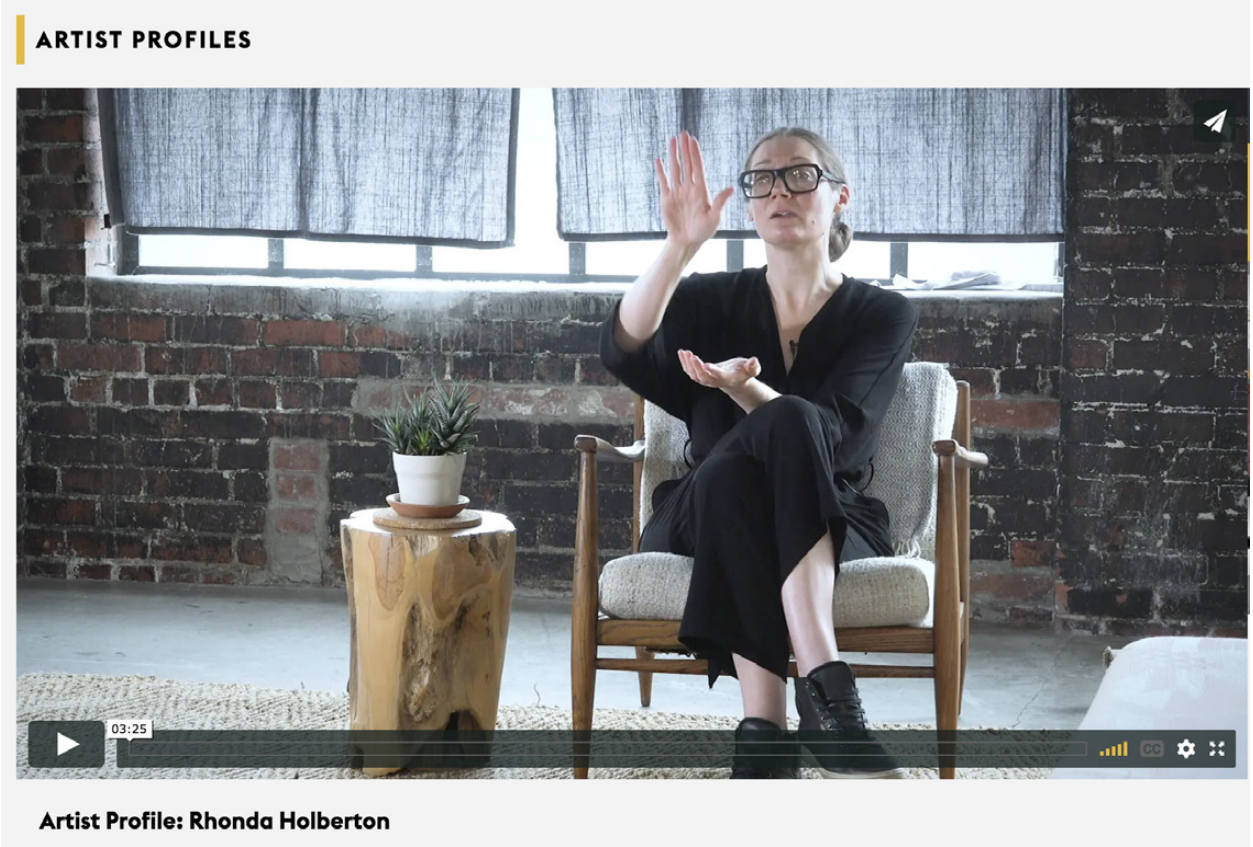
A croissant, a stack of baskets, handmade ceramics—Holberton creates the images by 3D-scanning actual objects and staging them in virtual space. In a quick scroll-by, the digital fabrications appear innocuous, ordinary. Only close inspection reveals them to be oddly pixelated approximations. Tagging each image #stilllife, along with hashtags like #rainydays or #sundaymorning, Holberton launches these interruptions into the stream of "real" Instagram posts, themselves approximations of actual lives."

'Show Me as I Want to be Seen' examines artistic and gender identity, SF Chronicle
Charles Desmarais, Art Critic for the San Francisco Chronicle
"Rhonda Holberton, who lives and works in Oakland, makes a particularly strong showing with works that make coldly poetic use of video and digital media."

Interviews



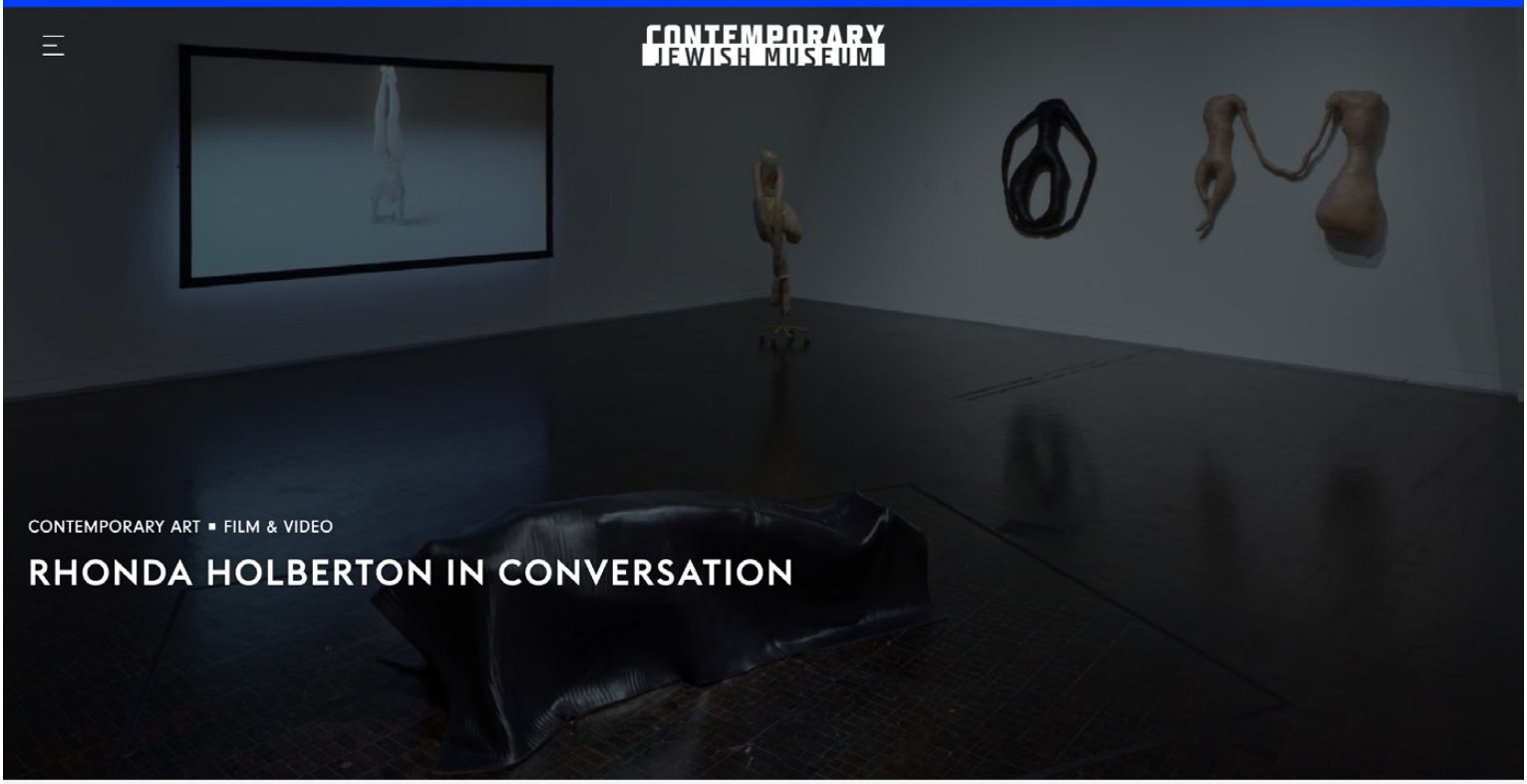
Interview: Rhonda Holberton in Conversation
Published on the The Contemporary Jewish Museum's Website
Rhonda Holberton is an Oakland-based artist who employs digital and interactive technologies to examine "the boundaries of the observable universe" and humans' role or representation therein. Featured in Show Me as I Want to Be Seen, on view from February 7 to July 7, 2019, Holberton's works interrogate how digital selves manifest, and what their depiction means for physical or IRL (in real life) identity. The Contemporary Jewish Museum's director of marketing and communications, Sarah Bailey Hogarty, recently sat down with Holberton to discuss this intersection of art, technology, and identity.



Links to Video Profile

- https://vimeo.com/317154135
- https://www.thecjm.org/learn_resources/426

Artist Profile–Rhonda Holberton. Oakland-based artist Rhonda Holberton shares her thoughts on her artistic practice at a recent studio visit. Video produced by the Contemporary Jewish Museum.



CONTEMPORARY ART ■ FILM & VIDEO

RHONDA HOLBERTON IN CONVERSATION

Rhonda Holberton is an Oakland-based artist who employs digital and interactive technologies to examine "the boundaries of the observable universe" and humans' role or representation therein. Featured in *Show Me as I Want to Be Seen*, on view from February 7 to July 7, 2019, Holberton's works interrogate how digital selves manifest, and what their depiction means for physical or IRL (in real life) identity. The Contemporary Jewish Museum's director of marketing and communications, Sarah Bailey Hogarty, recently sat down with Holberton to discuss this intersection of art, technology, and identity.

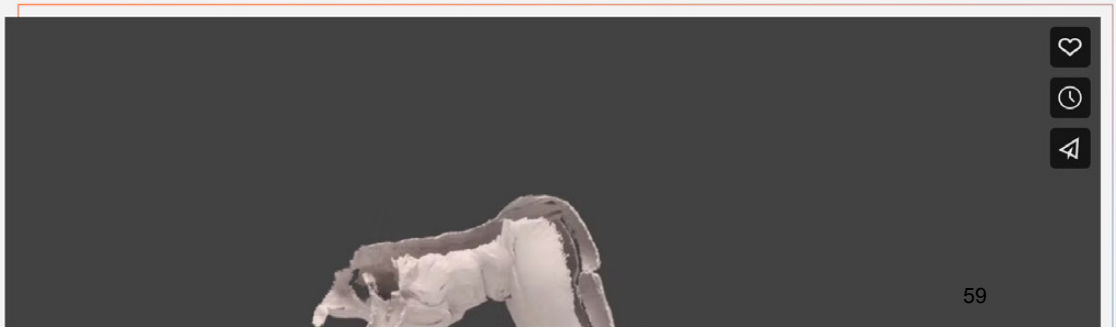
ON THE BOUNDARIES OF TECHNOLOGY

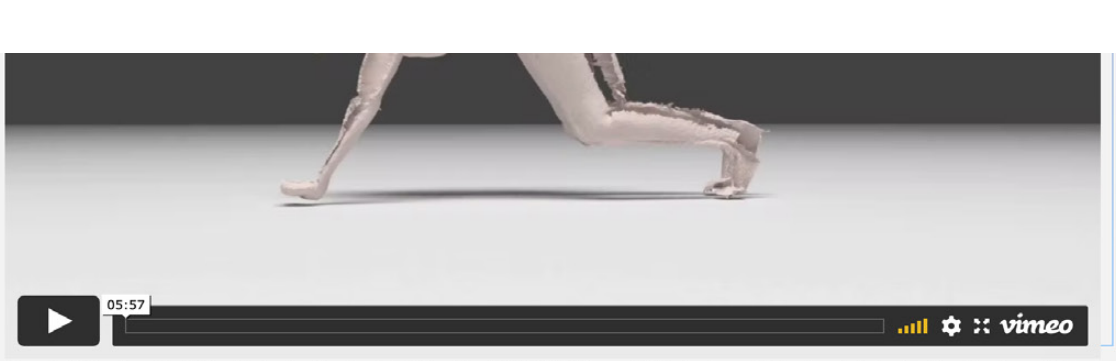
Sarah Bailey Hogarty: Let's start with how you use technology as a medium. In your work, it seems like you're trying to push the boundaries and the limits of the software that you use. Are you trying to break it, to find the twenty-first century Bob Rossian happy accident?

Rhonda Holberton: Yeah, totally. I definitely push into the technological capabilities of the tools I use, but I'm also frequently pressing into my own capabilities. There's this kind of slippage or gap that emerges between the two that is unpredictable. A lot gets exposed when there's a glitch, when you peek behind the curtain and get to see the operational mechanisms behind it. That's when the technology becomes more of an agent in the production rather than just simply a tool. There's this collaboration, or back and forth, when the technology and myself are both pressed to our limits. That's especially true for *The Italian Navigator Has Landed in the New World* [on view in *Show Me as I Want to Be Seen*], which was the first animation I tackled.

I'd been working with the 3D scans for a while and was just creating static broken bodies. Then I had a flash of one of these bodies trying to repair itself by going through this maintenance of yoga. That was the kernel of inspiration.

Now, I had no idea how to actually animate the scans that I'd been making. I was working as an engineer and was comfortable with static 3D models, but not animated. I was teaching myself how to use this broken scan. There are places where the technology is clearly breaking in the scan, but there's also places where as an animator I'm also doing it wrong, and so it kind of slips in between these places. Then a hand dips through the floor or this impossible kind of pose emerges, and then it really starts exposing parts of itself but in layers. It's not immediately evident what's going on.





Rhonda Holberton, *The Italian Navigator Has Landed in the New World,* 2014 (excerpt). Single-channel HD color digital animation. Courtesy of the artist.

SBH: There seems to be a parallel between pushing the medium and pushing your own skills as a way to lay something bare, or open something up—to really get at something about who you are as an artist, or what your process is—that feels related to this search for or understanding of self.

RH: It's interesting that you say that. I've worked as a mechanical engineer, so I like to take things apart to see how they work—like breaking something or pushing into those boundaries to reveal operational mechanisms.

On the other hand, that space of understanding of self, or understanding of how something works operationally, functions in parallel. I think part of what I'm trying to define for myself when I do that is a boundary, like a limit.

ON SELF IN THE AGE OF SURVEILLANCE

SBH: We live in the surveillance age where we are constantly either self-monitored on social media or being watched on closed-circuit television or surveillance cameras. How do you think the context of constantly being seen impacts the way we think about self?

RH: I think that performance of identity has been with us for a while, maybe always. Once you know you're being seen, you're kind of necessarily splitting yourself. In this conversation, for example, there's feedback back and forth between two humans. I'm listening, I'm trying to understand what you are saying to me, and trying to relate and perform a certain amount of conceptual or linguistic framework so that we meet in the middle.

When there's a camera looking at me, I don't have the feedback from the other side, so I project psychically to who might be on the other side. Because we do that, I think what ends up happening is that we perform lots of different types of identities very quickly. I think that frequency of transition is relatively new, and has led to psychic stress on lots of people. But it's also opened up conversations about fluid identity as we understand more about the mechanism of splitting the self, and how that self is received on the other side of the screen or on the other side of the surveillance camera.

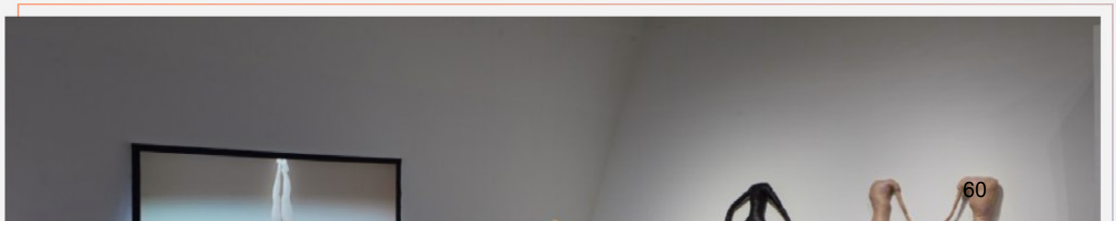
SBH: Do you think that the splitting of self via technology or that breaking up of self to perform in various formats has informed the evolution in gender fluidity or LGBTQIA+ categorization (or lack thereof)? Or do you think they are informing each other at the same time?

RH: We feel it more through the performative action of digitally switching between selves: I am now writing an email for work; and now there is this layer of Facebook behind that; and then there's Instagram behind that; and Twitter behind that. All of these identities get performed simultaneously, with more frequency.

Another thing that's happening is we get to see others perform identity. As a viewer, we receive that consciousness of gender fluidity, that consciousness of cultural identity—even if we have a narrower scope, we still understand what it means to perform in that way. We both see it being performed while we are we're doing it ourselves. I think that the understanding through *seeing*, through bearing witness (and eventual generosity that might emerge), actually co-evolves with the performance.

SBH: Something weird happens during this mediation of self through the screen when the screen becomes anthropomorphized—and then what happens to the actual human self as a byproduct of that interaction?

RH: Actually, that's exactly what I was thinking about when I was making *Water Striders*. The water strider is a creature that lives both on top of the surface as well as under the water. That image of someone that lives on the surface of, as well as under, a permeable boundary became a metaphor for the digital screen for me. I was thinking about the silicone blanket that covers the human form underneath very much as a physicalized screen that becomes skin. I was coming out of a long distance relationship, and the screen became this amazing site for intimacy. I would be having such intense feelings of connection with this other human, but then as soon as the Skype call ends, I'm just alone in the room.



Rhonda Holberton, *Water Striders*, 2015 (installation view). Platinum cure silicone, nylon power mesh, and polyurethane foam. Courtesy of the artist. Photo by Johnna Arnold.

SBH: It's super abrupt.

RH: Exactly. So much of that time was me feeling like I was psychically going through the tunnel, going through the screen—but that only made sense with this kind of perceived audience. But when I turn the screen off, I'm just alone in the room and everything else is the same but I feel completely different. I was really interested in teasing that out.

SBH: This gets back to the question of splitting the self between the physical and digital worlds. We talked about the positive ramifications of that in the context of self-determination and gender fluidity, but there's also some danger there. Your work in many ways really oscillates between optimism and pessimism—how do you feel about the potential for danger in the digital schism of the self?

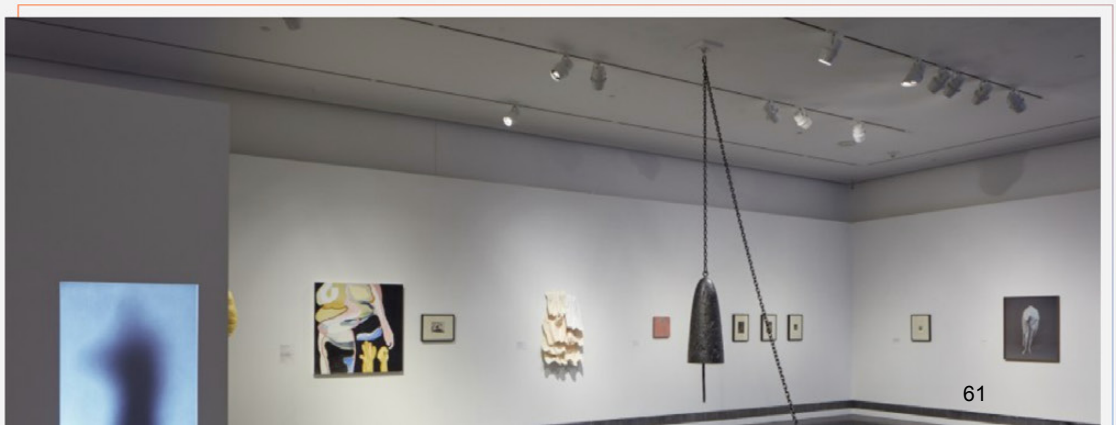
RH: There are lots of different dangers. I'll address maybe two: one is kind of an internal psychological danger and then one is kind of an external, economic or political danger.

We'll start with the internal danger. I think a lot of that has to do with the feedback mechanism. We're social creatures; we have to be. Digital technology promises to provide more of that interaction. But what type of interaction is it? Has it actually helped human interaction? When we become addicted, when we pull back from the physical world and push further into the digital social sphere, we don't have the natural feedback. It's easier to just throw things on the wall and see what sticks, which allows for behaviors like trolling. We see the extremes, rather than the bell curve distribution of healthy interaction.

The second danger is about the incredible value of our digital data. We're starting to see massive wealth accumulation around storing and analyzing that data—and although we're the ones producing the data, we don't own it and we can't sell it. Somebody else is making money from it. I think we could write better code to trigger algorithmic micro payments between interactions to profit the real, human owners of the data.

My other great fear is that we're engaged and distracted by something that can feel very positive, but it's still not based in the material world. Capitalism fails to appropriately account for things like water, air, environmental stability—and while we're distracted, climate change is destabilizing the material world.

But Google and Facebook are also really good at figuring out what motivates people and that could be potentially really powerful. If what we need is collective action on a massive scale, what better places to start than these companies that know so much about us. What if, instead of being slowly nudged toward a product, I was being slowly nudged toward a small behavioral change that was sustainable? Not just a massive revolutionary action, but rather a kind of daily practice that encourages me to turn the lights off. These small actions applied over a massive population could actually start shifting scales of energy.



Rhonda Holberton, */no stats the same*, 2017 (installation view, far left). Single-channel HD color digital animation, sound, frosted acrylic, drywall, and wood. Courtesy of the artist and CULT | Aimee Friberg Exhibitions, San Francisco. Photo by Johnna Arnold.

ON INVISIBLE MAGIC

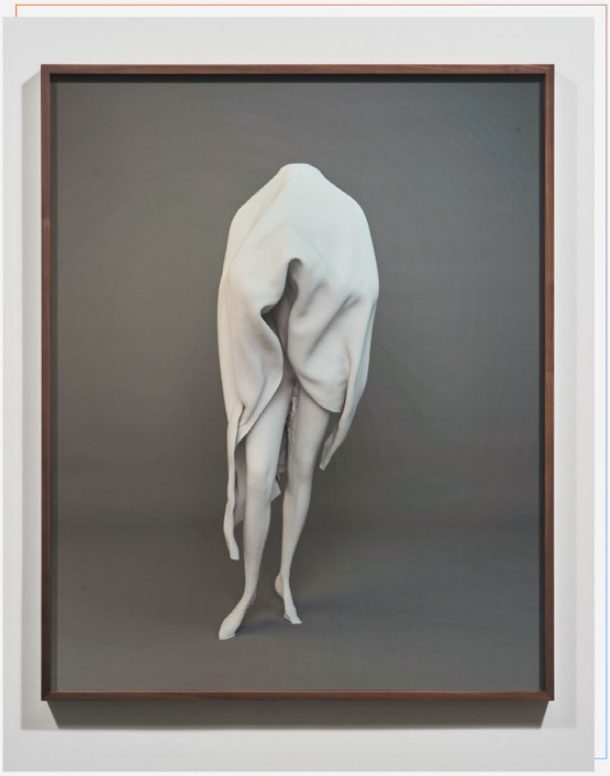
SBH: A lot of your work involves making the invisible visible, or engaging with the invisible, and so much of technology is invisible—this binary code that drives everything from the back end. How do unseen forces inform your work and your practice?

RH: Bringing some of those back-end, operational mechanisms to the fore, making them visible and physical, works best in art. As an artist, I'm not expected to build a functional product. I can have the glitch. The broken parts can be exposed in ways that can centralize that conversation, or expose those things.

The things that make the world enjoyable for humans are frequently more speculative, more emotional, or have more mystery embedded in them, what I call magic, or something. Beautiful, inexplicable moments of poetry. I think that bringing those two things together, making something that is invisible visible has a little bit of magic in it.

SBH: Right. I mean, so much of technology is magical.

RH: We live in a crazy time. If we can sustain this human project, we're so close to so many weird, wild, wonderful technological events. I want that to happen, but I think if we're not careful about taking care of some of the other foundational aspects that supports that system, like agriculture and distribution of labor and all of these other things, we won't get there.



Rhonda Holberton, *A/fisherman/hunts/a/shark/with/a/gun*, 2017. Archival pigment print. Courtesy of the artist and CULT | Aimee Friberg Exhibitions, San Francisco.

ON SOCIAL MEDIA AND DESIRE

SBH: Can you share a little bit about your Instagram account—your process and your thinking behind it?

RH: It's been kind of an art project. Before I opened an Instagram account, I was just using it to watch and to see how this whole thing worked. I found myself drawn to certain types of images, or following brands rather than people—and wondering what does it mean for a brand to have an Instagram account?

Anyway, I was having anxiety about the future, so I went go see a psychic, as you do when you're having anxiety about the future.

She gave me an assignment to imagine a happy and healthy home, and I couldn't do it. But I could imagine this little tabletop, or lifestyle images, and I'm like, "Where are these coming from?" Then I realized they were coming from my Instagram feed. Even in my most meditative state, that's what was coming to the fore, which I think is revealing of a really powerful thing. We think that we're just kind of scrolling and scrolling and not paying attention, but it's in there.

SBH: Like a Dopamine imprint.

RH: Exactly, or prescribed rules about what a lifestyle should look like. Of course, I can only see this little tabletop, because you don't get a 360 view of that—you just get these little moments.

SBH: But it could be chaos all around.

RH: I ended up creating these little virtual sets—finding and scanning images that I have that dopamine reaction to—"I want that!", and then realizing, "Oh, I already own these objects." So I make 3D scans of my own objects and then restage them in these environments where I imagined they came from—like the storefront window, or in a lighted studio scenario. In this virtual space, there's this little tiny moment that exists—a broken 3D scan in a perfect world, and behind that is void or chaos.

SBH: It goes back to making the unseen seen.

RH: Exactly. I point the virtual camera away from the void; the chaos of lights and filters, toward the 3D scans of the physical objects in my life to create images that I make visible when I repost them to Instagram.

Rhonda Holberton, *Still Life*, 2017. Archival pigment print. Courtesy of the artist and CULT | Aimee Friberg Exhibitions, San Francisco.

SBH: You talk about how these desires are fed to us through social media, which is increasingly about commerce rather than human connection. How do you see capitalism informing concepts of self?

RH: Right. The desire to sell a product in and of itself isn't necessarily a bad thing. But where it ends up breaking down is when we spend so much time in constructed visual environments vis-a-vis the screen, we stop taking in as much information from the real world.

My image of what people are doing, my imagination about what people are doing, how they're spending their time, and what they look like is very different than my experience out in the real world. These worlds don't align, but I am constantly overlaying a mental projection of the world—much of which is informed by human interactions on social media—on top of my IRL experience.

When we talk about brands as individuals, what does that mean? That becomes a little bit slippery and I don't think we've really reconciled how to address that. Advertising uses fear of inadequacy to sell product to us. If we're performing in the same way, then our identity stems from fear of anxiety, or as a product for other people.

See Rhonda Holberton's work on view in *Show Me as I Want to Be Seen* through July 7, 2019.

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TERMS & CONDITIONS | PRIVACY POLICY

Rhonda Holberton

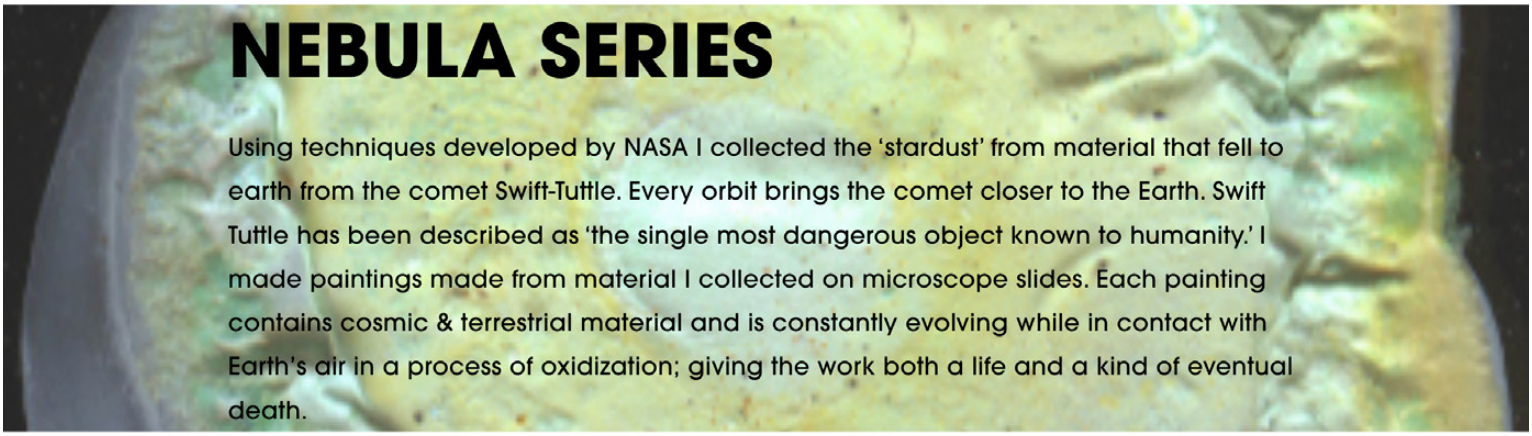
"My interdisciplinary art practice illuminates the politics of the corporeal body navigating through virtual space. Recent projects utilize networked VR designed to trigger subtle interactions of electrons between biological and digital systems through reiki, a speculative cosmetic company whose mission is focused on the potential of products to create distributed performative action ritualizing the Anthropocene, and collaborative image making with Neural Networks.

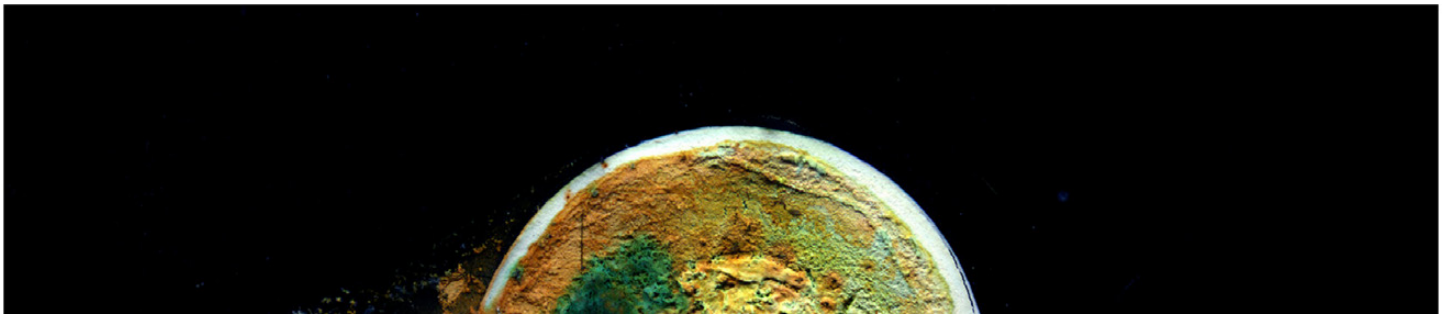
My work hijacks existing technologies to reveal invisible histories and make space in the ordinary for the creation of alternative narratives. The installations, videos, and sculpture I create are often results of experiments using scientific methodologies that return metaphysical hypotheses rather than empirical data. These methods have included everything from stardust harvesting to digging holes on the remediated landscapes of decommissioned military bases.

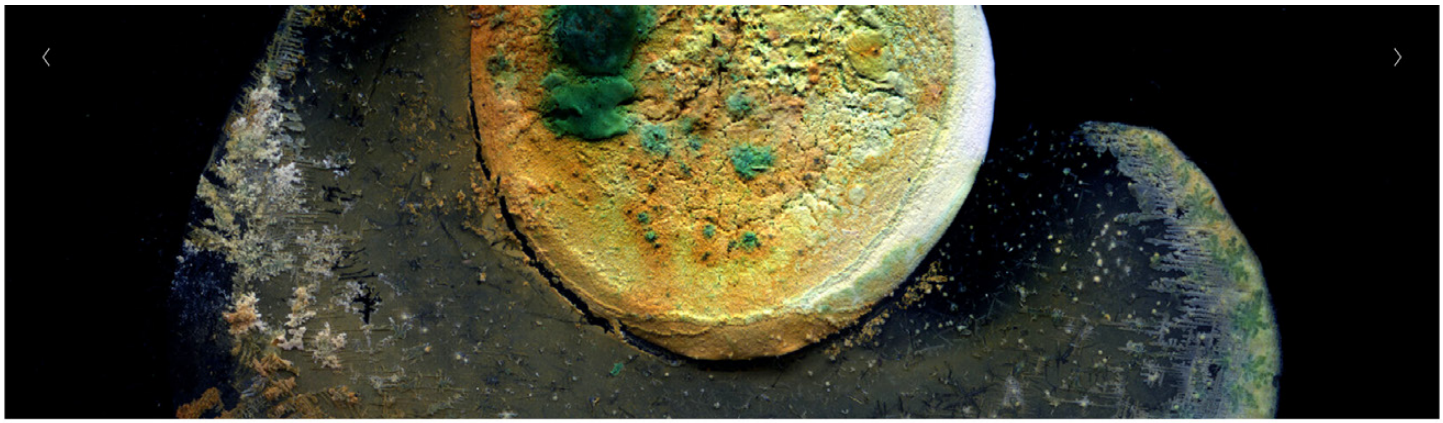
We are living through a crisis of reality. The collective reality-making produced by digital platforms support parallel but rarely overlapping realities. At the same time, the material environment and physical bodies living within it are approaching a critical moment of climate-induced destabilization that can only be mitigated by collective action. The solutions to existential problems like these must come from existential analytical frameworks.

I use materials and platforms that physically connect human bodies through technology, highlighting they ways signals of digitally engineered worlds have physical ramifications; how the extraction of materials from the environment that support technology are destabilizing the plant; and how we might write better rules for digital platforms that consider the external effects on all bodies and respect the most vulnerable ones."

-Rhonda Holberton



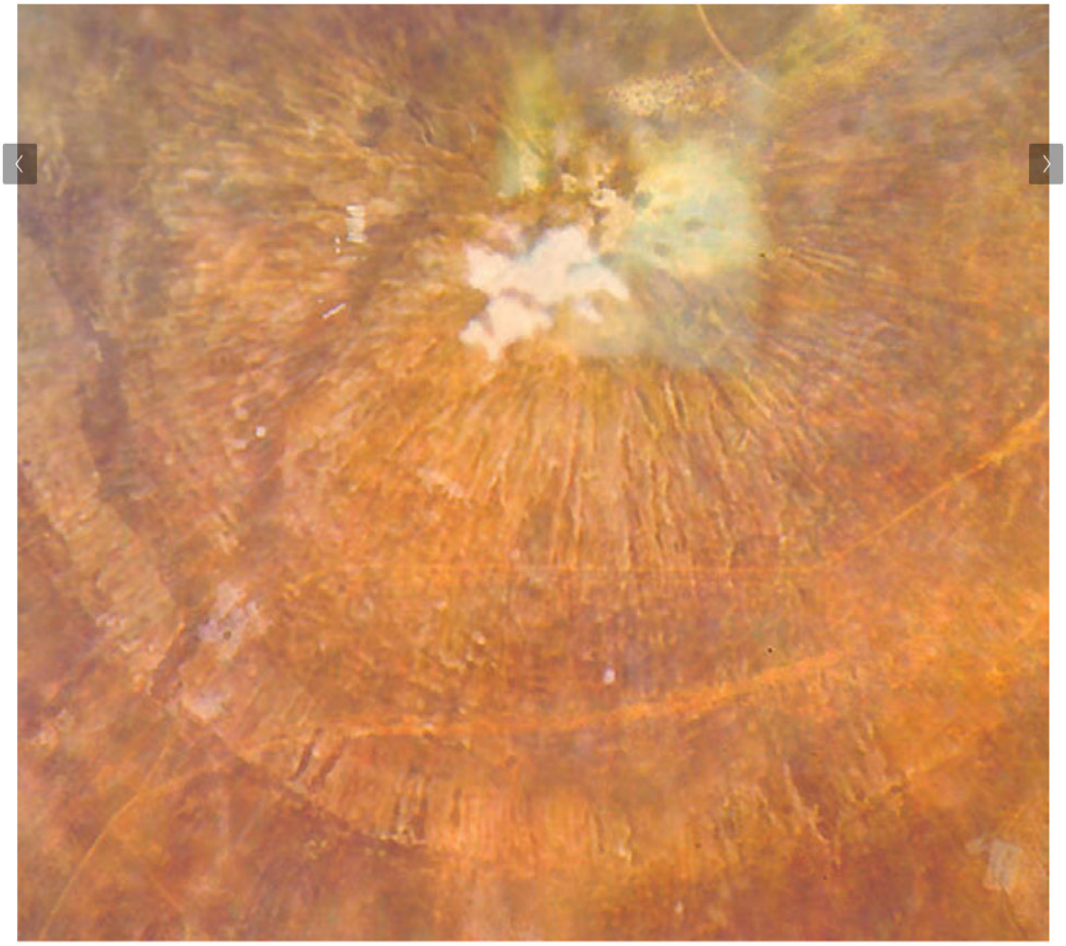




NEBULA XXIII, Stardust suspended in Acrylic Medium on Glass, 1x3 in, 2011

LONG EXPOSURE SERIES

The long exposure photographs were taken from a live animation using Google Earth. The choreography documents the series of scars in the earth left by nuclear detonations within The Nevada Test Site. The camera zooms and pans, tracing the temporo-geographic record beginning with 'Abel' in 1951 and ending with the last US nuclear test, Divider in 1992. The camera faces the computer screen while I navigate through each series of the nuclear weapons test. The number of detonations in each Series determines the length of exposure, approaching total whiteout at two minutes. The length of exposure ranges from under thirty seconds for the Ranger Series 1951 that saw five detonations to four minutes for the Storax Series 1962-1966.



BUSTER JANGLE 1951 7 DETONATIONS (2 CRATERING), Long Exposure Series, Archival, Pigment Prints, 24x32 in, 2011

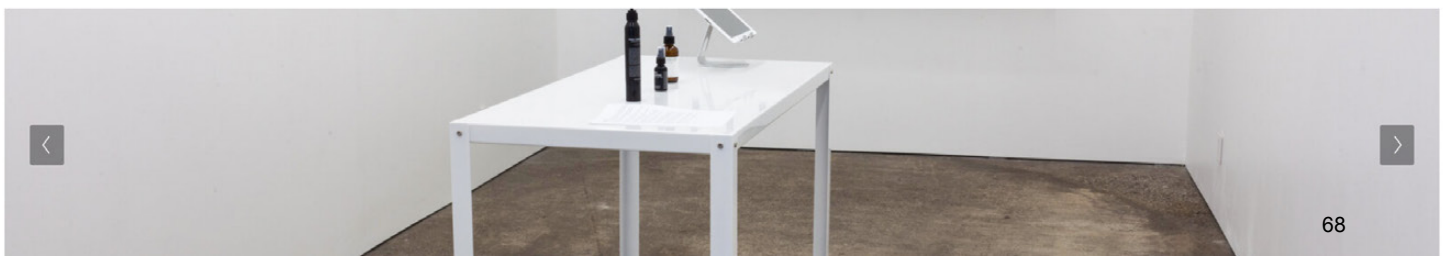
DISPLACED HOLES SERIES

The Displaced Hole series consist of castings made from a series of holes I dug at sites that trace a history of nuclear weaponry research. Sites include Sandia/Lawrence Livermore Labs, Lockheed Martin, Mare Island Naval Shipyard, and the San Francisco Naval Shipyard, and the Salton Sea Military Test base.

DISPLACED HOLES, Polyurethane Foam, Plaster, Graphite, 39 x 39 x 11 in, 2012

INDEX FORMULATIONS

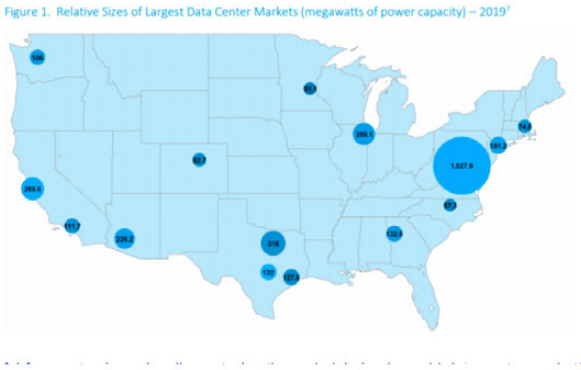
INDEX produces cosmetic formulations made for cyborgs living in the age of the anthropocene. The marketing copy draws from language used in radical political resistance movements, climate change science, and speculative fiction that leans into aspects of ingredients that can be read from many lenses: underground mycelial communication and transgendered algae to name a few examples. The project is a vessel for collective distributed performance intended physicalize the collapse of the biological human body into geologic time scales.



Q & A with Joshua Moreno & Rhonda Holberton

JM: *Rhonda, where are you from originally, and can any connections be made to your place of origin and the ideas your exploring in your practice?*

RH: I grew up in a suburb of DC. At the time, the area of Northern Virginia called the Dulles Corridor was rapidly developing; something like the Silicon Valley of the east coast. When I left in 2000, tech companies were populating newly built corporate campuses along the freeway between DC and the US Intelligence Agency offices near Dulles Airport. These offices were filled with government contractors working for tech companies building military defence systems and providing massive data analytics for government intelligence. My dad worked as a computer programmer for one of these companies after working for the Pentagon. While he couldn't tell the family what he did, we had satellite images in our house and he once told me in the early 90s that there were cameras on satellites in space that could read license plates. A fact that now seems pedestrian, but at the time it made a radical impression on me. Today, massive rectangular buildings stretch for miles along what I remember as farmlands. These windowless buildings make up the largest data center market in the United States. I originally moved to San Francisco for the counterculture and the easy access to diverse wilderness. As my practice has developed it's focused on the way technology shapes the material world & the intersection of capital interests & computation. Many of my projects utilize technology as medium to reconcile the individual biological body with geologic time; something I attribute to my early exposure to computation and witnessing a radically changing landscape from an early age



www.fairfaxcountyeda.org/media-center/northern-virginia-leads-world-data-center-market/

JM: *When looking at earlier examples of your work, there seems to be a fascination with relationships between microcosms and macrocosms that exists within our universe. What interests you about these relationships to scale?*

RH: I've always been fascinated by changes in scale and the way it impacts observable phenomena. At the root of our knowledge systems is the biological body; it determines how far we can see and how small we can see. This human scaled sensory system coupled with a drive to make sense of the world resulted in beautiful creativity across cultures; thousands of cosmologies trying to make sense of what we could perceive. Advancements in data storage (paper records) and optics expanded the perimeter of the single biological body; paper increased recorded observations across time and lens technologies reached out across the visible universe of the heavens and down into cellular phenomena inside our bodies. As I'm writing this I can't help but think of the Eames Powers of 10 film:

> Powers of Ten takes us on an adventure in magnitudes. Starting at a picnic by the lakeside in Chicago, this famous film transports us to the outer edges of the universe. Every ten seconds we view the starting point from ten times farther out until our own galaxy is visible only as a speck of light among many others. Returning to Earth with breathtaking speed, we move inward- into the hand of the sleeping picnicker- with ten times more magnification every ten seconds. Our journey ends inside a proton of a carbon atom within a DNA molecule in a white blood cell (https://www.youtube.com/watch?v=0fKBhvDjuy0)

This cinematic exercise mirrors a trajectory outlined by media theorist, Paul Virillio, in the book War and Cinema: The Logistics of Perception. In it,

> Virilio traces a co-production of military and cinematic techniques and technologies, from the mass production of aerial photography and cinematic propaganda to modern flight simulators and weapons that "open their eyes" (e.g. laser guided missiles). All of this falls under the logistics of perception – more than just prosthetic or removed from the body, vision is the result of a detailed coordination of complex operations, a technological exercise that requires planning, material support, engineering, and so on. (http://mastersofmedia.hum.uva.nl/blog/2008/03/10/notes-on-paul-virilios-war-and-cinema/)

These two perspectives cut across my research interests in scale, power, technology, material transformation and the body. In a recent performance, Dust to Dust, I pan for gold in the California landscape and raise a generation of mosquitos in my studio. Both exercises are an attempt to physically insert myself into what eco-philosopher Timothy Morton would call hyperobjects (objects too large or distributed in time to be fully perceived by a single human). In the extraction of gold I engage the capitalocene by way of California's history with ruses and bubbles. In raising mosquitos I'm engaging an index of the anthropocene in a performance with the mosquito; a species that becomes a new threat with expanded territory due to climate change. Both performances engaged in extraction at a very small scale as a way to engage a much larger system.

JM: *How, if at all, has your approach to artmaking shifted during COVID? Can any of the things we are facing as a society in result of COVID be connected to ideas you're pursuing in your practice?*

RH: It has, very much so. Since the viral outbreak; I've been thinking deeply about the kind of practice I want. One of the ways I've thought through this is through a new graduate course I'm developing/teaching focused on alternative exhibitions. We've looked at everything from the artist run spaces in 70s SOHO, to online/virtual platforms, to contemporary collectives like San Francisco based Heavy Breathing who utilize the body as a site for speculative curation. The conversations I've have with curators of alternative exhibitions and with my students about the relationship between arts intuitions and extractive/hyper accumulated capital have been extraordinarily grounding.

Before the shutdown I started engaging in larger interdisciplinary collaborative works. I wanted to pursue collaborative public-engagement projects that use my skills to amplify other voices; (1) a critical mapping project illuminating stories from San Jose's underrepresented residents, (2) a project that reimagines congress replaced by AI and extends voting rights to non-human entities (plants, air, etc), and (3) a project with the Japanese American Museum using Augmented Reality to highlight hidden histories.

My personal practice is quite speculative, making it hard to find direct institutional support (university grant committees understandably don't know what to do with my proposals for things like VR Reiki). My public-facing collaborative proposals have been easier to fund and allow me to translate the abstract concepts from my studio into language that engages broader publics in the critical discourses and actions that I see as necessary for a habitable future on earth.

www.rhondaholberton.com

Rhonda's Instagram

Documented Dialogues No. 7: Caroline Picard, Rhonda Holberton & Tsherin Sherpa

| Documented Dialogues No. 7 > is a conversation between curator **Caroline Picard** and artists **Rhonda Holberton** & **Tsherin Sherpa**. The conversation takes place within the exhibition ***Coming of Age*** at **Sector 2337**, and discusses the recontextualization of historical and formal heritages, the intersections of immaterial and material forms, and the capacity of attention to transport.

What possibilities emerge when the immediacy of the virtual verges on the historical?

You can jump to the transcript by clicking here.

Below is an excerpt of this Documented Dialogue, transcribed from the video above:

Caroline Picard: "I mean that also makes me think about – in some way, I, uh, I almost feel like Thangka paintings, or the tradition of Thangka paintings, is a way of um, where the image can become, like, a kind of portal ..."

Tsherin Sherpa: "Yeah."

CP: "... where if you study it long enough and meditate with it long enough you have, you suddenly have access ..."

TS: "Yes."

CP: "... to a new ... um ... state of being, or experience, and I think there's a kind of a really bizarre but interesting or maybe like uncanny parallel with, like, how we relate to the internet, or how we relate to, you know, even if you're designing a video game how you think about that landscape and the parameters of a protagonist moving through ... um ... but of course the virtual dimensions in those contexts are so much more ambiguous."

TS: "I think, in the, in the case of thangka painting also just the visual image, like, probably that's why I was very eager to play with the image, is because it has to, the visual image, has to accompany all the map, the guiding map along with it, without that is just becomes what you were saying how did this iPhone appear without you know, like. So yeah, and also probably that has a lot to do with when i see many galleries exchanging this as a merchandise you know uh as an iPhone just being exchanged without that guide-map accompanying it and understand ing what this image is all about. So, I guess it relates to that as well, in some ways.

|Artworks featured in order of appearance>

1. Rhonda Holberton (http://rhondaholberton.com/wp/), ***A FIXED RESISTANCE***. Pigment Print on Wallcovering, 12.5 x 55". 15.; Rhonda Holberton, 1 and 3 from *A FALLEN PIXEL*. Foam, Polyurea, 18 x 11 x 11.25", 28.25 x 17.50 x 17.25".

2. Tsherin Sherpa (http://www.tsherinsherpa.com/), ***Untitled***, 2017. Acrylic and ink on cotton, 44 x 45.5".

3. Aki Inomata (http://www.aki-inomata.com/), ***Why Not Hand Over a "Shelter" to hermit crabs?***, 2009-2016. Mixed media, dimensions variable.Installation view, Sector 2337, Chicago, 2017.

4. Ebony G. Patterson (http://ebonygpatterson.com/), **10, 18, 47, 33, 28, from *Invisible***

But, in the beginning when I was confronting it, it was from more of my personal life experience. I was in California, like in the bay area, and there's a large number of, uh, sympathetic, uh, communities for Tibetans and Tibetan Buddhism and all that, but I used to be a traditional artist and they used to always treat me like a "holy being"

[laughter]

TS: "and it was to a point where it was almost suffocating in a way, yeah. So, I had to act according to people's projection, you know, so I had to be nice, I couldn't drink ..."

[laughter]

TS: "... I couldn't eat meat, you're a Buddhist, but on top of that you're a religious icon painter. So, I guess that frustration was always there to break that notion, like, I'm as normal as anybody else and I didn't want to be something different, I guess. So, probably that also helped me go towards it."

Rhonda Holberton: "Yeah. there's something too ... um .. not so much in these works but in some of my more recent works where it's, um, I don't know if it's like this kind of like, the protestant work ethic – so this idea of like, you know, or maybe it's kind of this disassociation from labor that i feel with a lot of the projects, and that I use in also thinking about trying to address, like start thinking about these massive systems, right ..."

CP: "mhm"

RH: "... that we really can only partially access, and usually through technology. Things like, uh, what does it mean, what does the internet mean? Right, like there's this constant communication. What is climate change? These things that Timothy Morton talks about as like Hyperobjects, so it's like a thing but it can't be understood by one person. So, trying to insert my labor or insert my body into those systems, and was working with mosquitos in my last project so I raised mosquitoes and ..."

TS: "Oh."

[laughter]

RH: "... so, you know, for me thinking about the virus and thinking about, like, certainly, what, in the past few years, the mosquito means and can I stick my arm into that system or can I – and alternatively part of that project was digging for

Presence: Bling Memories , 2014. Fabric, acrylic paint, adhesive, fabric flowers, pinus palustris, lace, rhinestones, ribbons, tassels, crochet doily, crochet tassels, fabric appliques, glitter, pearls, 119 x 24 x 12".

5. Ebony G. Patterson (http://ebonygpatterson.com/), **Excerpt from *Invisible Presence: Bling Memories***, 2014. In collaboration with Michelle Serioux HD Video, 9:40min.

6. Takahiro Iwasaki (https://urano.tokyo/en/artists/iwasaki_takahiro/), ***Architecture* (*roach motel*)**, 2012. Cockroach trap and watch, dimension variable.

7. Takahiro Iwasaki (https://urano.tokyo/en/artists/iwasaki_takahiro/), ***Out of Disorder* (*Navy Pier*)**, 2017. Beach towel, dimension variable.

8. Takahiro Iwasaki (https://urano.tokyo/en/artists/iwasaki_takahiro/), ***Tectonic Model***, 2017. Books, dimension variable.

9. Takahiro Iwasaki (https://urano.tokyo/en/artists/iwasaki_takahiro/), ***Out of Disorder* (brush)**, 2017. Toothbrush, dimension variable.

10. Aki Inomata (http://www.aki-inomata.com/), ***I Wear the Dog's Hair and the Dog Wears My Hair*** ,2014. A cape made of dog's hair; a cape made of human hair; photo, inkjet print; 11x27", 15x7", 14x21".

gold, and extracting gold, another really physical not comfortable labor. So, it's like how do I get into there, how do i understand something that as a Westerner I'm so disassociated from, and I can really only, kind of, I think, express or play with that as part of my art practice, but it's just this, kind of, I wonder how much is just this aesthetic layer ..."

TS: "Yeah."

RH: "... and how much am I understanding more about my technology by digging metal out of the earth. I'm not sure."

|>

Caroline Picard *is an artist, writer, publisher, and curator who explores the figure in relation to systems of power through on-going investigations of inter-species borders, how the human relates to its environment and what possibilities might emerge from upturning an anthropocentric world view. Her writing has appeared in publications like ArtForum (critics picks), Flash Art International, Hyperallergic, Paper Monument, The Seen, and e-flux's live blog. In 2014 she was the Curatorial Fellow at La Box, ENSA in France, (http://www.ensa-bourges.fr/index.php/fr/la-box/la-box-archives/178-la-box-programmation-2013-2014/expositions-projet-curatorial-2013-14) and became a member of the SYNAPSE International Curators' Network (http://www.synapse.info/profiles/cpicard/) of the Haus der Kulturen der Welt in Berlin in 2015. She is the Executive Director of The Green Lantern Press—a nonprofit publishing house and art producer in operation since 2005—and Co-Director of Sector 2337, a hybrid artspace/bar/bookstore in Chicago. www.sector2337.com (http://www.sector2337.com/).*

Rhonda Holberton (b. Reston, VA, 1981) is an Oakland-based artist whose multimedia installations make use of digital and interactive technologies integrated into traditional methods of art production. Holberton has exhibited at San Jose Institute of Contemporary Art (https://www.sjica.org/), FIFI Projects Mexico City (http://www.fifiprojects.net/), the San Francisco Arts Commission (http://www.sfartscommission.org/), and The Berkeley Art Center (http://www.berkeleyartcenter.org/). Her work has been featured in *Art in America, Pulse Magazine*, and the *Copenhagen Institute for Futures Studies*. She is currently a lecturer in experimental media at Stanford University and joined San Jose State University as an Assistant Professor in Digital Media Arts in the fall of 2017. Holberton is represented by CULT | Aimee Frieberg Exhibitions.

11. Essi Kausalainen (http://essikausalainen.com/), ***Anette and Marin at the beach***, 2017. HD video, 7 min.

|Documented Dialogues> Bonus Materials
Here's the complimentary auto-caption transcript provided by YouTube (https://www.youtube.com/).

1
00:00:11,360 --> 00:00:16,230
I'm Caroline Picard and I curated an

2
00:00:14,969 --> 00:00:19,980
exhibition called

3
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coming-of-age at sector to 337 and

4
00:00:19,980 --> 00:00:27,930
Chicago there are about seven artists in

5
00:00:22,859 --> 00:00:29,910
the show and today we are fortunate or I

6
00:00:27,930 --> 00:00:32,160
feel very fortunate anyway to be

7
00:00:29,910 --> 00:00:35,700
speaking with the sharing Sherpa and

Tsherin Sherpa (b. Kathmandu, 1968) studied traditional Tibetan thangka painting from the age of twelve under the guidance of his father, Master Urgen Dorje, a renowned thangka artist from Ngyalam, Tibet. After six years of intense formal training, he left to study Mandarin and computer science in Taiwan. Three years later, he returned to Nepal working with his father in numerous projects that included painting thangkas and monastery murals. In 1998 he moved to the USA working as a thangka artist and as an instructor at several Buddhist centers in California. In recent years his emphasis has shifted from traditional subjects to more contemporary concerns, including imagining what traditional Tibetan spirits would now look like if they too had left Tibet and journeyed with him to California. In 2010 he was featured in the groundbreaking museum show in Beijing, *The Scorching Sun of Tibet*, as well as the landmark Rubin Museum show *Tradition Transformed – Tibetan Artist's Respond*, (http://rubinmuseum.org/events/exhibitions/tradition-transformed) in New York. In 2012 he had his first solo show at Rossi & Rossi, London. Sherpa lives and works in California.

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8
00:00:32,160 --> 00:00:38,640
around a whole Burton maybe just to

9
00:00:35,700 --> 00:00:40,710
start if you all would be comfortable

10
00:00:38,640 --> 00:00:46,110
talking a little bit about your camera

11
00:00:40,710 --> 00:00:49,070
sure my work in this show is a
wallpaper

12
00:00:46,110 --> 00:00:52,550
covering in the back it's comprised

13
00:00:49,070 --> 00:00:55,820
composite image made from sand
dunes

14
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some of the photographs I took
myself

15
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insolvency military bases of

16
00:00:59,190 --> 00:01:04,110
decommissioned military base and it

17
00:01:02,160 --> 00:01:06,420
really struck me I wasn't expecting to

RHONDA HOLBERTON, "#stilllife #handmadeceramics #rainydays," 30 Oct 2016, Instagram. Detail. bit.ly/2hz6t3P

September 27th, 2017

Rhonda Holberton's practice spans sculpture, photography, animated video, and performance, with new work that stages virtual performances of bodies in gallery settings based on motion capture data from the artist's own body. Her spring 2017 solo exhibition "Still Life" at CULT | Aimee Friberg Exhibitions in San Francisco focused on the translation of real bodies and objects into digital spaces. The entire "Still Life" show will have a new iteration at Transfer Gallery in New York in April 2018. Meanwhile, Holberton has three pieces in the ecologically-focused group show "Coming of Age" at Sector 2337 in Chicago. I spoke with the artist twice, once just after "Still Life" closed last spring and once just after "Coming of Age" opened earlier this month. -MW

Monica Westin: I'd like to start by asking about the video installation *no stats on the same* in the "Still Life" show. Is this the first time that you've used motion capture data from your own body in your work? What got you interested in using this technology? And what was the impetus not just to map your movements onto an avatar but onto a different person's avatar—and a professional model's at that?

Rhonda Holberton: The video installation, */no stats on the same*, utilizes motion capture data recorded from my body transplanted onto a scan of a male model. I rendered the animation through a virtual pane of frosted glass placed in front of the camera in the rendering program. In the physical gallery space, the video is rear-projected onto a frosted acrylic sheet covering the entrance to a small room. I taped out the dimensions of this room in the gallery in my studio, and then performed within the perimeter I mapped out. Also, the room was recreated to scale in the 3D modeling program. So, the physics, movement, and models are all sampled from elements of the real world, but interpreted algorithmically within the render.

You are correct, */no stats on the same* was the first time I introduced sampled motion into my animations. The first animation I made was applied to a 3D scan of my own body. I hand animated the mesh through a Vinyasa yoga sequence. I didn't really know what I was doing and the movement was really complicated—I ended up more or less keying every frame. I used my own body as a model because it was available and didn't want to make choices about the figure's identity. After several projects that made use of sampling my body, I was starting to realize that "my body" as a kind of default was in and of itself a choice—an expression of an algorithmic self, a self defined by digital choices and lines of code. Using another body was a way for me to foreground a kind of hybrid or fantasy identity that I think we all perform to a certain extent, especially in digital space where identity is separated from the body. Because the body I scanned was that of a professional model and because I was paying him for the scans, the performance fit into a logic of capital exchange in ways that highlight questions of value of labor, identity, and expressions of control.

Much of my recent body of work was inspired by the vignette in Deleuze and Guattari's *Thousand Plateaus* where they use the relationship between the wasp and the orchid to illustrate the kind of rhizomatic hybrid relationship I was interested in; "not imitation at all but a capture of code, surplus value of code, an increase in valence, a veritable becoming, a becoming-wasp of the orchid and a becoming-orchid of the wasp." The model's body is data represented as form; my body is data representation as motion. I was thinking about this piece as the performance of a hybrid body presented in a way that uses technology and is located in a third space (the site of installation and more importantly the space that the viewer occupies), to unite the two bodies and the two spatial or temporal locations.

I got into 3D modeling as a medium for my studio practice while working as a mechanical engineer. When you are immersed in the virtual space for hours at a time, you end up feeling

connected to the space of the screen in a very physical way. At the same time I was in a long-distance relationship where the screen mediated the majority of my intimate experiences of the person. I was feeling this intense expression of virtuality as both a space of frictionless, empirical geometry, but also as a place for messy projection of complicated emotional entanglements.

In *Dust to Dust*, you created a seemingly closed ecosystem in the gallery with mosquitos, mesh, and sugar water. You also fed the mosquitoes with your own blood by putting your arm inside the net. How do you conceive of your body in relationship to this system? Did you consider this process a performance? How did it differ from the process and labor that went into your project, also titled *Dust to Dust*, in which you were literally panning for gold?

Both the labor of goldpanning and the labor of caring for mosquitos is challenging and requires discipline. I titled both works *Dust to Dust* and I'm not sure if they are one or two pieces. I collected larvae and raised the mosquitoes in my studio. I wanted to insert my body into a local system that indexes a much larger system—what Timothy Morton would call a hyperobject—something too large and complicated to be understood by a single human processor. The works represent my attempts to engage corporeally with a global metabolism represented in concept of the Anthropocene/Capitalocene—to pull value out of the system through direct physical labor. I definitely think about the works as performances; both in terms of my actions that produce them and as a kind of material performance after production. Unlike the grueling physical labor associated with hand panning for gold, the labor of raising and feeding the mosquitos felt very domestic. The feeding process was psychologically challenging at first, but the actual performance felt more like a durational exercise. It became something like an active meditation, an hour of boredom punctuated by real and imagined feedings.

Both the gold and mosquitos connect back to corporeality, to the body The metaphors and histories of these very material things can't be divorced from globalized networks of digital technologies, climate change, religion, and politics. Today, the technologists in Silicon Valley are frequently compared to the pioneers of last century's gold rush; both activities belong to a similar narrative of positivist masculine entrepreneurial ideology. Alternatively, it's hard not to think about the mosquito without thinking of the virus, currently circumscribed by femininity and fertility, or of the mosquitos migration to new territories as an index of Climate Change—something that's shifting the narrative of a benevolent "mother earth."

Many works in “Still Life” take up the translation between real and digital objects. I'm struck again by the way that the form of the tapestry functions in your practice as an act of translation between one type of image and another, and one that seems to be analogous to the other digitization and rendering processes you work with. What happens when an image, for example a sneaker, is translated from a digital advertisement into a tapestry?

I think that’s a really good question, but I’m not sure I have the answer for it. I was thinking about the currency of digital aesthetics; how platforms that circulate images of images seems to be accumulating wealth at massive rates. Where is the value in these “free” models of aesthetic exchange and who is producing it? I wanted to tease out some of these questions by recreating images I found on these platforms using 3D scans of my own objects placed in virtual environments. The images tend to reduce or neutralize the object they represent. The question was then, how do the recreations circulate? I have a hunch that there is something in the triangulation of post-capital abundance of stuff (cheap labor/production, abundant digital storage), the new materialism (object-oriented philosophy, reconciling of environmental limits), and a new brand of posthumanism that rejects abject corporeality. The tapestries were ways to remove the images from the context of their original circulation by making them physical. The tapestries are strange objects, both image and material in a way that printed photographs are not.

Of course the material history of the Jacquard loom was another locus. The punch cards used to store the earliest computer programs (conceived by Ada Lovelace and Charles Babbage in 1837) were inspired by the wooden card used to make woven patterns with looms as early as 1725. There’s a connection between textile and certain assumptions of gender roles in the West that I wanted to connect to the history of writing code. In the early days of computing, programming was thought of as “women’s work." Women would translate programs onto the punch cards and the men who operated the machines would run the cards through the machines. I think there’s a throughline we can trace between the way repetitive labor is viewed as expendable in capitalist cultures. So where does the value go in the exchange of images when an algorithm can identify, produce, and distribute valuable images?

One of the most unsettling aspects of the exhibition is the way that it translates objects from the realm of the analog/handmade to the digital via modeling software and back again into some new quivery, neither-here-nor-there hybrid form. I'm still thinking about those

truly uncanny mugs that are both literally molded and stunted by material and technological (and, maybe, ideological) apparatuses. Can you talk about the process by which you take a single object across these kinds of mediums/boundaries and back again, and especially when such media become "social," as in your Instagrammed pieces? And what do you make of how popular these images are on Instagram?

The mug was one of the first objects to become virtualized in the series but the last in the show to take form. In some ways the porcelain mugs are the least resolved for me, or at least the work that is still asking me questions (which I take as a good sign and will probably be the thread I follow for the next body of work). I like the word you use here, “quivery;” it does a good job of describing the oscillation of these objects. I made a 3D scan of a beautiful hand-thrown ceramic mug by artisan Eric Bonnan. The mug was the survivor of a set I bought for my partner and not something I would normally allow myself to purchase. It became a talisman of sorts and makes an appearance in a few of the images in the exhibition. I 3D printed the model and used it to make a mold that was then slip cast in porcelain, returning it, as it were, to the original material. Unlike the original mug that Eric made, the 3D scan is heavy, burdened by the inaccuracy of the scan. The awkward forms of the casts I made are familiar; they look like something a child would make. I think what makes it so uncanny is that they all look very handmade, irregular, and lumpy, but slowly you realize they are the *same* kind of lumpy. The work starts to reveal itself as a product of a process of creative digital computation still in it’s infancy.

I used the Kinect Sensor to scan objects from my domestic space and then use a 3D modeling program to recreate images from Instagram feeds of lifestyle magazines that popularized a contemporary branding aesthetics, what I call Instagram aesthetics. The renders of the 3D scans recreate the kind of non-specific placelessness that is what I think is so appealing about these types of images. The images tend to reduce/neutralize the object (object out of contextual reference, only one shoe is shown on an all-white background—it’s facing away from the viewer and cropped).

I then repost the recreations to Instagram and use handles that are common to the types of source images I use like #handmadeceramics and #sundaybrunch. Since most of these images circulate on the small screens of mobile devices, the imperfections of the scans that are obvious at desktop size aren’t legible on the platform. Most of the renders “pass” as real and I developed a following from the bespoke craft movement that I hadn’t anticipated.

I'd like to hear more about the impetus for the "Still Life" exhibition's title. It's not obvious that this show would consider its immediate reference to be art historical still life paintings, and I'm really curious about where you see your work, especially the work that explicitly references classical forms, in relationship to art history.

A good place to begin might be with the namesake of the exhibition title, a still life I create from a collection of the objects from the Instagram piece and a 3D scan I made of myself wearing a mask taken from a 3D model of a Greek sculpture. I started calling the 3D renders I was making "vanitas" out of some vague recollection of the Dutch Vanitas paintings of the 17th century that depicted beautifully rendered flowers, fruits, and silks on tabletops.

After doing a bit more research, the similarities between the vanitas paintings and the source images I was recreating became really obvious to me. The vanitas painting style coincided with the height of Dutch Colonial Empire a period of accumulated capital largely based on slave labor. The paintings were popular with the mercantile class and are some of the first examples of images circulating outside of the church and noble classes, so in many ways they were examples of the first "social images."

This piece most overtly engages this classical art history, but most of the work I make is very aware of the system of capital and cultural exchange it operates within. This self-conscious engagement is obvious in the gold and the Instagram works where the works' value can be compared to empirical measurement (the spot price of gold or the number of likes/shares) but is also true of works that use mannequins I acquired from the American Apparel bankruptcy liquidation.

I'm curious about the Fallen Pixels series in the current Sector 2337 exhibition. What was the original context for these pieces?

The rock forms of the sculpture, *A FALLEN PIXEL*, manifest a complete cycle of anonymous and physically distributed production. The rocks are made from a single model downloaded from a 3D library used primarily by game designers. The file was then carved by a computer-controlled router in foam in three different sizes and hard-coated. Because the model was free, the rock was a popular download; it's populated countless virtual landscapes.

I was interested in the ways current technologies aid in the production of purely imagined things and wanted to circumscribe the physical realization of these digital apparitions. I like thinking

that someone I will never know sat in front of a screen and used a mouse and keyboard to manage electronic impulses within the machine that then ultimately manifest what, in many ways, could be considered a hallucination. Networks of metal culled up from the earth connect me to the labor of that anonymous person and allow me to download the virtual product of their labor for free. I sent that product over the same network to a CNC machine that translated the virtual into physical reality. The marks of the hand left in the plaster covering reflect a human interface layer that is becoming increasingly obsolete. The paint "re-skins" the physical object in the way the screen "skins" bio-digital translation.

Rhonda Holberton is an Oakland-based artist. Her multimedia installations make use of digital and interactive technologies integrated into traditional methods of art production. Holberton received her MFA from Stanford University and her BFA from the California College of the Arts. She is currently a lecturer in experimental media at Stanford University. Holberton was a CAMAC Artist in Residence at Marnay-sur-Seine, France and awarded a Fondation Ténot Fellowship, Paris, France.

Monica Westin is a writer and critic based in San Francisco. Her writing on art and aesthetics has appeared in Frieze*,* Artforum*,* BOMB, The Believer*,* Art & Education*,* The Brooklyn Rail, Art21*,* Raw Vision*,* Art Papers*,* SFAQ*, and SFMOMA's* Open Space*, among other places. She teaches in the Graduate Program in Fine Arts at California College of the Arts, where she leads the MFA written thesis seminar.*

PERFORMA

PERFORMA PRESENTS MAGAZINE INSTITUTE SUPPORT PAST BIENNIALS ABOUT

Performa Magazine is a unique online magazine dedicated to contemporary performance across disciplines. A lively source for both historical and contemporary material, it features documentation, short essays, interviews, video, and audio exploring the Performa biennial and beyond.

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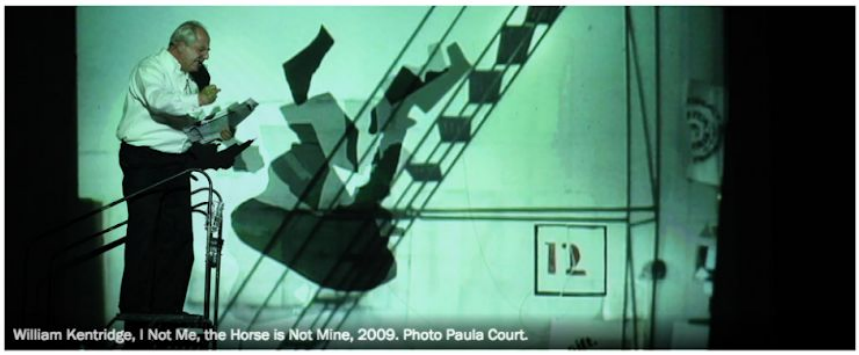

William Kentridge, I Not Me, the Horse is Not Mine, 2009. Photo Paula Court.

MISSION AND HISTORY

Performa is a multidisciplinary non-profit arts organization dedicated to exploring the critical role of live performance in the history of twentieth century art and to encouraging new directions in performance for the twenty-first century. Part of Performa's mission is to present a biennial of visual art performance in New York City that illuminates the critical role of performance in the history of art as well as its enormous significance in the international world of contemporary art.

Performa is the brainchild of art historian and curator RoseLee Goldberg, whose definitive book, *Performance Art: From Futurism to the Present* (1979 & 2000), pioneered the study of performance art and has been translated into eleven languages. Ms. Goldberg's writing, as well as her activities as curator at The Kitchen in the late 1970s, has shaped the public's view of live performance as a visual art form for almost thirty years. In 2001, Ms. Goldberg originated and produced visual artist Shirin Neshat's first live performance, *Logic of the Birds*, with critical and popular success in both New York and London. The idea to create the Performa biennial, with a specially commissioned new performance at its core, evolved from this highly successful production. Ms Goldberg is Founding Director and Curator of Performa, which was founded in 2004.

Performa's Objectives are:

- Commission new performance projects in visual arts

- Present a dedicated performance biennial

- Consult and collaborate with art institutions and performing art presenters around the world to create dynamic and historically significant performance programs

- Through the Performa Institute, offer an ongoing educational platform for expanding the knowledge and understanding of this critical area of visual art and cultural history.

Performa Biennial

Performa 05 The first of its kind, the 05 Biennial offered an exciting program of performances, exhibitions, symposia, and film screenings organized in collaboration with a consortium of leading museums, galleries, alternative spaces, and independent curators in New York. The first Performa Biennial was an enormous critical and popular success and set a new standard for the positioning of live performance in the international contemporary art world. Over 25,000 people attended sold-out and filled-to-capacity events at more than 20 venues across the city, truly activating and animating all of New York, from Harlem down to Wall Street, during Performa 05's entire three-week run.

Performa 07, the biennial's second edition, was greeted with as much enthusiasm and acclaim as the first. Performa 07 featured 10 Performa Commissions and an extraordinary array of over 100 performances by artists from around the world, with events taking place at a consortium of more than 60 venues across the city. More than 25,000 visitors from around the world attended over 95 different events, most of which were free. Reviewing Performa 07 in Domus magazine, critic and curator Francesco Bonami announced, "[Performa is now] high up in the sky as one of the major contemporary art events to look forward to."

Performa 09, the third biennial of new visual art performance, was held in New York City from November 1-22, 2009. The three-week festival featured new Performa Commissions and an exciting program of performances, exhibitions, educational forums, public art projects, publications, film screenings, and radio, Internet, and television broadcasts. Presented with a consortium of more than 60 arts institutions and a network of public and private venues across the city, Performa 09 showcased the work of more than 100 international artists, as seen from many different curatorial viewpoints, in a lively, performance-driven "festival as think tank."

Performa 11, the fourth edition of the internationally acclaimed biennial of new visual art performance, was held in New York City (NYC) from November 1st-21st, 2011. The three-week biennial showcased new work by more than 140 of the most exciting artists working today, in an innovative program that continues to break down the boundaries between visual art, music, dance, poetry, fashion, architecture, graphic design, and the culinary arts. The 14 Performa Commissions included new work by ten individual artists and thee multi-artist projects: Tarek Atoui, iona rozeal brown, Gerard Byrne, Elmgreen & Dragset, Simon Fujiwara, Ragnar Kjartansson, Liz Magic Laser, Guy Maddin, Laurel Nakadate and James Franco, Shirin Neshat, Mika Rottenberg and Jon Kessler, Frances Stark, and Ming Wong. The Performa Premieres program included Robert Ashley, Boris Charmatz, Ben, Kinmont, and Mai Thu Perret.

PLASMA

PLASMA—INTERNATIONAL ART
& SCIENCE MAGAZINE—ISSUE Nº3
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Heather Sparks

RHONDA HOLBERTON: THE RENDERED LIFE

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Image 1: Still Life (bed), 2017, archival pigment print

Image 2: Dust to Dust, 2017 Variable Dimension, Gold dust, mosquitoes, sugar water, acrylic, nylon, aluminum and LED lighting

Image 3: STILL LIFE installation view at CULT gallery, San Francisco.

Image 4: Still Life (vanitas), 2017, 19 × 23 inches (framed)

Interview: Heather Sparks

Pictures: Ronda Holberton

Artist Rhonda Holberton blends technology, intuition, and social critique. Her latest show, STILL LIFE at Aimee Friberg's CULT gallery in San Francisco's Mission District features instagrammable 3D renderings, a mosquito colony, California gold and more. Here, she discusses the works with science and art writer, Heather Sparks.

How did the work with STILL LIFE develop?

What I was starting with, was a conversation with a psychic. I was coming out of a very intense breakup and was meditating on the anxiety that I felt about the future and thought I would go see the psychic to allay some of those fears.

She gave me this assignment to imagine a "healthy body, healthy home," and what that might look like. And the best that I could do was make these little tabletop vignettes. But I was curious, "Where were these images coming from?" They looked a lot like Instagram.

Once I identified the source, then I scoured these Kinfolk and Cereal magazine Instagram feeds. I would just use my own objects and make 3D scans of them and place them in these really paired down, virtual, stripped environments.

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How do you get these 3D scans of your personal objects?

I was using the Kinnect Sensor. It sends out an infrared spray and then records the distance from each point, to the sensor. It's exactly the same technology that they're using with the Xbox 360. It wasn't a terrible success but it is a great resource for hackers, artists, and people who are interested in that type of data.

Why not use a camera?

I like that it's a messy, ham-fisted, re-imagination of what the technology is capable of. Because it's pressing into the limits of what it can do, those pixelated and broken scans feel more lifelike. They're not the perfect 3D models we're used to seeing.

Some of the works are entirely physical, breeding mosquitos or panning for gold. How do these relate to the other pieces?

The two pieces stand in relief and in context of one another. Both are attached to the body as a site of labor or resource exchange. The mosquito is a symbol of the virus. A carrier of data. It's a beautiful surrogate for the idea of this penetration, the accumulation or replication of data inside the body.

And then for the gold, thinking about the technologists of SF and the continuity of entrepreneurial psychology that's associated with California, the gold rush and the 49ers of that era.

One image I find so compelling is the scanned image of the mannequin with the blanket on her head. Tell me about her.

This is in many ways, what I would call a self-portrait. She's blanketed and masked and muted but there's also a power. A power there that I really like, that I see, that might not be evident. It was one of those conversations, I'm having with the algorithm. It's almost a collaboration between what I think I want and what the physics produces in the computer.

JOURNAL ARTICLES

Multi-Generation Digital Stewardship: XR Art & Technology Archives

Moderator: Rhonda Holberton
Assistant Professor of Digital Media Arts, Department of Art & Art History San José State University

Panelists
Don Hanson, Founder of New Art City (USA)
Amanda Helton, Manager of Digital Strategy, San José Museum of Art (USA)
Dr. Timothy C. Summers, Board Member of the enterprise think tank Leonardo/ISAST (USA)
Nick Szydlowski is the Scholarly Communications & Digital Scholarship Librarian at San José State University (USA)

Location: San José California, USA
Contact Email: rhonda.holberton@sjsu.edu

Abstract

Panelists will discuss their roles in a collaborative inter-institutional project funded by the Knight Foundation to create an XR & blockchain certificate enabled digital database that will archive, index, lend, and exhibit complex digital objects using a web-based platform that expands the current capabilities of the virtual 3D exhibition platform New Art City.

The panel will offer perspectives on collections management, blockchain certificates, artist contracts, and best practices for reauthoring. The team will provide insights from the first 6 months of the beta test of this collaborative project which archives and exhibits Creative New Media Projects produced in San José from 1984-2014 on New Art City. The Art & Technology Archive beta test will allow the technical and digital design upgrades to follow the material, social, and archival process; ensuring that necessary upgrades to New Art City are designed holistically and inclusively with integrated feedback from Museums, Librarians, Archivists, & Curators.

Keywords

Digital Archives, XR Archives, Blockchain Certificates, NFTs, Controlled Digital Lending, Cross-Platform Compatibility, Digital Stewardship, XR Accessibility, Publicly Accountable Cross-Sector Partner Service Organizations, Durable Code

Introduction

Rhonda Holberton, Assistant Professor of Digital Media Art, San José State University (SJSU), is leading an initiative with the panelists to preserve and archive several important bodies of digital media produced within the Silicon Valley in 1984-2014. The archive will focus on complex digital objects (with special attention to XR and 3D files), and collaborative research from the CADRE Media Lab at San José State University, SWITCH Journal, Leonardo/ISAST, ZERO1, and the San José Museum of Art archive/collections.

The entries will be archived on New Art City, a virtual exhibition toolkit originally developed by Don Hanson (once an MFA candidate in the CADRE program at SJSU) in response to the loss of physical exhibition opportunities for our community. New Art City utilizes web stable languages (HTML, JS, & CSS) which will ensure the longevity and accessibility of new media works that were originally produced to run on esoteric or out of date platforms. Students currently enrolled in the Digital Media Art program at San José State University will work directly with the original artists & digital creators to identify processes for rebuilding original artworks and/or archiving components for future researchers.

User experience of the archive will be grounded in interactive engagement with the region's rich history of collaborative new media art production utilizing an archive built on the New Art City web-based 3D platform. Unlike traditional digital archives, the SJSU XR Archive will integrate collection management databases, blockchain security certificates, digital lending, and exhibition

services. Users of the lending and exhibition services will experience spatial proximity, temporal texture, and architectural aggregation rather than overlapping windows or the long scrollto help researchers, exhibition designers, and public visitors make deep connections to and between digital entries.

Dr. Darra Hofman's research focuses on the intersection of archives, technology, and law. Her research and teaching interests are in investigating the impact of emerging technologies such as blockchain technology and artificial intelligence on archiving practices. She will oversee database integration metadata and hashing systems for blockchain certification of provenance and integrated fair use contracts. The interface will be set up to provide multilayered accessibility, and community facing features that will log specific dynamic feedback through the exchange of personal, regional, and associate knowledge tied to a sharable digital entry that accumulates new user contributions every time it is curated into an exhibition.

D**igital Stewardship** As envisioned, the archive is the first of 3 discrete phases of development that fit into a longer-term vision; the instantiation of the Center for Creative Digital Production & Stewardship at SJSU. Within the center, Faculty and Students will collaborate with digital creators and partner institutions to develop best practices and documentation for digital stewardship of technology-centered artist practices and create standards for artist contracts for institutional acquisition of digital work using blockchain technology applied in concert with controlled digital lending via the Martin Luther King Library.

Digital stewardship brings together the concepts of both digital preservation and digital curation and provides a framework for long-term thinking to ensure that preserving and managing digital content for the long-term is not merely an afterthought, but baked into the production process.

New Art City (NAC) Platform

Originally developed as an online exhibition solution for Digital Media Art BFA exhibition at SJSU, the New Art City platform has since expanded to host international art exhibitions with institutions like Gray Area SF, Bitforms Gallery NYC, Lumen Prize, Format Festival and several solo and group shows for individual artists & digital creators. The platform will allow designers to spatialize the visitors' experience of media entries in the archive using architectural orientation to present oral histories and contextual information alongside primary resources that take the form of websites, video, 3D animations, image, text, and soon; VR projects.

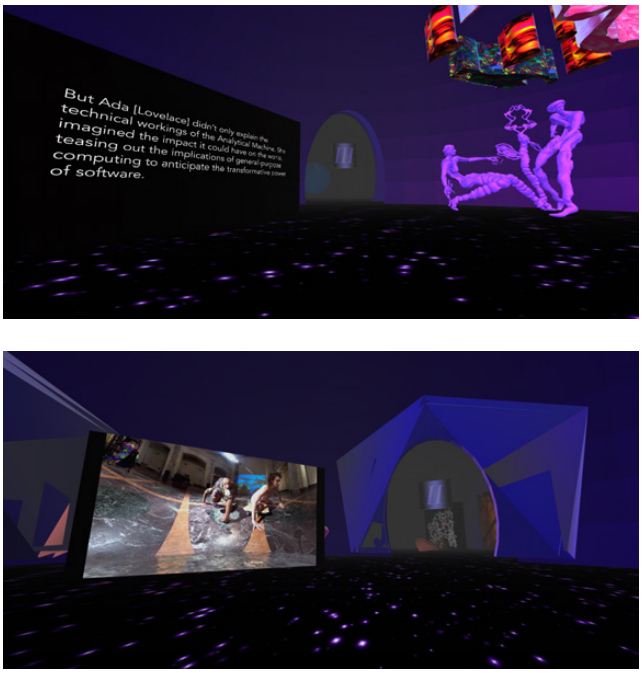


Figure 1. Screenshots of Unbound Unleashed and Unforgiving Exhibition hosted by New Art City. Works shown (left to right): Caroline Sinders: Femenist Data Set, German Lavroskii: Reborn, Otrus Extraviadus: parallel chaosmosis, Eva Davidova: Global Mode, Jeremy Diamond: Datura ©Artist Retain Copyright

NAC & Accessibility In Fall 2020 Professor Holberton worked with NAC founders to help complete a Voluntary Product Accessibility Template (VPAT) for New Art City. In Spring 2021 the California State University System certified NAC for systemwide use after determining the platform met Federal Accessibility requirements. In addition to the 3D environment, NAC now provides a 2D view optimized for Screen Readers. In their Accessibility Statement, NAC provides standards for accessible 3D environments, and is excited to work with the team to define new standards for accessibility in Mixed Reality environments including sound triggers/guidance, guided tours in 3D & XR environments, and new forms of translation between XR, 3D, and 2D web designs

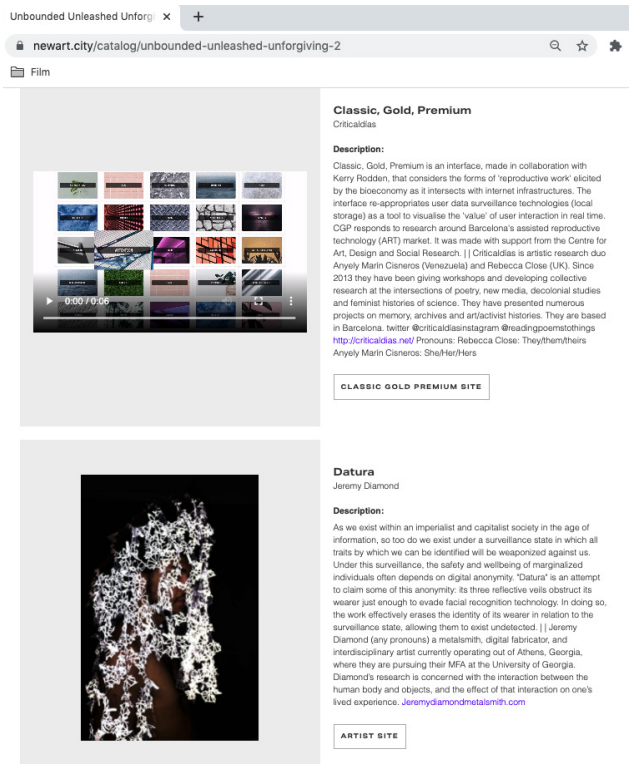


Figure 2. 2D Catalogue View of Unbound Unleashed and Unforgiving Exhibition hosted by New Art City. The catalogue view is automatically generated when exhibition designers upload their digital assets to the platform, alt text can be added for screen readers. ©Artist Retain Copyright

Audience & Impact

The project leads of the Multi-Generation Digital Stewardship project believe the practice of citation is a political act that shapes the future as much as it contextualizes the past. With this framework in mind, it is important to recognise preservation as a political act as well; and to understand that all archives suffer from intersecting and overlapping biases, limited accessibility, and data rot. San José State University (and public universities more broadly) can play an important role as a publicly accountable cross-sector partner service organization in the production and long-term preservation of tech-centered artist practices. Toward this goal, the Multi-Generation Digital Stewardship project team is currently:

- Working with librarians & archivists to expand the capabilities of research databases that determine what is citable in the first place
- Collaborating with artists & digital creators to create best practices for the digital stewardship of ephemeral technology dependent projects
- Connecting communities from public institutions with students and faculty at San José State University in the production creative projects that make meaningful technological advancements while at the same time expanding public understanding the social impacts of technology
- Providing support to technology platforms to develop accessible standards in-line with Section 508 of the Rehabilitation Act published in the Federal Register to ensure the technology we use in our projects is available to the broadest community possible

Inter-Institutional and Community Collaborations
Through collaborations between SJSU, SJMA, NAC, Leonardo/ISAST, and ZERO1, the Multi-Generation Digital Stewardship project will build bridges between SJSU students, the San José Public, and contemporary Digital Media Artists & Digital Creators. This is an exceptional opportunity to celebrate the rich legacy of interdisciplinarity at SJSU and our legacy of collaboration with art institutions in the South Bay while at the same time creating standards and best practices for the production & preservation of tech-centered artworks for generations to come.

As one of California State University's Hispanic Serving Institutions (HSI) and Asian American Native American Pacific Islander Serving Institutions (AANAPISI) as recognized by the United States Department of Education, the San José State University community represents a diverse set of perspectives. The Multi-Generation Digital Stewardship project team and organizational partners integrate the student body and communities within the city in the design of the archive and the curation of the entries within it to advance a broad and socially responsible approach to integrating artistic expression within historical contexts.

Bibliography

Blumenthal, Karl, Peggy Griesinger, Julia Y. Kim, Shira Peltzman, and Vicky Steeves. "What's Wrong with Digital Stewardship: Evaluating the Organization of Digital Preservation Programs from Practitioners' Perspectives." Journal of Contemporary Archival Studies 7, no. 1 (2020): Article 13. website, accessed Jan 29 2022, https://elischolar.library.yale.edu/jcas/vol7/iss1/13, preserved at https://perma.cc/X929-FYX7.

CSU Vendor Accessibility Requirements: website, accessed Jan 29 2022, https://teachingcommons.cdl.edu/access/procurement_process/CSU_Accessibility_Documenation_Review_Process.shtml

Langley, Somaya. “Planning for the End from the Start: An Argument for Digital Stewardship, Long-Term Thinking and Alternative Capture Approaches for Digital Content.” In Digital Cultural Heritage, edited by Horst Kremers, 209–237. Cham, Switzerland: Springer, 2020. website, accessed Jan 29 2022, https://doi.org/10.1007/978-3-030-15200-0_15

Lavoie, Brian, and Lorcan Dempsey. “Thirteen Ways of Looking at Digital Preservation.” D-Lib Magazine 10, nos. 7–8 (July/August 2004). website, accessed Jan 29 2022, http://dx.doi.org/10.1045/july2004-lavoie, preserved at https://perma.cc/5WMC-6725

Panel Biographies

Rhonda Holberton, Assistant Professor of Digital Media Arts, Department of Art & Art History San José State University. Holberton’s interdisciplinary research and art practice illuminates the politics of the corporeal body navigating through virtual space. Recent projects utilize networked VR designed to trigger subtle interactions of electrons between biological and digital systems through biofeedback & reiki, a speculative cosmetic company whose mission is focused on the potential of products to create distributed performative action ritualizing the Anthropocene, and a collaborative choreography with Neural Networks. rhonda.holberton@sjsu.edu

Don Hanson, Founder of New Art City. Don is an interdisciplinary/internet artist producing web-based interactive work and digital artmaking tools since 2008. As founder of New Art City he aims to provide an accessible toolkit to all types of artists and create an online home for born-digital artifacts. As an active member of the arts and technology community in the Bay Area, Don has served as technical director for Codame Art+Tech and B4BEL4B Gallery, and now focuses full-time on the operations and development of New Art City. don@newart.city

Amanda Helton, Manager of Digital Strategy, a position created as part of the San José Museum of Art's (SJMA) 2018 strategic plan, Helton works closely with the curatorial and public programs teams to develop innovative digital engagement tools that expand access to the Museum’s programs and permanent collection. At SJMA since 2017, she served as project database registrar for 50X50: Stories of Visionary Artists from the Collection, a major grant-funded digital publication designed to share the Museum's permanent collection with a wide audience. Subsequent ongoing projects support efforts to shape the technological vision for the Museum’s future and to support its strategic ambition to be a borderless museum. Helton is also deeply committed to accessibility issues in both the physical and virtual realms and is a member of the Museum's Equity Task Force. ahelton@sjmusart.org

Dr. Timothy C. Summers, Board Member of the enterprise think tank Leonardo/ISAST, is a seasoned, high-impact executive with broad strategic perspective and a proven track record in growing businesses, delivering solutions to problems, and developing and executing sound internal processes from the ground up. He is an ethical hacker, professor, frequent media commentator, TED speaker, and consulted expert internationally recognized as one of the world’s leading experts on cyber strategy, blockchain, normal chaos, and how hackers think. He is a trusted adviser and executive consultant to Fortune 500 companies, academic institutions, and governments worldwide. Timothy specializes in the scholarship and practice of hacker cognitive psychology (the hacker’s mindset) and normal chaos paradigm enabling him to advise on building and sustaining organizations during times of uncertainty. Dr. Summers is an executive scholar with an in-depth understanding of disruptive technologies and their strategic applications, as well as international business expertise, having conducted business in North America, the UK, Europe, Africa, and Asia. He is a motivated self-starter who has developed a thriving, reputable consulting practice that is considered among the best in the world while maintaining a dedication to community service. tcsummers@asu.edu

Nick Szydlowski, Scholarly Communications & Digital Scholarship Librarian, Martin Luther King, Jr. Library, San José State University. Nick is a librarian with experience in scholarly communications, repository management, preservation, and web development. His recent projects include the digital exhibit *Robert Morris: Civil Rights Lawyer & Antislavery Activist*. nick.szydlowski@sjsu.edu

Archiving an Early Web-Based Journal: Addressing Issues of Workflow, Authenticity, and Bibliodiversity

Code{4}lib Journal, Issue 54, 2022-08-29
By Nick Szydlowski, Rhonda Holberton, Erika Johnson

In Spring 2022 I collaborated with the MLK Library in a course I taught for the first time, ART 104 - Interdisciplinary Seminar in Digital Media Art. In the course students both read about ethics, metadata, and privacy while at the same time working with SJSU librarians to produce metadata for a web-based journal we are integrating into Scholarworks.

My collaborators from the MLK Library, Nick Szydlowski, Scholarly Communications & Digital Scholarship Librarian, & Erika Johnson, Institutional Repository and Digital Scholarship Coordinator, and I co-authored an article outlining our process and finding to the Code{4}lib Journal, a peer-reviewed online publication.

The article was accepted and published in the August 2022 issue.

About

The archiving of SWITCH Journal is part of the *Multigenerational Digital Stewardship Project, a* collaborative inter-institutional project funded by the Knight Foundation to create an XR & blockchain certificate enabled digital database that will archive, index, lend, and exhibit complex digital objects using a web-based platform that expands the current capabilities of the virtual 3D exhibition platform New Art City.

To beta-test cross platform compatibility, I'm working with the SJSU Martin Luther King Library to archive back issues of the journal SWITCH on Scholarworks. SWITCH is an online Journal published by the Digital Media Art program in SJSU starting in 1994. As part of this process

students enrolled in my Art 104 class are creating augmented metadata to describe articles and other pieces that were published in volumes 1-18 of the journal, published from 1994-2003.

Students select an article from SWITCH and then use library search tools to find contemporary articles written about similar themes. We will discuss major technological, cultural, political, and economic shifts that might account for the differences in perspective and tone. Students are working with the MLK library to write abstracts for SWITCH Journal articles and provide keywords that will help search engines find the articles. These abstracts will eventually show up as previews in Google Searches and within academic repositories like WorldCat and Digital Commons.

This hand-on experience will produce outcomes that have ‘real world’ impacts for future researchers, while also providing insight into the ways algorithms and metadata influence what is visible on the web and what remains hidden. At the same time, the students are building better research habits by reverse engineering the process. The abstracts produced for Scholarworks will help make the rich treasure trove of research within SWITCH discoverable by a wider community; many early SWITCH Journal contributors like Manuel DeLanda, Sadie Plant, and Alex Galloway have gone on to contribute substantially to their research fields.

code{4}lib JOURNAL

Issue 54, 2022-08-29

SWITCH is a journal of new media art that has been published in an online-only format since 1995 by the CADRE Laboratory for New Media at San José State University (SJSU). The journal is distinctive in its commitment to presenting scholarship and criticism on new media art in a visual format that reflects and enhances its engagement with the subject. This approach, which includes the practice of redesigning the journal's platform and visual presentation for each issue, raises significant challenges for the long-term preservation of the journal, as well as immediate issues related to indexing and discovery. This article describes the initial stages of a collaboration between the Martin Luther King, Jr. Library and the CADRE Laboratory at SJSU to archive and index SWITCH and to host a copy of the journal on SJSU's institutional repository, SJSU ScholarWorks. It will describe the process of harvesting the journal, share scripts used to extract metadata and modify files to address accessibility and encoding issues, and discuss an ongoing curricular project that engages CADRE students in the process of augmenting metadata for SWITCH articles. The process reflects the challenges of creating an authentic version of this journal that is also discoverable and citable within the broader scholarly communication environment. This effort is part of a growing multi-institutional project to archive the new media art community in the Bay Area in a 3D web exhibition format.

By Nick Szydlowski, Rhonda Holberton, Erika Johnson

SWITCH, a journal of new media art, has been published in an online-only format since 1995 by the CADRE Laboratory for New Media (CADRE) at San José State University (SJSU). In 2021, the Martin Luther King, Jr. Library at SJSU began to work with CADRE to archive the journal in SJSU ScholarWorks (https://scholarworks.sjsu.edu/), the university's institutional repository, which is hosted on the Digital Commons platform. SWITCH was one of the first online academic journals to embrace the visual possibilities of the World Wide Web (WWW). The first electronic-only scholarly journal, Postmodern Culture, was founded five years earlier, in 1990 (Amiran, 1991), but, like most of the earliest electronic journals, it was initially published in a text format that did not allow for graphics or specify the layout or design of the page. The year SWITCH was published, the Association of Research Libraries (ARL) compiled a print directory of all online serials, which was not limited to academic journals or publications in English, listing only 675 journals and newsletters of any type (King and Kovacs, 1995). The majority of these were published via email or gopher – less than half used the WWW. Going back a year to 1994, the directory lists only 36 journals with URLs (Mogge, 1999). SWITCH was truly a pioneering publication.

The process of archiving SWITCH presents a particular set of challenges due to the journal's status as an early electronic journal coupled with its emphasis on design and visual presentation. One unique feature, referenced in the journal's title, is the fact that each issue of the journal showcases a new visual design and layout. Nearly all of the journal's issues are still live on the web in their original formats, and the evolution of the journal represents a capsule history of web design strategies and site structures. However, these original versions are not visible to researchers as part of the broader scholarly literature, or easy to find using search engines or library discovery tools. Because of the unique features of each issue, the journal can be challenging to browse and cite. For these reasons, it was very desirable to produce a version of the journal that would be easy to discover, browse, and cite, while maintaining as much of the authentic experience of the journal as possible.

This article describes the development of a process to archive the journal in a PDF format and to create metadata for each article. We have automated as much of this process as possible using a modular, multi-step workflow. Each step of the workflow is described separately, and while the entire workflow might be most applicable to journal-based projects, several of the modules can and have been used in targeted web archiving and in the archiving of digital humanities and other web-based scholarship projects. Moreover, the collaborative nature of the project is an example of how libraries and other cultural heritage institutions can work more directly with communities of practice in a digital environment.

The workflow also includes stages which are very much not automated, but instead use the archiving process to create unique curricular opportunities for students in the CADRE program. Students who are involved in the creation of current issues of SWITCH have worked in class to write abstracts and create additional metadata for specific articles in the archived journal. These assignments have been incorporated into classes, allowing students to gain information literacy skills and understand the role of metadata in scholarly research, to encounter challenging scholarship in their field, and to bring their own experiences as scholars and artists to bear in making that scholarship discoverable. The students' work is incorporated into the presentation of the archived journals, and students are publicly credited with their work on the collection's metadata.

The archiving of the journal and the integration of the process into the CADRE curriculum are both part of a larger project to archive the new media art community in the Bay Area in a 3D web exhibition format. While the larger project involves a number of additional institutions and partners as well as a different technical approach, this initial project is an important step in creating and modeling active collaborations between the community of new media artists and cultural heritage institutions, and in building capacity to preserve complex digital artifacts that represent the early days of art on the WWW.

SWITCH was founded in 1995, only two years after the WWW made it feasible to create and share web pages using a graphical layout. The journal was edited by CADRE students under the supervision of artist and CADRE faculty member Joel Slayton. Figure 1 shows the homepage for the first issue of SWITCH, on the theme of Information on the Internet.

Issue #1 of SWITCH as it was originally published.
Screenshot from http://switch.sjsu.edu/archive/switch/switch_v1n1/switch.html.

The first 16 issues of the journal each feature unique visual presentations and appear to consist of hand-coded HTML and CSS. With the 17th issue, published in 2001, the journal was relaunched on a platform which presented all of the previous issues in a standard visual format. That platform was only used for one additional issue (issue 18, on the topic Interface: Software as Cultural Production) before the journal returned to the tradition of introducing a new visual design for each issue. However, the re-launched versions of issues 1-16 came to be the most accessible and discoverable versions of those issues. The earlier versions were so difficult to find that it was only through the archiving process that our team became aware that the original versions of those issues were still live on the SWITCH server. Figure 2 shows version 2 of the first issue of SWITCH. Version 2 appears to be based on a Linux, Apache, MySQL, and PHP (LAMP) architecture. While in version 1, each article consisted of one or more HTML files stored directly on the SWITCH server, for version

2 the SWITCH editors stored the contents of each article in a MySQL database, and the HTML of the page was generated via PHP when the user requested the page. While each issue has its own header image in version 2, the format of each issue and article is much more consistent that in the original version.

Version 2 of Issue #1.
Screenshot from http://switch.sjsu.edu/archive/nextswitch/switch_engine/front/front.php%3Fcat=5.html

The initial decision to begin the project by archiving the 18 issues on the version 2 platform was made before we became aware that version 1 of the journal was still live on CADRE's server, and it offered the primary advantage of providing a large set of structurally similar files on which to work out our automated workflow . We will discuss some of the other advantages and disadvantages of focussing on version 2 later in this article.

The process used to archive issues 1-18 and ingest them into SJSU ScholarWorks is as follows:

- First, HTTrack software (https://www.httrack.com/) was used to create a localized archive of the publicly available SWITCH server
- Second, scripts were used to address accessibility and encoding issues, simplify HTML structure, and extract basic metadata from each article
- The resulting simplified HTML files were batch-converted to PDF using Adobe Acrobat
- After the PDF files and basic metadata were published in SJSU ScholarWorks, CADRE students augmented the metadata with abstracts and additional description, added alt text to images using Adobe Acrobat, and audited the extent to which version 2 articles faithfully represent the original versions

We will discuss each of these steps below, with particular attention to methods that may be applicable to other attempts to perform targeted web archiving.

The project team created a local copy of SWITCH using HTTrack, a GPL-licensed offline browser created by Xavier Roche and other contributors. While there are many methods available for crawling the web, HTTrack may be attractive to library practitioners due to its straightforward and stable graphical user interface and its options for controlling the behavior of the web crawler. The tool is largely absent from the library literature, but one member of our team has been using it in library practice for over a decade.

We began our crawl on the SWITCH archive page (http://switch.sjsu.edu/archive/archives/index.html) and allowed HTTrack to follow links on the site to archive the contents of the SWITCH server. This approach yielded a local archive of HTML and other files with a folder structure that reflects the page URLs. Under this approach the articles from version 2 of issues 1-18 could all be found in a single local folder.

For this project, the local copy was of particular use due to the complex and sometimes ambiguous URL structure of the SWITCH site. Put simply, the server contains over 25 years of web development by CADRE students and faculty. Creating an offline copy allowed team members to browse the site through the file browser of their local operating system, providing a different view which clarified questions about the journal's history and content. This method also effectively transforms the output of content management systems and similar database-backed sites into a set of HTML files, allowing for subsequent transformation and archiving.

Browsing the offline copy revealed 237 articles that had been published on the version 2 platform. The team chose to focus first on those articles first in order to establish a workflow that could be customized further to address the later issues. Examining those 237 articles suggested three goals for the next phase of the workflow: addressing encoding problems in the version 2 articles, taking steps to enable the creation of accessible PDF files, and extracting metadata. All of these goals were addressed primarily using the Python library Beautiful Soup 4 (https://www.crummy.com/software/BeautifulSoup/bs4/doc/) using a working copy of the archived site.

Visual inspection of both the archived and live versions of the version 2 files revealed a large number of missing special characters when the files were displayed in a web browser. After troubleshooting, it became apparent that while the header of the version 2 pages indicate text encoded according to the ISO-8859-1 standard, the text that represents the articles is actually encoded using the Windows-1252 standard. This was likely an artifact introduced during the process of creating version 2 of the journal. This was addressed by rewriting the files while replacing the encoding text. The very simple code below was used to address these issues. [1]

```
filedata = filedata.replace('UTF-8', 'windows-1252').replace('iso-8859-1', 'windows-1252')
```

When the files specified the correct encoding, web browsers were able to render the special characters correctly.

The version 2 site presented two categories of accessibility issues which, unless addressed, would be carried over to any subsequent versions. Firstly, the layout features many areas with insufficient contrast between the text and background. Secondly, all images lack alt text.

The contrast issues could be addressed in an automated fashion by lightening the background of the content area and darkening text for certain HTML elements and classes. The initial plan for image alt text was for CADRE students to add it to the PDF file for each article at the same time that they wrote the abstract for the article. Adobe Acrobat provides a reasonable set of tools for adding alt text to PDF files, but testing that process on initial batches of SWITCH PDF files revealed that the complex HTML of the original files resulted in a PDF file that was incompatible with Acrobat's accessibility tools. SWITCH's version 2 platform, launched in 2001, uses nested tables to execute page layout, as was typical at the time. The article content is contained in a single cell of a table, which is the child element of another table, which is itself the child of a third table. A simplified and schematized version suggests why these pages might present challenges for tools like Adobe's that are expecting modern web page structures:

```
    <table><! -- page layout table -->
        <tbody>...<tr><td>
<table><! -- content area table -->
                <tbody>...<tr><td>
                    <table><! -- v2 database output table -->
                        <tbody>...<tr><td>
                            <! -- article content html-->
</td></tr></tbody></table></td></tr></tbody></table></td></tr></tbody></table>
```

In order to produce PDF files that could be made accessible using the available tools, the team chose to rewrite the HTML files to produce files that are visually identical to the original version 2 pages, but which use CSS and inline styles rather than tables to produce the layout. The contrast and page structure adjustments were combined into a single script which rewrites the files to a new folder. A simplified version is included below – the full script is available at https://github.com/NickSzydlowski/switch/blob/main/rewrite-accessible-colors.py.

Because the version 2 articles follow a consistent structure, it is possible to extract the unique content from the page programmatically. Article content and issue-level navigation were displayed in table cells with the classes "DBOuput" for the article "specialObjs" for the navigation. The first three images on the page are also retrieved, as they make up the header image which changes from issue to issue. Outside of these five elements, the remainder of the page is the same from article to article and can be replicated with greatly simplified static HTML.

```
article = soup.find(class_='DBoutput')
special = soup.find(class_='specialObjs')
images = soup.find_all("img")
image1 = images[0]
image2 = images[1]
image3 = images[2]
```

As an example, here is the code used to add the header images to the new simplified file:

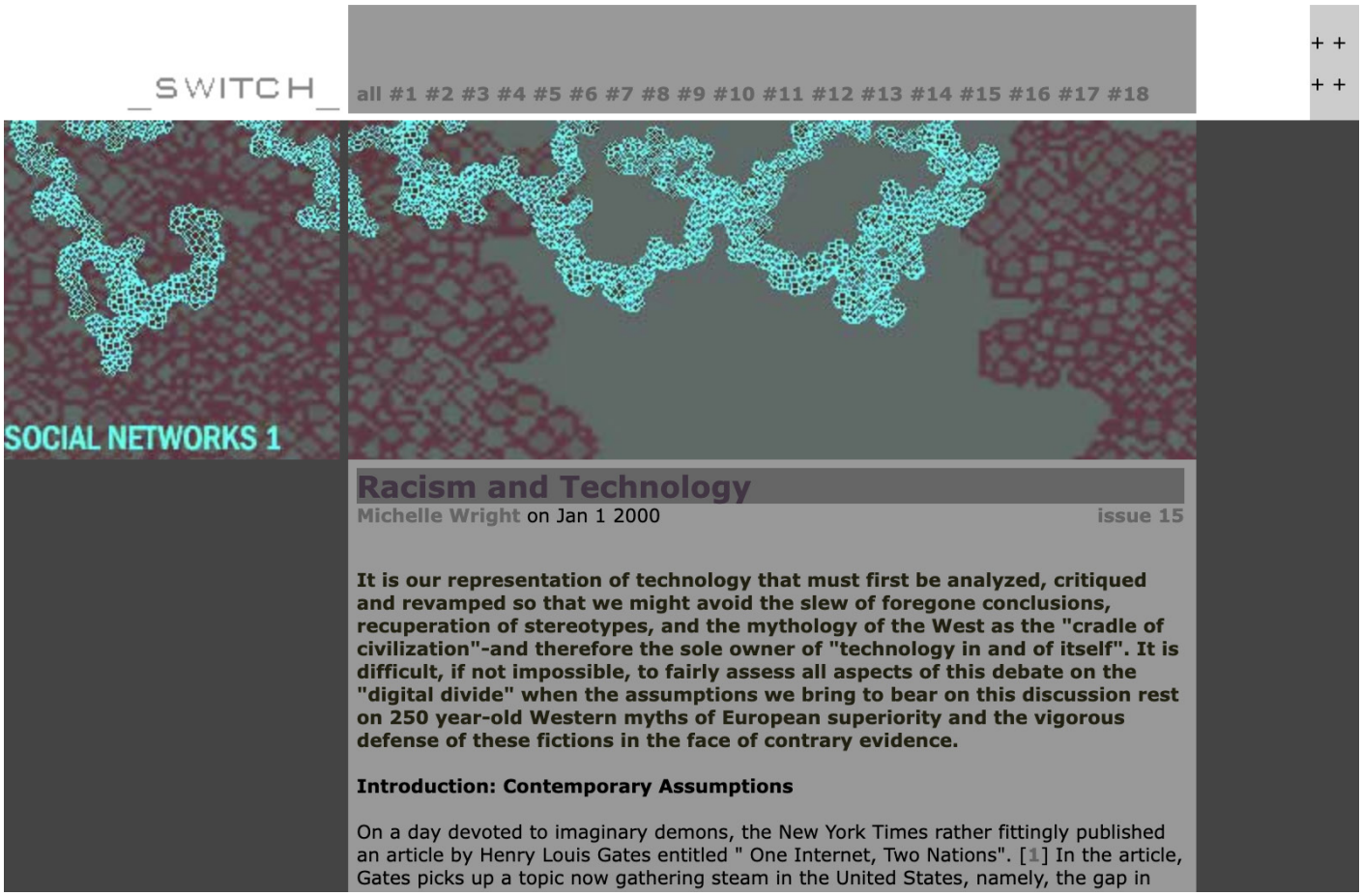
```
<div id="issueImage" style="background-color:#444444; clear:both; height:200px;">
{secondImage}
{thirdImage}
</div>
```

The original HTML is too complex to easily reproduce. In it, these adjacent images are at the top two separate cells of a single table row. The special navigation is below the first image, in the same cell, and the article itself is below the second image, again in the same cell. In this case, simplifying the HTML structure of the page had accessibility benefits even when converting from HTML to PDF. A similar process could be used to extract the article content from the page in order to create a new HTML or XML version of a web-based publication.

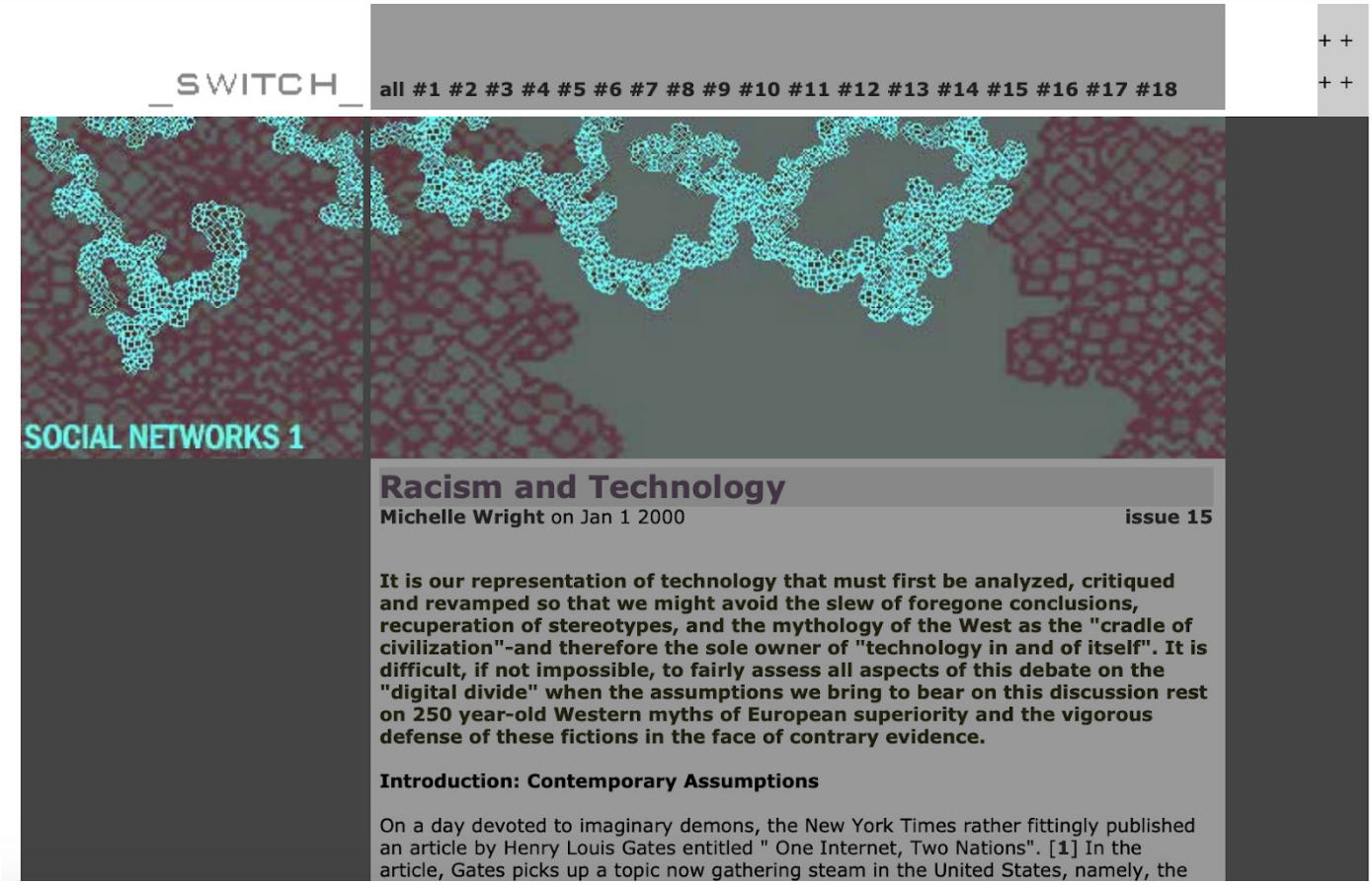
The same script addresses the accessibility issues present due to inadequate contrast on the version 2 site. Because the original site uses a mix of inline styles and CSS, it was simplest to use a multi-pronged approach to addressing styles. Here, as a last resort, background colors that were repeatedly specified in inline styles are replaced directly.

```
# accessibility changes - make changes here where inline styles and other issues make CSS difficult
output=output.replace('bgcolor="#666666"','bgcolor="#888888"')
```

These changes maintain the look and feel of the version 2 site while facilitating improved accessibility. Figure 3 shows screenshots of each version.



Comparison of original and archived article.
Screenshot from from version 2 http://switch.sjsu.edu/archive/nextswitch/switch_engine/front/front.php%3Fartc=30.html



Comparison of original and archived article.
Screenshot from archived PDF. https://scholarworks.sjsu.edu/cgi/viewcontent.cgi?article=1118&context=switch. Note increased contrast for accessibility.

Web archiving approaches that are suitable at scale may struggle to address accessibility issues that are common in older websites. Additionally, users of older sites may agree that character encoding problems leading to missing characters or the garbled text, sometimes called mojibake, are a particularly common issue for older sites. (McNulty, Alvarez, and Langmayr, 2021) The practices described here show some of the benefits of a more hands-on approach to archiving early web content, in particular when that content is of importance to a community of practice or an institution. There are clear parallels here to the preservation and conservation practices that libraries apply to print materials: materials of local and community importance warrant hands-on conservation treatment as needed, while the much larger set of “general collection” materials can be treated with practices that are capable of scaling up to larger bodies of material.(e.g. Boice, Draper, Lunde, and Schwalm, 2017).

The final script that was executed against the set of files used Beautiful Soup to parse out the article-level metadata available for each article and write that metadata to a CSV file. Available fields were title, author, issue number or issue description, date published, and filename. This module is an example of how close attention to the structure of these older files makes it possible to parse out data that is otherwise difficult to acquire programmatically. The pages do not include metadata in the header, and few elements have unique class names or IDs. The code used to acquire the issue and date information is included below.

```
issue =soup.find(class_='DBoutput').find('table').find(align='right').find('a').get_text(":", strip=True)

date =soup.find(class_='DBoutput').tr.next_sibling.next_sibling.a.next_sibling.replace('\n', '').replace('\r','').
```

Even this minimal metadata, when added to a modern journal hosting platform, dramatically improved the discoverability of individual articles, as well as the journal as a whole. Upon uploading to Digital Commons with minimal metadata, articles were almost immediately indexed in Google Scholar and easier to find on Google.

This information also provides a structure for the remaining steps of the project, in particular the curricular component which gives CADRE students an opportunity to augment this metadata and grapple with the challenges of archiving this content.

Students in the CADRE class ART 104 – Interdisciplinary Seminar in Digital Media Art are involved in the creation of new issues of SWITCH and engaged academically and artistically with the themes addressed in the journal. Being directly involved in archiving past issues of the journal is an opportunity for students to gain information literacy skills by learning more about how scholarship is created, shared, and archived. In particular, the challenge of writing abstracts for individual articles helped students understand how metadata influences the discoverability of scholarly articles.

Students each chose three articles to work on over the course of the semester. For each article, students wrote abstracts and assigned subjects and keywords, added alt text to images, and researched the author or authors of the piece. Students also located the article on the original SWITCH site and

compared the archived version to the original. In many cases, students identified missing content or other issues that were introduced during the creation of version 2 in 2001. Of the 98 articles students examined in Spring 2022, 36 had missing content from version 1 to version 2, with the most common issue being articles where only the first few paragraphs of the original text were reproduced in version 2. This occurred when an article was published over multiple URLs in the original version – many articles were laid out with a few paragraphs on one HTML page, with a next button or other navigation that brought the reader to a new URL for the next part of the text. Even in 2001, this pattern seems to have caused problems for the editors of SWITCH as they migrated to a new platform.

We expect to address this problem by adding the additional text to the downloaded HTML files and regenerating the PDFs of these articles. This is an example of the flexibility afforded by taking a more hands-on approach to digital preservation – while this stage of the process is likely to be labor intensive, it will restore the complete text of the articles that has been missing from the most visible version of the journal for two decades.

As part of a pilot project for a much larger preservation effort focused on the digital art community in the Bay Area, we hoped that this project would help to establish ways of collaborating that could carry over to the broader project. Additionally we believe some of the lessons from this project may also be applicable to similar contexts, especially those where relatively small research libraries, or other smaller cultural heritage institutions, aim to work with creative communities whose work involves technology. At our own institution, we believe the library's work with the digital arts community provides a template for efforts to support digital scholarship in other fields.

There were some unanticipated challenges that we think will be instructive to those who archive web-based art and scholarship. To be straightforward, the closer we looked at either the original SWITCH site, the 2nd version of the journal, or our archived surrogates, the more problems we found – problems with authenticity and missing content, problems with functionality and discoverability, problems with accessibility, and so on. This is not unique to SWITCH by any means. Both our previous experience with web archiving and existing studies (Ayala, 2020) suggest that these challenges persist across web archiving projects.

For our context, the lesson here is that, for content that is critical to the history of a particular institution or community of practice, we should expect to expend significant resources addressing these types of issues during the archiving process, and we should expect that hands-on, bespoke interventions will be required to make that content accessible to new users. In the context of the digital humanities, this project is particularly instructive. In SWITCH, we have an example of web-based digital scholarship that is over 25 years old. The level of intervention that is required to archive this type of material is significant and is not likely to be reduced as the technical complexity of the scholarship increases.

Importantly, for this project, faithfulness to the published version of the journal was not sufficient to preserve and provide access to the content of the journal. This is not only because of the extensive missing content in version 2 of the published journal, but also because the published journal did not meet current accessibility standards or provide the necessary metadata or structure to make the publication visible as a journal in the modern scholarly communication environment. Web archiving at scale necessarily limits its goals to an accurate reproduction of the published site, but in this case that approach would not meet the goals of either the library or the community of practice that created the journal.

More broadly, this project points to the need to consider the value of bibliodiversity to the scholarly communication environment, and the need for libraries to adopt an approach to technology that supports bibliodiversity. (Shearer, Chan, Kuchma, and Mounier, 2020) SWITCH is distinctive among scholarly journals in ways that include its integration of subject matter and presentation and its close connection to a particular community of artistic practice, but it is challenging to retain the journal's distinctive features while also increasing its visibility in the comparatively rigid world of scholarly publishing. This project points to a general approach for preserving both the visual and structural characteristics that make a journal like this distinctive. In particular, the close involvement of practitioners and students in the process of archiving the journal has produced a more authentic version of the publication than the library could have achieved on its own, while making the journal more visible and accessible to users.

In response to these challenges, project participants adopted several specific practices that that we hope to carry forward and apply to future projects:

- Flexible balance of hands-on and automated work
- Making archived work visible and legible to the broadest possible audience
- Close connection to communities of practice, including students

This project began with the intention of automating as much of the process as possible through web crawling and scripting. The initial aspiration of the project was to archive version 2 of SWITCH as it was published, but the input of various collaborators pointed the way toward a more ambitious project. Making the archived journal accessible required manual creation of alt text as well as more complex scripts to address contrast issues and simplify the HTML structure of the harvested pages. Student involvement created much richer metadata, grounded in the discipline, and also highlighted issues with version 2 which will require significant hand-work from the library, but will also make the archived SWITCH a much more complete record of the journal.

Hands-on digital preservation work is often addressed from a position of scarcity, with the implicit assumption that the volume of potential digital content is simply too great to allow labor-intensive intervention on individual objects or files. (Corrado, 2022) While library resources are necessarily limited, this project demonstrates how partnering with communities of practice can introduce a different dynamic, both by helping to clearly identify high-value material and by facilitating collaborative labor that can supplement work done within the library.

This project treats SWITCH as a journal, and in some cases it imposes a more conventional structure on the most experimental articles in the publication. While a traditional web archiving approach would capture the experience of the original publication more authentically – and would be an appropriate complement to this project – it would not make the journal's contents easily discoverable and browseable by a general audience.

This is another example where close collaboration facilitates a more interventionist approach. Migrating the journal to a very different context involved numerous small decisions. On this project library workers and CADRE faculty and students were able to discuss and work through those decisions, including

during in-class discussions and workshops. This process allowed members of the digital arts community to have consistent input, shaping the archiving process to fit the expectations of the journal's audience.

As the previous examples underscore, this project revealed both expected and unanticipated benefits of close collaboration between communities that create content and institutions that take on the responsibility of archiving that content. The Reference Model for an Open Archival System (OAIS) defines the designated community of a digital archive as:

> An identified group of potential Consumers who should be able to understand a particular set of information. The Designated Community may be composed of multiple user communities. A Designated Community is defined by the Archive and this definition may change over time. (CCSDS, 2012, 1-11)

This case study suggests an alternate understanding of an archive's designated community – as a community of collaborators in the archiving process, as well as one of potential consumers of archived information.

For this project, the collaborative model influenced decisions large and small. This is an area where approaches and methods developed in the field of community archives might help inform the work of libraries who are active in archiving and facilitating digital scholarship created by faculty and students. (Caswell, 2020).

Finally, this case study suggests that deeply collaborative partnerships between communities of practice and cultural institutions may be a viable model for digital preservation practice. It is important to expand the number and types of institutions that can practice complex digital preservation (Blumenthal et al., 2020), and we believe this model is particularly valuable for smaller and less resourced libraries. This approach opens up opportunities to integrate digital preservation and digital scholarship practices into the curriculum, which are particularly valuable at teaching-intensive academic institutions. Finding sustainable digital preservation models for small institutions is critical to maintaining the diversity and representativeness of archived digital collections, including the bibliodiversity represented by early electronic journals like SWITCH. We hope that this case study helps to demonstrate the feasibility of this work in a variety of contexts.

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Rhonda Holberton is an Oakland-based interdisciplinary artist and Assistant Professor of Digital Media at San José State University.

Erika Johnson is the Institutional Repository and Digital Scholarship Coordinator at the Martin Luther King, Jr. Library at San José State University.

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[1] Partial code is included for explanatory purposes. The complete code for the project is available at https://github.com/NickSzydlowski/switch.

Amiran E, Unsworth J. 1991. Postmodern culture: publishing in the electronic medium. The Public-Access Computer Systems Review 2(1):67-76. Available from: https://www.ideals.illinois.edu/handle/2142/201.

Ayala BR. 2020. Correspondence as the Primary Measure of Quality for Web Archives: A Grounded Theory Study. In: Hall M, Mer?un T, Risse T, Duchateau F, editors. Digital Libraries for Open Knowledge. Vol. 12246. Cham: Springer International Publishing. (Lecture Notes in Computer Science). p. 73–86. doi: 10.1007/978-3-030-54956-5_6.

Blumenthal K-R, Griesinger P, Kim JY, Peltzman S, Steeves V. 2020. What's wrong with digital stewardship: evaluating the organization of digital preservation programs from practitioners' perspectives. The Journal of Contemporary Archival Studies 7. Available from: https://elischolar.library.yale.edu/jcas/vol7/iss1/13/.

Boice J, C. Draper D, B. Lunde D, M. Schwalm A. 2017. Preservation for circulating monographs: Assessing and adapting practices for a changing information environment. Technical Services Quarterly 34(4):369–387. doi: 10.1080/07317131.2017.1360640.

Caswell M. 2018. Affective bonds: what community archives can teach mainstream institutions. In: Flinn A, Bastian JA, editors. Community Archives, Community Spaces: Heritage, Memory and Identity. Facet. p. 21–40.

The Consultative Committee for Space Data Systems (CCDS). 2012. Reference Model for an Open Archival Information System. Washington, DC: CCDS. Available from: https://public.ccsds.org/pubs/650x0m2.pdf.

Corrado EM. 2022. Digital preservation is not just a technology problem. Technical Services Quarterly. 39(2):143–151. doi:10.1080/07317131.2022.2045432.

Directory of Electronic Journals, Newsletters, and Academic Discussion Lists. 1994. Association of Research Libraries, Office of Scientific and Academic Publishing.

McNulty J, Alvarez S, Langmayr M. 2021. Detecting Research from an Uncurated HTML Archive Using Semi-Supervised Machine Learning. In: 2021 Systems and Information Engineering Design Symposium (SIEDS). p. 1–6. doi: 10.1109/SIEDS52267.2021.9483725.

Mogge D. 1999. Seven years of tracking electronic publishing: the ARL Directory of Electronic Journals, Newsletters and Academic Discussion Lists. Library Hi Tech. 17(1):17–25. doi:10.1108/07378839910267154.

Shearer K, Chan L, Kuchma I, Mounier P. 2020 Apr 1. Fostering bibliodiversity in scholarly communications: a call for action! doi: 10.5281/zenodo.3752923.

code{4}lib JOURNAL

The Editorial Committee of the *Code4Lib Journal* (*C4LJ*) collectively manages the entire business of the Code4Lib Journal, editorial as well as business functions. New members to the committee are approved by a majority vote of the existing committee.

There will be a rotating Coordinating Editor (CE), by volunteer. A Coordinating Editor will serve until the publication of an issue, at which point a new volunteering Coordinating Editor will serve. The CE is generally responsible for trying to make sure nothing slips through the cracks, and the issue gets out. But the CE isn't just responsible for the issue, she's responsible for loose ends tying for the period of her tenure.

The Code4Lib Journal does not have article processing charges (APCs), submission charges, page charges, color charges or any instance where money is required to complete the publication process. The Journal's editors are volunteers and the journal's website uses space donated by ibiblio – The Public's Library and Digital Archive.

We will generally use an open peer review process. A discussion of peer review is in the Editorial Introduction to issue #10 by Edward M. Corrado: The Code4Lib Journal Experiment, Rejection Rates, and Peer Review. In a June 6, 2012, post on his blog, long-time editorial committee member Jonathan Rochkind wrote Code4Lib Journal and "Peer Review". A more in-depth description of the editorial process can be found in a December 12, 2012, article from In the Library with the Lead Pipe: Open Ethos Publishing at Code4Lib Journal and In the Library with the Lead Pipe and in the Editorial Introduction to issue #26 by Kelley McGrath: On Being on The Code4Lib Journal Editorial Committee.

Submissions can be solicited by the Editorial Committee (EC) from specific people; solicited with an invitation on a topic; or submitted solely at author's initiative. The EC will maintain private forums for discussion of submitted articles. Other business of the journal that's not about specific articles will be conducted in public forums such as our public listserv and wiki pages.

A submission can come in the form of a complete draft, or a proposal in the form of an abstract, and is usually submitted via the online form. Submissions will be forwarded to the entire EC. A provisional vote will be taken within a month of submission, hopefully sooner. Not all editors need to vote on every proposal, but to be provisionally accepted submissions need to be achieve a positive result per the Code4Lib Journal Voting rules. A provisionally accepted article will have an editor assigned to it, and a target issue. There will generally be an issue-specific deadline for complete drafts, if the original submission was just a proposal.

The assigned editor will work with the author to get the article ready for publication. The assigned editor will mediate all communication between author and the EC, such as requests for changes, and generally keep track of the author.

Provisional approval does not commit *C4LJ* to publishing the article or set a date when it might be published, but it does signal to the author that *C4LJ* will likely publish the article provided the necessary changes (if any) are made and space allows.

After the first complete draft is received, it will be forwarded to the entire Editorial Committee. The assigned editor has the responsibility to review it and decide if he or she recommends it as a finished product to the Editorial Committee. [See our content evaluation guidelines.] The assigned editor will work with the author(s) on any changes, taking into account any suggestions or comments from other editorial committee members. When the assigned editor recommends the article as finished (which could be with no changes at all, or could be after changes), the Editorial Committee will take another vote to approve the finished product for inclusion. Successful articles require a positive vote per the Code4Lib Journal Voting rules.

The Coordinating Editor will:

- Keep track of each article in the pipeline, which editor is assigned, and what the deadline is.
- Recruit editors for each article as necessary, by cajoling, begging, or other mechanism to be determined later by the Editorial Committee.
- Keep track of votes on each article.
- Make sure no articles fall through the cracks, and that we don't reject any articles through being too busy to notice they're good.
- Communicate rejections with the author.
- Publicize Call for Submissions and Table of Contents.
- Set deadlines and help us keep them.
- Writing the introduction for the issue you are coordinating.
- Help identify other tasks that need to be done, and recruit editors to do them.

All Editorial Committee members will:

- Read, discuss, vote on, and be assigned articles.
- Proofread and comment on draft articles edited by other Committee members.
- Solicit articles and recruit authors
- Take a turn as Coordinating Editor, as they have time.
- Helping to do what needs to be done as it comes up.
- Share responsibility for making and keeping *C4LJ* a great publication.

This process is subject to review and alteration by the Editorial Committee, once we try it out.

More detailed information for editors

code{4}lib JOURNAL

Contact the Code4Lib Journal editorial committee at journal@code4lib.org. The Editorial Committee consists of the following:

- Sara Amato, Eastern Academic Scholars' Trust
- Gustavo Candela, University of Alicante
- Edward Corrado, University of Alabama Libraries
- Andrew Darby, University of Miami Libraries
- Brighid M. Gonzales, Our Lady of the Lake University
- Eric Hanson, MIT Libraries
- Angela J.A. Kent
- Péter Király, Gesellschaft für wissenschaftliche Datenverarbeitung mbH Göttingen (GWDG)
- Peter Murray, Index Data
- Ron Peterson, Library of Congress
- Terry Reese, The Ohio State University
- Mark Swenson, Winnetka-Northfield Public Library District
- Junior Tidal, New York City College of Technology, CUNY

The Editorial Committee collectively manages the entire business of the Code4Lib Journal, editorial as well as business functions.

Interest in working on the Code4Lib Journal is always welcome, and can be directed to our public discussion list at c4lj-discuss@googlegroups.com. To join this discussion list, see http://groups.google.com/group/c4lj-discuss. Be aware that this is a publicly viewable list.

We have a rotating Coordinating Editor. The current (issue 55) Coordinating Editor is Junior Tidal.

Jon Fackrell (jon.fackrell via the google email service) is our Technical Administrator, responsible for administrating and coordinating our technological infrastructure.

- Shawn Averkamp (Issues 17-29)
- Carol Bean (Issues 1-42)
- Jonathan Brinley (Issues 1-14)
- Heidi Dowding (Issues 24-29)
- Gabriel Farrell (Issues 9-19)
- Rebecca Hirsch (Issues 37-49)
- Tom Keays (Issues 1-29)
- Tim Lepczyk (Issues 10-17)

- Emily Lynema (Issues 1-16)
- Tim McGeary (Issues 10-16)
- Kelley McGrath (Issues 8-28)
- Eric Lease Morgan (Issues 1-2)
- Carolyn Moritz, Vassar College Libraries (Issues 44-46)
- Tod Olson, University of Chicago Library (Issues 10-17)
- Jonathan Rochkind, Johns Hopkins Libraries (Issues 1-27)
- Jodi Schneider (Issues 1-8)
- Christine Schwartz (Issues 3-7)
- Dan Scott, Laurentian University (Issues 23-29)
- MJ Suhonos (Issues 10-14)
- Ed Summers, Library of Congress (Issues 16-17)
- Jason Thomale, University of North Texas Libraries (Issues 23-32)
- Ruth Tillman, Penn State University (Issues 29-41, website maintainer 30-51)
- Ken Varnum (Issues 1-9)
- Ryan Wick (Issues 3-14)

COURSES TAUGHT/DEVELOPED

**indicates new courses developed*

SAN JOSE STATE UNIVERSITY

Digital Material*
Interdisciplinary Seminar in Digital Media Art (Spring 2022 - Fall 2022)
Special Topics in Studio Art (Summer 2021)
BFA Senior Seminar (Spring 2020, Spring 2021-Fall 22)
MFA Seminar in Digital Media Art (Fall 2020)
Medium & Message (Spring 2021)
Advanced Digital Projects (Fall 2018 - Spring 2019)
Introduction to 3D Modeling & Printing (Fall 2017 - Spring 2019, Spring 2020 - Fall 2020, Fall 2021)
Graduate Interdisciplinary Seminar (Spring 2018, Fall 2019)
Introduction to Digital Art (Fall 2017)

STANFORD UNIVERSITY

Embodied Interface (Fall 2016)*
Advanced Interaction Design (Spring 2016, Spring 2017)*
Sculpture I (Winter 2016)
Sculpture II (Winter 2016)
Art & Electronics (Winter 2016, Winter 2017)
Data as Material (Fall 2015, Fall 2016)*
Digital Printmaking (Spring 2015)*
Interdisciplinary Art Junior Seminar (Winter 2012)
Independent Study, Painting/Drawing (Winter/Spring 2016), Design (Winter 2016)
Mentor, Senior Capstone Projects (Spring 2015)

CALIFORNIA COLLEGE OF THE ARTS

Programming and Electronics (Spring 2017)
Advanced Programming & Electronics (Spring 2017)

CALIFORNIA STATE UNIVERSITY, EAST BAY

Software Design for Multimedia (Graduate) (Spring 2016, Spring 2017)
Professional Practices for Design (Spring/Fall/Winter 2016)
Graphic Communication (Winter 2017, Spring 2017)
Graduate Thesis Advisory Seminar (Spring 2017)

EXAMPLE SYLLABI

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Syllabus: 3D Modeling, Printing, & Animation

Course Description

This course introduces experimental 3D methods with a focus on conceptual and creative processes using Maya software and 3D printing technology while addressing contemporary uses for artistic production. Students will produce projects using 3D scanning, polygonal and NURBS based modeling methods, texturing, rendering, keyframe animation, and rigging/IK Skeleton control. The course will introduce more advanced animation techniques including looping and mixing of animation cycles as well as the implementation of motion capture data using the NiMate plugin with Kinect sensors. The 3D printing workflows will be covered for the Lulzbot and Ultimaker printers.

Required Texts/Readings

READING/MEDIA: INTRODUCTION

- Art21org. Jacolby Satterwhite Dances with His Self. New York Close Up, Art21, 16 Aug. 2013, www.youtube.com/watch?v=3LgtGM1Wcss. (8:58)
- Kahn, Sophie. “Leaders in Software and Art .” 2012, vimeo.com/58810920. (5:31)
- POSTmatter. “Holly Herndon Interview.” 2016, https://vimeo.com/128187333 (4:27)
- Atkins, Ed. “Ed Atkins at 14 Rooms. Interview.” VernissageTV, 6 July 2014, www.youtube.com/watch?v=3npen6jSlxo. (6:48)

READING/MEDIA 1: PROSTHETICS (3D SCAN & MODELING)

- Hendren, Sarah. “All Technology Is Assistive: Six Design Rules On ‘Disability.’” Wired.com, 14 Oct. 2014, www.wired.com/2014/10/all-technology-is-assistive/.
- Marguerite Humeau on reviving prehistoric creatures. https://vimeo.com/177215605 7:34

READING/MEDIA 2: HYBRID OBJECTS (3D PRINT)

- Bogost, Ian. “Chapter 1.” Alien Phenomenology or What's It like to Be a Thing, University of Minnesota Press, 2012, pp. 1–34.
- Allahyari, Morehshin, and Daniel Rourke. “The 3D Additivist Manifesto.” #Additivism, 2015, additivism.org/manifesto.

READING/MEDIA 3: OBJECTS IN PLACE (STILL LIFE)

- Diederichsen, Diedrich. “Animation, De-Reification, and the New Charm of the Inanimate.” Journal #36 July 2012 - e-Flux, July 2012, www.e-flux.com/journal/animation-de-reification-and-the-new-charm-of-the-inanimate/.
- Vermeulen, Timotheus. “The Altergorithm.” Posthuman Glossary, edited by Rosi Braidotti and Maria Hlavajova, Bloomsbury, 2018. Available: https://frieze.com/article/altergorithm

READING/MEDIA 5: ORIENTATIONS OBJECTS OTHERS (ANIMATION)

- Ahmed, Sara. “Find Your Way.” Queer Phenomenology: Orientations, Objects, Others, Duke University Press, 2007, pp. 1–24.
- Bailey, Stephanie. “IAN CHENG: ENTROPY WRANGLER | 艺术界 LEAP.” LEAP, 11 Dec. 2015, www.leapleapleap.com/2015/12/ian-cheng-entropy-wrangler-2/.

READING/MEDIA 5: SELF PORTRAIT/AVATAR (RIGGING & SKELETON CONTROL)

- Gaskins, Nettrice. “Art & the Avatar: Ambiguity of Identity in Virtual 3D Worlds.” Art21 Magazine, 21 Apr. 2010, magazine.art21.org/2010/04/21/art-the-avatar-ambiguity-of-identity-in-virtual-3d-worlds/.
- humdog. “Pandora's Vox: On Community in Cyberspace.” High Noon on the Electronic Frontier: Conceptual Issues in Cyberspace. Ed. Peter Ludlow. Cambridge, MA: MIT Press, 1996. 437-444. Available: http://folksonomy.co/?permalink=2299

READING/MEDIA: FINAL

- Steyerl, Hito. Bubble Vision. Serpentine Marathon: GUEST, GHOST, HOST: MACHINE! at City Hall, Serpentine Galleries, 7 Oct. 2017, www.youtube.com/watch?v=boMbdtu2rLE. (14:54)
- Hayles, N. Katherine. “How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics.” Chicago, Ill.: University of Chicago Press, 1999. (CH1, Ch11)
- Warburton, Alan, director. “Goodbye Uncanny Valley.” Tom Pounder and Wieden + Kennedy, 2 Feb. 2018, vimeo.com/237568588. (14:38)

Other equipment / material requirements

External Hard-Drive: Students will need to purchase a hard-drive for this class. The hard drive must be 500 GB or bigger. 3-button Mouse: The use of a 3-button mouse is HIGHLY recommended. There are many Middle and Right Click Operations in Maya. I recommend a scroll-wheel middle button design.

Course Assignments

Project 1: Prosthetics (3d Scan & Modeling)
With a partner, make a 3D scan of your body. Import the scan into Maya and use polygonal modeling techniques to create a ‘prosthetic’ for yourself. Consider ways the addition of external technologies can enhance, modify, or restrict the ways the biological body interacts with the world. How can prosthetics augment our biological senses? In rendered space you are not bounded by physics or economic restrictions so I encourage you to press into the limits of what you think is possible and stretch the definition of ‘prosthetic.’ How has technology changed the way the body interacts with the world? How has technology changed the way we interact with other humans?

Project 2: Hybrid Object (3D Print)
You are responsible for modeling or combining elements from 3 or more found models to create a hybrid object that will be 3D printed. What happens when a virtual object is translated into physical material? Why print a virtual model? What can 3D prints do that other mediums can’t? What does it mean that you can physically

manifest something that someone else created in virtual space? How is the value of the object calculated given that a) it takes so long to produce something relatively small and b) the reproducibility of the object resists aspects traditionally associated with the arts; namely originality and authorship. How is the object presented? Photographed? On a pedestal? Stop Motion Animation? Site Specific Installation?

Project 3: Objects in Place: Still Life (Rendering + Textures)
Create a scene with 3 or more objects with unique textures. How are virtual scenes different from painting or photography? How do the objects in your scene relate? What happens when you change the texture of an object? How does lighting affect the scene? How does the orientation (resolution) and position of the camera (and by extension the viewer) affect the way the scene is 'read'?

Project 4: Orientations Objects Others (Animation)
Use the scene from Project 3 (or create a new scene) and make a 30-60 sec animation that seamlessly loops using basic rigging and keyframe animation techniques. How does animation change the way the work is read? How does each object move? What happens when one object moves and another doesn't? How does the gesture effect temporal texture? Is it calm? Anxious? Athletic? Natural? Artificial? Does the animation suggest real-time or compressed/expanded playback?

Project 5: Self Portrait/Avatar (Rigging)
Use the modeling techniques we have discussed so far to create an animated self portrait/avatar. This can be as 'realistic' or fantastic as you like. Rig the model and create a looping animation cycle. Consider the ways site, lighting, texture, and gesture interact to create a conceptual framework for the piece. Why does this NEED to be an animation? How is an animation different from traditional video? How is the portrayal of a virtual self different from a portrayal of your 'real' self? What kinds of things can happen in virtual space? What kinds of things can't happen in virtual space?

Artist Presentation
Select an artist using 3D modeling techniques in their practice and give a 10 min presentation on their work. Use the readings and discussions from class to contextualize their practice within contemporary art/critical theory. Why is their work important and why is the use of 3D modeling necessary to their practice?

Final Project + 1500 Word PDF Artist/Research Statement
Create a work of art using 3D modeling that synthesizes the ideas and techniques you learned in Art 102. Final projects may be presented in-class in physical and/or animated formats. Include a 4-page PDF layout with text, images, & hyperlinks that includes a 500 word artists statement, and a 1000 word research statement that addresses your process, influences, and conceptual/theoretical interests.3D Modeling, Printing, & Animation

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Course Schedule

Week	Topics, Readings, Assignments, Deadlines
1	Course Introduction /Overview of Syllabus. Lecture: Intro to 3D Animation & Artists using 3D modeling
1	Lecture: File Formats and Basic Maya Navigation. Prosthetic. Workshop: 3D Scanning. Due: Reading 1 Due: Adobe Request Submitted Due: 3-Button Mouse. External Hard Drive with Exercise Files saved. Maya.
2	Lecture: Intro to 3D Mesh. Workshop: Sculpting in Maya. Tutorial Due: Maya Basics
2	Lecture: Lighting & Rendering PT1. In-Class Studio Time. Tutorial Due: Maya Lighting/Rendering with Arnold.
3	Lecture: Lighting & Rendering PT2. In-Class Studio Time.
3	Project 1 Due: Prosthetic
4	Lecture: Intro 3D Printing. Workshop: Introduction to 3D printing software. Due: 3D Printing Tutorial PT1 Due: Reading 2
4	Workshop: Preparing Files for 3D Printing. Due: Reading 2 Tutorial Due: 3D Printing PT2
5	One-On-One Meetings & Model Reviews. In-Class Studio Time. Print-Ready File by end of Class
5	Student Presentations: Artists Working with 3D
6	Lecture: Narrative and Placemaking. Workshop: Intro to Textures & Scene Setup. Tutorial Due: Textures PT1
6	Workshop: Textures PT 2 Tutorial Due: Textures PT2 Project 2 Due: Distributed Object (3D Print File Uploaded)
7	Workshop: Textures PT 3 Individual Meetings and In-Class Studio Time. Draft Due: Wireframe Sketches for Project 3 (Still Life)
7	Project 3 Due: Still Life (Rendering + Textures)

8	Lecture: Introduction to Animation. Workshop: Key Frames & Timeline. Due: Reading 4 Tutorial Due: Basic Animation
8	Lecture: Narrative & Storyboarding. Workshop: Basic Rigging. Tutorial Due: Animation Pt 2
9	Workshop: Batch Rendering. Project 2 Due: Distributed Object (3D Print)
9	In-Class Workshop: Physics Engine PT1 Individual Meetings & In-Class Studio Time. Draft Due: Storyboard Project 4 (Animation)
10	In-Class Workshop: Physics Engine PT2 Individual Meetings & In-Class Studio Time. Draft Due: Scene Setup
10	Project 4 Due: Animation
11	Lecture: Avatars & Virtual Space. Workshop: Character Rigging. Due: Reading
11	Workshop: Walk Cycle. Tutorial Due: Animating Walk Cycle
12	Workshop: Looping/Mixing Animation. Tutorial Due: Looping Animation
12	Guest Lecture. Individual Meetings and In-Class Studio Time. Due: Storyboard Project 5 Avatars
13	Project 5 Due: Self Portrait (Avatar) Animation
13	Student Presentations: Proposal for Final Project
14	In-Class Tutorials: Cloth & Liquid Individual Meetings and In-Class Studio Time. Draft Due: Scene/Parts on Hand for Final
14	In-Class Tutorials: Motion Capture & Using Animation Files Individual Meetings and In-Class Studio Time.
15	Due: Final Scene & Rendering Started
15	Student Paper Presentations. Due: Draft Final Paper
16	Student Project Presentations + Final Paper Due

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Course Lectures

Introduction to Maya: Tutorials on Youtube (Rhonda's Video Tutorials)

INTRODUCTION

00a_Intro-3D-Modeling-Printing

00b_INTRODUCTION_TO_3D_MODELING

Project 1: 3D SCANNING LIGHTING RENDERING

01a_Prosthetics

01b_MAYA_Interface

02_Maya_Mesh_Polyginal_Modeling

03_Maya_Lighting_Rendering

03b_3D Scanning_Model_Repair

Project 2: 3D PRINT

3D Printing - Model Prep & Slicing

05_3D_Printing_Aritst_Examples

Project 3: TEXTURES SHADERS MATERIALS

06a_Intro_Textures_Comp_Chart

06b_Textures_Shaders_Materials

07_TexturesPt2_UVs_Nurbs

07_UVpt2_3D_Paint

08_ModelingTips_Normals

MAYA-SHADERS2-DISPLACEMENT

Project 4: ANIMATION & KEYFRAMING

08b_Basic_Animation_CameraSeetings_Batch_Rendering_Adobe_Premiere

09a_Time_Narrative

09b_Premiere_Basics_Maya_Parenting_GraphEditor

09c_Animation_UncannyValley_Reading Discussion

10_Graph_Editor_Physics

10b_ANIMATION_MASH_KEY_MATERIAL

Project 5: RIGGING AND CHARACTER ANIMATION

11_Digital_Bodies_Avatars

11_Basic_Rigging

12_MakeHuman_Human_Rig

12_Walk_Cycle_Video_Time_Editor

12_Walk_Cycle_Still_Image_Time_Editor (same as lecture above, but uses stills exported from Premiere for references)

13_LOOPING_ANIMATION

13_Help_Crumpled_Mesh

rhonda@rhondaholberton.com
rhondaholberton.com

List of Artists Working with Experimental 3D

Addie Wagenknecht
Aki Inomata
Al And Al
Albert Omoss
Aleksandra Domanović
Alex Mcleod
Alfredo Salazar-Caro
Amanda Ghassaei
Andrew Norman Wilson
Antoni Tudisco
Barry Doupe
Bill Miller
Birch Cooper
Bluntxskensved
Brenna Murphy
Bryan Plust
Cao Fei
Carla Gannis
Charlotte Davies
Claudia Hardt
Clement Valla
Cool 3d World
Dave Fothergill
Dave Stewart
Diana Gromala
Drages Animation
Ed Atkins
Eku Wand
El Popo Sangre
Emmy Skensved
Erik Ferguson
Esteban Diacono
Eva And Franco Mattes Aka 0100101110101101.Org
Eva Papamargariti
Filip Tarczewski
Fred Fröhlich
Geoffrey Lillemon
Gilles Azzaro
Grégoire Blunt
Heather Dewey-hagborg
Herbert W. Franke
Hito Steyerl
Hyphen Labs
Ian Cheng
Istvan Aka Chaotic Atmospheres
Jacolby Satterwhite
Jenna Sutela
Jennifer Steinkamp
Jesse Kanda
John Butler
Jon Rafman
Jonathan Monaghan
Jonathan Pêpe
Julian Oliver
Jun Seo Hahm
Karl Sims
Kathleen Daniel
Katie Torn
Katja Novitskov
Kim Laughton
Kouhei Nakama
Kristen Lucas
Laturbo Avedon
Luke Jerram
Luyang
Lynn Hershman
Marc Owens
Manfred Mohr
Marguerite Humeau
Mark Leckey
Mark Dorf
Mike Pelletier
Morehshin Allahyari
MSHR
Nate Boyce
Nettrice Gaskins
Nonny de la Pena
Nic Hamilton
Oliver Laric
Ondrej Zunka
Peter Wu
Philippe Parreno + Pierre Huyghe
Pussykrew
Rachael Archibald
Rachel Rosin
Rafael Lozano-Hemmer
Rebecca Allen
Revital Cohen + Tuur Van Balen
Rhett Dashwood
Rick Silva
Sanatorios
Shane Mecklenburger
Simon Holmedal
Sophie Kahn
Sterling Crispin
Takeshi Murata
Tabita Rezaire
The Machine To Be Another
Theo Triantafyllidis
Tim Berresheim
Timur Si-qin
Victoria Vesna
Vince Mckelvie
Wu Tsang

Galleries/Museums
DiMODA, Online
Import Projects, Berlin
Panther Modern, Online
Pioneer Works, Brooklyn
Transfer Gallery, Brooklyn
Upfor Gallery, Portland
ZKM, Karlsruhe

Design Firms Pushing Boundaries
ZEITGUISED
CATK
weareseventeen

San José State University
Digital Media Art/Department of Art & Art History
Art 107 Advanced Projects in Digital Media Art, Spring 2019

Course and Contact Information

Instructor:	Rhonda Holberton
Office Location:	ART 319
Telephone:	(408) 924-4348
Email:	rhonda.holberton@sjsu.edu
Office Hours:	Tues/Thur 10:45AM - 11:45AM
Class Days/Time:	Tues/Thur 12:00PM - 2:50PM
Classroom:	Art Building 241
Prerequisites:	Art 74 & Art 75

Units: 3

Course Format

Technology Intensive, Hybrid, and Online Courses

This course requires access to a computer which can support Autodesk's Maya, Unity, and Adobe Creative Cloud (plenty of memory and a good graphics card). Mandatory Adobe Apps include Photoshop and Premiere. Students can use the lab computers or download the current edition of Maya, Unity, & Adobe Creative Cloud.

Email

All emails MUST include Art 107 in the subject line. Emails that don't include Art 107 won't be answered. Expect a reply within 1-2 business days (Monday-Friday). See Classroom Protocol for emails regarding missed class.

Canvas

Course materials such as syllabus, schedule, handouts, notes, assignment instructions, etc. can be found on Canvas.

Course Description

Advanced issues and applications of digital technology in art. Application of interactive technology in installation and performance. Emphasis on collaborative projects. Course is repeatable up to 6 units. Prerequisite: ART 75 or permission of instructor. Misc/Lab: Lab 6 hours. Misc/Lab: Activity 6 hours.

This upper level studio course will facilitate sustained investigations into designed interactivity in real space. Students will create interactive installations, web or public interventions, and critical design objects using sensors or other computational devices. The course will be project driven; students will develop three major project projects beginning with written proposals. After the proposal, students will have the chance to meet one-on-one with the instructor to design a production schedule that will identify necessary skill-sets and components for production, track deliverables, and document their progress. The first two weeks of the course will prepare the students for their first project proposal. In-class workshops will provide students with

foundational technical skills necessary to develop interactive art projects. The instructor will provide introductory resources for specialized projects but most of the projects will necessitate independent research and students will spend the majority of their project production time out-of-class. In addition to independent production time, students can expect to spend roughly 1.5 hours per meeting outside of class on readings and tutorials.

Course Learning Outcomes (CLO)

Upon successful completion of this course, students will be able to:
LO1 Design and build interactive software
LO2 Generate meaningful human-computer interaction and expressive data
LO3 Employ object-oriented programming in the creation of interactive artworks
LO4 Deploy multimodal forms of HCI to generate compelling interaction data
LO5 Write critically and creatively on contemporary issues in art and technology
LO6 Work collaboratively to build software for individual and group exhibition(s)
LO7 Present functional interactive artworks for individual and group exhibition(s)

Required Texts/Readings

Textbook

No textbook is required; all reading material will be available on Canvas.

Other technology requirements / equipment / material

Software (free)

- **Unity** - free for personal use and can be downloaded here: https://unity3d.com/get-unity/download
- **Maya -** Free download for SJSU students here: https://www.autodesk.com/education/free-software/maya.
- **Adobe CC** - Request free download for SJSU students here: http://www.sjsu.edu/ecampus/teaching-tools/adobe/index.html.
- **Text Editor** of your choice (Brackets, Atom, & Sublime are great for different applications and are all free). See here for review: https://www.upwork.com/hiring/development/text-editors-atom-sublime-brackets/
- **Lynda.com** - Access to Lynda is free through the SJSU library portal here (need library card): https://www.lynda.com/portal/patron?org=sjlibrary.org

Hardware & Other Materials

- Students are required to purchase an Arduino Uno Rev3 availble here for $22 https://store.arduino.cc/usa/arduino-uno-rev3
- The use of a 3-button mouse is HIGHLY recommended. There are many Middle and Right Click Operations in Maya & Unity. I recommend a scroll-wheel middle button design.
- Students will need to provide their own materials for individual projects

Library Liaison

Gareth Scott
email: gareth.scott@sjsu.edu
phone: (408) 808-2094
Dr. Martin Luther King, Jr. Library
4th Floor Administration Offices
Art and Art History Resources: **https://libguides.sjsu.edu/Art**

Shop Safety Test

Students are required to take the shop safety test in Room 10 during the first 3 weeks of the semester. Before the test students must pay a $20 fee at the Bursar's Office, located in the Student Services Center, directly into Fund 62089 with cash or check. You must bring the receipt for the payment with you to the Shop Safety Test.

Hazardous Materials (HAZMAT)

All studio classes that use any "hazardous materials" should include one graded assignment that helps students understand HAZMAT regulations and develop consistently safe practices—this might be as simple as a labeling assignment. Note that food containers cannot be used for chemical storage and that common household items (bleach, vinegar, etc.) are deemed hazardous materials and must be stored appropriately. The campus EHS (Environmental Health & Safety) office and the County will schedule inspections with increasing frequency; fines assessed by the County are now high enough to put us out of business, so this is a serious matter. The techs are NOT responsible for cleaning up facilities and classrooms and offices—this is your responsibility. If you need information or help, please let us know. Additional note: clutter is deemed a hazard, and we can be fined for clutter. Basic training powerpoint: http://www.sjsu.edu/fdo/docs/hazmatandlabsafetyguidance.pdf

Course Requirements and Assignments

The reading, videos, and podcasts that will frame our discussions are all available on our Canvas site. Students will be expected to complete short reading comprehension quizzes and should come prepared to discuss the media in the context of art & design. Readings and discussions will be divided into three major themes. Students will be expected to contribute 2 slides to the second part of each thematic presentation that will be folded into the group discussion.

Project 1 Disruptions & Glitches in Social Space: What makes a space social? How do certain spaces change what is considered normal behavior? How do we test the rules? What happens when we don't follow them? How do we misinterpret each other? Failures, communication breakdowns and arguments, ambiguity.
Media 1.1

- Goffman 'The Presentation of Self In Everyday Life' conclusion (p 152-162)
- Temporary Services, 'Evaluation' (1 page)
- Glitch Moment(um) (p 33-44)

Media 1.2

- Kwastek, Katja. Aesthetics of Interaction in Digital Art. CH 1: Interactive Art p 3-42

Media 1.3

- Langer Mindfulness (20:20)
- Jacolby Satterwhite Dances with His Self (8:58)
- The Tenacious Alchemy of China's Cao Fei | Brilliant Ideas Ep. 34 (24:10)

Project 2 Augmented Systems: How has technology changed the way the body interacts with the world? How has technology changed the way we interact with other humans? Mobile, public and participatory performance platforms, Social Media, App-Based Sharing Economies, Public vs Private, Inside versus Outside, Happenings, Individuals, Teams, and Mobs. Assistive Technologies, Transparent Enhancements, Extensions, Network Theory, Cyborgs, Object Oriented Ontology
Media 2.1

- Hendren 'All Technology is Assistive
- Computer Or Human? + Thad, NPR radio show

Media 2.2

- Intra-actions Interview with Karen Barad
- Diedrich Diederichsen 'Animation, De-reification, and the New Charm of the Inanimate'

Project 3 Critical Engineering: Can engineering be critical? Can it be political? Design in the Anthropocene, Philosophies of Design, Ethical Hacking, security/surveillance/privacy, Social engineering, phishing, cross-site scripting, trolling, & authenticity.

- Critical Engineering Manifesto,
- Lanier 'Enslaved by Free Information',
- Wood, John. Why User-Centered Design is Not Enough

The University Policy S16-9, Course Syllabi (http://www.sjsu.edu/senate/docs/S16-9.pdf) requires the following language to be included in the syllabus:

"Success in this course is based on the expectation that students will spend, for each unit of credit, a minimum of 45 hours over the length of the course (normally three hours per unit per week) for instruction, preparation/studying, or course related activities, including but not limited to internships, labs, and clinical practica. Other course structures will have equivalent workload expectations as described in the syllabus."

Final Examination or Evaluation

Final Projects will be presented during finals week on Thursday, December 13 9:45AM - 12:00PM

Grading Information (Required)

Determination of Grades

Each Project will be graded on the following three categories

1. The Work 50%
2. Description & Documentation 25%
3. Tutorials, Readings, Participation in Class Discussions, and Project Review Day 25%

1. The Work

Work will be assessed according to the following rubric

A 100-90% Excellent. Student exhibits exemplary effort at comprehension and application of the required materials. All creative and programming work is engaging.

B 89-80% Good. Student completes assignments, and demonstrates a grasp of key programming and creative concepts. Student participates actively in the classroom.

C 79-70% Satisfactory. Student completes the assignment but the work lacks creative and aesthetic effort. The work is underdeveloped, incomplete or partially broken.

D 69-60% Unsatisfactory. Student does not complete the work as assigned. Substantial problems exist in student's work.

F < 60% Fail. Student does not submit work, or work is below unsatisfactory level.

2. Description & Documentation

Must be submitted to Canvas. You will not receive a grade until the following is submitted:

Portfolio-Ready Documentation

- Photograph (.jpg 1200 pixels on the long side)
- Stills/Storyboard (.jpg 1200 pixels on the long side)
- Video (link)

Work list

- Title
- Medium
- Size/Duration

One paragraph description that includes

- Process/Tools
- Inspiration (existing work)
- Concept

3. Participation in Class Discussions and Project Review Day

- Students must be present on discussion and review days to receive credit
- Students who are not ready to present on review days must attend class to receive participation credit

Relative weight of course requirements:

1. Project 1 (15%)
2. Project 2 (15%)
3. Project 3 (15%)
4. Final Project (25%)
5. Class Participation (10%)
6. Artist Presentation (10%)
7. Artist/Research Statement (10%)

Late assignments will only be accepted under unusual, extenuating, or emergency circumstances.

Numeric grade equivalents:

93% and above	A
92% - 90%	A-
89% - 88%	B+
87% - 83%	B
82% - 80%	B-
79% - 78%	C+
77% - 73%	C
72% - 70%	C-
69% - 68%	D+
67% - 63%	D
62% - 60%	D-
below 60%	F

Please note: Except in cases of documented emergencies, incomplete grades are not given in this course.

"All students have the right, within a reasonable time, to know their academic scores, to review their grade-dependent work, and to be provided with explanations for the determination of their course grades." See University Policy F13-1 at http://www.sjsu.edu/senate/docs/F13-1.pdf for more details.

Additional Note:

This syllabus is subject to change, in the event of unforeseen circumstances, or in the case that changes will significantly enhance the quality of the course. Students will collectively have the opportunity to shape the ways in which the course unfolds.

Department Advising

For information about majors and minors in Art & Art History, for change of major/minor forms and a list of advisors: http://www.sjsu.edu/art/ or the Art & Art History department office in ART 116, 408-924-4320, art@sjsu.edu

Classroom Protocol

Students are expected to be punctual for class and actively engaged during all class meetings. Cell phones, smart phones, or other devices that detract from full attention should turned off or silenced.

University Policies

Per University Policy S16-9, university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc. will be available on Office of Graduate and Undergraduate Programs' Syllabus Information web page at http://www.sjsu.edu/gup/syllabusinfo/."

ART 107, Advanced Projects in Digital Media Art

Spring 2019 Schedule

Schedule is subject to change with fair notice and is available on Canvas. Check regularly for any updates.

Course Schedule

Week	Date	Topics, Readings, Assignments, Deadlines
1	Thu 1/24	Course Introduction /Overview of Syllabus. Lecture: Overview of Digital Art Due: In-Class Skills Query
2	Tue 1/29	Student Presentation: Everyday Interaction, Design Paradigms & Affordances Presentation & Discussion: Disruptions & Glitches in Social Space Due: Reading 1.1 Due: Receipt for Shop Safety Fee
2	Thu 1/31	Shop Safety Test in Room 110 ***Need to Confirm In-Class Workshop: Web-Based AR with AR.js Pt 1 Due: Reading 1.2
3	Tue 2/5	In-Class Workshop: Web-Based AR with AR.js Pt 2 Due: Reading 1.3 Due: AR on the Web Part 1

		MANDATORY TUES LECTURE GREG NEIMEYER ART 133
3	Thu 2/7	Student Presentations: Proposal for Project 1 Due: AR on the Web Part 2
4	Tue 2/12	Individual Meetings & Open Lab
4	Thu 2/14	**Project 1 Due: Disruptions & Glitches in Social Space**
5	Tue 2/19	Presentation & Discussion: Augmented Systems PT1 In-Class Workshop: 3D Scanning Due: Tutorial 2.1 Due: Reading 2.1
5	Thu 2/21	Presentation & Discussion: Augmented Systems PT2 In-Class Workshop: Kinect & Motion Capture Due: Tutorial 2.2 Due: Reading 2.2
6	Tue 2/26	In-Class Workshop: Importing Animations to Unity Due: Tutorial 2.3
6	Thu 2/28	In-Class Workshop: Unity & Vuforia Due: Tutorial 2.4
7	Tue 3/5	In-Class Workshop: Exporting Apps from Unity Student Presentations: Proposal for Project 2
7	Thu 3/7	Individual Meetings & Open Lab Due: Project 1 Deliverable 1
8	Tue 3/12	Individual Meetings & Open Lab Due: Project 1 Deliverable 2
8	Thu 3/14	Individual Meetings & Open Lab Due: Project 1 Deliverable 2
9	Tue 3/19	**Project 2 Due: Augmented Systems**
9	Thu 3/21	In-Class Workshop: Basic Electronics
10	Tue 3/26	In-Class Workshop: Arduino
10	Thu 3/28	In-Class Workshop: Processing & Arduino Due: Conductive & Non-Conductive Material
11	Tue 4/2	*Spring Recess, No Class*
11	Thu 4/4	*Spring Recess, No Class*
12	Tue 4/9	Presentation: Review of Variable, Logic, Arrays DUE: DIY Switch In-Class Workshop: Processing & Arduino Kludge PT1

12	Thu 4/11	Presentation: Processing & Kinect, Pixel Arrays In-Class Workshop: Computer Vision Due: Tutorial 3.1
13	Tue 4/16	Due: Project 3 Proposals Due: Reading 3.1 Individual Meetings & Open Lab
13	Thu 4/18	Individual Meetings & Open Lab Due: Project 3 Deliverable 3
14	Tue 4/23	
14	Thu 4/25	**Due: Final Project Proposals & Makeup Project 3 Presentations** **Due: Draft of Artist Statement**
15	Tue 4/30	Gallery 5 Exhibition Coordination **Exhibition Opening 6-8:00PM**
15	Thu 5/2	**Project 3 Due: Critical Engineering Review** **Final Project Proposal Review**
16	Tue 5/7	Workshop: Processing & 3D with Kinect Individual Meetings & Open Lab Due: Final Deliverable 1
16	Thu 5/9	Individual Meetings & Open Lab Due: Final Deliverable 2
Final Paper	Sun 5/19	**Final Paper Due by Midnight Sunday May 19**
Final Exam	Mon 5/20	**Final Project Presentations Monday, May 20 9:45am - 12:00pm**

DATA AS MATERIAL

Instructor: Rhonda Holberton
Introductory-Level Undergraduate

How can data be used as 'material' in art and design projects. Beyond straightforward ideas of 'data-visualization,' this studio course seeks to investigate how we construct meaning from sets of information, and how the construction of those sets determines the meaning itself. This course also investigates different display aesthetics and how this is also a strategy for generating meaning. Artists studied include those who use various forms of personal, public, and social data as part of their practice. Historical examples from conceptual artists and other genres are considered along with contemporary artists working with data in digital or hybrid digital/physical formats.

Our daily activities and communications are constantly being monitored, analyzed, and commoditized; what are the implications of a metricized life? How are artists, designers, policy makers, and scientists navigating the massive sets of data that are now available? Through a series of hands-on labs, students will develop projects using a combination of methods and discussions will address data/information theory today; collection processing, storage, & policy concerns.

Students will be introduced to code development within the context of the visual arts using Processing and MAX/MSP. We will develop projects using 3D scanners, augmented/virtual reality development kits, as well as analog methods associated with traditional art making. Students will be expected to complete short readings, videos, and audio lectures outside of class. We will begin with process-specific projects that are intended to quickly introduce methods. Students will then have the opportunity to develop these methods in their Final Project. No previous programming experience is required.

- Work creatively with data processing code environments
- Operate 3D acquisition tools and modeling software.
- Integrate traditional art making process with data-driven technologies
- Approach critical issues related to art and cultural production in the information age.
- Able to discuss work in the context of contemporary art and in relation to popular culture.

- Regular class participation in discussions and readings
- Timely Completion of 4 smaller class projects and one Final Project
- Participation in class critiques: Attendance for class critiques is mandatory.
- Presentation of Final Project Proposal
- Class attendance: no more than 2 unexcused absences

25% PROJECTS 1-3
20% FINAL PROJECT: Data Triage
10% FINAL PROJECT PROPOSAL
15% TUTORIAL COMPLETION

15% READING COMPLETION
15% CLASS PARTICIPATION

This course will be divided into four ‘sections', each focusing on a different aspect of data art:

- Data Collection: How do we isolate interactions in the real world and translate them into data? How do social and physical environments affect the data visualization cycle? How does the act of data collection change the data? How does the data change the act of collection? What role does the ‘collector’ play in this process ?
- Data Storage: What can store data? Does data have a shape? How does the material of storage affect Taxonomies, Ontologies, Memory, & Scale.
- Data Processing: How to we turn raw data into something comprehensible?
- Data Triage: How does data shape the social, cultural, & political landscape?

Each of these sections will develop in three parts. The first of the three parts will involve a survey of work being done in this area, and a 'workshop' teaching one or two important technical points. The second part will involve a discussion around assigned readings and a review of available tools. The third part will feature presentations of project work. For each of these sections, you will complete a project, which will be assigned on the first day of the section and will be due on the last.

Most of the required media is available online. Students will be expected to complete short reading comprehension quizzes and should come prepared to discuss the media in the context of course section.

- Ware, Colin. *Information Visualization: PERCEPTION FOR DESIGN, Chapter 1: Foundations for an Applied Science of Data Visualization (Third Edition)*. pg 1-30. PDF
- *Torp, Jer.* Data and Oil. 10:24. http://www.thelavinagency.com/speaker-jer-thorp.html

- Paglen, Trevor. *Six Landscapes.* 49:47 https://www.youtube.com/watch?v=j56s46e97Lo
- Dewey-Hagborg, Heather. *I steal DNA from strangers.* 15:29 https://www.youtube.com/watch?v=666Kq95xm1o

- A *Brief History of Data Storage PART 1* 5:35 https://www.youtube.com/watch?v=u_Msl2u4mJc
- *A Brief History of Data Storage PART 2* 4:26 https://www.youtube.com/watch?v=1XU3TQQUXTo
- Bostrom, Nick. *What happens when our computers get smarter than we are?* 16:31 https://www.youtube.com/watch?v=MnT1xgZgkpk

- Gordon, Deborah. *The emergent genius of ant colonies* https://www.ted.com/talks/deborah_gordon_digs_ants#t- 20:21
- *Gay Talese's Address Book* 4:45 https://www.youtube.com/watch?v=exAihVrYVsU
- *Internet Archive* (Brewster Kahle) 13:04 https://www.youtube.com/watch?v=ec_-fgy3EGY

- Troemel, Brad. *2013: A Space Odyssey.* https://vimeo.com/83496092 1:08:53
- Safer, Morley . *How to honor victims? Ask Maya Lin.* 12:46 http://www.cbsnews.com/news/how-to-honor-victims-ask-maya-lin/
- Tufte, Edward. *Envisioning Information: The Vietnam Memorial.* pg 43-44 (PDF)

- Arns, Inke. *Read_me, run_me, execute_me Code as Executable Text: Software Art and its Focus on Program Code as Performative Text.*http://www.medienkunstnetz.de/themes/generative-tools/read_me/scroll/
- Marguerite Humeau on reviving prehistoric creatures: 7:33 (https://www.youtube.com/watch?v=uFCQG2bv9EE
- Thorne, Sam. *Double Exposure: Interview with Marguerite Humeau.* Mousse Magazine. p. 1-8 (PDF)

- Heidegger, Martin. *The Question Concerning Technology*. pg 42-74 (PDF)

- McCarthy, Lauren. *The Models of Ourselves We Create from Our Data.* 13:45 https://www.youtube.com/watch?v=Ine5HJENM3k
- Farkas, Rózsa & Clark, Tom. *Self-Compression. An Interview with Jesse Darling.* Mute Vol 3. No 3. (PDF)
- Hito Steyerl. *A Sea of Data: Apophenia and Pattern (Mis-)Recognition* (PDF)

PROGRAMS WE WILL USE

*Unless otherwise indicated, all of the following programs are free:

Interaction/Data Processing

- Processing , p5.js
- openFrameworks

- MAX/MSP (30 day free trial)

Image Manipulation & Design

- Adobe Photoshop (not free, but available on all computers in the lab)
- Adobe Illustrator (not free, but available on all computers in the lab)

Modeling & Physics Engines

- Blender

3D Printing (slicing) Software

- Cura

3D Scanning

- Skanect (Mac)
- 3D Builder (PC)
- Next Engin (In M120)

Links to Slide Lectures:

- Intro
- Data Collection
- Data Storage
- Data Processing
- Data Triage
- Heidegger & Hypermodern Technology

M 9/26 COURSE INTRO	W 9/28 ● DISCUSSION: FOUND DATA 'OBJECTS' ● PRESENTATION: DATA COLLECTION ● Readings for Intro ● Bring in Example: Subjective Data 'Object' & Post to Canvas
M 10/3 ● PRESENTATION: DATA COLLECTION PT2 ● Review: Graphical Representations -Make a Graphical Representation of your Data	W 10/5 ● DISCUSSION: DATA COLLECTION ● Artist Talk : Brooke McEver - Readings for Data Collection
M 10/10 ● DEMO: Kinect, 3D Printer, 3DScanner	W 10/12

● DEMO: Large Format Inket Print Blender Tutorial PT1: 3D Introduction	
M 10/17 ● PRESENTATION: DATA STORAGE PT 1 ● Workshop: 3D Modeling & Textures ● 3D scan ● Readings: Data Storage Pt 1	W 10/19 ● Presentation: Data Storage PT 2 ● In Class Workshop: Blender, Lighting & Rendering ● Rendering of 3D Scan ● Blender Tutorial PT 2: Textures, Lighting, Rendering
M 10/24 ● PRESENTATION: DATA STORAGE Pt3 ● DISCUSSION: DATA STORAGE ● PRESENTATION: DATA PROCESSING PT1 ● DEMO: Processing ● Readings for Storage Pt 2 ● Blender Scene:Data in the Portrait, Still Life, & Landscape	W 10/26
M 10/31 ● PRESENTATION: DATA PROCESSING PT1 ● DEMO: Processing ● Readings for Processing PT1	W 11/02 ● Review: Inkjet & 3D Prints ● Sol Lewitt Tutorial ● Inkjet Print of 3D Rendering (at least 17" on one side) ● 3D Print
M 11/7 ○ Review Interactive Kludge ○ DEMO: Processing & Kinect ● Processing Tutorial 1: Interactive Self Portrait	W 11/9 ● PRESENTATION: DATA PROCESSING 2 ● Individual Meetings & Open Lab ● Readings for Data Processing 2 ● Processing Tutorial 2

M 11/14	W 11/16
M 11/21 Holiday: No Class ● White Room (1+1+1=4)	W11/23 Holiday: No Class
M 11/28 ● PRESENTATION: DATA TRIAGE DISCUSSION: DATA TRIAGE ● Individual Meetings (time permitting) ● Readings for Triage ● Project Proposal: Data Triage	W 11/30 Individual Meetings contd
M 12/5 Studio Day	W12/7 Studio Day

Contact: ldougla2@stanford.edu
Lauren's Schedule:
Mon-Thur 9-5
Fri 9-1

Monitored Print Lab Hours
Tuesday 5-7:30PM
Wednesday 4:30-8:30PM
Thursday 7-10 PM

EQUIPMENT CHECKOUT HOURS:
Monday & Tuesday 12-1:30 IN M124 (behind elevator)

Project 1: Data Collection

By now we have discussed how social and physical environments affect the data visualization cycle and looked at ways artist have used data collection methods in the following manifestations:

- Mapping (George BRECHT, TRANSLOCATION PROJECTS)
- Sampling of real-world phenomenon (Samuel Yates, Color of Palo Alto)
- Surveillance (Trevor Paglen)
- Circumscribing what is already there (John Cage 4'33") (Mel Bachner, In Measurement: Room)
- Ritual (Tehching Hsieh: One Year Performance 1980-1981)
- Methodological Experimentation (Stig Broegger, PLACING PLATFORMS)
- Comparisons (Frank Gillette and Ira Schneider, Wipe Cycle) (Bernhard and Hilla BECHER, ANONYMOUS SCULPTURE)

Now it's your turn to collect your own data. Think about ways that the elements in the visualization process interact and inform the system as a whole. How does the act of data collection change the data? How does the data change the act of collection? What is your role in this process (as variable more than as author). I'm asking that you dig in and push up against the boundaries of what you classify as data and give attention to some of the things around you that may not present themselves obviously.

You will be evaluated against the following criteria (you don't need to hit every point, select one or two to focus your process)

- Unique selection of data
- Original combination of elements within a set
- Exceptional method of collection

Present the data in a way that does not need explanation. You can use text in your presentation, but it should be considered as an element of the work rather than an explanation of your intent (think Douglas Huebler). Think about the ways some of the artists we have looked at have presented their data:

- Photographs (Sophia Calle's documents from the PI she hired to investigate her)
- Physical Translations (Katie Lewis's string and pin installations)
- Video (Google Street view versus recorded video while driving (Gerado Guerrero, Points of Interest)
- Paintings (Jacek Tylicki number 615)
- Performance (Vito Acconci's public following)

If the presentation of your data is too big (George BRECHT) or complex (Daniel Franke & Cedric Kiefer) or impossible to actually realize (Amy Balkin, Public Smog) then prepare a visual project proposal (examples here (Links to an external site.)). The proposal should be annotated. Include the project title, location, scale, & materials. Other necessary attributes can be included but no descriptions of intent. The data set may be included as a separate entity but needs to be displayed

to be considered. If you plan on making a proposal, please upload a 1 page description in addition to your visualization (see instructions below).

We will discuss the project as a group for 3 minutes and discuss with the artist's contribution for 2 minutes. Have your projects ready for discussion by the beginning of class (already installed In M120 or in the lounge between the classroom and the elevator) and any make sure your screens are ready to go as you want us to look at them). If your project needs to be installed or experienced in a certain location that is not the classroom then document the project in situ and add 3 slides to our Collaborative Project Presentation (Links to an external site.) (include your name and title of the work).

Things to remember:

- Deletion/Absence/Gaps in data can be a positive attribute and speak volumes
- Data is all around us. You could spend years investigating the object nearest you right now.

PROJECT 2: DATA STORAGE (IMPOSSIBLE PROPOSAL)

We've discussed ways that physical objects from tree rings to candy bars can store data. We've listened to the heartbeat and nervous system of someone falling in love as recorded on a gold-record mounted to a spaceship hurtling itself to the outer reaches of our galaxy. We've seen how data can paint a portrait of the personal/biographical and structure complex social interactions (think ant colonies & Casey Reas drawings) from very basic rules.

Now it's your turn. Please design/invent/engineer/produce a data storage system. This is a proposal for a storage system that would be impossible for you to actually build/make. There are no size/medium/budget constraints. You are encouraged to come up with examples that may not be intuitive or that press into the limits of what may be considered data.

Please address the following concerns in your proposal and Upload PDFs here. Candidates should prepare a 3-4 minute presentation. Add your renderings/drawings to the **Collaborative Data Storage Presentation.** You must include your name somewhere on all of your slides.

See **examples of Artist Proposals Here.**

1. **Purpose:** Please describe the project in one or two brief sentences (maximum 50 words).
2. **Detailed project description:** Describe the proposed project, its genesis, its stages and technical requirements (maximum 500 words)..
3. **Concept/Context:** Please summarize the critical, historic or current challenge, opportunity, or issue (political, social, economic, cultural, etc.) that the project is addressing. (maximum 400 words).
4. **Renderings/Drawings:** Please provide a drawing of your proposed project. You may approach this drawing in whatever style is most comfortable for you. For instance, you might use a standard sheet of letter paper, or a large piece of cardboard. You might make a loose sketch in charcoal, or a carefully drafted and to-scale technical drawing.

The drawing can focus on the visual impact of the work, its technical functioning, or some other aspect that interests you. While there are no restrictions on how to approach this part of the description, consider what aspects can be best expressed using this highly visual medium and how it might help to convey your creative intentions. Also consider what is difficult to convey in text, but easy in a drawing.

Things to consider:

- What kinds of data does the **material** you use carry with it? (think Ai Weiwei's pearls & Katie Paterson's Glacier records)
- What kinds of data does the **amount of material** you use carry with it? (think Felix Gonzalez-Torres candy & Siah ARMAJANI stack of numbers)
- How does **transformation of the material** point towards a different kinds of interpretation? (think Ryan Park covering John Cage's book with graphite & Allan McCollum's drawings)
- What **shape/taxonomy** does data storage take? (think Amy Balkin's Public Smog & Andy Warhol's time capsules)
- How does the data storage **system reflect the collector**? (think Brad Troemel, Eleanor Antin, the Internet Archive, & Gay's address book)
- How does the data storage system reflect a **macro or micro reading of the data**? (think Maya Lin, On Kawara, & Tauba Auerbach)

PROJECT 3: Data Processing

By now we have discussed the ways the very act of data collection can reframe events that happened in the past and shape events in the future. We have considered non-digital data storage systems and seen the ways ontological framing works together with technology to literally reshape our landscapes and bodies. In the most recent section of our course, Data Processing we have discussed the relationship between language, performance, & code. We've looked at projects that use digital, chemical, and mechanical processes as a medium like a painter would use paint. We've discussed art as a process of unconcealment (Heidegger) and explored examples of artists using their own bodies as tools for processing. We've also addressed the 'transparent' and the 'black box' as models for concealment.

Now you are tasked with designing/inventing/engineering/producing a system for data processing. You must use one of the tools introduced in this course:

- Next Engin 3D Scanner
- Kinect with 3D Builder to make a Scan
- Ultimaker 3D printer
- Blender to sculpt 3D objects & export svg files for laser cutting or vinyl cutter
- Kinect & Blender for motion capture & Animation
- Processing
- Max MSP/Jitter

Consider the following operations as starting points for conceptualization:

- Mathematical operations on numbers—multiplication, division, and so on
- Merging
- Inverting a value to create its opposite
- Bringing an entity or relationship into existence (such as the mean of a set of numbers)
- Deleting an entity or relationship (a marriage breaks up)
- Transforming an entity in some way (the chrysalis turns into a butterfly)
- Forming a new object out of other objects (a pie is baked from apples and pastry)
- Splitting a single entity into its component parts (a machine is disassembled)

Questions to consider:

- How can processing 'reveal' the conditions of a system? (think Giuseppe Penone tree carvings revealing younger trees or walker.php exposing digital rights management systems)
- How do glitches and bugs make spaces in technological systems for new ideas? (think Nam June Paik & Holly Herndon)
- How have artists used the concept of the 'hack' to insert philosophical or political content into a system (think insert_coin, fork bomb, & biennale.py)
- Can deletion be a creative act? (think Marcel Broodthaers ('redacted text') & Rafael FERRER (melting ice))
- Can the physical world be processed like a line of code? (think Heidegger's Standing Reserve, Sol Lewitt, Michael HEIZER Displaced-Replaced Mass, & Walter De Maria's 'Vertical Earth Kilometer'

You will also be providing a peer review for one of your classmates Projects. The review assignments are anonymous and created automatically by the canvas website. These don't need to be lengthy (about a paragraph), but you should include points from the conversation the class has about the project as well as your own thoughts so be prepared to take notes during class next week. You will submit the review as a comment. For help, see the Peer Review Guide here.

The act of creation can be incredibly challenging. We are learning to use new technology, but are also training ourselves to think abstractly/conceptually/philosophically about the systems we are using. If you are still stuck after meditating on these prompts, try a creative visualization:

Imagine an empty room. Just white walls, white ceiling, white floor. Keep imagining the empty room and when you're ready grab a pen and read on. Write down the very first thing you think of, you can go back and modify later but start quickly and impulsively:

Put three things in the room:

1. What is the first artist you think of that we have looked at?
2. What is the most interesting technology we've used?
3. What is the first reading/media that comes to mind?

Write these three things down. What is the same about these things? What is different? Select one of the operations from the list above to modify the components. Let these things interact in the room. Sleep on it.

When you're ready, click here for the next step in the creative visualization.

Make sure you are really ready. In the meantime, review Ettore Sottsass' Design Metaphors & Italo Calvino's Six Memos for the Next Millennium to create a framework for lightness and clarity.

tri·age
trēˈäZH,ˈtrē¸äZH/
verb : the assigning of priority order to projects on the basis of where funds and other resources can be best used, are most needed, or are most likely to achieve success

We've covered a lot of ground in this course. Now is the time to synthesize the concepts from our discussions, presentations, and readings with the methods of production introduced in the course:

- Where have you landed in terms of your own personal relationship to the concept of data and technology?
- What is that once sentence that sums that up?
- What are poetic ways that you can express or investigate what you believe?

You will be graded in regard to the course objectives:

- Work creatively with data processing code environments (Processing & MAX MSP)
- Operate 3D acquisition tools and modeling software.
- Integrate traditional art making process with data-driven technologies
- Approach critical issues related to art and cultural production in the information age.
- Able to discuss work in the context of contemporary art and in relation to popular culture.

Specifically I will grade based on the following criteria:

You are not required to use any specific tool or technology, but I will be assessing the degree to which you are challenging yourselves (i.e.: I will be looking at the experience you came in with based on the evaluations you filled out versus the tools you have used in the project)

Is it clear that you have analyzed the theories we've addressed in the course and come up with your own ideas about the role data and technology play in our lives? Are you using the data acquisitions tools in a way that expands our understanding and un-conceals truth?

- Data Collection
- Data Storage
- Data Processing

If you are stuck, start with the same visualization process we used in the last project. Visualize the white room. Place 'three things' from our class (could be another student's project) in the room and focus on that 4th thing. Hold it in focus and 'zoom' in. There is something small inside the 4th thing that wasn't visible before. What is it?

San José State University
Department of Art & Art History
ART 193, Digital Materials, Spring 2022

Course and Contact Information

Instructor:	TBD
Office Location:	TBD
Telephone:	TBD
Email:	TBD
Office Hours:	(Days and time TBD) *[See University Policy S12-1 at http://www.sjsu.edu/senate/docs/S12-1.pdf for faculty office hours guidelines]*
Class Days/Time:	(Days and time TBD)
Classroom:	(Building and room number, or your online course web address TBD)
Prerequisites:	(TBD - Art 74, 75, 173 Recommended)
Department Office:	ART 116
Department Contact:	Website: www.sjsu.edu/art Email: art@sjsu.edu
Course Format:	Activity

Technology Intensive, Hybrid, and Online Courses

This course requires access to a computer which can support Adobe software. Students can use the lab computers or download the current edition of Adobe Creative Suite. Mandatory Apps include Photoshop and Premiere. Free download for SJSU students here:http://www.sjsu.edu/ecampus/teaching-tools/adobe/index.html. We will also be using a free/open-source program called Processing which is available for download here: https://processing.org/. This course requires access to Lynda.com. Access to Lynda is free through the SJSU library portal here: https://www.lynda.com/portal/patron?org=sjlibrary.org

Canvas Web Page and MYSJSU/Email Messaging

Email

All emails MUST include (COURSE NUMBER TBD) in the subject line. Expect a reply within 1-2 business days (Monday-Friday). See Classroom Protocol for emails regarding missed class.

Canvas

Course materials such as syllabus, schedule, handouts, notes, assignment instructions, etc. can be found on Canvas.

Course Description

The course includes technical skills acquisition to facilitate the realization of projects that are conceptually rooted in an analysis of computational media and its relationship to the physical world. Students will experiment with video and computational outputs that are integrated with tangible presentation methods. The course provides a high level material survey, covers exhibition strategies, and introduces fabrication techniques that facilitate projects bridging computation, architecture, objects, and the body.

Course Learning Outcomes (CLO)

Upon successful completion of this course, students will be able to:

1. Create projects that integrate material concerns with code development and digital devices.
2. Develop software for embodied interaction with digital devices.
3. Integrate the display of virtual environments with physical materials.
4. Design & Construct exhibitions that integrate physical, electronic, and digital components.
5. Approach critical issues related to interactive, virtual, and networked art practices in the digital age.
6. Discuss artwork in the context of contemporary theory and in relation to current events.

Required Texts/Readings (examples of readings, final list TBD)

The reading, videos, and podcasts that will frame our discussions are all available on the course Canvas site. Students will be expected to complete short reading comprehension quizzes or responses and should come prepared to discuss the media in the context of art.

Reading 1

- Kwastek, Katja. Aesthetics of Interaction in Digital Art. Cumberland, US: The MIT Press, 2013. CH 4: Aesthetics of Interaction in Digital Art p89-119

Reading 2

- Clark, Andy. Natural-Born Cyborgs: Minds, Technologies, and the Future of Human Intelligence. Oxford University Press, 2004. Chapter 2 p35-58
- Bell, Kirsty. “Rag-Picking: Why has abjection gained renewed currency in art.” Frieze Magazine, March 2016.
- Marks, Laura. “Touch: Sensuous Theory and Multisensory Media.” 2002. Introduction ix-xiii

Reading 3

- Wood, John. Why User-Centered Design is Not Enough. Core77. Sept 12, 2012.
- Kay, Alan. User Interface: a Personal View from Multimedia: From Wagner to Virtual Reality. 2002

Reading 4

- Arns, Inke. “Read_me, run_me, execute_me.” Medien Kunst Netz, Media Art Net, 15 Feb. 2007, www.medienkunstnetz.de/themes/generative-tools/read_me/.
- Vermeulen, Timotheus. “The Altergorithm.” Frieze, 27 Apr. 2016, frieze.com/article/altergorithm.

Reading 5

- Steyerl, Hito. A Thing Like You and Me. The Wretched of the Screen. 2012. p46-59
- Wendy Hui Kyong Chun, “On Software, or the Persistence of Visual Knowledge,” Grey Room.
- Goffman, Erving . “Conclusion .” The Presentation of Self in Everyday Life. Overlook Press, 1973, pp. 152–162.

Other technology requirements / equipment / material

Fusion 360 (free for SJSU Students with Autodesk Education Account)
Meshmixer (free - great model repair & automatic support generator - I like it better than Fusion 360s repair right now)
Ultimaker Cura (free - slicing software for Ultimaker 3D printer)
Ultimaker Lulzbot (free - slicing software for Lulzbot 3D printer)
Trnio ($4 3D scanning app for iphone)
Skanect & Kinect Sensor

Hazardous Materials (HAZMAT) (Required)

Unlikely that this will apply.
All studio classes that use any "hazardous materials" should include one graded assignment that helps students understand HAZMAT regulations and develop consistently safe practices—this might be as simple as a labeling assignment. Note that food containers cannot be used for chemical storage and that common household items (bleach, vinegar, etc.) are deemed hazardous materials and must be stored appropriately. The campus EHS (Environmental Health & Safety) office and the County will schedule inspections with increasing frequency; fines assessed by the County are now high enough to put us out of business, so this is a serious matter. The techs are NOT responsible for cleaning up facilities and classrooms and offices—this is your responsibility. If you need information or help, please let us know. Additional note: clutter is deemed a hazard, and we can be fined for clutter.

Basic training powerpoint: http://www.sjsu.edu/fdo/docs/hazmatandlabsafetyguidance.pdf

Library Liaison

Gareth Scott
Email: gareth.scott@sjsu.edu
Phone: (408) 808-2094
Dr. Martin Luther King, Jr. Library 4th Floor Administration Offices
Art and Art History Resources: **https://libguides.sjsu.edu/Art**

Shop Safety (Required)

Shop safety test—please provide shop info to your students if they will use the shop for ANY assignments. Safety tests for Fall 2016 will ONLY be given between xx/xx – xx/xx.

Course Requirements and Assignments

Project 1: Sculptural Screens (Could be a Group Project pairing digitally oriented students with materially oriented students). Create a physical 'receiver' for a digital image/movie.

- Tools: Woodshop & Provided Materials, Projector, Micca Player.
- Artists: Tony Oursler, Jim Campbell,
- CLO's: 1, 3, 4, 5, 6

Project 2: Interface Modification. Modify a found 3D model & make a rendering.
- Tools: Fusion 360, 3D model Libraries: Sketchfab, Thingiverse, TurboSquid
- Artists:
- CLOS: 1, 4, 5, 6

Project 3: Digital-Material Kludge. Make a 3D scan and prepare the file for 3D printing.
- Tools: 3D Scanning (Trnio, Skanect, Kinect), Repair in Fusion 360 or Meshmixer, Print using PLA printer.
- Artists: Morehshin Allahyari, Oliver Laric
- CLOS: 1, 5, 6

Project 4: Embodied Interface. Design a wearable 'interface' in Fusion 360. Print using Filament or Ceramic printer. Glaze & Fire. Document Wearable. Artists: Jacolby Satterwhite, Rebecca Horn,
- Tools: Fusion 360, Ceramic or 3D Printer, Potterware (Virginia's software - basic version web based & free)
- Artists:
- CLOS: 1, 4, 5, 6

Project 5 (Final): Networks and Social/Architectural Interventions
- Tools: Any of the processes from projects 1-4, Materials TBD
- Artists: Julian Oliver, Aram Barholl, Forensic Architecture, Lauren Lee McCarthy
- CLO's: 1, 2, 3, 4, 5, 6

Final Examination or Evaluation

Insert descriptions of your final examination or evaluation information here. More details can be found in University Policy S06-4 (http://www.sjsu.edu/senate/docs/S06-4.pdf) which states that

"There shall be an appropriate final examination or evaluation at the scheduled time in every course, unless specifically exempted by the college dean who has curricular responsibility for the course."

Grading Information

Determination of Grades

- 35% PROJECT 1-4
- 20% FINAL PROJECT
- 15% ASSIGNMENT COMPLETION
- 15% READING COMPLETION
- 15% CLASS PARTICIPATION

The work will be assessed according to the following rubric
A 100-90% Excellent. Student exhibits exemplary effort at comprehension and application of the required materials. All creative and programming work is engaging.
B 89-80% Good. Student completes assignments, and demonstrates a grasp of key programming and creative concepts. Student participates actively in the classroom.
C 79-70% Satisfactory. Student completes the assignment but the work lacks creative and aesthetic effort. The work is underdeveloped, incomplete or partially broken.
D 69-60% Unsatisfactory. Student does not complete the work as assigned. Substantial problems exist in student's work.
F < 60% Fail. Student does not submit work, or work is below unsatisfactory level.

Description & Documentation must be submitted to Canvas. You will not receive a grade until the following is submitted:
Portfolio-Ready Documentation
- Photograph (.jpg 1200 pixels on the long side)
- Stills/Storyboard (.jpg 1200 pixels on the long side)
- Video (link)

Work list
- Title
- Medium
- Size/Duration

One paragraph description that includes
- Process/Tools
- Inspiration (existing work)
- Concept

Participation in Class Discussions and Project Review Day
- Students must be present on discussion and review days to receive credit
- Students who are not ready to present on review days must attend class to receive participation credit

Classroom Protocol

Show up on Time. If you need to miss a class, inform the instructor and let them know what you will do to make up the missed work and when you will turn it in. Everyone is required to find two partners and exchange contact information to answer questions and fill you in on content if you need to miss a class.

University Policies

Per University Policy S16-9, university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc. will be available on Office of Graduate and Undergraduate Programs' Syllabus Information web page at http://www.sjsu.edu/gup/syllabusinfo/"

Course Number / Title, Semester, Course Schedule

Schedule is subject to change with fair notice and is available on Canvas. Check regularly for any updates.

Course Schedule

Week	Date	Topics, Readings, Assignments, Deadlines
1		Course Introduction
1		Presentation: Example Artists & Concepts for Project 1 Discussion: Reading 1 Due: Reading 1
2		In-Class Demo/Tutorial Project 1 Due: Student Presentation of Interface Examples
2		One on One Meetings and Studio Time

		Due: 3 Sketches/Ideations for Project 1
3		**Due: Project 1** Review: Project 1
3		Presentation: Example Artists & Concepts for Project 2 Discussion Reading 2 Due: Reading 2
4		In-Class Demo/Tutorial Project 2
4		Due: Proof of Skill/Tutorial Project 2
5		One on One Meetings and In-Class Work Time Due: 3 Sketches/Ideations for Project 2
5		**Due: Project 2** Review: Project 2
6		Presentation: Example Artists & Concepts for Project 3 Discussion Reading 3 Due: Reading 3
6		Demo/Tutorial: Project 3
7		Workshop: Project 3
7		One on One Meetings and In-Class Work Time Due: 3 Sketches/Ideations for Project 3
8		Due: Project 3 Deliverable 1 (Material)
8		Due: Project 3 Deliverable 2 (Digital Content)
9		**Due: Project 3** Review: Project 3
9		Presentation: Example Artists & Concepts for Project 4 Discussion: Reading 4 Due: Reading 4
10		In-Class Tutorial: Project 4 Due by end of Class: Proof of Skill/Tutorial Project 4
10		In-Class Workshop: Project 4 Due: Material Acquisition for Project 4
11		In-Class Tutorial PT2: Project 4 Due: 3 Sketches for Project 4
11		In-Class Tutorial PT3: Project 4 Due: Milestone 1 for Project 4
12		One on One Meetings and In-Class Work Time Due: Milestone 2 for Project 4
12		One on One Meetings and In-Class Work Time

		Due: Milestone 3 for Project 4
13		**Due: Project 4** Review: Project 4 Day 1
13		Review: Project 4 Day 2 Discussion: Reading 5 Due: Reading 5
14		Due: Final Project Proposal Presentations
14		One-on-one Meetings and Studio Time Due: Final Deliverable 1
15		One-on-one Meetings and Studio Time Due: Final Deliverable 2
15		One-on-one Meetings and Studio Time Due: Final Deliverable 3
16		**Due: Final Project 5 (Final)** Review: Final Project Critique PT1
Final Exam*	Venue and Time	Review: Final Project Critique PT2

*There shall be an appropriate final examination or evaluation at the scheduled time in every course, unless specifically exempted by the college dean who has curricular responsibility for the course.

Faculty Resources (remove or edit before sending to students)

DMA Potterbot Folder
- Potterpot Instructions
- Cura Profiles

3D Scanning & Printing Tutorials
- 03b_3D Scanning_Model_Repair (slides & video tutorial)
    - Scanning Software
        - Trnio
        - Skanect
        - In3D (self scan for humans)
    - 3D Model Repair for Printing
        - Meshmixer
- 3D Printing - Model Prep & Slicing
    - Lulzbot Printer Slicing with Cura
    - Ultimaker Printer Slicing with Cura
- 05_3D_Printing_Aritst_Examples

3D model Libraries
- Sketchfab

- Thingiverse
- TurboSquid

Faculty & Staff Support for Art 193

3D Scanning, 3D Printing (Ultimaker & Cura Slicing Software)

Faculty: Rhonda Holberton
Staff: James Morgan, DMA Lab Coordinator, james.morgan@sjsu.edu

CNC

Faculty: Steve Durie & Rhonda Holberton
Staff: n/a

Potterbot

Faculty: Virginia SanFratello & Rhonda Holberton
Staff:

- Jesus Hernandez, Design Instructional Support Technician, jesus.hernandez03@sjsu.edu (can help with Potterware setup)
- James Morgan, DMA Lab Coordinator, james.morgan@sjsu.edu (may be able to help with slicing software)
- Tim Straubing, Ceramics Instructional Support Technician, timothy.straubing@sjsu.edu (clay preparation, not sure how much he knows about Potterbot software)

Kilns & Ceramics Casting

Faculty: Adam Shiverdecker
Staff: Tim Straubing, Ceramics Instructional Support Technician, timothy.straubing@sjsu.edu

San José State University
Department of Art & Art History
Art 281, Interdisciplinary Graduate Seminar
Section 01, Fall 2019

Course and Contact Information

Instructor:	Rhonda Holberton
Office Location:	ART 319
Telephone:	(408) 924-4348
Email:	rhonda.holberton@sjsu.edu
Office Hours:	Tuesdays 12:45-2:45PM
Class Days/Time:	Tuesdays 6:00PM - 8:45PM
Prerequisites:	Graduate Standing
Classroom:	Art Building 110
Department Office:	ART 116
Department Contact:	Website: www.sjsu.edu/art Email: art@sjsu.edu
Course Format:	Seminar

Course Web Page

Course materials such as syllabus, handouts, notes, assignment instructions, etc. can be found on Canvas.

Course Description

This interdisciplinary graduate peer-group seminar is dedicated to the artistic creation, presentation, discussion and critique of graduate student artwork. Students will be required to present their studio work, articulating the ideas and processes within their practice through visual presentations, group critiques and ongoing peer-to-peer dialogue.

As an interdisciplinary critique seminar, students will bring a wide range of materials and methods, as well as a diverse range of theoretical and philosophical positions to the table. Students will be responsible for leading discussions concerning their own work as well as the work of other artists influential in their creative praxis. Students will be expected to engage the larger arts community of the Bay Area through attendance at gallery openings, studio visits, cultural events and regular visiting artist presentations at SJSU.

Course Learning Outcomes (CLO)

Upon successful completion of this course, students will be able to:

1. Advance individual creativity and research leading toward successfully graduate thesis project.
2. Identify, compare and articulate contemporary art strategies from examples, readings and their own work in discussion and writing.
3. Articulate what it means to create works of art in contemporary culture, speak and write clearly about their own work in relation to art and culture.
4. Develop professional strategies and objectives for success inclusive of exhibition, publishing, funding, marketing and personal goals.

Required Texts/Readings

Textbook

There is no required textbook for this course. All readings will be made available on the Canvas Course Site

Required Reading (Introduction)

Read the following and take notes in your Journal. Identify 3 questions from the Discussion Directives that are most relevant to your practice. Be prepared to discuss the selection in relation to your own practice.

1. Discussion Directives For MFA Critiques (see below)
2. Bove, Carol. 'Self Expression.' AKADEMIE X: Lesson in Art + Life (p50 - 59). PDF
3. Solomon, Deborah. How to Succeed In Art, NY Times 1999

Related Recommended Reading (not required)

1. this is what it's like to get a yale mfa degree (i-D Vice, 2018) (interviews with the class of 2018)
2. Why MFA Critiques Are Futile Exercises (dis, 2012)(written by artist Brad Troemel the year he graduated with an MFA from NYU, who now teaches at SVA & Pratt)
3. Debating an MFA? The Lowdown on Art School Risks and Returns (Modern Painters, 2013) (written by Coco Fusco, an artist and Chair, College of the Arts, University of Florida)
4. Is Getting an MFA Worth the Price? (ArtNet, 2016) (written by Ben Davis, an art critic known for his writing on politics, economics, and contemporary art, wrote 9.5 Theses on Art and Class)
5. Art School Confidential (The Chronicle of Higher Education, 2018)*particularly snarky, written by a PhD Candidate in English at Harvard.)

Discussion Directives (adapted from a list created by artist Anthony Discenza):

What is the content of the work? What issues and ideas does it try to address?

What questions or problems does the work posit around this content?

What sort of space or discourse does the work emerge from? i.e., Is it theory-driven? Is it intuitive? Personal? Emotive? Expressive? Formal? Conceptual? Combinations thereof?

What is the historical context of the work? What larger frames of reference does it seek to place itself within? How is this signaled within the work?

What categorical boundaries does the work operate inside of, or outside of? Does it attempt to push/challenge/question these boundaries?

What are the formal/aesthetic attributes of the work, and how do they relate to its content/context?

How does the form (the delivery system, the way it presents itself) of the work relate to its content and its context?

What sort of viewer/audience does the work presume? How does the work attempt to engage the viewer/audience?

What is the feel of the work? What sort of voice does it speak in?

What is the ontological argument the work makes for its existence? In other words, within the internal logic of the work, what is its reason for being?

What is the experiential space created or posited by the work? What are the phenomenological characteristics of this experiential space?

What is the degree of autonomy of the work? In other words, to what extent can it be read on its own v. relying on knowledge/experiences outside of itself? Put another way, what tools does the viewer/audience require in order to arrive at a satisfying understanding/experience of the work?

Other Readings

Each student will assign one reading to the group no later than two weeks in advance of their respective critique session. Students are encouraged to select from Professor Holberton's MFA Reading List and/or develop their own catalog of writers, essayists, and critical theorists for personal research and reference.

Hazardous Materials (HAZMAT)

All studio classes that use any "hazardous materials" should include one graded assignment that helps students understand HAZMAT regulations and develop consistently safe practices—this might be as simple as a labeling assignment. Note that food containers cannot be used for chemical storage and that common household items (bleach, vinegar, etc.) are deemed hazardous materials and must be stored appropriately. The campus EHS (Environmental Health & Safety) office and the County will schedule inspections with increasing frequency; fines assessed by the County are now high enough to put us out of business, so this is a serious matter. The techs are NOT responsible for cleaning up facilities and classrooms and offices—this is your responsibility. If you need information or help, please let us know. Additional note: clutter is deemed a hazard, and we can be fined for clutter. Basic training powerpoint: http://www.sjsu.edu/fdo/docs/hazmatandlabsafetyguidance.pdf

Library Liaison

Gareth Scott

email: gareth.scott@sjsu.edu
phone: (408) 808-2094
Dr. Martin Luther King, Jr. Library
4th Floor Administration Offices

Shop Safety

Safety tests for Fall 2019 will ONLY be given between August 21st and September 13th..

Course Requirements and Assignments

Participation	30%
Critiques (Studio Visits) ● The Work 60% ○ Presented Work 50% ○ Title & Documentation 10% ● The Work in Relation to your Artist Statement 20 % ● The Work in Relation to your Assigned Essay & Artist Examples 20 %	40%
Artist Statement (Final)	20%
Journal	10%

Participation

Students are required to attend scheduled class meetings and engage in meaningful dialogue. Participation in group critiques is essential.

Critique (Studio Visits)

Each student will receive two visits to their studio to review work in progress and finished projects. Students will submit a contextual essay and inspirational works from three artists for class review no later than 1 week before their visit. On the day of the review the students will provide discussion directives to Canvas for class review. An artist statement with project documentation will be due the week after your review.

Critical Reading

On the day of their critique, students will lead a discussion of a critical reading of their own selection. They should be prepared to discuss the text in relation to their own practice, the three other artists, and within a historical/social/political context. Students should create an outline for the discussion and present the class with 3 questions for group discussion.

Artist Statement

Students should begin the semester with a minimum one-page statement, working towards a full three-page artist statement due at the end of the semester. One page statements should be presented to the class on the day of the student's first critique. A revised and lengthier statement should be presented to the class on the day of the student's second critique. A full three-page statement is due on the final exam day.

Journal

Students are required to maintain a research journal throughout the semester. The journal should include notes from student's personal critique sessions, sketches, outlines for artist statement, and pertinent information relating to studio practice. Every week the students will submit: one mid-career artist, one emerging artist, and one established artist they draw inspiration from as well as one critical essay they find useful.

Final Examination or Evaluation

Students are responsible for attending and participating in ALL seminar discussions and must complete a journal containing documentation containing personal writings and research informing their work which serves as the final exam.

Grading Information

Critiques will be evaluated on the following categories

You will not receive a grade until the following is submitted to Canvas:
1) Documentation (even if work in progress)
- Photograph (.jpg 1200 pixels on the long side)
- Stills/Storyboard (.jpg 1200 pixels on the long side)
- Sketches/Tests/Mockups (.jpg 1200 pixels on the long side)
- Video (link)

2)Work list
- Title
- Medium
- Size/Duration

3)Artist statement that addresses
- Process/Tools
- Inspiration (existing work)
- Concept

4)Critical Essay that helps inform your process
5)Examples of Three Artists Projects that the work is in conversation with

Determination of Grades

A = 100 - 90% Exceptional.
Overall - The student's presented work demonstrates an exceptionally clear understanding of the concerns of their practice in terms of its professional excellence; is exceptionally original in its exhibition of practice and research; deploys comprehensive and outstandingly innovative critical analyses of the concerns and contexts of their practice; utilize source material highly effectively in order to achieve the original and self-directed objectives of their individual practice and research.

Writing - Essays demonstrate highly original independent research advancing the student's understanding and contextualisation of their key concerns; comprehensively and rigorously analyze the relevant sources to establish a well-articulated independent critical position; clearly demonstrate that the adopted mode of writing enables the rigorous articulation of an independent and imaginative critical position.

B = 89 - 80% Above Average
Overall - The student's presented work: demonstrates a high degree of understanding the concerns of their practice in

terms of its professional excellence; is highly original in its exhibition of practice and research; deploys comprehensive and highly innovative critical analyses of the concerns and contexts of their practice; utilizes source material effectively in order to achieve the original and self- directed objectives of their individual practice and research.

Writing - Essays demonstrate highly original independent research advancing the student's understanding and contextualisation of their key concerns; rigorously analyze the relevant sources to establish a very well-articulated independent critical position; clearly demonstrates that the adopted mode of writing enables the clear articulation of an independent and imaginative critical position.

C = 79 - 70% Average
Overall - The student's presented work: demonstrates a good understanding the concerns of their practice in terms of its professional excellence; is very original in its exhibition of practice and research; deploys comprehensive and innovative critical analyses of the concerns and contexts of their practice; utilizes source material well in order to achieve the original and self directed objectives of their individual practice and research.

Writing - Essays clearly demonstrate independent research advancing the student's understanding and contextualisation of their key concerns; clearly analyzes the relevant sources to establish an independent critical position; demonstrates that the adopted mode of writing enables a good articulation of an independent or imaginative critical position.

D = 69 - 60% Unsatisfactory
Overall - The student's presented work: demonstrates an attempt to understand the concerns of their practice in terms of its professional excellence; is lacking in exhibition of practice and research; attempts critical analyses of the concerns and contexts of their practice; utilizes source material in order to meet the bare minimum of self -directed objectives of their individual practice and research.

Writing - Essays demonstrate independent research and basic understanding and contextualisation of the student's concerns; analyze the relevant sources to establish an informed critical position; demonstrate that the adopted mode of writing articulates a critical or independent position.

F = < 60% Fail
Overall - The student's presented work: does not demonstrate any understanding of the concerns of their practice in terms of its professional excellence; fails to address its exhibition of practice and research; deploys little critical analyses of the concerns and contexts of their practice; does not utilize source material appropriately or critically.

Writing - Essays do not demonstrate independent research or contextualisation of their concerns; fail to analyze the relevant sources to establish a critical position; do not demonstrate that the adopted mode of writing enables the articulation of a critical or independent position

Please note: Except in cases of documented emergencies, incomplete grades are not given in this course.

"All students have the right, within a reasonable time, to know their academic scores, to review their grade-dependent work, and to be provided with explanations for the determination of their course grades." See University Policy F13-1 at http://www.sjsu.edu/senate/docs/F13-1.pdf for more details.

Classroom Protocol

Email

All emails MUST include Art 281 in the subject line for priority filtering. Expect a reply within 1-2 business days (Monday-Friday). Emails that don't include Art 281 won't be answered as quickly.

Attendance

Show up on time. If you need to miss a class, let me know ahead of time and tell me what you will do to make up the missed work and when you will turn it in.

University Policies

Per University Policy S16-9, university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc. will be available on the Office of Graduate and Undergraduate Programs' Syllabus Information web page at http://www.sjsu.edu/gup/syllabusinfo/"

Department Advising

For information about majors and minors in Art & Art History, for change of major/minor forms and a list of advisors: http://www.sjsu.edu/art/ or the Art & Art History department office in ART 116, 408-924-4320, art@sjsu.edu.

Art 281 / Interdisciplinary Critique, Section 01, Fall 2019, Course Schedule

**This calendar is subject to change. Students are responsible for checking the Calendar in Canvas for updates*

Course Schedule

Link to Full Critique Schedule: Art-281-Crit-Schedule-2019Fall

1	Aug 27	Course introduction. Critique practices. Schedule Critiques. Due: In-Class Assignment 5 Pillars
2	Sep 3	Meet in Art 110 at 6:00, we will visit MFA exhibitions and regroup at 6:30 in Art 110 Student Presentations Previous Work & 3 Examples of Artist Statements Due: Intro Reading
3	Sep 10	Artist Statement, Bio, & CV Workshop Due: Draft of 1 page Statement, Bio, & CV
4	Sep 17	Studio Visit 1A – Critique and Discussion
5	Sep 24	Studio Visit 1B – Critique and Discussion
6	Oct 1	Studio Visit 1C – Critique and Discussion
7	Oct 8	Guest Studio Visit with Mads Lynnerup (Thesis Crits 1:30-2:00 Megan,

		2:15-2:45 Tessa, & Group Seminar 3:00 - 4:00 ART 114)
8	Oct 15	Field Trip: Meet at SJMA 3:15-4:30. Visit Leily's Exhibition @ 6:00PM Due: Student Presentations Studio Visit Documentation Due: Artist Statement Rev 2 Friday, Sep 20: Advancement to Candidacy (ATC) applications due to the Graduate Administrator in the Art Office.
9	Oct 22	Due: Artist Presentations for Mock ATC 15min + 15QA Due: Peer Revisions of Artist Statements 2
10	Oct 29	Studio Visit 2A – Critique and Discussion
11	Nov 5	Studio Visit 2B – Critique and Discussion: ATC Presentations Mon Nov 4, MLK Library room 225
12	Nov 12	Studio Visit 2C – Critique and Discussion
13	Nov 19	ART 281 Group Exhibition Opening Due: Artist Presentations for First Semester 5min + 5min QA
14	Nov 26	Due: Mock 1st Sem & ATC Presentations Due Artist Statement Rev 3
15	Dec 3	Guest Studio Visit with Ranu Mukherjee (Thesis Crits: 1:30pm-2:00pm MFA first critique, 2:15pm-2:45pm MFA second critique. Group Seminar 3:30 - 4:30) First Year & First Semester Presentations/ Grad Potluck Dec 10th
Final Exam*	Tue 12/17	5:15-8:40 Due: Journal & Final Artist Statement 45 minute Artist Presentations

***There shall be an appropriate final examination or evaluation at the scheduled time in every course, unless specifically exempted by the college dean who has curricular responsibility for the course.**