

Kevin Hamilton

University of Illinois, Urbana-Champaign

ARTS 499: Memory Palaces: Computing and History in the Built Environment

INTRODUCTION

This course is an experiment in integrating research and the classroom. As such, the METHOD of the course is as important as the SUBJECT.

Our SUBJECT will be broad, and is intended to function as a catalyst for action and understanding across disciplines. Our METHOD will be experimental, and will likely generate more new disciplinary knowledge than our work on the SUBJECT.

SUBJECT: Memory and Space

METHOD: Interdisciplinary Collaboration

SITE: Thomas M. Siebel Center for Computer Science, UIUC

PREMISES

1 - Our professional climates praise "creativity" or innovation within the bounds of disciplinary distinctiveness. If extra-disciplinary influence ("out-of-the-box" thinking) is rewarded, clarity and specificity in relation to traditional forms is a requirement for sustained institutional support.

2 - Collaboration, with those within or without your discipline, encourages externalization of internalized habits and assumptions, toward the end of clear and effective action and thought.

3 - When we produce artifacts for art or science, we also produce discourses. Our methods (inherited or invented) influence the objects we produce, and contribute to the construction and maintenance of the professional disciplines by which we are evaluated and supported.

GOALS

1 - To develop transferable methods and techniques for interdisciplinary collaboration on creative projects. (We would eventually like to apply these techniques, with your help and credit, toward a distributed set of conceptual and technical tools.)

2 - To identify separate desired research goals across disciplines, and achieve them together.

3 - To develop a clearer understanding and record of disciplinary distinctions.

METHOD

1 - We will work on a subject area of common interest from our distinctive disciplinary perspectives. For this class, we have chosen the subject of space and memory - how memory is manifested in space, and how space informs and affects memory. Relevant subject areas include Pervasive Computing, Locative Media, Monuments, Museums, Performance, History, Architecture, and Archives.

2 - In order to achieve careful understanding, lasting research and a platform of support for future projects, we will employ multiple methods of documentation throughout the course. These methods, some devised by instructors and others by students, will also enable some members of the class to achieve the quantifiable data they need for their own professional practice. At the same time, we will maintain a critical discussion about the effects and implications of these observational techniques. (No one's work will be subjected to documentation without consent.)

3 - Students will work in teams through a series of projects devised by the instructors. Groups will be expected to document their process and turn-in a website for each project solution.

4 - Assigned readings will facilitate discussion about differing methods, language, and evaluative criteria across disciplines. Students will also be expected to participate in online participation and information sharing through blogs, social bookmarks, etc.

5 - Outside experts will function as consultants and even clients for specific projects.

SUBJECT: Memory and Space

Everyone's talking about space. The last 10 years or more has seen a "spatial turn" in the arts, humanities and social sciences, with research turning to examine the utilization of space in the production of self, society, perception. At the same time, networks and mobile technology have made possible some of the dreams of "pervasive computing" in Computer Science and Engineering. When computing can happen anywhere, the metaphorical space of the network becomes real, and design of user experiences has to consider factors once limited to architecture.

The experience and construction of space inevitably involves memory and history, as through use we build subjective and collective memories. We "store" memories in space through the way we attach events to locations, but also are taught to recall memory spatially through the organization of cognitive "memory palaces." With the addition of embedded computing, sensing, and surveillance, spaces acquire literal possibilities for storing and retrieving information.

We will explore, through projects and readings, some of the ways in which space is "produced," how memory and history functions in the creation of shared space, and how design can address the storage of new memories, or the retrieval of old ones. We will take as our laboratory the building that hosts the course, the Thomas M. Siebel Center for Computer Science.

RELATED RESEARCH on SPACE AND MEMORY:

Others who are looking at the role of creative projects in understanding the experience of memory and history in built spaces. Many (but not all) are looking at the function of networks and new technologies in this process.

Urban Atmospheres laboratory at Intel Research Berkeley <http://www.urban-atmospheres.net/>

The Presence Project at Stanford <http://presence.stanford.edu>

C5 <http://www.c5corp.com>

Networked Publics at the Annenberg Institute, USC <http://netpublics.annenberg.edu/>

Ursula Biemann's homepage - <http://www.geobodies.org>

Centre for Research Architecture at Goldsmiths, London - <http://roundtable.kein.org/>

Interactionfield

Experience, Memory, Re-enactment <http://pzwart.wdka.hro.nl/fama/programme2/archive/2003-2004/experiencememory/>

Interrogative Design Group <http://www.interrogative.org/>

The Long March <http://www.longmarchspace.com/english/homepage.htm>

WHO SHOULD TAKE THIS CLASS?

The only prerequisite experience is that you already be familiar with the professional practice of your own field - graduate students and upper-level undergraduate students usually fit this description.

You should be curious about how others from fields wildly different from your own approach similar problems or areas of interest.

You should be open to, and interested in, collaboration with others within or without your field.

You need no prior experience in particular technologies.

You need no prior experience in art or other creative work.

You should be open to exposing and examining the processes by which projects are realized.

You should expect from this course only an introduction to fields of knowledge outside your own. This course is advanced in that it takes a reflexive and reflective attitude toward practice, but serves only as an introduction to represented bodies of knowledge.

ABOUT THE SIEBEL CENTER:

The Siebel Center for Computer Science is the home of the Department of Computer Science at the University of Illinois, Urbana-Champaign. It was completed in 2004, at a budget of \$80 million dollars, and designed by architect Peter Bohlin. At 225,000 square feet, the facility is built to accommodate a dynamic range of research through a hefty data infrastructure designed to grow, even when the physical space runs out.

Thomas Siebel, an alumnus of the University, donated \$32 million for the construction of the facility. Siebel's company, Siebel Systems developed and sold a leading Customer Relationship Management software platform. The company is currently owned by Oracle. Among Siebel's other philanthropic ventures are the Montana Meth Project and the Siebel Scholars program.

DESIGN PROJECT #1: Magnetic Brain

PROBLEM:

With your team, devise a system for storage and retrieval of a particular set of information, using the tape recorder and tapes provided. Real or metaphorical space should be considered, either in the choice of subject or in the treatment of the tape form.

CONSIDER:

A successful design can either solve an existing problem or propose a new one.

You may either re-engineer the linear medium of tape to suit a less linear subject, or you may choose a linear event-subject to record.

You may approach the tape as a place to record audible sound, or as a place to store and retrieve cues or encoded bytes.

You may use the tape and recorder "as-is" or disassembled, re-configured.

You may embed the recorder in a space or object, or use it in its present form.

You may add other devices (microphones, speakers, etc) to the recorder.

You may approach this as a "wizard-of-oz" scenario, in which a person acts as a computer, or sensor/actuator, controlling recording or playback according to a prescribed algorithm or pattern.

Will there be "forgetting" involved? Will your system re-record over the same tape?

What role will fidelity play?

Will your project be a one-off experience, or a re-usable system, suitable to use by others?

Will the same agent do the recording as the reading?

DELIVERABLES:

You should document and explain your project through a webpage, including audio, video, or images where necessary. The site should be just one page in length. If website design isn't in your group's set of skills, you can submit a Microsoft Word document. Your team should also divide up the following questions; each team member should answer one to their group in an email, cc'd to Piotr and Kevin.

The webpage and answered questions should be delivered by midnite Thursday, Feb 1. Where-ever possible, refer in your answers to these questions to specific notes or sketches made in your journals throughout the process, as reference points.

1) How evident is the tape's linear structure in your teams's solution? Is linear time more a factor in the recording, or retrieval, or equally in both? Discuss how your group came to this approach.

2) What alternative designs of this piece did your team entertain or anticipate? Why did the team decide against these alternatives?

3) How did your team sub-divide your project into tasks? Is this division of labor evident in the final outcome?

4) Describe your group's communication efforts. Did you find yourself communicating ideas more often through drawing, talking, writing, or something else? What role did sharing references or other examples play, if any? What aspect of your design concept presented the greatest challenge to communication within your group? What aspect presented the least challenge?

DESIGN PROJECT #2: Exterior Memory Project

Guest Instructor: Jeremy Beaudry

PROBLEM:

memory as autobiography
memory as impression
memory as data
memory as art
memory as image
memory as technology
memory as representation

Imagine living your life without memory, without the ability to remember those myriad experiences which define you as a person and which anchor your sense of belonging in the world. Such an hypothesis raises the question: By what other means, external to your own mind, would you accumulate and retain the events, sensations, perceptions in your life?

So, instead of carrying those events, sensations, perceptions, etc with us in our heads as autobiographical memories, we must gather and stockpile them externally around us in great storehouses, vaults, archives, pockets. We would always need close at hand a great many recording devices, systems, and technologies: pens, pencils, markers, paints and pads of paper, sketchbooks, notebooks, chalkboards & all kinds of cameras, Polaroid, digital, disposable & mini dv movie cameras, Super 8, 16mm, and rolls of film, memory cards, batteries, dv tapes, lenses, light meters, and laptop computers, PDA's, and tape recorders, mini-disc or mp3 players with microphones, and more batteries and tapes and mini-discs and much, much more.

Then we must decide how to organize all of this STUFF. What systems do we use to catalogue, cross-reference, archive all this STUFF? What items/elements/content become associated with what; how do we make connections? What kind of architecture might hold these archives? And remember (remember?), we need to have some of this STUFF (and devices, too) always readily available, carried in pockets, coats, and bags with many pockets, compartments, and loops.

GOALS

This workshop will explore the above hypothetical situation and use it as a point of departure for the exploration of the "technologies of memory," a phrase which Marita Sturken (a contemporary cultural historian) uses to identify the cultural products which assist in both individual and cultural memory. Our goals for the course are:

- Develop a cursory understanding of how memory functions, from a philosophical, psychological, social, historical, and cultural perspective, as well as how artists have addressed the power and mystery of memory
- Adopt a rigorous process of documentation and subsequent system of organization and representation—an *exterior memory*—in order to discover how these other forms, devices, and systems contribute significantly to the construction of our own memories as well as a larger cultural or collective memory
- Engage a multi-modal art practice that encourages translation between different media and demonstrates how such translation can lead us beyond the conceptual limitations of any one single medium
- Discover effective methods for artistic collaboration and dialogue with others whose work is perhaps very diverse and exists outside of our own sphere of comfort; and understand the implications of an art practice that moves beyond solipsism and into a more communal realm
- Increase effectiveness in collaborative practice through intentional methodologies and thorough documentation

DESIGN PROJECT #3: Social Memory in Space

So far, our class has focused on building productive group processes and on two aspects of memory:

1. The nature of individual memory as it relates to sensation, expectation, and consciousness
2. The role of space and time in the storage of memory using new and old media

We will now move to more sustained engagement of these issues in the context of public space and collective or social memory.

PROBLEM

For your final project, your team will construct a system for storage and retrieval of memory at a large-scale. Either the site of storage, site of retrieval, or both should be located in a public space. You will have the remainder of the semester to:

1. Propose your project as a research plan.
2. Carry out your research plan, meeting sub-deadlines for presentation and documentation as set by the instructors.
3. Present a fully-functioning prototype of your project in a final public presentation.

RESEARCH PROPOSAL COMPONENTS

Your initial research plan should specify the following (some of these may be stated as broad ranges to be narrowed through research):

1. Research Questions
 - Which aspects of collective memory are you addressing?
2. Related Work
 - Precedent for your project in a variety of disciplines (bibliography)
3. Subjects/Users
 - A specific audience
 - A specific user-group
4. Materials
 - A specific site or sites for deployment
 - Tech requirements
 - A medium of storage and retrieval
 - A data-set of memory for storage and retrieval
 - Expectations from the audience/user-group
5. Measures
 - Standards for evaluating success
 - Goals for improving group work and collaboration
 - What dimensions make sense to measure?
 - How do you intend to measure them?
6. Experimental Design
 - Between-subjects (Each research participant receives only one level of the independent variable.)
 - Within-subjects (Each research participant provides data for all levels of the independent variable.)
7. Procedures
 - Methodologies of investigation and iteration
 - Archiving - how intentional is the choice of medium
 - Who does the recording?

- An account of the experience - in words - allows for a meaningful comparison after the intervention
- Integration of the "expert" throughout the process?
- Participatory action research? How engaged do you want the community or audience to be?
- Pilot study? Did this influence subsequent versions?
- Informed consent?

8. Results

- At least one outside "expert" who will serve as a consultant or a client on some portion of your project
- Analysis of the measures within a given experimental design
- How well did you achieve goals for improving group work and collaboration?
- Longitudinal? How long was the system in place - did you consider the timeline and how the length on site might change interpretation?

9. Discussion

- Broader implications
- How did specific choices lead to impact or tension
- Do you feel your approach is more like "grounded theory" or "hypothesis testing"?

FIRST STEPS

(Read the three articles by Connerton, O'Hara, and Degnen.)

This is a broad project that could go many different directions. Your group should start with talking about your individual inclinations and desires around the following poles of thought. Decisions about any of these areas will serve as entry points into an initial proposal.

1. In terms of collective/social/cultural memory, are you more interested in "incorporating practices" or "inscribing practices?"

These terms come from the work of Paul Connerton, whose book "How Societies Remember" is central to the study of collective or social memory. He writes:

"The first type of action I shall call an /incorporating practice/. Thus a smile or a handshake or words spoken in the presence of someone we address, are all messages that a sender or senders impart by means of their own current bodily activity, the transmission occurring only during the time that their bodies are present to sustain that particular activity. Whether the information imparted by these actions is conveyed intentionally or unintentionally, and whether it is carried by an individual or group, I shall speak of such actions as /incorporated/."

The second type of action I shall call an /inscribing practice/. Thus our modern devices for storing and retrieving information, print, encyclopedias, indexes, photographs, sound tapes, computers, all require that we do something that traps and holds information, long after the human organism has stopped informing. Occasionally this imparting may be unintentional, as when we have our telephone tapped, but mostly it is intentional. I shall speak of all such actions as /inscribing/."

2. Are you more interested in intentional or unintentional storage and retrieval?

3. Are there particular media you're interested in investigating?

4. Are you more interested in short-term or long-term memory?

5. Memory typically implies value - what value are you interested in engaging? In their article "Memories for Life" O'Hara and others describe at least five categories of social, material memory: /commemorative/, /identity/, /trauma/, /conflict/, /justice/, and /transhumanism./ Memory practices that deal with these different subjects might carry very different tones, disciplinary associations, or economical locations. Which of these categories are you most interested in? Are there other categories of social or collective memory that interest you but were not included in this list?