LIA COOK

Weaving & Innovation
Digital Fibers Converse with Neural Networks

February 1 - April 7, 2013
Ruth Davis Design Gallery

INTRO: MARK NELSON
Professor and Faculty Director
of the Center for Integrative Design
University of Wisconsin - Madison

Artworks have a meaning and context that transcend geography and history; they are able to journey around the world and across time while retaining their potentialities. Geraldine Craig touches on these transcendencies in the accompanying essay, asking us to ponder how Lia Cook's work explores new territory and engages us in innovative thinking about an ancient mode of creation. At the same time, however, this catalog is about specific artworks that are residing at a specific geographic location during a specific time period; the weavings are installed in a gallery on the campus of the University of Wisconsin-Madison, one of the world's leading research universities. These weavings, their specificity and their engagement with neuroscience raise a question linked to this setting: what place do art and artists have in an institution where science, empirical analysis and creating new knowledge are the dominant imperatives?

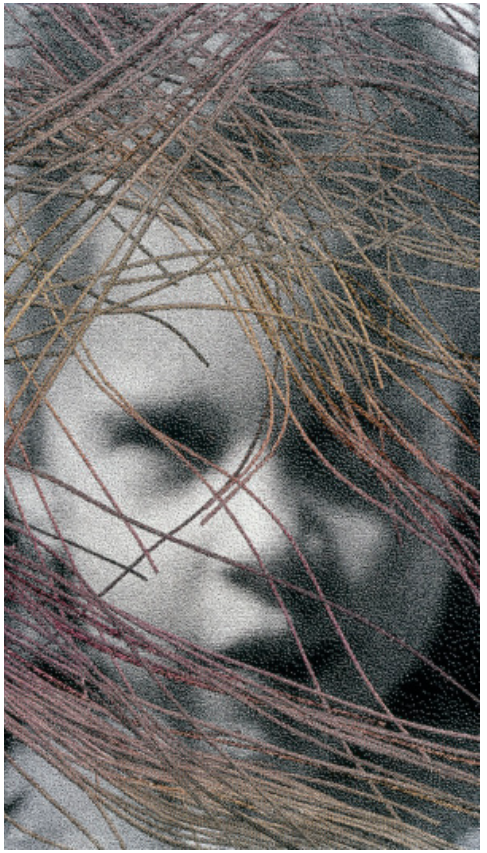
Perhaps Lia Cook revisits a time when scientists, artists and philosophers were one and the same person. While today's scientists might wonder how an artist can possibly help them answer their important questions, Lia Cook and her weavings suggest that artists are uniquely situated to help scientists rethink what those important questions are. For instance, what if touching an image (haptics) is as important as seeing it; does Lia's UW-Madison collaboration with Dr. Joann Peck suggest a whole new area of study called Haptic Representation? Lia's work challenges people to think of even more questions as they read the essay and study the images in this catalog.

Cover Photo: Facing Touch (2011)

Design Gallery

"I am interested in both the scientific study as well as my artistic response to these unexpected sources, exploring the territory between scientific investigation & artistic interpretation."

Lia Cook, 2012



Traces Past (2012)

WITTY AGENTS: GERALDINE CRAIG
Associate Professor & Art Department Head
Kansas State University

"*Feminist objectivity makes room for surprises and ironies at the heart of all knowledge production; we are not in charge of the world. We just live here and try to strike up noninnocent conversations by means of our prosthetic devices, including our visualization technologies.*"[1]

Donna Haraway

Forget the romance of the hand-weaver, the lure of William Morris utopias. Forget the sixties, and a hippie rejection of materialistic ambitions within the post-war raging capitalist engine that was America. Forget Etsy and DIY enterprises that bring agency to the nostalgic comfort value of hand-crafted goods. This is not one of those weavers. This weaver is a cyborg.

To call forth Lia Cook in the image of a cyborg is to suggest a performative aspect to her weaving, with loom as prosthetic device. The matrix of threads embodies her human intelligence in an intricate tango with machine intelligence, the TC1 loom guided by software and image capture now ubiquitous to humans from our shared meta-narrative called information. Perhaps one of the more interactive and interesting features of viewing her weavings is that one must forget how habituated we have become to seeing pixels as generative information. Her work demands we see the big picture architecture of threads in full physical ontology as well as image-generating-three-dimensional-pixel-by-pixel potential. The Sky Mall catalog offers the opportunity to have your family photograph woven into a couch throw – how does a viewer separate these generic representations in cloth and their appropriationist lineage from a work of art? The ecofeminist project has been to reclaim agency and control of capitalist colonialism and knowledge production that sees all the world (including humans) as resource, with "... richly evocative figures to promote feminist visualizations of the world as witty agent."[2] Lia is an artist who engages the world through weaving, with herself and the world serving as witty agents.

Of course humans are not alone in their use of tools as prosthetic devices – we are partners in earth history and evolution that has included not just primates in the genus of tool engagement. Bird

1. Donna Haraway, "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective," Feminist Studies, Vol. 14, No. 3 (Autumn 1988): 594.
2. Haraway, 593

cognition is not inconsequential, most accessible to human understanding by the weaver bird. While a cyborg weaver with loom as prosthetic device situates a conversation in the materiality and articulation of organism and machine, it also did not take the computer for this relationship to begin. Weaving on a back-strap loom has been prevalent in numerous cultures for millennia. Yet the availability of computerized looms outside of industry in the late the twentieth century coincided with the onslaught of information and photographic representations on the internet, and flowed from jacquard weaving traditions where punch cards that control threads served as model for the binary code of computer programming. Lia is well acquainted with these early pictorial-weaving technologies. She purchased a 1824 jacquard loom in France and rebuilt it in her Berkeley studio in the early 1980's. A residency at the Jacquard Project, Muller-Zell, Germany in 1991 brought a new technological and conceptual focus to her work. The purchase of a TC1 computerized loom for her school (California College of the Arts, where she has taught weaving since 1976) and for her personal studio in 1999 allowed her next incarnation as cyborg weaver.

Known for her relentless innovations in woven form since the late 1970's, Lia began the twenty-first century producing heroic scale weavings from photographs of her childhood self and her dolls' faces, where individual threads coalesce only at a distance into the needed resolution for perceptually grasping the image. Up close, the viewer is caught in the materiality of thread as dimensional

Binary Traces: Young Girl (2004)

object, how it serves to build the image structure literally in the over/under of thousands of threads at a time. (Her impressive technical feat is apparent the more viewers understand about weave structures – if the overall cloth doesn't have sufficient interlocking elements, too many "floats," the cloth will collapse.) Works such as *Binary Traces: Young Girl* (2004) and *Big Tera* (2007) are ironic, reflexive weavings that materialize the tentative and skeptical social interactions of childhood in unsentimental self-portraits seen at a scale much greater than life-size. However, the body of the viewer becomes drawn in to the work until the maze of weave structure overtakes image, and the work's embodiment of weaving-ness goes beyond dimensional artifact. We are in the mind of the maker, following implied neural tracts that resonate with our own baggage of pixel resolution/frustration. And extraordinarily aware of intelligence and labor, from woman/ machine. What's a cyborg to do? Next create a new interactive feedback loop of synaptic connection, self-referential to the structural and material binaries that create the architecture of the weaving. In works such as *Face Maps Revisioned: Lips* (2006) or *China Maze Doll* (2008), the labyrinthian weave structure is brought forward in exploded scale so it overtakes the image in a constructed interface of information. Lost in perceptual liminal states that are familiar and yet new, it is tempting to touch the work to trace the implied binary path along fingertips. This impulse links the work to the constant reference in Lia's work over the last thirty years, that of touch as lived experience.

Big Tera (2007)

Seeking ever new ways to visualize and conceptualize the interactive and binary nature of weaving and explicate the role of touch brought Lia to collaborate with neuroscientists. Neuroscience allows for visualization technologies as another prosthetic device, which Lia recognized as fruitful territory, especially as she attends neuro-aesthetics conferences in Berkeley each year. (Research always has been a primary driver for her work.) In 2010 she was invited to spend a week in the lab of Dr. Greg Siegle, PhD psychiatrist at the University of Pittsburgh's School of Medicine, who turns over his lab/scientists to work with an artist, providing access to sophisticated imaging software for artistic not medical means. There she posed a central question related to the tactile qualities of weaving: How does the fact that a face is woven impact the viewer's emotional response compared to a photographic face? They attempted to map both emotional and physical interaction with EEG, and brain stimulation recorded through pupil dilation, eye tracking, and with a fMRI which measures the relative change in the oxygen content of the blood indicating neuronal activity in different parts of the brain. The test subjects showed more activity in the amygdala and insula (part of the brain that registers touch) with a woven face than the photo of the face. Dr. Siegle was very surprised. Lia said, "It wasn't science, we were basically doing preliminary studies, but the study was set up scientifically with single subject

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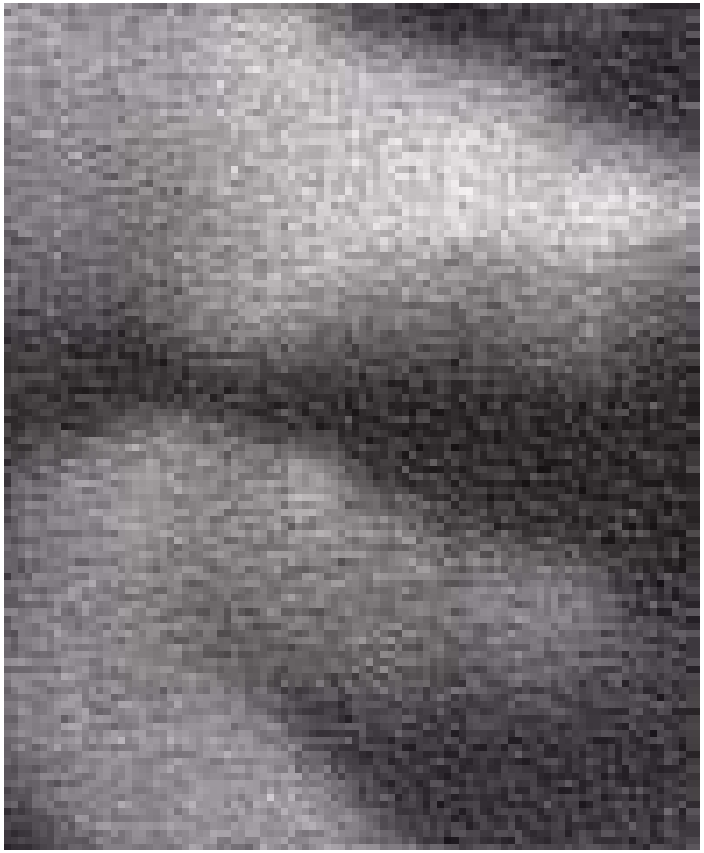
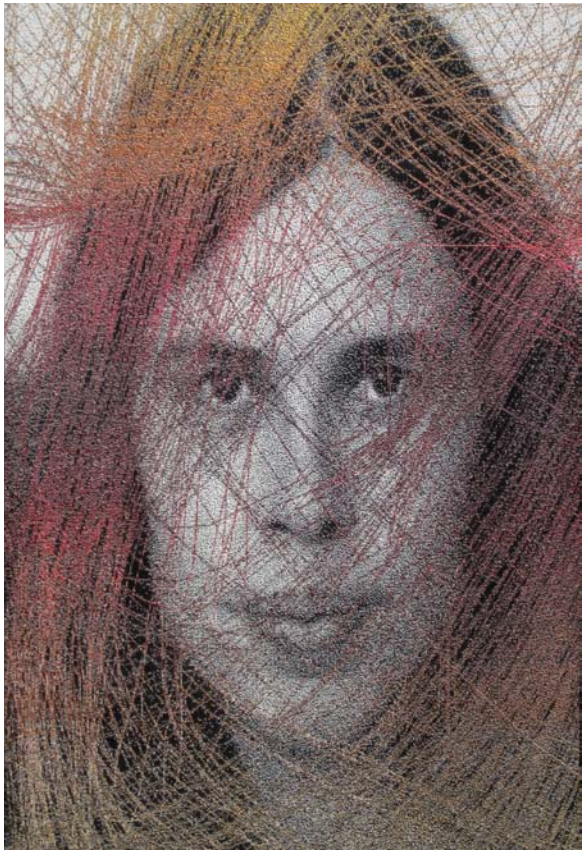
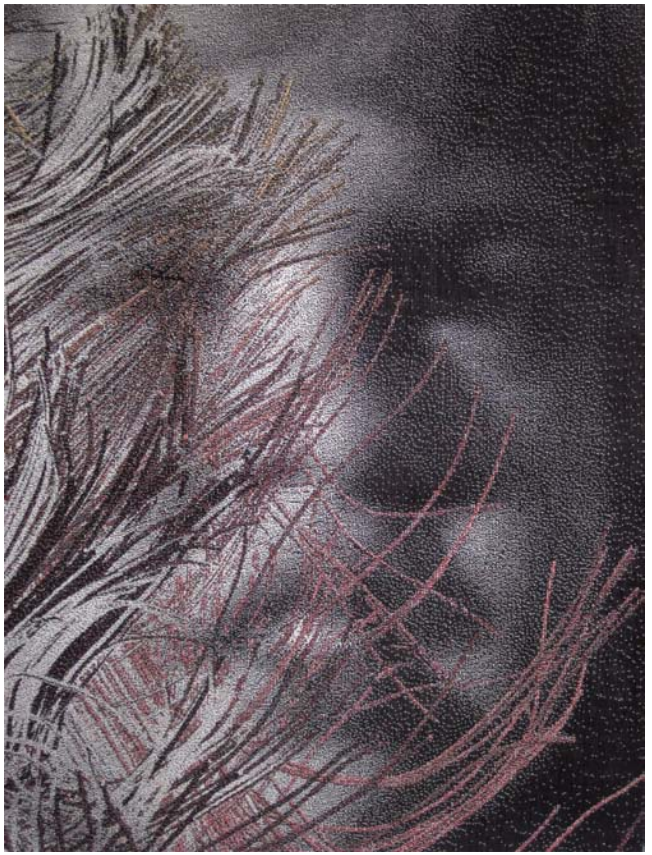


Face Maps Revisioned: Lips (2006)

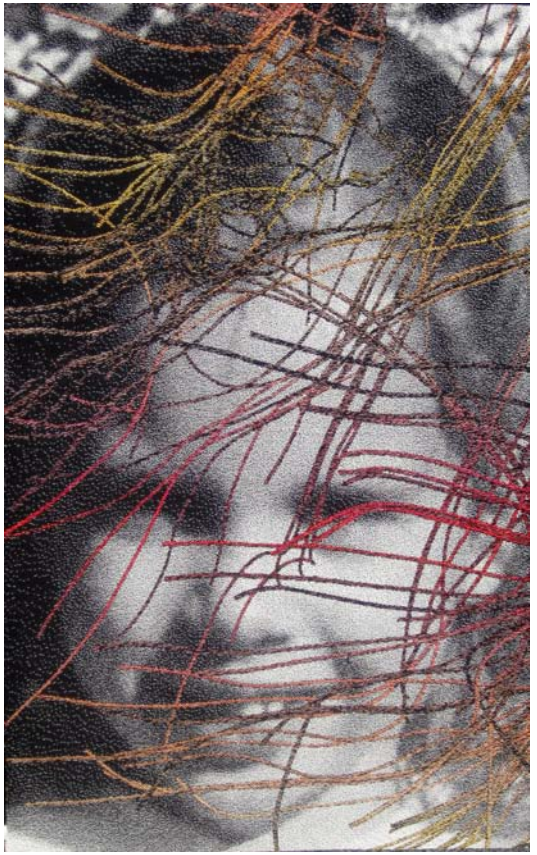


Mona Lia (2012)



Tracts Remind (2011)

Su Inside Outside (2011)



Neural Networks (2011)

and multiple processes."[3] A weaving that resulted shows test subject as art subject wearing fMRI sensors in *Facing Touch* (2011) and the background a scaled-up view of *Binary Traces: Young Girl* (2004). In this iterative, recursive work, materiality and optical foci vie for importance and technologies of power are in equilibrium.

After the week with Dr. Siegle, Lia began other collaborations with scientists at Sinai Hospital -New York, Vanderbilt, and Stanford. Dr. Philippe Goldin has been working with Lia on a behavioral study with visitors in her *Bridge 11: Lia Cook* traveling exhibition organized by the Society for Contemporary Craft, Pittsburgh in 2011. Another brain mapping collaboration utilizes a software TrackVis written at Martinos Center for Biomedical Imaging, Harvard that shows fibers tracks or neural connections in the brain passing through white matter (Diffusion Spectrum Imaging, DSI) for a much more detailed, structured vision of the brain. Walter Schneider Laboratory did the imaging of Lia's brain, and worked with her to use the software and she was back at the loom, incorporating the fibrous imagery into the newest weavings over photos of herself. *Traces Past* (2012), *Neural Networks* (2011), and *Mona Lia* (2012) suggest a translation of the indeterminate pathways of brain and body, temporal compression and expansion of a life. While the prosthetics of TC1 and brain visualization technologies make sense as art devices, the technical tour de force is secondary to Lia's witty agency in usurping the old technologies of power

3. Lia Cook, Studio interview with the author, Berkeley, CA, August 7, 2012.

China Maze Doll (2008)

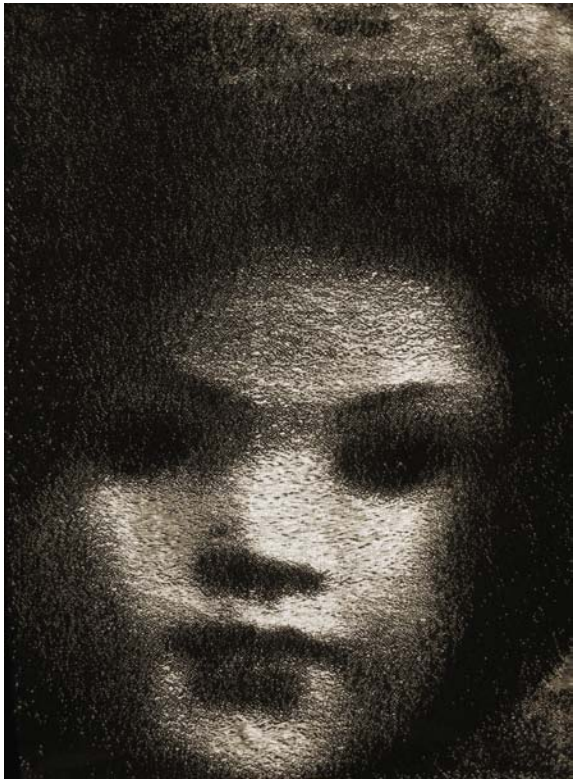
in art, with legitimations of tradition weakening. It would be an essentializing insult to stand in front of Lia's works and define any medium (photography, weaving vs. painting) or subject (family snapshots) as inferior.

In the end, one success of a work of art is how it relates to the interests of the viewer, and to our common understanding of the human condition. Do our visualizations tell us what it's useful to know, help us (re)claim this wet and sticky business of living and dying, of touching, smelling, tasting, hearing, and seeing? When our senses disintegrate, fade away, do our biologic systems simply wear out? Daily prosthetics prop us up - pace-makers, insulin pumps, contact lenses – and more extreme machines can sustain life indefinitely, but to what end? Lia has seen the strategic utility of machines to help us serve as witty agents, tools to lead noninnocent conversations towards the final moments of a global and individual history of what it means to be organic and human, to seek our temporal pleasures in pictures of the world.

"Known for her relentless innovations in woven form since the late 1970's, Lia began the twenty-first century producing heroic scale weavings from photographs of her childhood self and her dolls' faces, where individual threads coalesce only at a distance into the needed resolution for perceptually grasping the image."

Geraldine Craig

Iterations Series (2009)



Iterations: Face A (Detail) (2009)

ARTIST STATEMENT, BIOGRAPHY: LIA COOK
Professor of Art
California College of the Arts

Working in a variety of media combining weaving with painting, photography, video and digital technology, Lia Cook explores the sensuality of the woven image and the emotional connections to memories of touch and cloth. She investigates the nature of the emotional response to woven faces by looking at the fiber connections of communication between parts of the brain and integrating these fiber tracks with the actual fiber connections that make up the woven translation of an image. Cook is interested in both the scientific study as well as her artistic response to these unexpected sources, exploring the territory between scientific investigation and artistic interpretation.

Lia Cook studied art at the University of California, Berkeley where she received her bachelor's of art and then masters degree in art and design. Cook is currently a Professor of Art at the California College of the Arts in Oakland, CA. Cook has had many exhibitions around the United States. Lia Cook has led lectures and workshops and published papers about her work as well. For more information on Lia Cook, visit www.liacook.com.

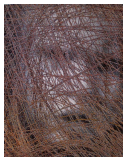
Big Tera (2007)
Cotton woven
102x50 inches

China Maze Doll (2008)
Cotton, rayon woven
72x51 inches

Traces Past (2012)
Cotton, rayon woven
88x50 inches

Binary Traces:
Young Girl (2004)
Cotton woven
68x48 inches

Facing Touch (2011)
Cotton, rayon woven
54x51 inches



Su Inside Outside (2011)
Cotton, Rayon woven kaunas
68x52 inches

Mona Lia (2012)
Cotton, rayon woven
81x51 inches

Tracts Remind (2011)
Cotton, rayon woven
74x51 inches

Neural Networks (2011)
Cotton, rayon woven
81x51 inches

Face Maps Revisioned:
Lips (2006)
Cotton, rayon woven
64x53 inches

Iterations Series (2009)
Cotton, Rayon woven
88x18 inches

Welcome to the Ruth Davis Design Gallery at the School of Human Ecology.
The Design Gallery holds exhibitions that communicate the value of creative inquiry through objects, images, text and people.

As a programming space that is affiliated with the Center for Integrative Design, the Gallery offers an opportunity to experience the innovative research that artists and designs are engaged in. This research encompasses both artists and designers who work nationally and internationally, as well as undergraduates and graduate students working here at the School of Human Ecology and across the UW Madison campus.

The Center for Integrative Design provides a hub for design research, education and outreach by bringing together the Helen Louise Allen Textile Collection (HLATC,) the Ruth Davis Design Gallery and Ruth Ketterer Harris Library, as well as undergraduate and graduate programs in Design Studies. We are located in the new Nancy Nicholas Hall at the University of Wisconsin-Madison's
School of Human Ecology, 1300 Linden Drive, Madison, WI.

For more information on upcoming exhibits at the Design Gallery, Gallery hours and a link to parking info, visit www.Designgallery.wisc.edu or contact Liese Pfeifer, Academic Curator and Collections Manager of HLATC at DesignGallery@sohe.wisc.edu, 608-262-8815.

Support for the Design Gallery programming provided by the Anonymous Fund.
Support for the catalog in part from the Ruth Ketterer Harris Memorial Lectureship Fund.

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Catalog Design by Kendell Sierzchulski
Rear Cover Photograph by Liese Pfeifer
Artwork Photography by Lia Cook