

Peach Upside Down Cake

Topping

1/4 c. butter or margarine

2/3 c. brown sugar, firmly packed

Dash salt

4 slices pineapple (or cherries)

Melt butter in 8 inch pan (or an iron skillet) and sprinkle with brown sugar and salt. Arrange pineapple halves and cherries

over

ELEGANTLY ARCHIVAL Artifacts, Archives and Tangibility in Dynamic Media

ELEGANTLY ARCHIVAL  
ARTIFACTS, ARCHIVES AND  
TANGIBILITY IN DYNAMIC MEDIA

NICOLE TARIVERDIAN





Thesis submitted in partial fulfillment of the requirements for the degree of Master of Fine Arts and approved by the MFA Design Review Board of the Massachusetts College of Art and Design, Boston

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## Before Interaction

Starting point / precursor

- Recontextualization
- Perceived Meaning / Storytelling
- Archiving / Collecting
- Framing
- Photography (claiming act / documentation)
- Memory



## Interaction



## A Shift in Curatorial Power

From (me) the creator

To (you) the user

Readdresses topics in a new context.

## Tactility / Tangibility

For the user (not only in the process of making)

Integration between analog and digital.

## ABSTRACT

In general, human interactions with technology remain flat in comparison to the sensorial and tactile nature of “lower” technology interfaces that require a more engaging use of our hands such as reading a book, processing and printing photographs from film, and engaging in analog crafts such as weaving or letterpress printing. Digital technologies are powerful because they provide easy rapid access to extensive amounts of data. I am interested in creating tactile, interactive systems that bridge analog and digital experience.

I believe all artifacts (objects or images) connect to memory on some level. Frequently an artifacts’ initial meaning fades over time due to its abandonment or separation from the original owner. Through recontextualization, documenting, archiving and framing artifacts, memories can be accessed or reassigned. Shifting the relationships between artifacts dynamically transforms the message conveyed. The associations between artifacts and the environment create meaning. This perceived meaning is influenced by a participant’s personal experiences. In some cases participants’ perceived meaning transforms further into story.

In my past work, as an artist, I assumed the role of curator having full control over the artifacts and their meanings. Interaction encourages a shift in curatorial power from the creator to the user forming a shared curatorial role. Users inherit partial authorship of the story by interacting with the work. Through the combined use of the camera, artifacts, and sensors, I design interfaces that speak to areas of performative curation, archiving, and storytelling. My work introduces an innovative perspective on art and design that combines the powers of interaction, technology and tactility.



## INTRODUCTION

### Early Memory

Growing up I was extremely curious about my father's side of the family and our Iranian culture. My grandmother, aunts and cousins lived in Tehran, and my grandmother traveled back and forth every year to visit us in Boston or my aunt in New York City. It fascinated me how far away she lived and how different her life was there. My dad, speaking nostalgically of his childhood would show me where Iran was on a map. It was hard to imagine how far away they were. I always imagined what it would be like to visit.

My grandmother would bring us gold bangles and small turquoise charms along with sweets and spices that tasted more pungent than we have here. Over the years, she also sent or brought us pictures of my dad, my aunts and various other relatives from their childhood. I loved seeing how much I resembled my aunt when she was in her twenties or how much we both looked like my grandmother. I asked who everyone was, what they were doing, and where they were. Through these images and the stories they encompassed, I learned about cities, my culture and my grandfather, who I never had the privilege of meeting.

For years these photos lived in a drawer with some baby pictures of my sister and I. I'm not sure what compelled me, but I felt the need to preserve and organize these objects at a young age (maybe six or seven). I told my mom that I wanted to give them to my dad for his birthday.

OPPOSITE PAGE: Image 20 from *Passage*, 2008.

To humor me she bought some albums. Diligently, I went through the images organizing and curating the story. I had forgotten about this encounter until recently when analyzing my own processes, interests and practice.

I examined my mom's side too. Growing up, my sister and I spent a lot of time with my mother's parents. They lived in the house my great grandparent's built after they had passed away. I treasured their house, it was full of interesting artifacts and stories like old reels of slides and photographs of my great grandparents. The cedar closet was like a time machine. My grandmother knew about every object's story and original owner — everything from my mother's prom dresses and Raggedy Anne to my great grandmother's mink shawls. The most intriguing artifacts were the albums she had. They were filled with pictures of her and my great aunt as children, and when she and my grandfather first met here. It even contained a lock of my grandmother's hair from when she cut it short in her late teens. Each of these artifacts has a story and when they are strung together the information proved telling. Recently, when my grandfather passed away, my mom and I rediscovered these artifacts and relearned some of these stories.

I was surprised that one of the artifacts we found actually existed. When I was very young my grandmother (on my Mother's side) told me stories of a Bible that had been passed down from generation to generation



through her mother's side. My great grandmother, who had emigrated from Ireland brought this Bible with her through Ellis Island. According to my grandmother, on the first page was a written list of everyone's birthday and death date ending with my mother's birth. I was constantly enthralled with the idea of this book. It had traveled such a long journey, survived so many years, and contained interesting information about my family, but I had never seen it. When my mom pulled it out of a dusty box, it was heavy and large and wrapped in some brown paper to protect it. We were both surprised by its appearance. I had only seen Bibles this old in the rare book collection at Cornell. On the first page was the list, ending with my Mother's birthday, written in my grandmother's handwriting. The book is a beautiful object with many stories to tell about the people who have owned, traveled with, and preserved it.

Another object that has had continual presence in my life is my Mamiya 645 medium format camera. When I started learning about light and optics in elementary school, my dad took apart his Mamiya to explain how the mirrors, lens, and optics work. This camera is now on "loan" to me and was used to shoot the entirety of *Passage*, my undergraduate thesis project. The Mamiya is a satisfying object to use. It is heavy, tactile and has personality.

The tangible aspects of analog photography have influenced my work and process as an interactive designer and artist. They have inspired me to build systems that are tactile and object based. I feel tactility is missing in many modern interfaces due to the reliance on screens. Technology is amazing, fast and practical. But in the process of upgrading and inventing, we may lose how things feel to touch and to use. I strive to bring back some of the tangible qualities existing in different photographic objects through the interfaces I create.

My obsession with the process of archiving and story telling has spread to my academic and design career. Originating as a curiosity with my family and personal history, my interests now address larger audiences.

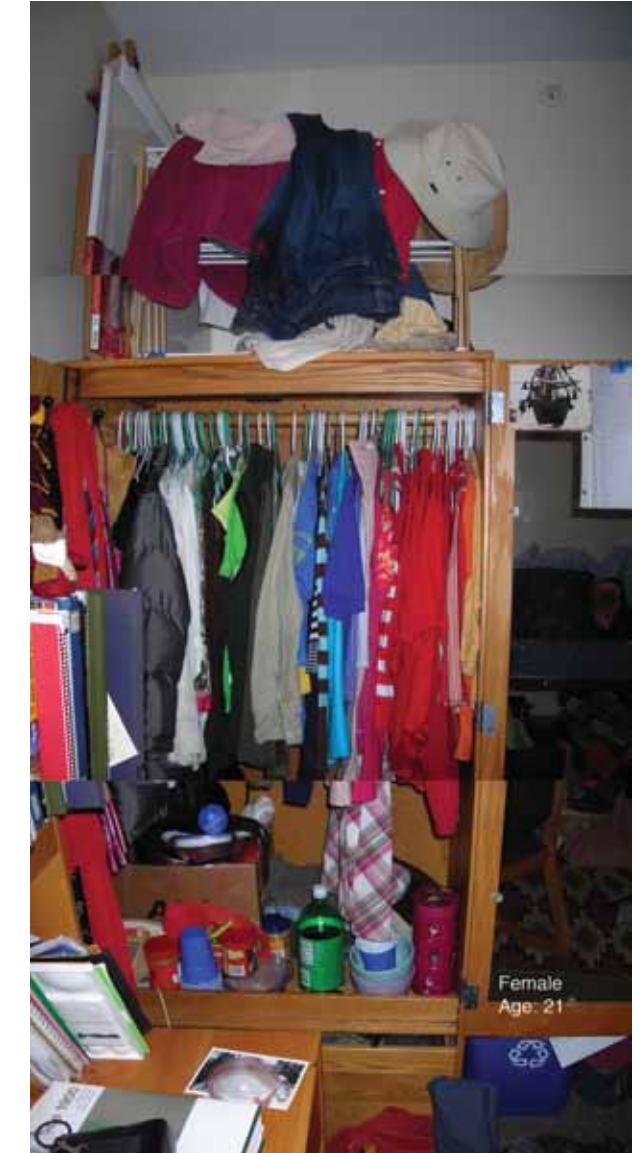
### Past Work

Themes such as recontextualization, storytelling, archiving, framing, and documenting have been reoccurring in my work since undergraduate school.

*Junk Space* emerged from the inspiration of Rem Koolhaas' *Junkspace* (Koolhaas). This project is my photographic interpretation of Koolhaas' descriptions and metaphors. Here, I documented a variety of different participants' closets in three parts; top, middle, and bottom. One participant photographed their own closet remotely and sent me the images. Each closet was assembled in Photoshop and printed. The collection was installed on the wall. This was one of the first true experiences I had with documenting and archiving. When displayed together, the closets became an archive of my idea of a *Junkspace*, preserved and elevated in importance. Each closet is, in a way, a portrait of its owner.

*Inside Out* is a series of black and white photographs of spaces and shadows created in 2006. Each image was printed once as a positive image and again as a negative (contact print). Both versions — positive and negative — were displayed in the same matte. Each diptych's negative image was created from the positive, except the middle image, which depicts a spiral staircase. The negative image was the staircase shot from the bottom instead of the top. This project allowed me to think deeply about documentation, recontextualization and placement of elements. The placement, size and order of the images affected the meaning. The placement of the positive and negative images changed within each pair.

*Night Lights* was completed in the Fall of 2007. Process was an important aspect of this series as well as time. The work consists of long exposure color images taken with a medium format camera. I experimented with many different techniques, films and times to achieve the desired effects. Documentation is a critical element of *Night Lights*. Here the camera is used to document the passage of time in one frame. The camera and film reveal elements invisible without them. Subtle differences in the colors of lights, reflections, shadows and motion mapped over time are exposed.



Two images from *Junk Space*, 2007.



One diptych of ten from, *Inside Out*, 2006.



Single image from a series of 20, *Night Lights*, 2007.



*Passage*, completed in 2008, consists of twenty-three color C-prints taken with a Mamiya 645. Each image consists of a collection of family photographs and objects.

The original artifacts were acquired from several sources: photographs my father took during a trip in the 70's home to Iran, objects I have collected mainly from my father's side of the family, and some images I fabricated depicting myself. Each artifact was carefully placed and arranged to tell a story to the viewer. I used key objects, images and people to provide clues. The size and location of each print was carefully selected to reveal the intended narrative. Although the story is clear to me, I intentionally left room for viewer interpretation by providing them the ability to determine the narrative in interacting with the prints and space. The subject matter and treatment of artifacts speaks to nostalgia and memory. As a result, the work is personal but also relatable to anyone.

*Passage* has been shown twice; once as a solo show for the completion of my BFA and a year later as *Translated Memento* in conjunction with work by Alison Chen. I have written about this work several times in different circumstances. Each time the work takes on new meaning. Initially, I wrote about personal connections to my family and my culture as well as the relationship of archiving to the project (Tariverdian). Most recently, I have considered it a precursor to my current interactive work that addresses recontextualization, curation, storytelling, framing, archiving, and documenting through the lens of interactivity. Although *Passage* allowed for some interpretation, and as a result, authorship by viewers, new media provides a greater ability to shift authorship and curation from the designer to the users.

The original images, taken by my father over 30 years ago, reveal aspects of personal and cultural identity. They depict a variety of places, settings, objects, and people including some of my family. I arranged and re-photographed the artifacts creating an archive that objectifies the photographs. The work was created methodically. The categories are analytical, personal, and at times, fictional. As the collections grow they take on

anthropological and archival qualities. The negatives for the photographs are unobtainable, making the found imagery the only record.

My experiences with the imagery, my heritage and culture are second-hand. As a generation removed and disconnected, this work is informed by stories and memory. Re-photographing speaks to my removed experience by creating a level of separation. Re-photographing is also a possessive act that allows me to reclaim the found artifacts as my own. The insertion of my own imagery and objects amongst the found and borrowed pushes the line between fact and fiction.



ABOVE: Installation view, Spark Art Space, Syracuse NY, *Passage*, 2008.  
RIGHT: Image 23 from *Passage*, 2008.





### Archiving and Collecting

Archiving and collecting are two terms I use frequently to describe my work and inspiration. Although in some cases I use them synonymously, archives and collections have distinct differences. Both are a series of objects or artifacts and can have notions of story, memory, and nostalgia connected to them. The difference, for me, is in a shift from “low” or everyday to “high” or important. Collections are on the “lower” end. The distinction between archives and collections is like the difference between “crafts” such as weaving or sewing in relationship to “fine art” like painting or sculpture. Collections are more personal and less for public viewing and analysis.

Documentation is an important factor in the distinction between a collection and an archive. Archives are well documented through writing, photography or other various channels. People who manage archives are archivists. Archival science is the analysis and practice of organizing, preserving, and providing access to information and materials in archives.

An additional distinction is metadata. Archive’s artifacts, unlike collections, have important information attached to them that further define the artifacts’ meaning in greater detail. For example, someone may have a collection or recipe cards tucked away in a box in their kitchen cabinet. This collection could become an archive through the incorporation of outside data like where each came from, who pasted the recipe on, what the recipe is used for and the stories or memories attached to a particular card. This additional information elevates the card from “just another recipe card” to an artifact that belongs to an archive of recipe cards.

Much of my work is comprised of pieces of other peoples’ collections, like recipe cards, family photographs, personal items or small sections of larger stories. The systems I build relate to archives rather than collections. My work involves curation and the elevation of individual artifacts from ordinary to important, regardless of their past use and meaning.



CR135, Dr. Martin Luther King Jr. resting in the Lorraine Motel following the March Against Fear, Memphis, TN, 1966. © Ernest C. Withers Family Trust, Memphis, TN.

### Archiving and Curation

Curation is another important term I use due to its relationship to archives. Professionally, I have had the pleasure of assisting in maintaining various historical photographic archives including Ernest Withers, who documented the entirety of the civil rights movement, and Bradford Washburn, who in the early 1900’s methodically documented mountains in Alaska and Europe. My work with these archives has taught me a great deal about process, the physicality of these artifacts and the stories they tell. In particular, working with Ernest Withers work, I realized how little I knew of the events and stories of the civil rights movement. Withers’ powerful images of the movement instilled a considerable amount of respect in me for his work and for the period in American history. I always knew the power of an image. Withers’ photography has reinforced the power to imply story, create emotion, and capture history in a way no other medium can.

As a curated body of work, archives tell a story from the perspective of the curator. The implied truth archives suggest is a powerful attribute for me as the curator, designer and artist. In the past, I have fabricated and curated archives to imply a story to viewers. In the digital systems and artifacts I now construct, participants are allowed some authorship by modifying the archive or infusing new meaning.





### Storytelling

One concept I return to frequently in my work is storytelling and its relationship to the viewer (or user). In many cases the story relates directly to collections of objects and artifacts. *Walking Project* completed in 2006, is one of the initial pieces incorporating storytelling through objects.

This collaboration, with Leah Thomason, documented a story performed through two pairs of shoes in the form of a flipbook. The book reveals the account of two shoes, one female and one male, that are interacting with each other on a spiral staircase. As the female shoes walk down the stairs toward the male pair, the male pair stops and faces the female shoes, then advance very quickly down and away. The female shoes follow and catch up toward the bottom, where they both stop again. This interaction could be perceived as either a fight or flirtation. The book is comprised of two halves allowing users to control the speed of the narratives. The interaction between the shoes from one side of the image to the other, one book to the next, is determined by the viewer's handling of the pages. Interaction is required to reveal the story between the shoes giving the users a small roll as curator.

Storytelling through artifacts also occurs in the projects *Passage*, *Butter the Size of an Egg*, and the *Polaroid 20 x 24's*. In each project, collections of strategically grouped images and artifacts piece the narratives together through photographic installations. In all three works, viewers obtain clues and form relationships from one image to the next. These associations create meaning and imply an open narrative. The narrative is interpreted by different viewers based on their life experiences juxtaposed with their physical approximation the work. Although each of these projects are personal investigations of family, memory and ritual, the puzzle-like installations encourages viewers to build relationships drawn from their personal associations. In all three of these installations repeating objects, images, characters, placement, and framing help guide the viewer through the imagery.

Storytelling acquires a new function in my current projects such as *The Perfect Human Narrative* and *Things That Matter*. In both systems, participants are involved in curation by building meaning through interaction. In *the Perfect Human Narrative*, users place a series of empty wooden frames (visual clips), and speaker cut outs (audio clips) onto a multi-touch table to construct a unique dynamic narrative. Users gain some authorship by having ultimate control over the order and placement of the elements of the story. Changes in the proximity and relationship from one element of the narrative to the next affect the overall meaning and continuously create multiple unique versions of *The Perfect Human*.



ABOVE: Installation View, *Butter the Size of an Egg*, 2009.

LEFT: Three frames from *A Walking Project*, 2006.

### The Role of the Curator

Curation and storytelling are symbiotic. Through curation meaning is formed, and through meaning, story is generated. The systems I create allow users to create meaning (and potentially story) through curation. In my earlier work, as the curator, I collected data and artifacts through investigation and documentation. Once collected, I framed and recontextualized the data in a specific manner to imply meaning and story for viewers. My presentation and organization manipulates the data disclosing the intended message. In some cases the message is ambiguous, leaving room for interpretation by the viewer.

In my recent projects, the role of curator is shifted to the user. Prior to the involvement of interaction in my work this transfer was less possible. The static nature of a photograph hung on a wall allows for little viewer interaction. The creator retains curatorial control. Interaction allows for the role of the curator to be shared between participant and designer. In *The Perfect Human Narrative* users build unique variations of the original story in the selection and organization of audio and visual components.

*Things That Matter* also gives participants the role of curator through the act of documenting and assigning meaning to objects. Although there is some rigidity to the underlying system, the role of curator is shared. Participants select objects and assign them meaning through interacting with the infrastructure. Their choices affect the meaning and potential narrative created.

*Déjà Vu* is a women's hand bag that utilizes an RFID system that informs users to what is inside. This system also has a shared curatorial role to an extent. The system's rules, determined by the designer, are the permanent aspects of the curation. In *Déjà Vu* the rules include: how many items can be tagged, what types of RFID tags are provided; and what types of feedback users receive. Participants choose objects of personal significance to track these using the five tags provided. This flexibility allows users to control personally relevant information. The selected objects can constantly change, shifting the interface's output.

### The Photograph

The camera's use to document, claim and recontextualize is a consistent theme in my work. Photography has an interesting history and complex relationship to fine art. Since its invention, it has been argued that a photograph cannot lie nor tell the truth. A photograph captures a moment in time and forges a memory. I aim to manipulate these qualities. I use photography to re-present and archive artifacts by documenting them. Archiving and documenting also has a symbiotic relationship. Documenting is the action that facilitates the creation of an archive. Both archives and documentation are perceived as true and important, but can be fabricated or made of irrelevant parts. This paradox is intriguing and motivates me to create work that plays with the definition of archive and the significance documentation. In *Junkspace*, I used photography to document closets to create an archive of these specific but ordinary spaces. *Passage* and *Butter the Size of an Egg* used documentation of artifacts to construct an archive of personal history. Both works are rooted in memory and second hand story, the narratives are fictitious but can be perceived as true.

### Interaction

Interaction also allows for the application of documentation and archiving. Through interaction, users document artifacts to build an archive themselves. In *Junkspace*, this begins to happen with the participant who takes their own photographs remotely. *Thing That Matter* allows users to continuously make decisions about which artifacts to add to the archive and about what explicit meaning is associated.

I strive to create tactile digital systems that allow users to assume a partial role as curator. As curators, participants control specific aspects of the systems and or assign data to specific artifacts. The associations between the artifacts in each system construct meaning that in some cases is interpreted as story. I will be addressing several case studies in this thesis that exemplify aspects of archiving, tactility, curation, and narrative in relationship to digital space and interaction. These case studies include iterations of: *The Perfect Human Narrative*, *The Comfort Food Project*, *Déjà Vu*, *Things That Matter*, and *Story Cloth*.

## CONTEXTUAL HISTORY

Facets from several disciplines have persistently supported and encouraged my thesis research. Some of these areas include my background and interest in photography, handmade objects, and DIY technologies. Much of my work is inspired by the quirky inherent qualities of photography. Photography's complex relationship to technology, fine art, memory and truth motivate my investigations. I have looked to many contemporary artists and designers who work with digital technology for inspiration. Studying their work has enabled my systems to mature conceptually and aesthetically.

### The Pursuit for Invention

Photography was an anticipated,, and exciting discovery of the 1800's. I feel its early history is important to my own investigations due to its curious position as both an art form and an advanced technology. Much of my current work sits in a similar position between fine art and technology.

Photography has a short dense history in comparison to other fine art mediums. In the mid 1800's, due to advances in technology and necessity, several people all over the world were determined to create a stable photographic process.

In France, Luis Daguerre was one of the first to reveal a photographic method. His process, the Daguerreotype, produced beautiful, single,

one of a kind positive images. Deguerre's work was set into motion by Joseph Nicephore Niepce. When Niepce died, he left the entirety of his research on light sensitive materials to Daguerre (Meggs, 144). This research formed the foundations for the Daguerreotype. Daguerre's process was successful in capturing images with light. He was also the first to photograph a person (a man who had stopped to have his shoe shined). Although Daguerreotypes produce beautiful images, the process is long and cumbersome and the output is not reproducible. As a result Deguerotypes were not widely used. In the methods to follow, reproducibility becomes known as one of photography's most substantial assets, setting it apart from other mediums like painting and drawing.

Also working in France slightly earlier than Daguerre was Hippolyte Bayard. Bayard developed a direct positive process that was paper based instead of copper plates like Daguerre. The downfall of Bayard's process was the paper's insufficient sensitivity to light. This resulted in exceedingly long exposure times. Bayard's process was completed and used almost a year before Deguerre completed his work. Unfortunately, Bayard was deterred from announcing his process by a friend of Deguerre's, resulting in Bayard being omitted as a key player in the invention of Photography (Komnino, 164). Currently he is not included in all texts describing this history.

As a reaction to this disappointment, Bayard created *Self Portrait of a Dead Man Drowned*. This image depicts, in the pictorial style of early photography, Bayard as a dead man. Here, Bayard uses photography in a very modern experimental fashion. He uses photography like contemporary artists such as Cindy Sherman use photography today. Bayard wrote a piece to accompany the photograph saying: “The corpse which you see here is that of M. Bayard, inventor of the process that you have just seen, the marvelous results of which you are soon going to see. To my knowledge, this ingenious and indefatigable researcher has been working for about three years to perfect his invention. The Academy, the King and all those who have seen his pictures, that he himself found imperfect, have admired them as you do this moment. This has brought him much honor but has not yielded him a single farthing. The government, having given too much to Mr. Daguerre, said it could do nothing for M. Bayard and the unhappy man drowned himself. Oh! The fickleness of human affairs! Artists, scholars, journalists were occupied with him for a long time, but here he has been the morgue for several days, and no one has recognized or claimed him. Ladies and Gentlemen, you’d better pass along for fear of offending your sense of smell, for as you can observe, the face and the hands of the gentleman are beginning to decay” (Komnino, 164).

Although the viewer knows Bayard is not dead, he is representing himself as drowned in the photograph. Therefore “the act of photography becomes metaphysical because it allows him to watch the world in his absence” (Komnino, 164). Bayard’s poetic and conceptual use of photography opens a wide discussion to the meaning of his actions as well as the cultural perception of death at the time. This image is imperative to photography’s history because it is a precursor to what is to come.

In Britain, Fox Talbot was also developing a photographic process called the Calotype. Calotypes were unique to the others because of the incorporation of paper negatives which allowed the process to be less burdensome and for images to be reproduced (Meggs and Purvis, 145). The key element of reproduction, missing from all other processes, rendered



Hippolyte Bayard, *Self Portrait of a Dead Man Drowned*, 1840.

Talbot’s process superior. Calotypes provided a base for others like Gorge Eastman, and John Herschel, to discover and produce the film processes that exist today.

Over time photography has earned its place in the fine art world. Photography is also widely used for documentation of everything from mundane everyday events to important moments in history. It has continually advanced and changed like most technologies for the better and for the worse. The beautiful, tactile process of film and silver gelatin printing is disappearing. In its place are cameras that are small and abundant. Digitization allows for new interactions like telepresence. Through platforms like Skype people transcend space through the camera. Cell phone cameras are consistently becoming better quality. They are readily available and small encouraging frequent use. These devices are used not only for documenting but to access data, like with QR codes, and to overlay data. Applications like Instagram are widely used allowing users to merge social networking and photography. Users can also digitally attach metadata to images taken with Instagram. In combining interactive forms of photography with tactility powerful systems are generated. I hope to create systems that address photography in this manor.

“I have been a witness, and these pictures are my testimony. The events I have recorded should not be forgotten and must not be repeated.”

James Nachtwey

### Documentation

As soon as photography became a stable process it formed a complicated relationship between documentation and fine art. From the beginning, photographers documented in order to study and preserve. Photography brought a new perspective to visual documentation of events. Matthew Brady and his photographic crew changed the way the American public viewed war through their documentation of the Civil War (Meggs and Purvis, 150). “When the American Civil war began, Brady set out in a white duster and straw hat carrying a handwritten card from Abraham Lincoln reading ‘Pass Brad- A. Lincoln’ (Meggs and Purvis, 150). Prior to photography’s invention battles were glorified by painting. Brady and his colleagues depicted real causalities and the dreadfulness of war.

When travel to Egypt became fashionable due to Western fascination with the exotic, photographers attempted to document “the cultural other.” As early as 1877 Eadweard Muybridge was successful in documenting the motion of a horse in a full gallop. In the early 1900’s photographer’s like Bradford Washburn, Vittorio Sella and Ansel Adams artfully documented the natural marvels of the world including many of the world’s fantastically stoic mountain ranges. In the 1950’s, 60’s and 70’s Ernest Withers documented the entirety of the Civil Rights movement as well as the Memphis Blues Music scene. Withers’ images depict many of the

most important events of that time including Martin Luther King Jr.’s marches and funeral, strikes conducted by the sanitation workers, and the first moments of desegregation. Currently, James Nachtwey respectfully and powerfully documents war, its ramifications and aftermath. Nachtwey states, “I have been a witness, and these pictures are my testimony. The events I have recorded should not be forgotten and must not be repeated” (Nachtwey).

Lower forms of photographic documentation also are presently copious and important to photography’s definition. These forms of documentation exist as ID cards, police lineups, cataloging personal items for insurance, x-ray security machines now found in airports, as well as blogs. Many contemporary artists and photographers create projects that surround these “lower” forms of documentation. Taryn Simon in *Contra-band* photographs over 1,000 items that were confiscated from passengers in JFK international airport. Through her documentation these strange and illegal objects become an archive to be displayed in the galleries that according to the New York Times “offers a snapshot of the United States as seen through its illicit material needs and desires” (*Strange Cargo at Kennedy Airport*).

Photographic documentation has allowed us to vividly preserve and examine pieces of history. It allows viewers to learn about specific moments



in time while visually transporting them into another space. Photography's documentary nature implies truth even though the medium is easily manipulated. It is a powerful paradox that can create tension, and is employed by some artists to its full potential.

### The Paradox

John Berger addresses photography's paradox of truth vs. fiction in *Understanding a Photograph* stating, "In itself the photograph cannot lie, but, by the same token, it cannot tell the truth; or rather, the truth it does tell, the truth it can by itself defend, is a limited one" (Askew and Wilk, 53). Although a photograph can preserve a moment in time, it still imposes artistic bias and the photographer's perspective, just as paintings or other forms of fine art do. Documentation to some degree, as Berger alludes to, cannot lie about its subject (Askew and Wilk, 53). On the other hand, photography lends itself to manipulation, both directly to the subject and also during the process. This paradox is one of photography's most fascinating assets. Many conceptual artists utilize this power to create absurdity, irony, or impossibility in their work.

Yves Klein's famous performance in 1960 *Leap into the Void*, in which Klein evidently jumped from a second story window, exemplifies photography's ability to simultaneously exhume truth and lie to the viewer about an event. The photograph recreates, through photomontage, Klein's jump from the second floor window. "Klein's photomontage paradoxically creates the impression of freedom and abandon through a highly contrived process" (Heilbrunn Timeline of Art History). Artists such as Klein employ photography's unique quality to enhance the perception of their work.

### Is it a Photograph or Is it Art?

Photography's relationship to documentation is direct. The subject of the photograph becomes important, preserved, and re-presented. Documentation gives events or artifacts new meaning. This concept is in ephemeral works of art like performances and earth art.



Yves Klein, *Leap into the Void*, 1960.



TOP: *Cayuga Salt Mines*, Robert Smithson, 1969.

BOTTOM: An image from *Splitting*, Gordon Matta-Clark, 1974.

Earth Art is fleeting by nature. In most instances, the physical work exists for a short time. Later, only the documentation remains to tell its story. In some cases artists like Robert Smithson have used documentation to re-present explicit pieces of his site specific earth works in a gallery space. Smithson called these works non-sites. In the *Cayuga Salt Mines Site*, Smithson created a site-specific work of art, consisting of a series of mirrors located outdoors. Later he strategically photographed and collected parts of the site, including piles of salt and mirrors, and brought them inside a gallery space. Smithson discussed this work stating, "I am going to use a room and a salt mine... (It's out here on Lake Cayuga, Cayuga Salt Mines)-and tomorrow I'll go down there and put on an exhibition in the salt mines and arrange these mirrors in various configurations, photograph them, and then bring them back to the interior along with rock salt and various grades. As you can see the interior of the Museum somehow mirrors the site" (Smithson, 178).

Smithson pushes the boundaries between photography as documentation and photography as conceptual art. His work utilizes photography differently than celebrated photographers like Ansel Adams or Edward Weston. Smithson's non-site images are less refined and planned. Non-sites are "sculptural evidence of his eccentric archaeology, Minimalist in design, accompanied by maps and photographs" (Kimmelman).

Gordon Matta-Clark, uses documentation in a unique way to re-present work after it has been physically created and destroyed. Matta-Clark, who graduated from Cornell University's architecture program, strived to challenge the rules of architecture in his work (Janku, 18) He would cut away sections of building and document the process as well as bring pieces of these buildings into the gallery space. Due to "the essentially performative or time-lapse nature of his process and the ephemerality of the end result, Matta-Clark documented his works through film and photography" (Janku, 18). His images also reconfigure and amplify the effects of the cuts they document to form collages (Janku, 18). Matta-Clark, like Smithson, pushed the limits of documentation, driving the documentation itself to become the work.





Three images from *This Was Now*, Mark Iwinski, 2006 and 2007.

“Snapshots are complex and willful little pictures.”

Marvin Heiferman

Documentation is essential to Mark Iwinski’s work as well, specifically in the body of work *This Was Now*. Iwinski has documented distinct locations in Ithaca NY. For each location, Iwinski holds up a transparency depicting the same setting many years in the past. This results in one image that transcends time. “The photos — or “re-photos,” as the artist calls them—highlight changes in society reflected through an altered urban landscape, and their effect is both instructive and haunting” (Crawford, 44). The story his work reveals is intriguing due to the merger of past and present. Two of the most engaging images from this series are titled Lake Views. These images capture a black and white vintage airplane and silent film star Pearl White in her roadster driving along the side of the current lake side (Crawford, 47).

#### The Power of Snapshots

Photography’s ability to document a moment in time through a snapshot bonds photographs to memory and nostalgia. “Snapshots are complex and willful little pictures. It is only because they are so small and so frequently and easily made that we think of them as innocent” (Heiferman, 41). Photographs can transport us into a specific time or place. We take photographs during important events, in order to have access to particular memories in the future. They are simultaneously archival and nostalgic. Heiferman eloquently says “Every photograph that captures a moment in time simultaneously documents its passing. As a result, every snapshot is both wondrous and sad. Each is a touching reminder of life and of our inevitable disengagement from it. And yet, snapshots provide solace; they are helpful, even sustaining, because every photograph of someone or something allows us to ‘replace its absence with presence’”(50,51).

Over time, snapshots are lost or abandoned by their owners, but still possess the ability to imply stories and connect us to memory and the past. Photographs are points of reference that allow us to reflect on our mental recollections. Geoffrey Batchen refers to snapshots in his article *From Infinity to Zero* as “Having been elevated to the status of folk art, they have also been transformed into something other than themselves:

memories without memory, stories without storytellers; in short enigmas” (124,125). The original storyteller is disconnected from the memory. As a result, new stories are informed by our experiences as well as a desire to attach narrative to the images. Photography acts as a medium to connect and create a new reality and truth.

Curator of Photography, Sandra Phillips, at the San Francisco Museum of Modern Art has observed “when the family history ends and the album surfaces at a flea market, photographic fair or historical society- and the image is severed from its original, private function” a snapshot becomes anonymous (West, 82). When snapshots become ‘anonymous’ they become open and available to a range of readings wider than those associated with their conception” (West, 82). This concept is not only interesting as a viewer but also for artists as a tool to create stories both true and fabricated. Artists like Jasper Rigole take advantage of this anonymity and nostalgia. Through found imagery he creates new stories and collective memory. In *OUTNUMBERED, a Brief History of Imposture*, Rigole uses a found panorama for 1936, a camera, a computer and a projector, to create a moving image that tells a story. The artifact is given a new life through the algorithmically created dialogue about imposture. In *Buttons*, Sascha Pohflepp, implicates found digital snapshots from Flickr in a similar fashion. With the device she created, found images are associated to a personal moment. The seemingly random images take on new meaning through their relationship to a particular time and place.

### The Photograph, The Object, The Archive

Photography’s ability to document provides artists the power to collect and archive, as well as imply new meaning to the subjects of their photographs. Photography and documentation are essential mechanisms for archiving. A complex relationship exists between photographs, artifacts, documenting, memory and photography. The act of photographing documents a place, person or artifact. Documenting has the potential to archive by elevating an everyday moment or object to an important one. As a result, artifacts can be anything including objects and images. A

photograph can be an artifact. Artifacts usually retain metadata through the process of documenting. Personal associations like, memory, place, time, and the people depicted can be attached to artifacts providing them deeper meaning.



*Outnumbered, a Brief History of Imposture*, Jasper Rigole, 2009.

Artifacts are the building blocks of archives, and their relationships to one another can generate a story for viewers. Although archives are usually perceived as true, the connections and artifacts can be fabricated or real depending on the purpose and curator. “Archives are prone to bias. Shaped one way, the story goes like this; structured differently, it’s as though it never happened Depending on who’s doing the telling, veracity hangs in the balance” (Avgikos, 364). Photographing and documenting are possessive acts that claim, reassign meaning to and provide a new existence for artifacts. Artists such as Sophie Calle, Nigle Poor, Cindy Sherman, Eve Sussman, Mark Iwinski, Ed Rushe, Michael Rakowitz, Jasper Rigoli, Nina Katchadourian, and Daniela Rosner use photography as well as archives and collections to assign new meaning to artifacts and to generate stories for viewers.

In *Exquisite Pain*, Sophie Calle uses photography combined with text to document, curate and recite the days preceding and following a break up with a boyfriend. She creates an archive “composed of photographs, reproduced love letters, air tickets and passages from remembered conversations,[and] takes the reader through the 92 days leading up to her abandonment, and the three months of recovery that followed” (Gentleman). Relationships from one image to the next in conjunction with text, allows viewers to re-experience her story each time the book is opened.

In *Found*, Nigle Poor photographs objects she encounters on walks to create an archive and narrative. She glorifies the once discarded objects by photographing them on a pristine black background. In conjunction with the photograph is text about the object. Through recontextualization these objects take on a new form with new meaning. The project becomes a map of time navigated through text and image. By archiving, Poor reassigns memory and context to forgotten items.

Jasper Rigoli created the *International Institute for the Conservation, Archiving and Distribution of Other Peoples Memories (IICADOPM)* to frame his body of work. He writes “some memories, archived at the



TOP RIGHT: *Found*, Nigle Poor, 1998.

TOP LEFT: A single image from *Found*, Nigle Poor, 1998.

BOTTOM: One page from *Exquisite Pain*, Sophie Calle, 2003.

“Artifacts are important... I keep tiny things and pictures, like souvenirs and triggers for my work. Often artifacts are places holders for work in the future.”

Nina Katchadourian

*IICADOM*, were added voluntarily to our institute, the majority however are lost or found memories. These memories were abandoned by the remembering person and therefore they were deemed to vanish. The institute sees it as the main task to search for new destinations for these lost memories. The memories are saved by the *IICADOM* and without the intervention of the institute these memories were doomed to be forgotten” (Rigole). Through his dynamic installation, *An Elementary Taxonomy of Collected Memory*, he implicates the abandoned memories in forms of film clips, photographs and objects, creating new narratives from the relationships generated between each piece. Although the individual memories are seemingly unrelated, when recontextualized and related to one another, they form new associations that allude to a dynamic narrative.

Nina Katchadourian uses a combination of artifacts and photography in her work to create narrative. She says, “Artifacts are important... I keep tiny things and pictures and, like souvenirs and triggers for my work. Often artifacts are places holders for work in the future” (Katchadourian, dialogue with Nina Katchadourian). In *The Nightgown Pictures* Katchadourian revisits a tradition and an artifact created by her mother and grandmother many years before. She describes the ritual as “Every year on my mother Stina’s birthday, my grandmother Nunni dressed her in a handmade nightgown and took her outside to be photographed. This

tradition continued until the birthday when Stina could no longer fit into the nightgown” (Katchadourian). Years later Katchadourian and her mother set out to recreate the ritual. Each year they hunted for the exact spot the original was taken. Once the locations were determined they took a new image of the location. Katchadourian states “*The Nightgown Pictures* was an unusual project for me in some sense. I did not know where it was headed for a long time. It took the better part of 10 years to figure out. This artifact, the nightgown, is so special to me and to my mother. My goal was not to over ride my grandmother’s work and hijack her project” (Katchadourian, Dialogue with Nina Katchadourian).

The result is an archive comprised of the old and new images, displayed side by side, accompanied by the dates and text. The juxtaposition of image and text delineates an interesting history and story of the artifact, tradition, and place. “The project became many things over time (to Katchadourian): an excuse to travel, a landscape study, an attempt to take part in a family ritual that I missed, a study of someone else’s methods, and a small-scale research project on the island’s community and history” (Katchadourian).

OPPOSITE PAGE LEFT: *The Nightgown Pictures*, The Nightgown Artifact, Nina Katchadourian, 1996–2004.  
OPPOSITE PAGE RIGHT: Two images from *The Nightgown Pictures*, Nina Katchadourian, 1996–2004.



1997



1998





Artifacts from *The Invisible Enemy Should Now Exist*, Michael Rakowitz, 2007.

In *White on White* Eve Sussman creates a series of dynamic narrative episodes through the use of a database of film clips and tags. As the tags scroll on the bottom of the screen they trigger pieces of video that specifically relate to the tags. Each time a user visits the episode they experience the same narrative in a different form. The work, programmed by Joshua Noble, is described as a algorithmic noir (*White on White*).

Michael Rakowitz also uses archives innovatively to tell stories. Many of the stories he tells are hybrids of truth and fiction. In *The Invisible Enemy Should Not Exist*, Rakowitz reveals a fictional narrative that was born from one found image of Dr. Donny George, former Director of the National Museum in Baghdad, who worked to recover looted artifacts and also sidelined as a drummer in the band 99%, which specialized in Deep Purple covers (Rakowitz). This persona inspired Rakowitz to fabricate a story centered on Dr. George and the looted artifacts. In the center of the installation are a series of objects on a table. Each object is a replica of an artifact looted from the Baghdad Museum, fabricated from Arab food labels. Each object corresponds to a museum label with factual information about the lost object along with quotes of reactions to the looting. Hanging around the perimeter of the room is a fictional narrative about Dr. George and his band. Rakowitz's curation of the symbolic artifacts and story in conjunction with the experience create an engaging story for participants. During his lecture at the Harvard School of Design in September of 2011, Rakowitz described how thrilling it was to see Dr. George come and interact with and add to the experience. During his visit Dr. George allegedly gave tours of the fictional artifacts just as he would have in the Baghdad Museum. (Art, Design, and the Public Domain Lecture Series: Michael Rakowitz, *Three projects. Maybe four*).

Daniela Rosner, applies documenting and archiving in a very innovative fashion in *Spyn*. Rosner developed a platform for mobile phones that allows users to embed stories and artifacts into a knitted garment. According to Rosner “handmade objects seem to have a special quality that prompts their role in gift exchange. Some scholars of handcraft practice



have suggested gift giving is a core motivation” (Rosner and Ryokai 2). Through this process of creating with Spyn users can physically pin digital memories and stories to specific locations of the knit. Rosner also states “The process of creating a handmade object requires a human investment of time, physical effort, and care. Through traces of physical handwork, a handmade object reveals aspects of its creator’s technical journey. Through color, material, and form, a handmade object hints at the creator’s expertise, knowledge, and taste. Through its historicity, a handmade object connects with cultural tradition and learned technique” (Rosner and Ryokai, 1). *Spyn* intersects the space between digital and analog. It also creates intelligent artifacts that can share their embedded memories with users.

Two film stills from *White on White Episode "Dispatch"*, Eve Sussman and Rufus Corporation, 2010, <http://canopycanopycanopy.com/10/whiteonwhite>.



### Dynamic Media, Aesthetics, and Tactility

My BFA program in Photography and Painting was extremely traditional. Nothing was digital: we ground lime stone by hand and etched it for lithographs; sanded, cut, dowelled, and cast sculptures; mixed different pigments and binders to create paints; and processed and printed film. Over all the four years were physical, tactile and gratifying.

The analog photographic process is exceptionally gratifying to me. The darkroom is quiet and meditative. I become completely engrossed, forgetting time is passing. Film's tactile qualities are pleasing from the way it crinkles through my hands while winding it onto a reel to the first glimpse of an image in the developer. For the majority of my undergraduate education I viewed digital processes as the evil thing killing the practice I adored. I was horrified by the thought of Polaroid dying and by other schools converting their darkrooms into digital printing labs. It disgusted me to hear that Kodak and other brands were cutting back on their film production. Least rewarding to me were digital cameras and digital printing. It was unsatisfying. I found pixels offensive and missed the subtle grain of a black and white 35mm negative enlarged to a 30" x 40" print.

I still feel this way. But I have realized that new media technology can be used to create or enhance the tactile qualities of an interface. Don Greenburg first encouraged my thinking about new media. Don, who worked

for HP developing and testing color printers and printing technologies, is currently in his eighties, the head of Cornell's Computer Science department, and on the cutting edge of technology. He gave me a new perspective in a class called Art in the Digital Age. He allowed me to consider technologies' ability to drive art and design outside the static world of traditional fine art mediums. Through examples of projects developed at the Media Lab at the time, like e-paper, and other algorithmically generated installations, my eyes were opened to a new world of possibilities.

The idea of spending my life taking static wedding photographs or product images was terrifying. Prior to graduation I attempted to explore alternative paths. After several internships and experiences, I gained insight to the potential of design and new media and felt compelled to explore this world and found myself looking to dynamic media.

I am drawn to dynamic media for a multitude of reasons. Many are influenced by my educational background and personal fascination with curation and narrative. Some are generated by the potential I know dynamic media offers to enhance systems through interaction. My exposure to dynamic media has pushed my work to become more engaging.

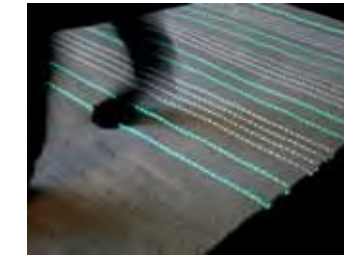
Currently many artists and designers are using technology innovatively to create tactile digital systems.

Artists and designers like Rafael Lozano-Hemmer, XS Labs, Linda Worbin, Sascha Pohflepp, Theo Watson, and Anna Pinkas use dynamic media and tangibility to create engaging systems that fall in-between digital and physical systems.

In *Please Empty Your Pockets* Lozano-Hemmer has created an interactive art piece from a conveyor belt and a scanner. Participants can place any small object onto the conveyor belt. As the object passes through the scanner its image is captured. The new image then reemerges with a selection of a larger group of previous users' archived images. Lozano-Hemmer "is able to mimic the nefariously controlling aspect of collecting information and, at the same time, spin an improvisatory, uncontrolled artistry out of it" (Herbert 28). *Please Empty Your Pockets* innovatively translates physical objects into a digital archive.

XS Labs is an experimental design studio that works with electronic textiles. Much of their work elegantly ties digital technologies to tactile physical objects. *Krakow* exemplifies textiles seamlessly integrated with technology. Using thermochromic dyes, conductive yarn, a Jacquard Loom, and a circuit board, a tapestry was woven with imagery that changes over time. The fabric depicts a black and white image of people walking on a city street. Over time the people fade away. The fleeting nature of the imagery is indicative of memory (Extra-Soft XS Labs). Although created in a traditional fashion, the use of new technologies has allowed this fabric to behave innovatively.

Linda Worbin, and Anna Persson, in collaborations with Kasthall have created an engaging interactive carpet entitled *Traces*. As a person walks on the carpet, white or turquoise stripes appear by lighting up. The carpet seems completely ordinary until someone walks on it (Smart Textiles Design Lab Blog). Like *Krakow*, *Traces* subtly speaks to ideas of memory and the passing of time.



TOP LEFT: *Traces*, Linda Worbin, and Anna Persson, in collaborations with Kasthall.

TOP RIGHT: *Krakow*, XS Labs.

BOTTOM: *Please Empty Your Pockets*, Lozano-Hemmer.



*The Portrait Machine*, Theo Watson, 2009.

Sascha Pohflepp in *Buttons* has created a unique device that juxtaposes time with a memory and an image. Poflepp has created a type of camera that produces images that are linked to an exact time and the users specific memory. As with a traditional camera, participants press the button on Pohflepp's device to preserve the moment they are expecting. The system then searches Flickr for an image shared at that exact moment. When the system finds an image, it is displayed onto the device's screen. The selected image becomes associated to the user's moment and memory despite its enigmatic qualities. "Taking a photo means making a memory. Choosing a moment in time and framing a situation. Archiving it or making it public. Either way, we create a visual item that we have an emotional attachment to our memory" (Pohflepp).

*The Portrait Machine* built by Theo Watson also uniquely relates aspects of digital archives with physical space. Watson created a system that consists of three digital displays hung on a wall, and a makeshift portrait studio. The user steps into the studio to snap a portrait of herself. Once the image is taken, the system analyses the photograph and displays it on one screen. Then corresponding images are displayed on the remaining two screens. "The portrait machine analyzes all the portraits collected determining the final arrangement on the monitors by clothing choice,

hair color, facial expression and composition within the frame. The installation 'presents both similarities and differences in these characteristics, reminding us of our connectedness and uniqueness, creating strong visual patterns and playful juxtapositions" (Designboom).

Anna Pinkas, artist and designer, cohesively integrates traditional physical objects and technology. *Message in a Bottle* plays on the traditional idea of a *Message in a Bottle*, where someone throws a glass bottle with a personal message enclosed inside into the ocean in hopes that it will be found and read (Pinkas). The project consists of a board with written quotes and a simple glass bottle with a blank note inside. As the user moves the bottle over each quote an image is projected into the bottle providing a better clue as to who the owner of the message is. Users have ultimate control of the order and speed in which information is revealed. The piece is whimsical and appealing due to its user interaction, projection mapping, and use of a real bottle.

Participation coupled with tactility creates powerful results that produce gratifying systems. Art making satisfied my need for physicality in the past. Participants engage with these interfaces on a deeper level through touch, feel and use. Technology juxtaposed with tactility changes how we view and interact with objects and space.

The integration of new technologies with lower technological objects and materials creates interesting dichotomies. Dynamic media encourages systems that provide users with a fresh perspective and insight as well as authorship where it did not exist before. My case studies address the intersection of tactility and technology and demonstrate the powerful role interaction has on traditional curation and archives. These projects speak to these areas in two ways: multiple artifacts that disclose meaning and potentially story through user interaction and curation or individual interactive objects that store and reveal their own metadata (and potentially stories) through participant use.

DÉJÀ VU





### Project Overview

*Déjà Vu* created in the spring of 2011 is a collaborative project with Heidi Chen (a graduate of Cornell University's Mechanical Engineering program and currently a candidate for a Master in Mechanical Engineering at MIT). The project formed out of Leah Buechley's New Textile course. In taking Leah's class, we both gained a significant amount of knowledge about soft circuits and electronic textiles. This base was very helpful in building all three versions of the project.

Using an RFID system in conjunction with sewn circuitry and the Arduino LilyPad, we created an intelligent woman's handbag, which knows and communicates its contents to the owner. In French, *Déjà Vu* is the experience of feeling sure that one has already witnessed or experienced a current situation, even though the exact circumstances of the prior encounter are uncertain and were perhaps imagined (Wikipedia) This definition inspired the name for the project. The user receives information by pressing a fabric button located on the front of the bag. Throughout the system, users can select five "important" items to track with the custom built RFID tags. The tags include a key fob, a cell phone case/sock, and three flexible tags that could fit into a wallet, glasses case, small sketchbook or any other necessary item. In the second and third iterations each tag is color coded with a corresponding LED on the front display.

OPPOSITE PAGE: *Déjà Vu* version #1 with RFID tags.

When items are placed into the bag, they are scanned by the RFID reader and stored in the Arduino's memory. As each is scanned, an LED blinks on the front of the bag providing its owner with visual feedback that the artifact has been entered into the system. When the button is pressed, a series of lights, located on the front of the bag, display which of the allotted five chosen articles are present. If an artifact is missing or has been removed its light will remain off.

### Inspiration

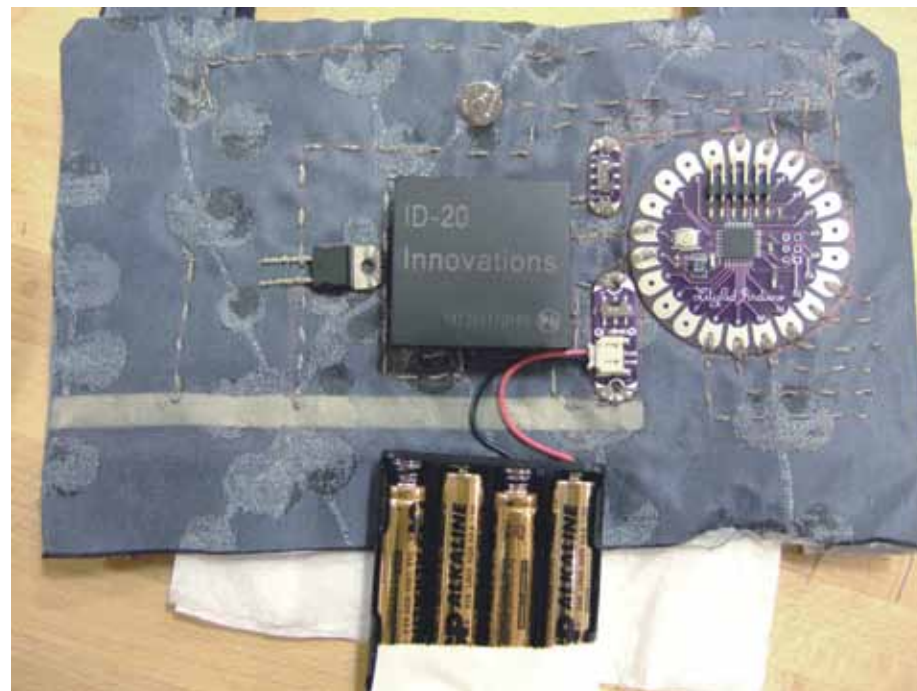
This interactive object was inspired by a previous collaboration with Heidi, and by my constant need to vigorously dig through the contents of my bag in search of my iPhone and apartment keys. During our previous project we attempted to translate the noise of a vibrating or ringing cell phone into a quiet, aesthetic visual response. Our hope was to create a cell phone case with a series of elegant lights that would glow when your phone was ringing and also for a missed call. The case would beacon users to their phone without creating noise. This would create a less invasive, more graceful interaction with cell phones.

This system like *Déjà Vu* uses a sensor, microcontroller and a series of LEDs. We attempted to create a fabric case for the iPhone that boasted a fabric PCB\* including an ATtiny microcontroller\* and two LEDs. The sensor was crafted by crocheting a combination of resistive yarn and

\*PCB: Printed Circuit Board, we constructed ours out of conductive fabric.

ATTINY MICROCONTROLLER: A specific type of microcontroller that is very small.





non-conductive yarn together. In sensing the differences in resistance our hope was to determine when the phone was vibrating and then program an LED to fade on and off with the vibration. Unfortunately, this sensor became finicky once the case was sewn together as the sensitivity decreases due to the fibers vibrating into a set position. Some of the unreliability may also be caused by voltage changes as the battery slowly loses its charge. However, the system works well when the case is squeezed. The experience we gained in building the PCB LED cell phone case provided us with much of the experience we needed to build *Déjà Vu* successfully and reliably.

#### Testing, User Feedback

Our technical struggles provided insight into how the bag should look. We wanted to create a purse that looked like an expensive well-crafted handbag. We also wanted the circuitry to be visible but esthetically pleasing. We used conductive threads and fabric as well as sew-able LEDs to make the circuitry look beautiful.

After completing the first bag we decided we wanted to continue the project. The deadline for the class did not allow us to receive user feedback and we wanted to know how people would actually use the bag. In May of 2011 we began to loan the bag out to different users. We hoped for two different areas of feedback: usability and durability. Our hope was that users suggest improvements and also would break the bag. Both types of feedback occurred. Many users enjoyed the bag. They liked the idea and found it easy to use. Many suggested the bag be bigger. In addition, we received the suggestion to visually connect each light with the corresponding tag. One user brought the bag into the rain. This was very useful testing, the bag did not break and the system was not affected. The battery life was fairly long although after several users we needed to replace the batteries. The main concern was the soldering to the battery holder broke after several users. This was jarring to the woman who was using the bag at the time. She was concerned that she had broken something that could not be fixed.

OPPOSITE PAGE LEFT: LED cell phone case with fabric PCB.  
OPPOSITE PAGE RIGHT: *Déjà Vu* version #1 circuitry.

After having many people use the bag we were very happy with the feedback. It was reliable, with the exception of the battery pack soldering, and we received productive feedback to drive the next iteration.

#### Version II.

After receiving a small amount of grant money from MIT's arts association, we decided to create a second bag with modifications including a color-coding system for the tags and lights, waterproofing for the circuitry, and shielding for the RFID reader. At this point we also decided to put the bag on Etsy to see if we could sell it. Unfortunately we did not have any buyers, but we did receive many comments on what a useful product this would be. The price was set around \$150.00 which may have been too high for buyers. Although Etsy was not a successful venture, *Déjà Vu* was noticed by many sources during this time. \*(I will include this list at the bottom of this page) The project was blogged and re-blogged and we were interviewed and written about in RFID Journal.

The second version of the bag has had some reliability issues due to the ground connection. This issue was caused somewhat by the hand-sewn circuitry and partially because of the conductive fabric pulling away from the stitching making a compromised connection. As a result, the bag needs repair after a few days or weeks of use. The problem is reoccurring after any extensive use. This bag received similar feedback to the first, including "can you make a bigger bag". We also observed that users our own age liked the project, but middle-aged women really enjoyed using the purse. My mother and many of her friends were excited about the prospects of owning their own, or retrofitting an existing hand bag with our system. I suspect women in their 50's and 60's enjoyed using *Déjà Vu* because it is high tech enough that it is exciting and new, but easy and fun to use.





### Version III

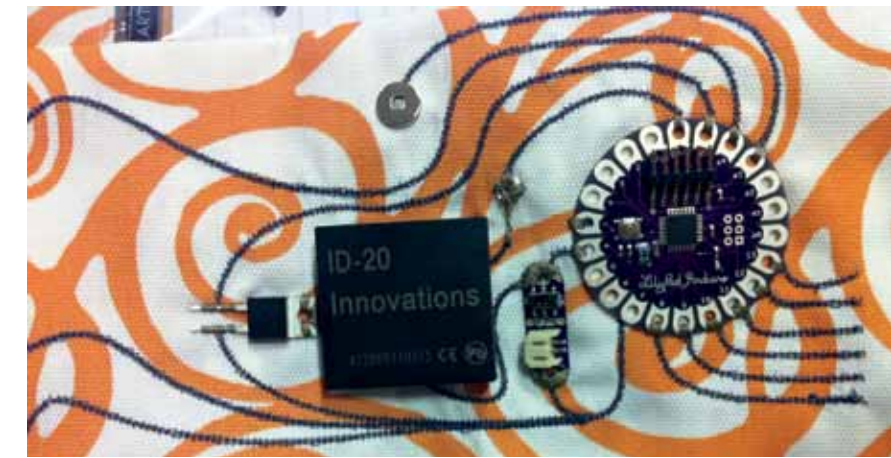
We decided to embroider the circuitry on the third bag instead of hand sewing in response to the issues uncovered by the second prototype and a desire to make the bag easier to manufacture. The circuitry was translated into precise vector drawings with Adobe Illustrator. The embroidered circuit had much fewer imperfections making it very reliable. This circuit is also more aesthetically pleasing because we had precise control of the shape and placing of the circuitry. Version III is also significantly larger, about 17" by 14"). It is large enough to fit a small laptop. Other modifications include the use of outdoor fabric that is water and sun resistant, as well as clear vinyl to cover the circuitry, and the elimination of the shielding used in Version II. Version III has not undergone extensive user feedback at this time but will be sent for user testing.

### The Future of *Déjà Vu*

We intend to create a version of *Déjà Vu* in the future that is designed for men, potentially a messenger bag. In addition we hope to retrofit existing bags with our circuitry and LED RFID system. Currently, one project that is inspiring the continuation of *Déjà Vu* is Linda Worbin's Fabrication Bag. Worbin has created a bag that changes color when your mobile phone inside it receives a call. Like *Déjà Vu*, Worbin's bag is an intelligent tactile object that elegantly communicates information to its user that ordinary objects cannot do. Through the careful integration of technology, handcrafted physical artifacts are enhanced. As a result, user interaction reveals embedded metadata like what is inside the object, or stories related to the artifacts, or even events that are affecting the object.

OPPOSITE PAGE: *Déjà Vu*, Versions I and II, 2011–2012.

RIGHT: *Déjà Vu*, Versions III, embroidered circuitry.





### Process and Collaboration

Collaboration with Heidi was extremely fun and rewarding. Our skill sets complement each other allowing us to have an ideal balance of technology and a design experience. We became friendly with the discovery that we both went to Cornell for our undergraduate degrees at the same time. Leah paired us together for the first project. After working well together, and having fun during the process, we found that we shared many similar design interests.

Heidi's practical mechanical engineering outlook influenced our original ideas from a product that was simply ambient to something useful for everyday. Originally we were playing with the idea of creating a bag that used outside data, like weather, to affect the series of lights on the bag. Heidi's mechanical engineering perspective pushed us to make the bag's function useful for everyday. This practical vantage combined with my interest in interaction and small knowledge of RFID systems led us to the technologies and design used for the first version.

Our design process was complex for the first version. We began by determining the functionality of the object, and how it would be used. We researched RFID technologies and how to interface them with the Arduino. In addition we looked to others doing work in this area, like XS Labs', Daniela Rosner. Next we worked on the code. Once our code and system was solid we chose a pattern and mapped out the circuit. Prior to beginning the final version, we created the entire circuit and bag out of a cheap fabric. In fabricating this mock up we found several issues that needed to be resolved with the circuit and power. At this point, Heidi and I split the workload. She debugged and completed the circuit as I began to sew an actual prototype out of the final material. Our workflow allowed for each iteration to be fabricated faster and more easily, even with modifications.

After a year of working together, I know the value of fluid collaboration. I learned a lot about electronics and circuitry from Heidi, like how to use a mosfet and properly debug circuitry with a multi meter. We both learned about electronic textiles, conductive threads, RFID systems and

the Arduino platform. We have also gained much knowledge from our users over the past year. This knowledge has given us motivation to continue to make changes, and to explore the possibility of manufacturing it.



*Dejà Vu*, Versions III embroidered circuitry knots and iron on fabric to keep them from unraveling.

STORYCLOTH





**Project Overview**

Story cloth is a related to *Déjà Vu* in the sense that it merges clothing and technology with the purpose of disclosing information to its users. *StoryCloth* stemmed out of a conversation with my friend Hila, who is a competitive Latin dancer. While helping her repair a costume for a competition, she began showing me video of other dancers wearing her costume during previous competitions. It was interesting to see the transformations in the garment. We thought it would be interesting to have a database of these changes attached to the costume.

*StoryCloth* allows users to embed information into a garment with the use of embroidered QR codes and an iPhone application. The app would track the previous use and transformations in a garment. I have narrowed its use to three cases: the MIT Ballroom Dance Team, Hollywood costumes, and a vintage clothing store.

**Use Case I: MIT Ballroom Dance Team**

In talking with Hila, I learned that her team has an archive of costumes. Dancers can borrow these costumes and make alterations. Each garment, used for different competitions and dance types, has transformed over time. *StoryCloth* allows users to digitally inherit a garment's history with the physical artifact. Over time, the garment collects images, videos and text that document its use and transformations. Each time a new dancer

uses the costume they can view the archive by scanning the code. Once in the archive, users can add their own images or video by uploading the media from their phone. Here each image, or video, is tagged with a date and a description. This description is flexible and can be revised. Dancers are also able to add new garments to the system. Once a new costume is added, the system generates a corresponding QR code that can be saved and printed. *StoryCloth* merges digital and physical spaces, creating a richer artifact.

**Use Case II: Hollywood Costumes, Jewelry, and Accessories**

A second use case is Hollywood costumes. Like Hila's Ballroom Dance Team, costumes for movies are used, altered and reused. For example, Elizabeth Taylor wore a distinctive pearl in several films including *Anne of a Thousand Days*, 1969, *Divorce His – Divorce Hers*, 1973, and *A Little Night Music*, 1977 (Recycled Movie Costumes). Each time the necklace changed in configuration. In addition, this pearl had a history long before it was purchased for Taylor. It was worn by several famous English Queens, and is depicted in very old paintings as a result. With *StoryCloth*, this history would be embedded into the object itself through a tag with a QR code.



Possible iPhone app that scans and produces custom QR codes for each artifact.



The user must have the artifact to scan QR Code. The data becomes embedded into the artifact .

“When a person gives a handmade object, the object may not simply be valued for its utility, but also for its affective and communicative potential.”

Daniela Rosner

Anne of the Thousand Days, 1969.

Divorce His - Divorce Hers, 1973.

A Little Night Music, 1977



Historical Pearl  
Purchased in 1969  
for Elizabeth Taylor  
\$37,000.



Mary I as Queen 1554.

Mary in 1554 .



Queen Isabel of Bourbon 1634-1635.

### User Case III: Vintage Clothing

A third use case is vintage clothing. Unlike costumes, this variation is more for personal use. A vintage store using *StoryCloth* would have QR codes on their clothing's tags. This code allows participants to access the history of the garment as well as add their experiences with it into the archive. For example, a woman buying a 1960's dress would know who owned the dress prior to her, as well as special stories, and transformations the dress encountered. She also is informed about the style of the dress, the fabric, and the brand. After wearing the dress to an event the woman adds an image of herself with the date and a note describing where she was. This information is now a part of the artifact's history. Later when she passes this artifact to her daughter or niece, they will be able to enjoy these images, like the way I enjoyed an explored the images from my parents and grandparents.

*StoryCloth* is not yet a working prototype. During conversation and review the concept and its potential application have been analyzed. Many people like the ability to share stories and memories by passing on the physical garment without needing additional physical sources, like journals or scrapbooks. Some felt this added a level of information to an artifact that is impossible otherwise. This information can potentially make an artifact more special to its owners. There was also a great interest in *StoryCloth's* function with costumes. There was a significant curiosity in the access to a particular garment's transformation over time. A classmate involved with theater suggested the use of the system in theater programs. Hila, the friend whose dress inspired this project, liked this project very much. She feels it will be both interesting and valuable to inherit the digital history along with the physical garment.=

In addition to this reassuring feedback there was also interest in *StoryCloth's* application towards artifacts other than clothes. My goal is to merge physical garments with story, transformation, and time. For now *StoryCloth* will remain for clothing that is passed from owner to owner. My hope to build this project as an iPhone app for one specific instance, most likely vintage clothes. If I am able to find a store locally that would like to experiment with the platform, we could embed the QR codes into the garment themselves or create custom tags.

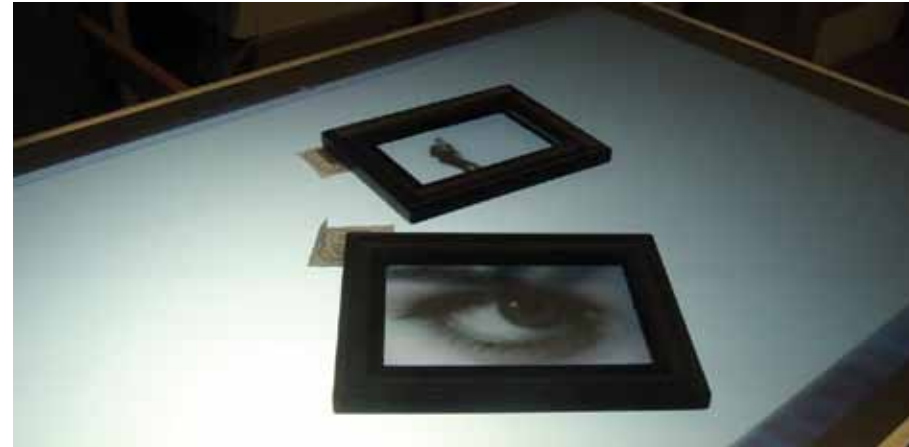


ABOVE: User Case #3: Vintage clothing with custom QR code tagging system.

OPPOSITE PAGE: Elizabeth Taylor appearing in multiple films with the historic pearl. Over the configurations of the necklace has changed. All these images would belong to the archive.

## THE PERFECT HUMAN NARRATIVE





**Project Overview**

*The Perfect Human Narrative* pulls visual inspiration from Jorgen Leth's 1967 short film *The Perfect Human*. Leth's black and white film anthropologically looks at two humans, a man and a woman. The scene is a white boundless room. As viewers, we watch the man and women as they go about their life. A loose narrative unfolds that can be interpreted in a variety of ways.

**Prototype I: Wooden Frames and Fiducials**

*The Perfect Human Narrative* is based on a taxonomy of actions, body parts, narrator statements and audio and visual clips collected from the film.

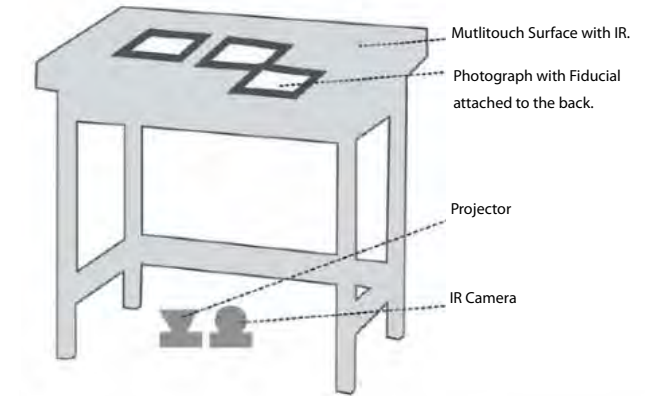
The visuals consist of body parts and actions such as jumping, dancing, etc. The audio clips are composed of statements and questions by the narrator and main character. Decisions about which pieces go where is done by the user through their organization of the frames and sounds.

Each clip, represented by an object, functions as a building block in the interactive narrative. Empty black wooden frames contain visual clips, and black speaker cut outs play audio clips. Here, real objects relate and translate to digital space when users position objects onto a multi-touch surface. When an empty frame is placed on the table, its specific video clip appears and plays inside. This response is evocative of a black and white fiber print emerging in the developing tray. Sound clips are activated in a similar fashion. Each clip loops when placed onto the table and stops when removed. Users can place as many objects onto the table that fit.

This system allows users to build a compilation of visual and audio pieces that dynamically changes and grows with experimentation. This work was significantly influenced by my analog photography experiences. Image location and the relationship from one object to the next affect the story being told. Here, as on a gallery wall, the position of one frame to the next changes the narrative. The audio adds another level to the story. Users can build from no sound to a cacophony.

This prototype was created through the use of a multi-touch surface along with fiducials, RecaTIVision and Processing. The very first tests were created using a plain piece of plexiglas and a low-resolution webcam.

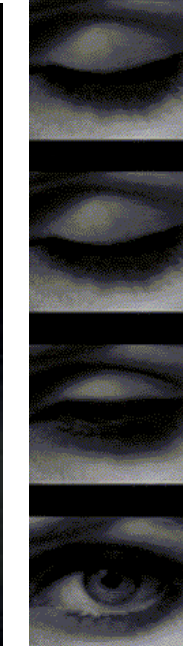
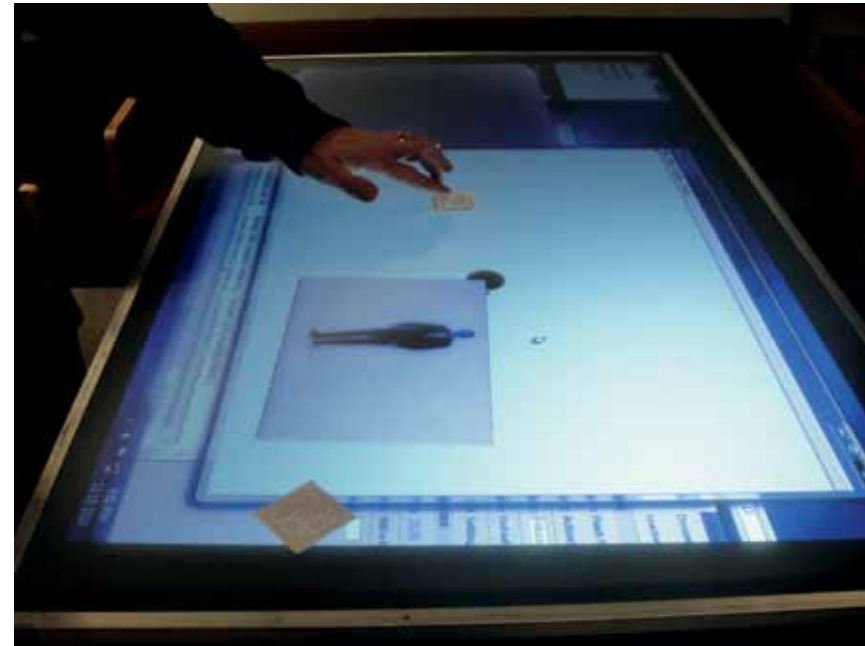
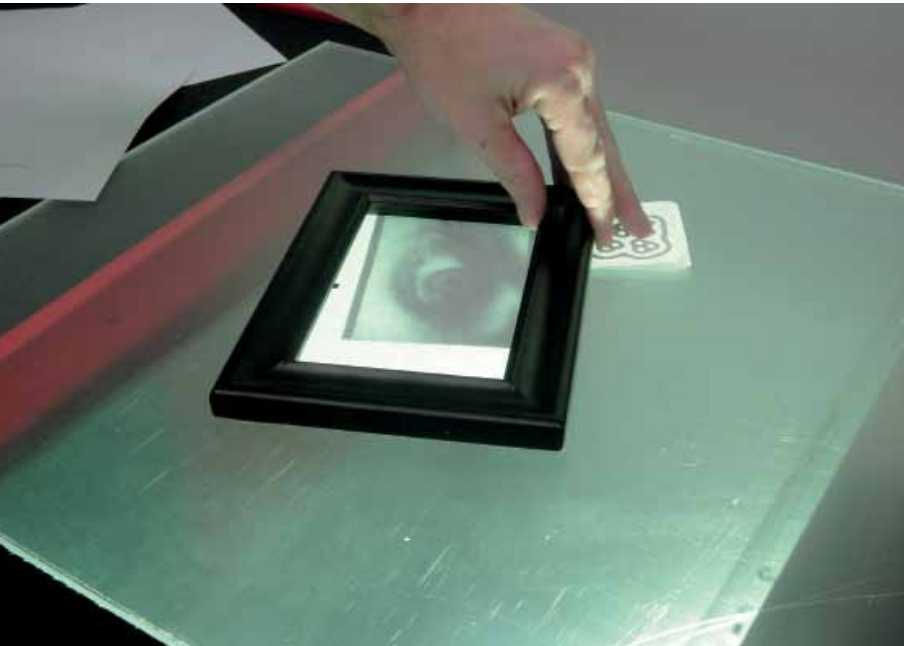
BELOW: System setup and interactions.  
OPPOSITE PAGE LEFT: *The Perfect Human Narrative*: second prototype..



Video Clips



Audio Clips



*The Perfect Human Narrative: second prototype with Sifteo cubes.*

### Prototype II: Sifteo Cubes

A second rendition of this project was created with Sifteo cubes. The cubes have a sense of proximity and know if they are being tilted, shaken, or are next to another cube. Unfortunately, the cubes do not support video. As a result video clips were translated into short animations. Each cube contains several animations shown one at a time. To switch to a new animation, users can click on the cube's screen. When two cubes are placed next to each other both animations play along with their respective sound.

The cubes posed many challenges including using the SDK and an unfamiliar programming language. In order to program the cubes, a combination of the Sifteo SDK and were used. This experience provided me with a small amount of confidence in my programming skills. An additional challenge was formatting the images in order to display properly. This entailed cropping each image to scale and applying the proper color look up table. Once the images were formatted properly they could be used in sequence to create animations.

### User Feedback

The first prototype was not extensively user tested due to the limitations of the system. The multi-touch surface was temporarily built as a rapid proof of concept. As a result, it was never shown publicly. My classmates, who interacted with the system, enjoyed the experience. They liked the tension between the ordinary wooden frames and the video clip that appears inside the frame. Some felt it had a magical feeling. Other commented that it was reminiscent of developing a photograph in the darkroom. During this test multiple frames of different sizes were placed onto the surface. In addition, the frames were quickly moved and rotated to test how responsive the system was. The prototype proved very responsive and easy to use. One classmate suggested that the frames contain visual elements to provide visual feedback for users. This feedback would indicate the length of the clip. This prototype can be viewed at <http://nicoletariverdian.com/interactive-installation-the-perfect-human/>

### The Experience

The relationships viewers create from one image to the next in *The Perfect Human Narrative* generate meaning. In some instances this meaning forms a narrative shaped by the viewers' experiences. If you change the placement of the images the meaning changes. In the past, I labored over which images to show, what size they should be, and where they should be located in order to convey the intended meaning to the viewer. In other words, I curated the experience. *The Perfect Human Narrative* allowed me to play on this experience by allowing participants to dynamically shift and change the elements. The system makes each user a curator. Participants dynamically change the narrative by making curatorial decisions regarding which clips go where and what sounds relate to which clips. As the designer of the system, I have enjoyed observing how the systems have been used as well as what the participants think and feel.

During testing of *The Perfect Human Narrative* users commented on how the wooden frames and magical appearance of the video inside them speak to the analog photographic process. Users commented it felt similar to watching a photograph appear in the developer. This response was very satisfying to me here since film photography is an influence on my work.

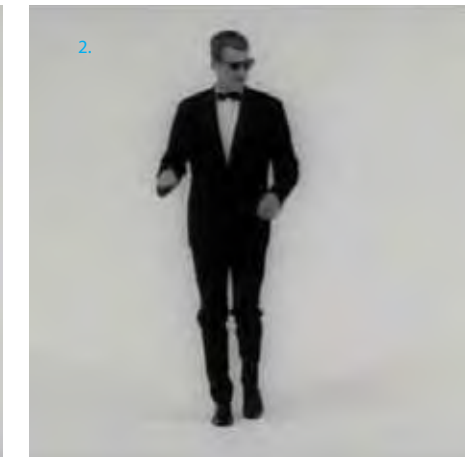
### The Second Iteration: Sifteo Platform

The second iteration is a reaction to some of the feedback and my own experience with the first system. When first thinking about possible platforms for my ideas for *The Perfect Human Narrative* I stumbled across MIT's Fluid Interfaces' project Siftables. I was inspired by the cubes' ability to sense and respond to each other. I also enjoyed the small size and thought it would be an interesting platform. Unfortunately, at the time the cubes were unobtainable. Siftables became Sifteo in 2011 and started to sell the cubes with a SDK for developers. I was excited by the possibility to create a second iteration. The Sifteo cubes are small and portable. This allows for a different more intimate experience than the big multi-touch surface.

### Feedback for Sifteo Cubes

During *Fresh Media*, a week-long student DMI show in April of 2012, this version of *The Perfect Human Narrative* was displayed. Six short animations, scenes created from a series of GIFs, and were shown on six cubes. As users click on the screens, the scene changes. When two cubes are placed next to each other the scene begins to animate. When separated the animation stops. As users interacted with the cubes, changing both the positioning and the scenes shown, the narrative shifted meaning.

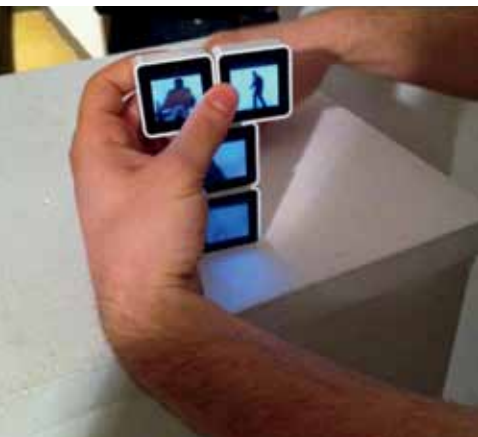
Participants challenged the system in interesting ways during the opening of *Fresh Media*. Not only did users shift the cubes proximity on the pedestal surface, but they began to build with the cubes. Users found it very intriguing that the scenes would still animate when the cubes were stacked on top of one another. One participant used her iPhone to photograph the cubes. Then she displayed the photograph on her phone screen and placed it around the cubes. This added extra images to the narrative and changed the meaning further. Users also moved the cubes to other locations of the gallery. It was very satisfying to see participants enjoying the system and creatively pushing its limits. Other interesting feedback given by one user was that the video felt tangible to her. She was intrigued by this concept and like the idea that she could hold the animation in her hands. One user commented that he felt the proximity and shape built changed meaning like an installation. Many users were intrigued by what the technologies original function was and were surprised to here children's games. Overall, it was very exciting and gratifying to observe and talk to participants during the opening. As a result I was able to improve the system..



TOP: *The Perfect Human Narrative*: second prototype with Sifteo cubes.

BOTTOM: *The Perfect Human Narrative*: second prototype with Sifteo cubes, steps to processing the images for the cubes.





### Challenges

There were several challenges faced in building this project. The first was programming in C#, a programming language I was unfamiliar with. The example code in the SDK as well as the Sifteo developer forums proved very helpful. The second was programming the cubes to animate. Originally I wanted to use video clips from the film. The Sifteo platform does not support video. As a result the clips had to be transformed into a series of GIFs. Each animation consists of twenty-six images. In addition, for the images to be displayed correctly, a specific CLUT needed to be applied to each image. Once each image was indexed it looked correct on the cubes. The last two challenges occurred because of the exhibition. The

project needed to run for a week and be easy for someone unfamiliar with the system to start up. To accomplish this I wrote step-by-step directions and also set the computer to launch the two applications needed to make the system run. The battery life of the cubes withstands only a few hours. They must be charged every day when the gallery is closed. Lastly, because users at the opening were challenging the system and playing with the project more than it has been tested before, I detected a bug in the code. When two cubes were left together for several minutes the continued to animate even after separation. This caused a lag time in the entire system. Most participants did not notice. After the opening I fixed the code to stop the animation as soon as the cubes are separated and stop them from animating after ten loops.

I have learned a considerable amount about dynamic media's relationship to photography in this project, specifically, how traditional photographic elements can be infused with technology to create flexible systems. I also learned firsthand how photographic elements affect the meaning of a narrative when shifted around by participants. Users are attracted to systems using photographic elements because of their explicit visual qualities. The flexibility of the system allows users to make curatorial decisions that change the perceived meaning of the system. Both the versions of *The Perfect Human Narrative* encourages users to shift elements to create many variations of the same narrative. The first iteration strongly bonds physical objects and digital space while the Sifteo cubes allows participants to use three dimensions and build the narrative into space. Both iterations create interesting relationships between interaction and photography. Without interaction this work would be no different than photographs hanging in a gallery. Interaction adds levels of curiosity and tangibility that make these systems interesting.

OPPOSITE PAGE AND ABOVE: *The Perfect Human Narrative*: second prototype with Sifteo cubes. Images from Fresh Media. Some responses were very surprising.



ABOVE: Image from Fresh Media opening reception, April 13, 2012.

RIGHT: *The Perfect Human Narrative*: second prototype with Sifteo cubes.



## COMFORT FOOD



LEFT: *The Comfort Food Project Installation*, April 2011.



RIGHT: *The Comfort Food Project Installation and Blog*, Cards created in show, and posted on the first iterations of the blog April 2011.

### Project overview

*The Comfort Food Project* is an investigation into handwritten recipes and their attachment to memory, tradition, ritual, and family. This project has grown into various iterations over the past two years. It began as an interactive installation, in April of 2011, that inspired a submission-based blog and archive. Both versions address my ongoing interest in recipes and hand-written recipe cards as artifacts. Recipes can signify a time, ritual or memory. Food is an important part of culture, family history and friends. Personally, food has always brought my family together through physical and cultural distance. It has allowed me to glance into the past and learn traditions from my culture.

My interest in hand-written recipes stems from my own collection of cards which I acquired from my mother, which in turn were passed down from her mother and from my grandmother's mother. Four generations of women are connected through these cards. They are artifacts. The paper, type, handwriting, language used, stains and food type all contain meaning. They are a glimpse to the past. They are pieces of a personal history that speak to memory and nostalgia.

Thanks to the Internet, we no longer have a need for recipe cards. Every recipe imaginable is accessible through food blogs, recipe sites, and many other outlets. These sources are useful to quickly find a new recipe for

dinner but are devoid of history. In general, online recipes have lost their specialness, traditions and meaning. Like snapshots these artifacts start to reveal stories. The stories emerge when the artifacts are shared with others.

### Inspiration

My collection of recipe cards have inspired two photographic projects in the past, *Butter The Size of an Egg* and a series of Polaroid 20" x 24". *Butter the Size of an Egg* was created in response to a group exhibition theme *Phoenix*. The installation consisted of eighteen digital prints hung a few centimeters from the wall by a strand of book binding thread attached to a nail. The relationships generated from one artifact to the next evoke a story that speaks to family, tradition and the lineage of women who owned the artifacts. For example one image depicts two cards — one written in my great grandmother's handwriting, and the other in my grandmother's handwriting. Another image depicts the same recipe written in my mother's handwriting. Three generations of women have connected through this one recipe.

With the rare opportunity to use the 20" x 24" Polaroid camera at MassArt, I produced a series of six prints. Each print is a small archive of snapshots and keepsakes and recipe cards that relate to each other. Each artifact is framed separately in a black frame organized like a shrine or



museum display. Like *Butter The Size of an Egg* this series of Polaroids reveals personal stories of family, cooking, ritual and the lineage of women in my family. For example, one recipe is written three separate times, by my mother, grandmother and great-grandmother. The three cards viewed together are fascinating. There are similarities in handwriting but a difference in language. I asked my mother why the card was copied like this, and she replied that she thinks she wanted a copy to take with her to college.

Today, the warm, personal qualities of artifacts like handwritten recipe cards are in opposition to the cold sleek feel of some digital media. We crave the human touch to things, the imperfections and the ties to the past. This craving has driven my current work with recipe cards and dynamic media.

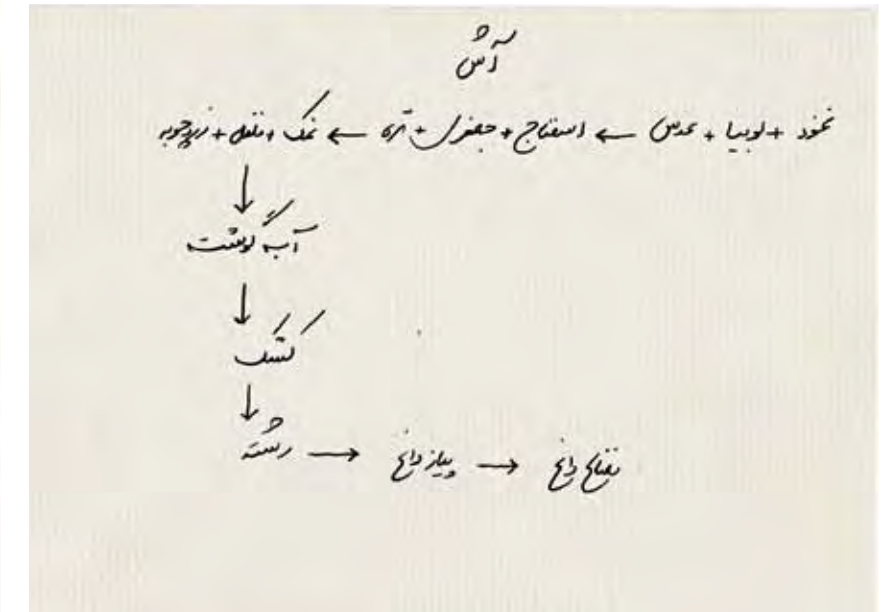
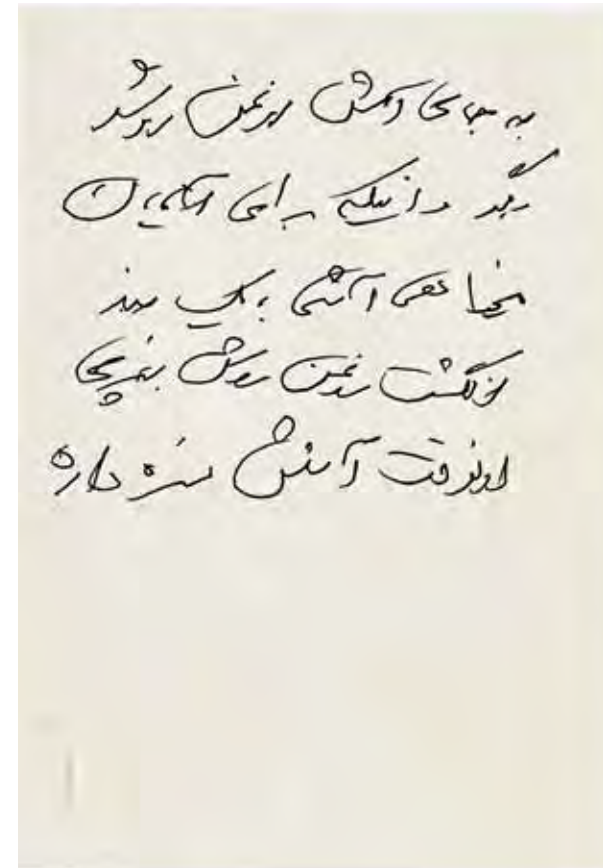
During these two investigations, I wondered what drew me to these objects. I discovered that it was not simply their interesting tactile and visual qualities, but also the stories, memories and traditions they represented. In addition, I am drawn to the passage of time the cards represent. Also, I knew that others must be as intrigued by these objects as I am. Dynamic Media and interaction have allowed me to readdress the recipe cards and branch out from my personal experiences to others.

#### Part 1

*Comfort Food* was an installation at *Medialuscious* (the Dynamic Media Institute's student show in April 2011). The installation consisted of a capture application displayed with directions on a laptop, a stack of cards with pens, a stand with a webcam, and a display projected onto the wall. Initially, participants were asked to write, illustrate, or map their recipe for grilled cheese on one of the cards provided. Users were then directed to place their card under the camera and capture it by pressing any key. The system would then add this image to the display. In using the system, participants' recipes transformed from memory, to visual representation, and then to artifact. The topic was initially restricted to grilled cheese in order to encourage interesting variations and interpretations of this simple comfort food.

Throughout the evening, users challenged and changed the system. Participants began to watch the display as it looped through the archived images and then to react to them with their own recipe card. My friend initiated an interesting example. She asked if she could write a recipe for another food she found to be comforting, since she apparently does not like grilled cheese. My response was you can interpret the directions however you like. She decided to write a recipe for one of her favorite Persian foods in Farsi called Ash-e Reshteh. It is a very popular hearty soup with noodles, green vegetables and beans. Every woman has her own secret ingredient or way of cooking it. Some time after she entered her card into the system, I noticed that there was another card written in Farsi for the same soup, but with a different spin. This response was very exciting. It was not how I intended the system to function but was an inspiring outcome. The system became a way for users to curate the growing collection by adding their artifact to the dynamic archive displayed. As the opening progressed, the meaning of the archive transformed with each new addition to the system.

At the end of the show, an interesting and diverse archive of recipe cards remained. Some were images, some maps, and some just words. In addition to age and visual diversity, language was another intriguing variation from card to card. Over the course of the night many different languages were recorded including Farsi, Chinese, Korean, Thai, and English.



The Comfort Food Project Installation, Two cards for the same recipe in Farsi, April 2011.

## Part 2

After *Medialuscious*, I decided to create a blog to display the work and to expand the collection by letting others add their own images. The current variation of *The Comfort Food Project Blog* suggests a translation and preservation of physical recipe cards. The focus is on documenting hand written recipes cards and their stories. The blog format allows participants the ability to write about what a recipe means to them. Users are asked to photograph the card itself or the food and post this image along with a description. Tags of nostalgia, memory, tradition, and family are provided for users during the submission process. Participants can comment on other user's submissions. In addition to the archive, there is a description of the project as well as a news section, and a page for participants to send their questions. Recently the submissions have started to increase. <http://comfortfoodproject.tumblr.com/>

The first version of the blog was not very successful. There were very few submissions. Feedback indicated that the task was too cumbersome for users without compensation. One participant told me that she had forwarded it to her friends and the feedback she received was that they did not feel comfortable drawing or that it was too much work to write something and then take a picture.

I also believe that the system was too open — giving too many possibilities for users to respond with. Another frequent comment was “Why can we only write grill cheese?” I realized that this restriction worked well for the show environment but badly in cyberspace. After this feedback I decided to focus on recipes that were already written down, to restrict the submission to a photo and text, and open up the food to anything the participant wanted. Then I invited my friends, classmates and family to post on the blog. This was the middle stage of the blog that become somewhat successful.

After some time of struggling for user interest in the project, I started a new iteration based on more feedback that I should target specific audiences. I started to customize the inquiry for different groups of people.



TOP: *The Comfort Food Project Installation*: Image from *Medialuscious* April 2011.

BOTTOM: *The Comfort Food Project Blog*, submission to blog, Feb. 24, 2012.



This was especially successful with women in their late forties to early sixties. Using my mother as an ambassador, I drafted an email for her to send to her friends:

Hi everyone, as part of my MFA thesis research (and also for fun) I am working on a project entitled “The Comfort Food Project”.

My goal is to collect (through images) hand written recipes cards. I feel very strongly that these cards are important to look at and to preserve. They are ties to our pasts, our family and to a lineage of women. I personally feel very strongly about the importance of these artifacts. The internet has changed the way we communicate both for the better and for the worse. While the ability to look up any recipe for any food online exists there is still a great satisfaction for my in knowing the story, and traditions, behind the food that is being cooked.

If you have hand written cards you would like to share with me I would greatly appreciate it.

You can share your cards with me in a few ways:

\* all submissions will be keep anonymous in the project.

1. Snap a picture of the card, write a description, e-mail it to me (this can be as short as the name of the food or as long as a story or memory about the food or card)
2. Snap a picture of the food, write a description, e-mail it to me.
3. Post your picture directly to the project blog: <http://comfortfoodproject.tumblr.com/>
4. If you hate technology ... you also could mail me the card itself (I will return it!), or a copy of the card with a description.

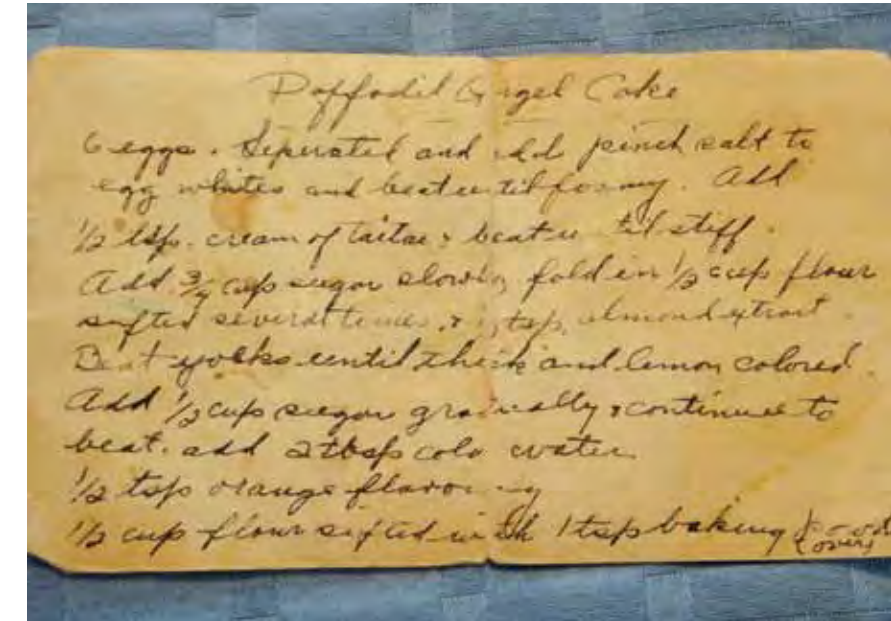
Thank you so much for your help and your interest in preserving handwritten recipes  
Sincerely, Nicole Tariverdian

This email generated a significant amount of interest in the project. Some participants wrote back to me sharing their mutual interest in the preservation of these artifacts. One participant wrote “I have a recipe website, but completely agree that the handwritten ones are so important. I actually inherited my maternal grandmother's recipe box, a mixture of handwritten recipes and newspaper clippings.”

In addition to the email inquires I have begun to re-blog other blogger's posts addressing relevant subjects. My hope is to generate interest in my

project. I also created an About This Project page describing my interest in the cards and reason for the archive. I added a News page as well to display related articles to hand-written recipe cards and advancements in the project. My hope was to de-mystify the project for participants. So far these changes have seemed to create more interest in the blog. I intend to continue this project and refine it accordingly to receive more participation.

A key finding in this investigations is that system limitations can be helpful. Users are very willing to participate in a show environment. Outside the gallery requires a new strategy for participation. It is helpful to directly address the audience you are trying to engage.



*The Comfort Food Project Blog*, submission to blog, March 8th 2012.



## MARINATED SHARK STEAKS

2 lbs. shark steaks  
1/3 cup vegetable oil  
3 Tbsp. lemon juice  
2 Tbsp. soy sauce

1 Tbsp. Dijon mustard  
1 clove garlic, minced  
1/2 tsp. dill  
Salt and pepper to taste

Combine all ingredients except fish. Add fish and marinate in refrigerator at least 1 hour. Remove fish, reserving marinade. Place fish on greased broiler pan or grill. Broil 4 inches from heat or barbecue, 5-8 minutes per side for fish 1" thick, or until fish flakes easily when tested with a fork. Baste with marinade while cooking. Serves 6.

(add 5/16) flour  
BIRTHDAY PRININGE  
6 1/2 c flour  
2 c tub cream or milk (sweet) →  
1/2 lb butter  
1/2 - 1 c sugar  
3 egg yolks

1 1/4 c 1 1/4 c 1 1/4 c  
2 pkgs dried yeast (2 pkgs)  
1/2 tsp saffron crumbled in warm milk  
1/2 tsp ground cardamom  
1 tsp salt  
1 1/2 c golden raisins washed (1 whole box)  
1/2 c sliced almonds

1/4 c warm water mix 1/2 c sugar & yeast + sprinkle in a little flour (2 tsp)

In a large bowl combine warm cream with yeast mixture + 1/2 flour.  
Mix well & cover, let sit till it's double in size (1 1/2 hours approx).  
Whip butter sugar + eggs. Add this to main dough yeast mixture.  
As you add these together over the top sprinkle cardamom  
& salt & sprinkle more of the flour. Knead a bit. Add raisins  
after flour. Cover & let rise again.

Place on floured board till smooth & elastic. Use 1/2 for 2 rings.

THINGS THAT MATTER



### Project Overview

*Things That Matter* plays on the intrinsic truth implied by an archive. It also addresses elements of curation and documentation through the act of taking a photograph. The system allows participants to archive any common object they have with them at the time they encounter the installation. *Things That Matter* raises the status of an ordinary object to an archived artifact by documenting and assigning metadata.

This system has evolved through several stages of prototypes. The finished installation consists of a wooden free standing sculptural object, a high-resolution camera, a capture application (driven by an RFID reader, tags and an Arduino), as well as projection that displays the results of the participants' interaction.

### Version #1

The first version of *Things That Matter* was similar to *The Comfort Food Project Installation*. A simple web camera was set up to take pictures of objects placed beneath it. Users selected tags from the menus provided by the on screen capture application. After two tags were selected users clicked save to capture their object and add it to the database. Finally the user's image was displayed beside a related image in the archive.

OPPOSITE PAGE: *Things That Matter*, installation in the MassArt MFA Thesis Show, April 2012.

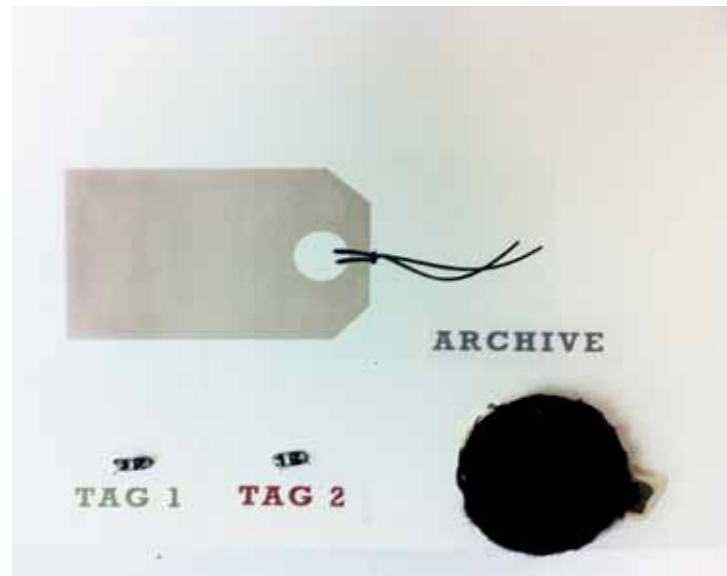
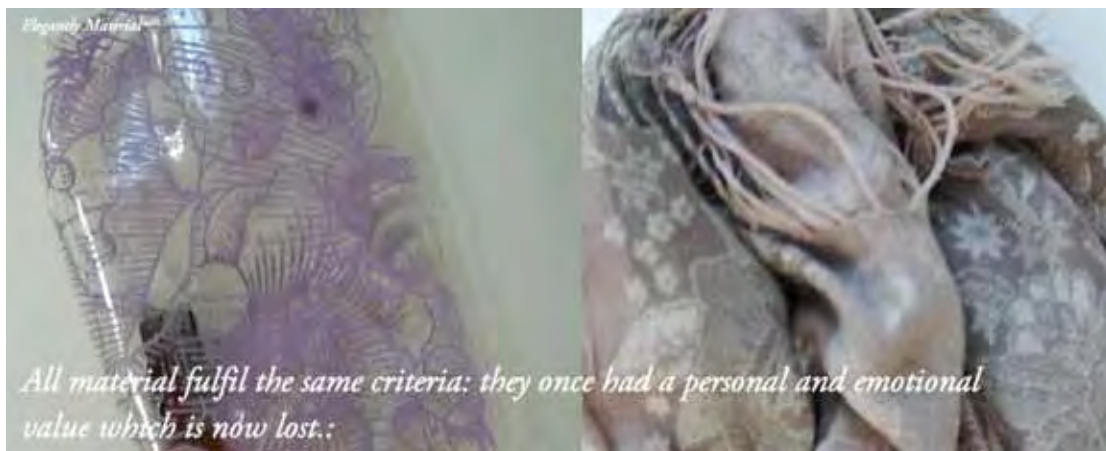
### Version #2

While users seemed to enjoy the results of the system, I felt the interaction was awkward. The screen detracted from the projection. It also added an extra layer of complication for users. Some users found the pull down menus confusing. This feedback led to a second version where the interaction with the screen was eliminated. In its place a tangible systems was created using the an Arduino Uno, an RFID reader, physical paper tags, and a fabric button. A wooden platform was created to guide users through the interaction. When the first tag was scanned an LED would light. A second LED turned on when the second tag was scanned. The LED's conveyed to users to press the button to take a picture. This iteration was more successful. During testing, users enjoyed the physical interaction with the system. In addition a high resolution camera was introduced. The high quality images are more archival. Therefore they play into the system's ability to increase the importance of an everyday object.

### Version #3

Version three is a more polished iteration of the second version. The goal was to create a sculptural object, that could stand in a gallery space, and only needed to be powered to function. In order to achieve this level of craftsmanship, I collaborated with a sculptor named Jesus Mathos. This process was enjoyable. I carefully designed the object with precise measurements, and passed my idea on to him. We met a few times, made some changes and he began to build the object. The sculpture consists





ABOVE: Setup and results of the second version of *Things That Matter*, April 2011.  
OPPOSITE PAGE: Final version in the Bakalar Gallery, MassArt, April 2012.

of two boxes. The top contains the camera and the projector. The bottom section is where all of the electronics are placed. A door, held into place with magnets, was installed to make access to the electronics easy. Also included in the bottom section is a fan to cool the computer and electronic components.

When users encounter the installation, they are directed to place an object in the space under the camera. Then, they assign their object two physical museum tags (containing RFID tags) by placing the tag onto the marked silhouette near their object. There are two categories of tags delineated through color: one blue and one red. The first category is a descriptive word and the second category is a noun that relates to a quote embedded within the system's memory. Users can select one of each color. Each tag represents the word written on it. After the two tags are assigned, the user archives the object by pressing a button to photograph it and store the tags. Finally, the photograph of the current participants artifact is displayed on one side of the projection. On the opposing half is a related image from a previous user. Also shown on the display are the two words, as a statement (for example archival unmemorable), and the relating quote (ie. "Because it cannot be grasped, Junkspace cannot be remembered. It is flamboyant yet unmemorable.")

Tagging attaches characteristics and meaning to each object. When viewing the piece the relationship between text and image allows meaning and connections to build and change as the collection grows. Location and time will affect the nature of the archive built, resulting in profiles or portraits of a specific place and time. Here, like in *The Comfort Food Project*, participants curate through adding their personal objects to the dynamic archive displayed.

The goal was to create an interactive system that completely escapes any reliance on a screen. In doing this, the analog and digital are brought together. Like in the previous projects, well integrated digital aspects enhance the physical. The integration creates new relationships.





## CONCLUSIONS

Some Items collected, MFA thesis exhibition in the Bakalar Gallery, MassArt, Boston April 2012.



DMI provided a uniquely challenging environment that encouraged my work and concepts from the past to grow. Concepts involving archiving and documentation, nostalgia and tactility stem back to my BFA thesis work. Technology and interaction design have added new layers to my work. User interaction has become essential. Participants challenge and inform my system in ways I could not do myself. This role drives the work in new interesting directions. Interesting stories and experiences have emerged by sharing my curatorial role with participants. *Comfort Food* exemplifies how participants' interactions push systems to become richer. By involving others, this project has developed further than it would have with me as the sole curator. It has been fascinating and satisfying to observe how participants' respond within the infrastructures of my interfaces.

#### The Future

I intend to continue exploring two main areas: documenting and archiving through the lens of new media and the seamless merger of analog and digital spaces. These areas are particularly important in the future of interaction design due to the increasing presence of cameras in mobile devices and our need for tangibility to learn and engage.

Today, digital cameras are everywhere and, as a result, documentation occurs frequently and easily. Our new relationship to the camera is changing photography. As a result there is an abundance of meaningless "documentation" and bad photography. The Internet is littered with blogs full of cell phone images captured with "Hipstamatic" and applications alike. Most create cheesy, want-to-be versions of naturally created film affects. I have prided my-self on disliking the apps due to my respect for film. Recently, after testing many of these photographic applications, I have found one or two surprisingly satisfying to use including Intagram and Magic Hour. These particular apps are rewarding not due to badly mimicking, film but because they offer a new functionality that only an app can offer. They create new photographic experiences.

Instagram offers something innovative in addition to taking images in a pleasing square format. It allows users to instantaneously share and view

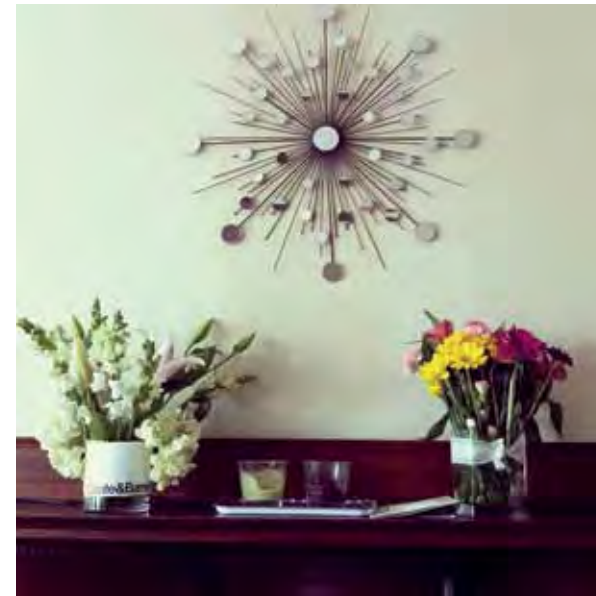
their images, as well as to search and tag them. The interface is simple and uses a smart phone camera's portability and Internet access to the fullest. Each image is displayed full screen and past images are viewed by scrolling down. This feature is particularly satisfying and feels like a digital translation of a contact sheet.

Instagram provides users with the options to share their images with other users. Like a blog, other participants can comment and "like" individual images. Users can also keep images private and use the app solely as an extension of their iPhone camera. This interface provides an experience that is influenced by the past while utilizing new technology to the fullest.

Over the past several years I have learned a significant amount about archives and their relationship to artifacts. Technology is altering these connections. Artifacts tell their stories through metadata and are the building block of archives. Technology can flawlessly embed metadata into physical artifacts. Digitally enriches them. Creating work that speaks to these changes is one of my contributions to the design field. Specifically, I feel much of my work is congruent with fields like museum and media installations.

The application of dynamic media to fuse digital data to physical artifacts is a area I hope to continue to explore. Technology and interaction used in this fashion generate new relationships between users and artifacts. Through the merger of analog and digital, powerful digital interfaces regain engaging tactile qualities. I intend to continue to create interfaces that explore this important area of interaction design including projects like *StoryCloth*.

I intend to peruse personal and professional projects involving physical objects and emerging technologies. Potential for projects like these exist in museums, architecture, and textiles. Each of these areas can expand to new places with the inclusion of technology and interaction. Textiles are particularly interesting to me because of their tactility and everyday use.



Some images taken with Intstagram, 2012.

### Prototyping and User Testing

My explorations of the space between analog and digital, I have taught me the value of prototyping interactive projects. My desire to prototype is influenced by my background in fine art. Practicing art instilled a value of the process of making and using objects. Prototyping feeds into my need to make physical objects to test my designs. As a result, prototyping has been an enjoyable and essential part of my experience with dynamic media. The ability to bring my projects to life through simple, small prototypes is invigorating. This process has allowed for user testing and learning about programming and other interesting platforms. Prototyping propels projects to a higher level. Creating even small parts of an interface reveals problems that would have remained hidden other wise. This has occurred in all of my projects at some point. When creating *Things That Matter*, prototyping allowed me to observe that the system was more engaging without a computer screen and with tangible buttons. These physical experiments allow concepts and systems to develop far past what they would as descriptions, slides, or wire frames.

Prototyping has also encouraged me to learn programming in order to build small applications to test ideas. In some cases these small sketches developed into projects like *Things That Matter*. Learning programming has provided me with a new perspective on interaction design. It has instilled an understanding of what is feasible and logical to build. This experience is valuable for designers. It allows designers to see through the eyes of a developer. As a result, designers can work more closely and efficiently with developers to make ideas work. Personally, an understanding of programming has improved my design process. I am able to build and test my designs, then make improvements based on user feedback.

User feedback provides further insight into the system. Participation allows for modifications and new, stronger, more intuitive iterations. Personally, I have discovered the projects I have received user feedback on have grown and transformed immensely in comparison to other systems. *Comfort Food* exemplifies this process. Later iterations become stronger, enticing more participation. The value of building and testing is indispensable to the design process.

### What I Have Learned

Dynamic media has encouraged me to learn new technologies and processes including programming and DIY techniques involving electronic textiles, and other physical types of interfaces. Interaction plays a key role in the future of communication design. Many areas of communication design are being affected by the web, and technology in general

While technology is heavily involved, my design work is influenced and rooted in the tradition and history of fine art and film photography. As a result my systems are tactile. I firmly believe that tangible interfaces are the future of design, due to humans' need to touch and make in order to better understand.

My experiences in learning DIY electronic techniques, soft circuits and programming allow me to teach techniques required to prototype and add levels of tangibility to interfaces. In learning how to build circuits, utilize microcontrollers and program I am able to make working prototypes. This process has made me a stronger designer. I believe learning these skills, in conjunction with visual aesthetic skills, are important in being an interaction designer

Documentation and process are a large part of teaching these techniques. In working with MIT's Media Lab's High Low Tech group, I experienced the importance of documenting and explaining each step of the development process for a project (*Déjà Vu*). Documenting each step clearly and in detail allows me to teach how to use these specific technologies to a greater audience.

In addition to techniques to create tangibility I have also gained significant information regarding archives and their digital uses and translations. My knowledge in this area can be taught in a variety of historical or practical outlets. I think the evolution of documentation's use and function in relationship to technology is important. This thread could be an interesting tangent to the history of photography.

### Education

In completing this two-year exploration I have personally grown and learned a significant amount about being a "good" interaction designer. These lessons as well as topics addressing tactility, archives and curation are what I would pass to students. I would specifically address why tactility creates engaging systems. As well how students can incorporate tangibility into their designs by using sensors, soft circuitry and microcontrollers. Through a series of small projects, like simply using an Arduino, I can teach students a set of simple skills that can be built to create tactility in interfaces.

The effect interaction has on curation is an another topic I would teach. Through a comparison of traditional static archives to dynamic ones, a difference in curatorial power from creator to user can be observed. Static archives are, historical museum collections like the MFA's artifacts from the ancient world. Dynamic archives are projects like Daniela Rosner's *Spym*. In comparing these two examples the relationship between the artifacts and the archive surface. It is easy to observe technology's role in digitally merging metadata with the physical artifact. This evaluation also demonstrates how curation is shared between users and the creator in examples like *Spym*. Although the system has boundaries, users build stories through attaching their own material to a physical object. This interaction makes the system more engaging than static forms of archives in which the metadata is fixed. Through examples such as these, students can absorb how interaction and technologies are changing the traditional role of archives and how shared curation can create engaging systems.

### Final Thoughts

In completing my studies, I have observed some important trends and over arching topics. One observation that women in their fifties and sixties enjoyed using *Déjà Vu* more than women in there twenties and thirties. I feel this occurred because Déjà Vu is high tech enough that it is exciting and new but remains easy and fun to use. I believe this observation speaks to the advantage of the usability of analog objects. All of the system I have created used elements of analog objects. I have found that juxtaposition of simple physical objects and higher technologies creates engaging systems. Familiar objects allows users to quickly and easily learn how to use the system. New technology adds elements of interest and surprise. I feel this balance is an important quality for designers to learn. In addition, analog objects are tactile. The physicality of the objects also generates user interest and feeds into humans need to use our hands.

Another key point is the idea of handing over control of curation. This topic is absolutely essential to my thesis. In sharing my role as curator with users, my systems become more engaging to use. I have observed this shared role causes participants to feel some ownership of the project. In addition users assume possession of the meaning generated. As an interaction designer this is very important. The work expands from the creator, becoming more important and relatable to the world. This is an additional useful tool and lesson for designers.

My thesis exploration has proven challenging, engaging and rewarding. I intend to continue down these paths as I feel there is more to discover. Technology's influence on design is ever present. Technology cannot be evaded. In some cases technology has flattened the intrinsic emotion found in previous processes. This void has motivated my work with dynamic media and driven my desire to merge qualities from the past with the newest technologies.



## DIALOGUE WITH NINA KATCHADOURIAN *March 9, 2012*

*I had the pleasure of speaking with Nina Katchadourian, a contemporary artist who lives and works in New York city. I was introduced to Katchadourian's work, by a friend., who told me "you will love her work, you share many of her interests and this project made me think of you". My friend was correct. The first project I looked at is entitled Accent Elimination. It is an investigation of her mother and father's different accents, in relationship to her own lack of their accents. During the performance a speech coach attempts to teach Katchadourian her parents accents and vise a versa.*

*This project immediately reignited with my personal experience with language. My mixed cultural background has created a complex relationship to language, accents and idioms. Growing up, my parents used phrases in English that are direct translations from Farsi. For example in Persian, the saying "chap chap negah kard" means "looking left left" implying someone is giving you a dirty look. It was not until college I learned from friends this actually did not make sense in English. To me these phrases make sense, but to others they are confusing. In talking to Katchadourian, I learned she shares this funny experience. In addition, she and I have culture in common. My father, like her father, is Armenian. Hers' from Lebanon and mine from Iran. In addition to our cultures, I feel a strong connection to her work and process. Katchadourian's investigations support many of the points of discussion in my thesis. Her work like mine addressed topics relating to memory, artifacts, archives, tradition, storytelling and the role of documentation.*

*After looking at her work I decided to contact her. I told her how fascinating I found her work. I also stated how relevant her investigations were to my own, and if she had time to talk I would be very appreciative. She wrote back to me the same day to set up at time. Here is a record of our conversation.*

### **1. Objects and artifacts seem to be a large part of your work. Like in *The nightgown pictures* and *Talking Popcorn*. What role do you feel artifacts take on in your work?**

You are right and that is a insightful comment on your part. Artifacts are important. *The Nightgown Pictures* was an unusual project for me in some sense. I didn't know where it was headed for a long time. It took the better part of ten years to figure out. This artifact, the nightgown, is so special to me and to my mother. My goal was not to over ride my grandmother's work and hijack her project. I had a lot of different ideas but some of them were not feasible and started to fall apart. It took many years to figure out what that project was. The collaboration with my mom became important. The project became a collaboration between three generations of women, even that my grandmother at that point had passed away. The collaboration spanned over time and space.

### **2. Another interesting aspect I noticed in your work is this idea of repair and renewal. How do you feel these things play into your work and practice?**

Yes, yes, these are important to me as well. I like fixing something that might be broken but is not really broken. This happens with *The Spider Web* project, where I am repairing them but they are not really broken to nature. With repair its more like there is a human overlay onto things. On a basic material level I enjoy fixing things. I get a strange satisfaction of putting things back together. It is sort of profound, that you can be a strange agent to connect things that have not made contact in a long time. Maybe, this metaphorically connects back to ideas of family history, I don't know?

For example, I took a trip to Lebanon and Syria in 1996 with my dad. We visited the site of a archeological dig in this very rural area. We were in this village and walking through farms. I noticed that we were walking over ancient pottery shards. It was kind of upsetting. I picked up two pieces and put them together and they fit together. It was so uncanny that these two things matched. I kept thinking when did these extremely old things last touch, and when did they break apart. I felt that it is a metaphor for what I like to do with my work. I like to be this agent bringing things together.

Another related tangent is, in my family I have this family member who I call my grandmother, but she is actually not. She is a Genocide orphan. She out lived my grandmother, who had my father very late in life. She (this other woman) took care of my dad. It's actually crazy to think that realistically no one really knew who she was, she is a mystery person in a way, that my family rescued from an orphanage as a little child and loved very much. Some times she was very sad about it. I remember her showing me book and pictures about Armenian Genocide orphans and starting to cry. She was so sad that she did not know who she was or where she came from. Its amazing that she was saved, its kind of like the pottery shards. It's unlikely and strange when things can connect, like the pot shards. My job is to be the agent to connect these two things, to connect them together again.

### **3. That is an amazing story, because of my own experience with language I have really connected to your project where you are trying to teach you parents your accent. I have had some funny confusing experiences with language and translations from Farsi to English and traditions.**

Yeah, its strange. I have a friend that says foreigners always speak the best English. Not grammatically, descriptively and I agree. The combination of things ends up with a flowery and funny use of language. It also happens with food. For example we have a family friend who is a wonderful cook. And its really funny, she took tortillas, which are Mexican, and stated to make \*lahmajun with them. And she named them something interesting too. Its just was funny that she took tortillas and made them Armenian.

### **4. I feel that much of your work is performance based. Do you feel documentation and the photography are important of your process and also to make work for the gallery?**

Yes definitely. I feel strange to call myself a photographer, since I have not real formal training but I use photography a lot since its an efficient documentation tool. As you said, otherwise nobody else would be able to see the performance. In my most current project *Seat Assignment* it plays an important role. This is a new project that I am continually adding to.

\*lahmajungrown is lamb on top that is sometimes spicy.

I take photos constantly on my phone. The camera phone is like a new version of a sketchbook, where not a day goes by without me taking pictures. The cell phone is not a proper camera so there is no pressure. I like the casual feeling. Photography is also important to me because, more than any medium, it is the one I exhibit and sell most.

### **5. Due to the Archival nature of much of your work like the *Charts and Systems*. Do you feel that you are the curator of these collections, of your work?**

Yes I feel I am a curator of my work. I often tell students when I do studio visits or crits that it is helpful for an artist to, in a way, trick themselves to look at their work from an outside perspective. I also work as a curator, and literally have been thinking and working as a curator for a few years. I'm thinking about sequencing, and how you can draw out so many aspects in how you arrange things. I think there are a few parts to the process.

The first part is collecting and gathering materials. Then part two is the ordering, sequencing, and deciding what am I trying to draw out

I think gathering is more emphasized in contemporary art. It's the default in contemporary practice. You will see a lot of art where people go out and shoot as many images as they can of some subject matter. Then hang it on a gallery wall in a grid. Spending little time on the order and sequence. I am trying to do more than just gather. A smart friend told me something that has been a great piece of advice, in regards to my current project. They said, "you should ditch chronology and manipulate more. Crop and arrange things in another way. Chronology is not the most interesting organizing". I let go of that and the work is becoming much more interesting. I think I am taking on a more aggressive and assertive role as a curator, where I manipulate things more. Its hard to do both. When you are the creator of the work you feel like, how can I not include this? But, what is most interesting to you, may not be the most interesting solution.

## WORK CITED

Arduino. 7 March 2012 <<http://www.arduino.cc/>>.

"Art, Design, and the Public Domain Lecture Series: Michael Rakowitz, "Three projects. Maybe four." Boston, 26 September 2011. Lecture.

Askew, Kelly and Richard R. Wilk. "The Anthropology of Media: A Reader." Berger, John. *The Ambiguity of the Photograph*. Malden: Blackwell Publishing, 2002. 47–55. Print.

Avgikos, Jan. "Archive Fever: Uses of the Document in Contemporary Art." *Artforum* April 2008: 364. Print.

Barts, Roland. *Camera Lucida: Reflections on Photography*. New York: Hill and Wang, 1980. Print.

Batchen, Geoffrey. *Forget Me Not: Photography and Remembrance*. New York: Princeton Architectural Press, 2004. Print.

Batchen, Geoffrey. "From Infinity to Zero." *Now Is Then*. Ed. Marvin Hiferman. New York: Princeton Architectural Press, 2008. 121–130. Print.

*Designboom*. 3 March 2012 <<http://www.designboom.com/weblog/cat/16/view/9892/theo-watson-portrait-machine.html>>. Web.

Enwezor, Okwui. *Archive Fever: Uses of the Document in Contemporary Art*. New York: International Center for Photography, 2008. Print.

Extra-Soft XSLabs. 3 March 2012 <<http://xslabs.net/work-pages/krawkow.html>>. Web. Franklin, Crawford. "Through Glass, Darkly." *Cornell Alumni Magazine*, Jan.–Feb. 2011: 42. Print.

Garfield, Mette. "Eve Sussman: White on White. A Random Thriller." 24 June 2010. *Puff Magazine*. 5 March 2012 <<http://puf-art.com/blog/2010/06/24/eve-sussman-white-on-white-a-random-thriller/>>. Web.

Gentleman, Amelia. *The Worse The Break-up, The Better The Art*. Monday December 2004. 5 March 2012 <<http://www.guardian.co.uk/>>.

artanddesign/2004/dec/13/art.art>. Web.

Heiferman, Marvin. "Now is Then: The Thrill and the Fate of Snapshots." *Now is Then*. Ed. Marvin Hiferman. New York: Princeton Architectural Press, 2008. 41–53. Print.

*Heilbrunn Timeline of Art History*. 5 March 2012 <<http://www.metmuseum.org/toah/works-of-art/1992.5112>>. Web.

Herbert, Martin. "Rafael Lozano-Hemmer Records Manchester City Art Gallery." *Art Monthly*, November 2010: 28. Print.

Janku, Laura Richard. "The An architectures of Matta-Clark and Elias-son." *ArtUS*, 12 November 2008: 18–21. Print.

Katchadourian, Nina. *The Nightgown Pictures*. 5 March 2012 <<http://www.ninakatchadourian.com/chartssystems/nightgown.php>>. Web.

Kimmelman, Michael. "Sculpture From the Earth, but Never Limited by It." June 2005. *The New York Times*. 5 March 2012 <[http://www.nytimes.com/2005/06/24/artsdesign/24kimm.html?\\_r=1&scp=1&sq=Sculpture%20From%20the%20Earth,%20But%20Never%20Limited%20by%20t%20&st=cse](http://www.nytimes.com/2005/06/24/artsdesign/24kimm.html?_r=1&scp=1&sq=Sculpture%20From%20the%20Earth,%20But%20Never%20Limited%20by%20t%20&st=cse)>. Web.

Komnio, Effie. "Hippolyte Bayard's Le Noyé: A Little Meditation on Death." *Third Text* 17.2 (2003): 163-170. Print.

Koolhaas, Rem. "Junkspace." *October* (2002): 175–190. Print.

Leopold, Rebecca. "Notes on Nostalgia." 29 April 2011. *Art 21: Blog*. 5 March 2012 <<http://blog.art21.org/2011/04/29/notes-on-nostalgia/>>. Web.

Nachtwey, James. *Witness Photography By James Nachtwey*. 5 March 2012 <<http://www.jamesnachtwey.com/>>. Web.

"New York Times Magazine." *New York Times*. 5 March 2012 <<http://www.nytimes.com/interactive/2010/07/30/magazine/20100801-taryn-simon-contraband.html>>. Web.

Pinkas, Anna. *Anna Pinkas Blog*. 3 March 2012 <<http://itp.nyu.edu/~ap2469/myblog/?p=282>>. Web.

Pohflepp, Sascha. *Blinks and Buttons*. 3 March 2012 <[http://www.blinksandbuttons.net/buttons\\_en.html](http://www.blinksandbuttons.net/buttons_en.html)>. Web.

blinksandbuttons.net/buttons\_en.html>. Web.

Rekimoto, Jun. "SmartSkin: An Infrastructure for Freehand Manipulation on Interactive Surfaces." CHI. Minnesota, 2002. 113–117. Print.

Rigole, Jasper. *About The IICADOM*. 5 March 2012 <<http://jasperrigole.com/IICADOM.html>>. Web.

Rakowitz, Micheal. *The invisible enemy should not exist*. 5 March 2012 <<http://michaelrakowitz.com/projects/the-invisible-enemy-should-not-exist/>>. Web.

Rosner, Daniela K. and Kimiko Ryokai. "Spyn: Augmenting the Creative and Communicative Potential of Craft." CHI. Atlanta, n.d. 1–9.

Rushe, Ed. *Twentysix Gasoline Stations*. Alhumbra: Cunningham Press, 1969. Print.

*Smart Textiles Design Lab Blog*. 3 March 2012 <<http://www.stdl.se/?p=611>>. Web.

Smithson, Robert. *Robert Smithson: The Collected Writings*. Ed. Jack Flam. Berkely: University of California Press, 1996. Print.

Vaucelle, Katie. *The Everyday Collector*. 3 March, 2012 <<http://web.media.mit.edu/~cati/Collector/EverydayCollector.html>>. Web.

West, Nancy Martha. "Telling Time: Found Photographs and the Stories They Inspire." *Now Is Then*. Ed. Marvin Hiferman. New York: Princeton Architectural Press, 2008. 79–89. Print.

White on White. 3 December 2012. 5 March 2012 <<http://canopy-canopycanopy.com/10whiteonwhite>>. Web.



# BIBLIOGRAPHY

Arduino. 7 March 2012 <<http://www.arduino.cc/>>.

"Art, Design, and the Public Domain Lecture Series:

Michael Rakowitz, "Three projects. Maybe four." Boston, 26 September 2011. Lecture.

Askew, Kelly and Richard R. Wilk. "The Anthropology of Media: A Reader." Berger, John. *The Ambiguity Of the Phtograph*. Malden: Blackwell Publishing, 2002. 47–55. Print.

Avgikos, Jan. "Archive Fever: Uses of the Document in Contemporary Art." *Artforum* April 2008: 364. Print.

Barber, Elizabeth Wayland. *Women's Work: The First 20,000 Years Women, Cloth, and Society in Early Times*. New York: W.W. Norton & Co, 1995. Print.

Barts, Roland. *Camera Lucida reflections on photography*. New York: Hill and Wang, 1980. Print.

Batchen, Geoffrey. *Forget Me Not Photography and Remembrance*. New York: Princeton Architectural Press, 2004. Print.

Batchen, Geoffrey. "From Infinity to Zero." *Now Is Then*. Ed. Marvin Hiferman. New York: Princeton Architectural Press, 2008. 121–130. Print.

Bender, Sue. *Everyday Sacred a Woman's Journey Home*. New York: Harper Collins Publishers, 1996. Print.

Bush, Vannevar. "As We May Think." *The New Media Reader*. Ed. Noah Wardrip-Fruin and Nick Montfort. Cambridge: MIT Press, 2003. 37–47. Print.

Campanella, Thomas J. "Eden By Wire: Webcameras and the telepresent landscape." *The Visual Culture Reader*. Ed. Nicholas Mirzoeff. Ne York: Routledge, 2002. 264–276. Print.

Designboom. 3 March 2012 <<http://www.designboom.com/weblog/cat/16/view/9892/theo-watson-portrait-machine.html>>. Web.

Dewey, John. *Art As Experience*. New York: The Berkley Publishing Group, 2005. Print.

Enwezor, Okwui. *Archive Fever: Uses of the Document in Contemporary Art*. New York: International Center for Photography, 2008. Print.

Extra-Soft XSLabs. 3 March 2012 <<http://xslabs.net/work-pages/krakow.html>>. Web.

Franklin, Crawford. "Through Glass, Darkly." *Cornell Alumni Magazine* Jan.– Feb. 2011: 42. Print.

Garfield, Mette. "Eve Sussman: White on White. A Random Thriller." 24 June 2010. *Puff Magazine*. 5 March 2012 <<http://puf-art.com/blog/2010/06/24/eve-sussman-white-on-white-a-random-thriller/>>. Web.

Gentleman, Amelia. *The Worse The Break-up, The Better The Art*. Monday December 2004. 5 March 2012 <<http://www.guardian.co.uk/artanddesign/2004/dec/13/art.art>>. Web.

Heiferman, Marvin. "Now is Then: The Thrill and the Fate of Snapshots." *Now is Then*. Ed. Marvin Hiferman. New York: Princeton Architectural Press, 2008. 41–53. Print.

Heilbrunn *Timeline of Art History*. 5 March 2012 <<http://www.metmuseum.org/toah/works-of-art/1992.5112>>. Web.

Herbert, Martin. "Rafael Lozano-Hemmer Records Manchester City Art Gallery." *Art Monthly* November 2010: 28. Print.

Janku, Laura Richard. "The Anarchitectures of Matta-Clark and Eliasson." *ArtUS* 12 November 2008: 18–21.

Katchadourian, Nina. *The Nightgown Pictures*. 5 March 2012 <<http://www.ninakatchadourian.com/chartssystems/nightgown.php>>. Web.

Kimmelman, Michael. "Sculpture From the Earth, but Never Limited by It." June 2005. *The New York Times*. 5 March 2012 <[http://www.nytimes.com/2005/06/24/artsdesign/24kimm.html?\\_r=1&scp=1&sq=Sculpture%20From%20the%20Earth,%20But%20Never%20Limited%20by%20It%20&st=cse](http://www.nytimes.com/2005/06/24/artsdesign/24kimm.html?_r=1&scp=1&sq=Sculpture%20From%20the%20Earth,%20But%20Never%20Limited%20by%20It%20&st=cse)>.

Komnio, Effie. "Hippolyte Bayard's Le Noyé: A Little Meditation on

Death." *Third Text* 17.2 (2003): 163–170. Print.

Koolhaas, Rem. "Junkspace." October (2002): 175–190. Print.

Lee, C.H., Y. Hu and T. Selker. "iSphere: a Proximity-based 3D Input Interface." *CAAD Futures 2005*. Vienna, 2005. Print.

Leopold, Rebecca. "Notes on Nostalgia." 29 April 2011. *Art 21: Blog* . 5 March 2012 <<http://blog.art21.org/2011/04/29/notes-on-nostalgia/>>. Web.

Licklider, J.C.R. "Man-Computer Symbiosis." in *The New Media Reader*. Ed. Noah Wardrip-Fruin and Nick Montfort. Cambridge: MIT Press, 2003. 74-81.

Nachtwey, James. *Witness Photography By James Nachtwey*. 5 March 2012 <<http://www.jamesnachtwey.com/>>. Web.

"New York Times Magazine." *New York Times* . 5 March 2012 <<http://www.nytimes.com/interactive/2010/07/30/magazine/20100801-taryn-simon-contraband.html>>. Web.

Pinkas, Anna. *Anna Pinkas Blog*. 3 March 2012 <<http://itp.nyu.edu/~ap2469/myblog/?p=282>>. Web.

Pohflepp, Sascha. *Blinks and Buttons*. 3 March 2012 <[http://www.blinksandbuttons.net/buttons\\_en.html](http://www.blinksandbuttons.net/buttons_en.html)>. Web.

Rekimoto, Jun. "SmartSkin: An Infrastructure for Freehand Manipulation on Interactive Surfaces." CHI. Minnesota, 2002. 113–117. Print.

Rigole, Jasper. *About The IICADOM*. 5 March 2012 <<http://jasperrigole.com/IICADOM.html>>. Web.

Rocavitz, Micheal. *The invisible enemy should not exist*. 5 March 2012 <<http://michaelrakowitz.com/projects/the-invisible-enemy-should-not-exist/>>. Web.

Rosner, Daniela K. and Kimiko Ryokai. "Spyn: Augmenting the Creative and Communicative Potential of Craft." CHI. Atlanta, n.d. 1–9.

Rushe, Ed. *Twentysix Gasoline Stations*. Alhumbra: Cunningham Press, 1969. Print.

Salvini, Pericle. "The Ethical and Societal Implications of Presence from a Distance." *PRESENCE 2007 The 10th Annual International Workshop on Presence*. Barcelona, 2007. 25 – 27. Print.

*Smart Textiles Design Lab Blog*. 3 March 2012 <<http://www.stdl.se/?p=611>>. Web.

Smithson, Robert. *Robert Smithson: The Collected Writings*. Ed. Jack Flam. Berkely: University of California Press, 1996.

Vaucelle, Katie. *The Everyday Collector*. 3 March, 2012 <<http://web.media.mit.edu/~cati/Collector/EverydayCollector.html>>. Web.

Warhol, Andy. *The Philosophy of Andy Warhol (From A to B and Back Again)*. San Diego: Harvest Book Harcourt, 1977. Print.

West, Nancy Martha. "Telling Time: Found Photographs and the Stories They Inspire." *Now Is Then*. Ed. Marvin Hiferman. New York: Princeton Architectural Press, 2008. 79–89. Print.

White on White. 3 December 2012. 5 March 2012 <<http://canopy-canopycanopy.com/10whiteonwhite>>. Web.

