

Mediations on the Connections Between Memory and Graphic Design

James March

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ABSTRACT

Since the adoption of memory as an investigative area within the social sciences in the twentieth century, the act of memorization has been examined largely within categorical, rationalized expressions. Two central issues currently exist in memory research: 1) the difficulty of visually depicting the active process of memorizing; and 2) the limitation of assessing memory as a categorized entity rather than a multidimensional, pluralized system. In simplifying highly complex imagery, graphic design has made significant contributions to contemporary visual aesthetics, positioning itself as a mediator between a wide variety of comparable disciplines. This thesis examines the active process of memory through graphic design practices. By applying design principles and composing visual metaphors of storing information alongside techniques dating from the ancient and medieval ages, graphic design as a methodological practice endeavors to bridge the disconnect between contemporary memory models by generating a visual lexicon of an abstract mental process.

DEDICATION

I wish to dedicate this thesis to my parents, Derrick James March and Maureen Rose March, for their uncompromised generosity, love and guidance throughout my life. I thank them dearly for raising me with compassion and determination, and for raising me with the courage to trust my intuition. I am heartily grateful for every sacrifice that they have made in the name of furthering my education.

IN MEMORIAM

During the tenancy of this thesis, two individuals passed away who were highly influential on my practice as a designer and form maker. I would like to recognize the contributions of Steven Paul Jobs (1955 – 2011) and Edwin Parker “Cy” Twombly (1928 – 2011) to design and the fine arts.

May they rest in peace.

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The majority of the interesting discussions that I have had concerning graphic design during the tenancy of this program have been with Kevin Paolozzi. I thank him for his knowledge sharing, for the road trips, for being a great friend and for reminding me to never celebrate mediocrity.

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TABLE OF CONTENTS

| | |
|--|------|
| Title | i |
| Abstract | ii |
| Dedication | iii |
| In Memoriam | iv |
| Acknowledgments | v |
| Table of Contents | vii |
| List of Figures | viii |
| Foreword | ix |
| Introduction | 1 |
| Portrayals of Memory in the Cognitive Sciences, Contemp... | 2 |
| Towards a Postmodern Framework | 6 |
| Methodology | 8 |
| The Art of Memory: Architectural, Graphical and Textual Visualizations | 8 |
| Chunking | 10 |
| Affect and Emotion | 11 |
| Experimental Practice: The Constant Search for New Forms | 12 |
| Results | 15 |
| The Textual Mnemonic | 16 |
| The Graphical Mnemonic | 19 |
| The Architectural Mnemonic | 28 |
| Spatial Practice | 33 |
| General Discussion | 40 |
| Afterword | 42 |
| Work Cited | 43 |

LIST OF FIGURES

Figure 1. Ian Neath and John Nairne, *Long-Term Memory Span*, 2001.

Figure 2. Louise Bourgeois, *Cells (Eyes and Mirrors)*, 1989-1993.

Figure 3. Judy Chicago, *The Dinner Party*, 1970.

Figure 4. Christian Boltanski, *Autel de Lycée Chases*, 1987.

Figure 5. Tracy Emin, *My Bedroom*, 1998.

Figure 6. Marian Bantjes, *Seduction*, 2007.

Figure 7. Jeffrey Keedy, *Spread from Emigre No. 15*, 1991.

Figure 8. James March, *Ode on a Grecian Urn*, 2011.

Figure 9. “_____”, *Ode on a Melancholy*, 2012.

Figure 10. “_____”, *Ode on a Nightingale*, 2012.

Figure 11. “_____”, *Ára Bátor*, 2011.

Figure 12. “_____”, *Caslon*, 2011.

Figure 13. Robert Fludd, *The Zodiac*, 1612.

Figure 14. James March, *The Test*, 2011.

Figure 15. “_____”, *Atlas: The Peripatetic Nature of Memory*, 2011.

Figure 16. “_____”, *Hortus Memoriae: Interaction*, 2011.

Figure 17. “_____”, *Alas, As the Years*, 2012.

Figure 18. “_____”, *The Architectural Mnemonic*, 2011.

Figure 19. “_____”, *The Mental Walk*, 2011.

Figure 20. “_____”, *The Artificial Bedroom*, 2012.

Figure 21. “_____”, *Spatial Practice*, 2012.

Figure 22. “_____”, “_____”, 2012.

Figure 23. “_____”, “_____”, 2012.

Figure 24. “_____”, “_____”, 2012.

Figure 25. “_____”, “_____”, 2012.

Figure 26. “_____”, *Spatial Practice: Projected Imagery*, 2012.

Figure 27. “_____”, *Spatial Practice: Hand Lettering*, 2012.

Please note:

The majority of my thesis work can be viewed at the following web address: <http://jamiemarch.com>.

With regards to the final artifact, full documentation can be viewed at: <http://spatialpractice.jamiemarch.com>.

Simply navigate by clicking on the work of interest in the left menu. Once you have expanded that division of work, click on the name of any project and you will be presented with its accompanying images and discourse in the main content area.

FOREWORD

“The places we have known do not belong solely to the world of space in which we situate them for our greater convenience. They were only a thin slice among contiguous impressions which formed our life at that time; the memory of a certain image is but regret for a certain moment; and houses, roads, avenues are as fleeting, alas, as the years.”¹

In Marcel Proust’s most prominent work, *Remembrance of Things Past*, the author brings to consciousness the importance of the past with respect to its influence on the present. In *Time Regained*, the work’s final volume, the Narrator comes to realize that the sensations of both that which has past and that which is currently happening allow him to step outside time and receive a glimpse of the true nature of things. He realizes his whole life has been preparing him for the mission of describing events in their true state, and finally resolves to begin writing. The significance of what is happening is often placed within the memory or in the inner contemplation of what is described. This focus on the relationship between experience, memory and writing and the radical deemphasizing of the outward plot, have become staples of the modern novel, shifting contemporary thought into a time-displaced aura. Taking that further, this internalized attention towards self-discovery and reflection may also be of value to material making and the comprehension of experiential influence on creation.

¹ Marcel Proust. *Remembrance of Things Past*. (London, UK: Chatto & Windus, 1968), 267.

Meditations on the Connections Between Memory and Graphic Design

INTRODUCTION

Memory is an organism's ability to store, retain and recall information and experiences.² Since the adoption of memory as an investigative area in the social sciences in the twentieth century, it has been primarily defined and described in terms of its structurally imposed input and output mechanisms and has generated a wide variety of scientifically rigorous discourse.³ Two issues currently exist in memory research: 1) the difficulty of visually depicting the active process of memorizing; and 2) the limitation of assessing memory as a categorized entity rather than a multidimensional, pluralized system. In simplifying highly complex imagery, graphic design has made significant contributions to contemporary visual aesthetics, positioning itself as a mediator between a wide variety of comparable disciplines. In addressing issues of visual complexities, it is probable that the practice of graphic design can shed light on the existing concerns of memory within the visual modality. It is the central hypothesis of this body of work that much can be learned about the active process of memory through graphic design practice, which entails a creative process that conveys a specific message (or messages) to a targeted audience⁴. By applying its principles and composing visual metaphors of storing information alongside practices dating from the medieval ages which used visual techniques to store information, graphic design can bridge the disconnect between contemporary memory models by generating a visual lexicon of an abstract mental process.

The goals of this thesis are as follows: 1) to investigate memory as an active, fluid and pervasive process in a visual manner drawing from contemporary graphic design practices; 2) to examine memory using postmodern ideologies, free of scientific doctrines and systematic organizations; 3) to integrate the mnemonic principles collectively known as the Art of Memory into informed applications of graphic design, paying mind to textual, graphical and architectural representations; and 4) to develop new methods of practicing graphic design through an experimental approach that interconnects traditional design practices with alternative analog and digital techniques. These goals have arisen from two overarching questions: 1) how can graphic design offer further insight into our knowledge of the metaphysical workings of memory and the recollection of experiences and information; and 2) how does one visualize the process of memorizing in a purely experiential/subjective fashion?

² Ian Neath and Aimée Surprenant. *Human Memory*. (Belmont, CA: Wadsworth, 2001), 3.

³ *Ibid.*, 3.

⁴ Ellen Lupton and Jennifer Cole Phillips. *Graphic Design: The New Basics*. (New York, NY: Princeton Architectural Press, 2008), 234.

In addition to these two main lines of inquiry, this thesis intends to demonstrate the ability of graphic design practice to act as a mediator between other disciplines – the cognitive sciences, for example – in which visual phenomena are predominantly rendered from statistical data and are not usually subjected to any other practices that impose clarity or alternative insights into the information being presented. In providing a variety of visual aesthetics and approaches to aid in the comprehension of theoretical concepts from various topics, graphic design not only adds to the body of knowledge set for the discipline in question but also demonstrates the value in which this creative process can lend to addressing complex visual phenomena. Further, new approaches found through the bridging of diverse disciplines may lend additional insights into the theoretical and practical construct of graphic design. This thesis aims not only to generate a visual awareness of memory as one of the key underlying fundamental processes of the human experience, but to also demonstrate that the practice of graphic design is consequentially instilled in visual phenomena and thus influences recollected experiences. It is hoped that the work presented here is seen as a response to objective, scientific accounts of memory and submissively critiques its limitations through a de-emphasis of systematic methodologies and an embracing of chance, happenstance and personal inquiry.

Portrayals of Memory in the Cognitive Sciences, Contemporary Art and Graphic Design

Unlike the visual arts, the cognitive sciences utilize graphics as a means of visually portraying collected data in simplistic terms, with little emphasis on the design of the graphics or in developing a visual lexicon in which to operate. As an example, Figure 1⁵ displays the proportion of items correctly recalled in order as a function of list length in a long-term memory span task. The primary objective of the graphic does not appear to be within the realm of contextualizing the information or rendering the data as a simplistic entry point for non-scholars, but rather to serve as a visual method of identifying a trend in the data. The graphic also denotes data that was obtained from the results of an examination-like testing procedure. This approach differs substantially from the work conducted on memory within contemporary art.

⁵ Neath and Surprenant, *Human Memory*, 78.

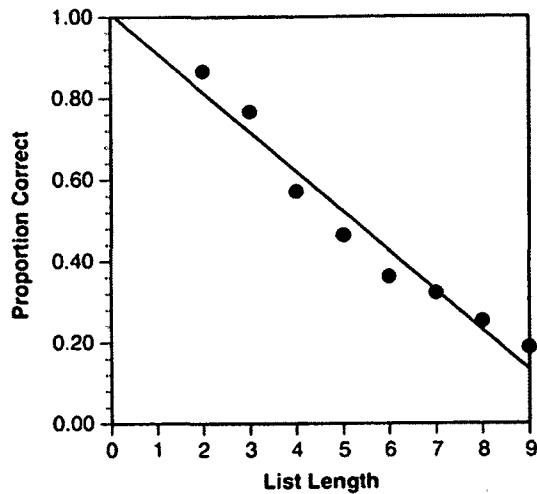


Figure 4.4 Long-term memory span: the proportion of items correctly recalled in order as a function of list length. There was a 5-minute delay between end of list presentation and recall.
SOURCE: Nairne & Neath (2001).

Figure 1. Ian Neath and John Nairne, *Long-Term Memory Span*, 2001.

Attempts to communicate the process of memory through contemporary art practices have been extensive over the past several decades, and include works by Louise Bourgeois (see Fig. 2)⁶, Judy Chicago (see Fig. 3)⁷, Christian Boltanski (see Fig. 4)⁸ and Tracy Emin (see Fig. 5)⁹. Louise Bourgeois details in *Cell (Eyes and Mirrors)* a memory technique first recorded by ancient scholars in which memories are linked to imaginary objects and images replaced in a room for an ordered sense of retrieval. Interestingly, Bourgeois addresses indirectly the implications of the Art of Memory mnemonics as a working methodology for visual graphics.¹⁰ Alternatively, Judy Chicago's piece, *The Dinner Party*, with its attempt to end the ongoing cycle of omission in which women were written out of the historical record, communicates sentiments of a collective and selective memory. The piece consists of a triangular table with each place setting honoring the accomplishments of a particular woman, specifically emphasizing three distinct periods in which women cultivated substantial influence on society but were at the time largely undermined.¹¹

⁶ Joan Gibbons. *Contemporary Art and Memory*. (London, UK: I. B. Tauris, 2009), 4.

⁷ *Ibid.*, 16.

⁸ *Ibid.*, 18.

⁹ *Ibid.*, 27.

¹⁰ *Ibid.*, 5.

¹¹ *Ibid.*, 15.

In contrast to Chicago's work, Christian Boltanski's *Autel de Lycée Chases* emphasizes the sentiments of "postmemory" – the inheritance of past memories that are being worked through by descendants of those who have experienced traumatic events – which demonstrates the act of memory forming a cultural narrative at both personal and cultural levels.¹² The work of Tracy Emin exemplifies further exploration into the personal realm, in which the piece *My Bed* blurs the boundaries between life and art and generates tensions in the convergence of anti-art and extreme artistic self-reference. The piece consists of Emin's bed, featuring bedsheets that were stained with bodily secretions, and a floor with items from the artist's room (such as condoms, a pair of knickers with menstrual period stains, other detritus, and functional, everyday objects, including a pair of slippers). The bed was presented in the state that Emin claimed it had been when she said she had not gotten up from it for several days due to suicidal depression brought on by relationship difficulties and is an object-oriented documentation of that period in her life.¹³

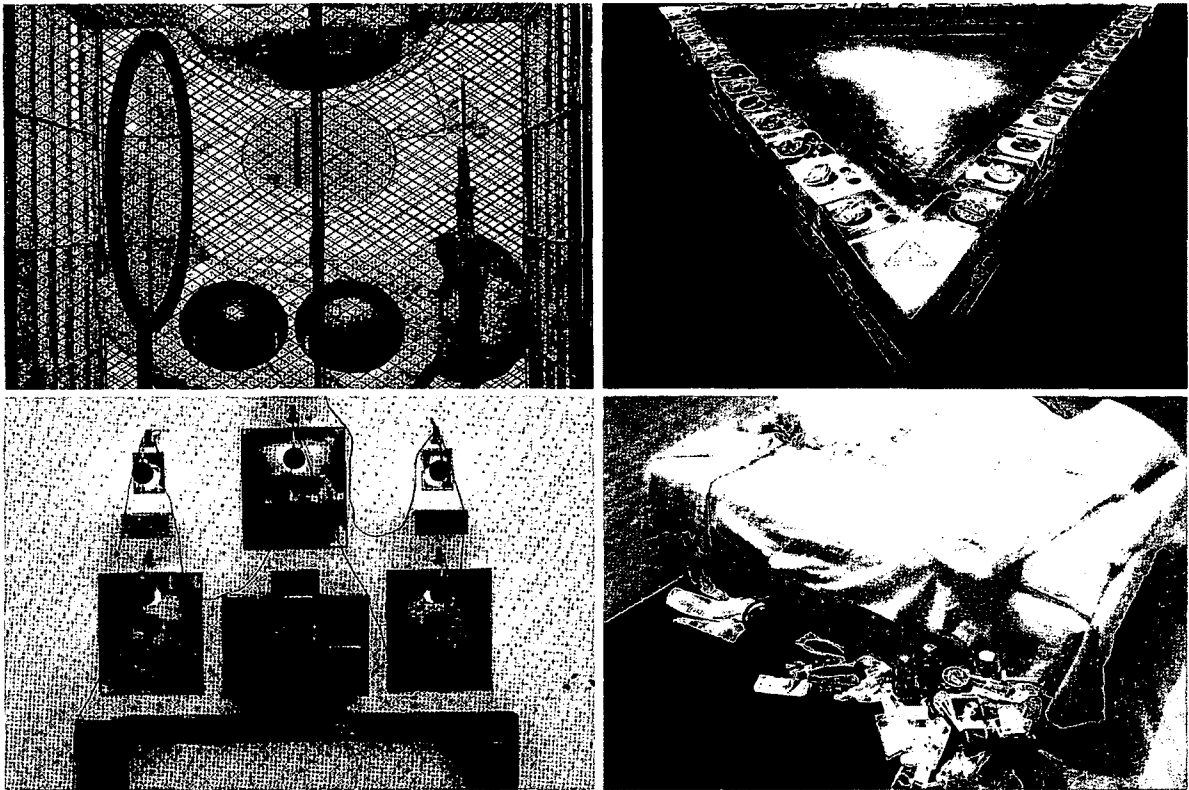


Figure 2. Louise Bourgeois, *Cells (Eyes and Mirrors)*, 1989-1993.

Figure 3. Judy Chicago, *The Dinner Party*, 1970.

Figure 4. Christian Boltanski, *Autel de Lycée Chases*, 1987.

Figure 5. Tracy Emin, *My Bedroom*, 2001.

¹² Joan Gibbons, *Contemporary Art and Memory*, 17.

¹³ *Ibid.*, 28.

A contemporary design practice usually involves a combination of textual and graphic information (of varying degrees) decidedly placed, positioned, composed and balanced onto a certain material form in which the form converts into a tangible artifact. Meaning is then inferred from the composition, color, texture and holistic perception of the artifact.¹⁴ Although memory has yet to be investigated directly in contemporary graphic design practices, several designers, including Marian Bantjes, discuss the role of memory in design and life. In *I Wonder*, Bantjes examines the functions of memory and past emotions in applying a methodological approach to letter-making, and also emphasizes the role of visual narratives in developing an emotional intersection between typographic lettering and specific events that have occurred in her life (see Fig. 6).¹⁵ Californian type designer Jeffrey Keedy also emphasizes the personal subjective experience of designing: “Whenever I start a new job and try to pick a typeface, none of the typefaces give me the voice that I need. They just don’t relate to my experiences in my life. They’re about somebody else’s experiences, which don’t belong to me” (see Fig. 7).¹⁶ These notions emphasize an inherent subjectivity in design making in the postmodern era, specifically where conceptions of memory and experiences are embedded in the design making process.

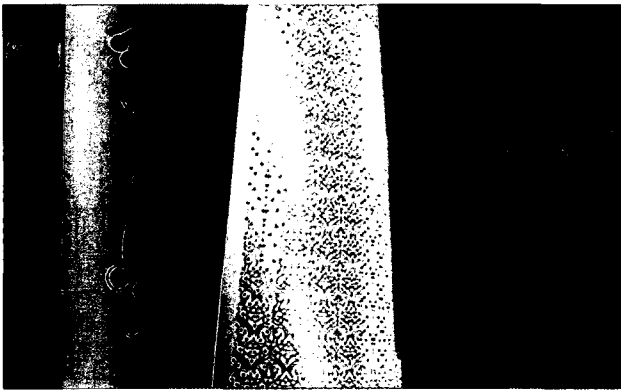


Figure 6. Marian Bantjes, *I Wonder*, 2010.



Figure 7. Jeffrey Keedy, *Spread from Emigre No. 15*, 1991.

¹⁴ This is my personalized operational definition of graphic design practice and comes as an inward-looking response to my education in the discipline.

¹⁵ Marian Bantjes. *I Wonder*. (New York, NY: Monacelli Press, 2010), 34.

¹⁶ Rick Poynor. *Typography Now*. (London, UK: Booth-Clibborn Editions, 1991), 8.

The complex and disorderly consensus of past research in memory when considering the cognitive sciences with that of contemporary art is a testament to the richness of engaging in memory directly. Past recollection and experience carry with them an overabundance of available imagery and potential working methodologies. The openness of this area of investigation was a deciding factor in choosing it as a thesis topic. At this stage in my design practice, I sought a pluralistic and conjectured approach to making so that my work could materialize in a variety of forms and mediums. Not only was this trajectory sound in terms of my goals of making, it also served the theoretical underpinnings of my thesis that consider the multidimensional notions of Postmodernity as a parameter for the making process.

Towards a Postmodern Framework

Many postmodern frameworks draw influence from both contemporary viewpoints as well as outmoded insights that are usually displaced from modern practice due to technological advancements;¹⁷ such a framework is true within the inquiries of memory. In taking a postmodernist stance on the formation of memories and the active process of memorizing, I have chosen to draw investigative insights from the ancient practices of memory, prior to scientific inquiry. In many ways, the ancient practice of the Art of Memory employs principles that remain fundamentally rich in the storage and retrieval of memory. Furthermore, the conceptual basis of the Art of Memory forms a superior, solidified crux towards a postmodernist discourse of memory in comparison to nineteenth and twentieth century theories on the subject.

Postmodernism, a movement away from the viewpoint of modernism problematizes the notions of objective truths and inherent suspicions towards global cultural narratives or meta-narratives, and involves the belief that many, if not all, apparent realities are only social constructs, and that they are subject to change inherent to time and place.¹⁸ Postmodernism in its essential form rejects the use of sharp classifications such as male versus female, straight versus gay, white versus black, and imperial versus colonial; as a result it holds realities to be plural and relative, and dependent on whom the interested parties are and where their interests lie. Whereas modernism was primarily concerned with principles such as identity, unity, authority, and certainty, postmodernism is often associated with difference, plurality, textuality, and skepticism. In large part, this thesis invariably concerns the latter, both in terms of its theoretical foundations as well as the means of production.

¹⁷ Poynor, *Typography Now*, 157.

¹⁸ Christopher Butler. *Postmodernism: A Very Short Introduction*. (London, UK: Oxford University Press, 2002),

The modernist approach, customarily found in the cognitive sciences, approaches memory in the evaluative sense, where participants are tested on their internal storage abilities using common recall and recognition tasks. While there is certainly merit in this approach to memory research, a pluralistic, highly intimate and virtually arcane methodology is also equally vital. The cognitive sciences provide an exceptional framework for addressing memory in the empirical sense, where the ultimate goal is to collect data and discover commonalities among a sample of a population. Alternatively, much can be learned through a subjective recollection of an individual's experiences where memory is assessed qualitatively and the central focus is reliant upon the unquantifiable elements of time, sensation and emotion when retrieved from the past. Postmodernism as a framework welcomes this often frowned approach by scientists to theory and outcome.

METHODOLOGY

There are two distinct methodological approaches used in this thesis; one involves techniques derived from theory while the other entails analog and digital experiments in graphic production. The Art of Memory mnemonics were utilized as a framework for adopting visual methods of communicating memory within the confines of graphic design practices. These mnemonics serve in large part as mediators between form and content, both of which yield to the concept of storing information as a result of these methods. In light of this methodology being largely concept-driven, a variety of form and content could emerge from a production standpoint. Graphic media could be realized as two-dimensional standard poster art or could take the form of an interactive digital piece. Both works could thus maintain a focused conceptual affiliation with each other and co-exist in complimentary forms. These approaches as a result led to a series of formative investigations into graphic production. The materials used to produce the work were in large part experimentally chosen and executed. These choices culminated in the balance between analog and digital making methods that are readily apparent in the form of the works produced.

The Art of Memory: Architectural, Graphical and Textual Visualizations

The Art of Memory, a term derived from the medieval ages, is used to consolidate a variety of mnemonic principles and techniques that aid in the organization of memory impressions, improve recall of stored items, and assist in the combining and developing of ideas. Although it is titled as a set of artistic principles, the Art of Memory prescribes a method or set of prescriptions that adds order and discipline to the pragmatic, natural activities of human beings, suggesting a framework based on rhetoric, logic and science rather than visual arts. Techniques commonly employed in the Art include the association of emotionally striking images within visualized locations, the chaining or association of groups of images, the association of images with schematic graphics and the association of text with images.¹⁹ Any or all of these techniques were often used in combination with the study of architecture, books, sculpture and painting, which were seen by practitioners of the Art of Memory as externalizations of internal memory images and the organization of the holistic to-be-remembered information.

¹⁹ Frances Yates. *The Art of Memory*. (Chicago, IL: University of Chicago Press, 1966), 17.

Perhaps the most important principle of the Art is the dominance of the visual sense in combination with the orientation of 'seen' objects within space. This principle is reflected in the early Dialexis fragment on memory (dated approximately 400 BCE), and is found throughout later texts on the Art. Mary Carruthers, in a review of Hugh of St. Victor's *Didascalion*, emphasizes the importance of the visual sense as follows:

"To help recall something we have heard rather than seen, we should attach to their words the appearance, facial expression, and gestures of the person speaking as well as the appearance of the room. The speaker should therefore create strong visual images, through expression and gesture, which will fix the impression of his words."²⁰

This passage emphasizes the association of the visual sense with spatial orientation. The image of the speaker is placed in a room. The importance of the visual sense in the Art of Memory would seem to lead naturally to the importance of a spatial context, given that our sight and depth perception naturally position images seen within space. Moreover, these notions further emphasize the methodological approaches of visual creators in contemporary times. As an example, a common pedagogical approach to instructing design is the teaching of composition, balance and hierarchy, generating a sense of order within space, be it printed matter or a three-dimensional interactive object. The positioning of images in virtual space leads naturally to an order – an order to which we are naturally accustomed as biological organisms – deriving as it does from the sense perceptions we use to orient ourselves in the world. This fact perhaps sheds light on the relationship between the artificial and the natural memory²¹, which were clearly distinguished in antiquity, and also forms the basis of discussion concerning visual thinkers and the ways in which memory acts as an instrument of operation.

²⁰ Mary Carruthers. *The Book of Memory*. (Cambridge, UK: Cambridge University Press, 1990), 34.

²¹ As per Yates (*Art of Memory*, 93), there are two kinds of memory: one natural, the other artificial. The natural memory is that which is engrafted in our minds and born simultaneously with thought. The artificial memory is recollection that is strengthened or confirmed by training. A good natural memory can be improved by this discipline and persons less well endowed can have their weak memories improved by the Art.

Chunking

Many works discussing the Art of Memory emphasize the importance of *brevitas* and *division*; that is the breaking up of a long series into more manageable sets. This is reflected in advice on forming images or groups of images which can be perceived at a single glance, as well as in discussions on memorizing lengthy passages, "A long text must always be broken up into short segments, numbered, then memorized a few pieces at a time."²² This is known in modern terminology as chunking. 'Chunking,' in the discipline of psychology, is a phenomenon whereby individuals group responses when performing a memory task. Tests where individuals can illustrate 'chunking' commonly include serial and free recall, as these both require the individual to reproduce items that he or she had previously been designated to study.²³ Items generally include words, syllables, digits/numbers, or lists of letters. Presumably, individuals who exhibit the 'chunking' structure in their responses are forming clusters of responses based on the items' semantic relatedness or perceptual features. It is believed that the integration of the different items according to their perceptual properties and semantics occurs as a result of higher order cognitive representations of the items on the list. It should be noted that representations of this order are highly subjective, as they depend critically on the individual's perception of the features of the items position in their semantic network.

The concept of chunking information and placing it into distinctive areas within either two-dimensional or three-dimensional planes is related to generating hierarchy in graphic design. Hierarchy is the order of importance within a graphic work and is conveyed visually through variations in scale, value, color, spacing, placement, and other pictorial signals.²⁴ A designer's approach to visual hierarchy typically reflects his or her personal style, methodology, and training as well as the zeitgeist of the period. Similarly to chunking in psychology, a designer bases his or her hierarchical forms on the perceptual features of the texts and images used, and will oftentimes integrate semantic or affective elements together in clusters so that the composition is operationally meaningful.

²² Carruthers, *The Book of Memory*, 82.

²³ Neath and Surprenant, *Human Memory*, 47.

²⁴ *De memoria et reminiscencia*, 452, 8-16, cited in Yates, *The Art of Memory*, 1966, 34.

Affect and emotion

The importance of affect and emotion in the Art of Memory is frequently discussed in Yates' account of the principles.²⁵ The role of emotion in the Art can be divided into two major groupings: the first is the role of emotion in the process of seating or fixing images in one's memory, the second is the way in which the recollection of a memory image can evoke an emotional response. One of the earliest sources discussing the Art, the *Rhetorica Ad Herennium*, emphasizes the importance of using emotionally striking imagery to ensure that the images will be retained in memory:

“We ought, then, to set up images of a kind that can adhere longest in memory. And we shall do so if we establish similitudes as striking as possible; if we set up images that are not many or vague but active; if we assign to them exceptional beauty or singular ugliness; if we ornament some of them, as with crowns or purple cloaks, so that the similitude may be more distinct to us; or if we somehow disfigure them, as by introducing one stained with blood or soiled with mud and smeared with red paint, so that its form is more striking, or by assigning certain comic effects to our images, for that, too, will ensure our remembering them more readily.”²⁶

In modern terminology, the concept that salient, bizarre, shocking, or simply unusual information will be more easily remembered is referred to as the Von Restorff effect.²⁷

With existing technologies used in contemporary graphic design, striking imagery can be visually rendered with moderate ease. Combining graphical forms that typically do not coexist is a relatively simple task in the majority of cases and as a result, graphic designers are afforded vast opportunities in making forms memorable, striking and meaningful. A subset of my research involved visual investigations into the psychological reasons for the choice of mnemonic images. Why is it that certain images are strong, sharp and suitable for awakening memory, whilst others are so weak and feeble that they hardly stimulate memory at all? The *Rhetorica Ad Herrenium* explains the necessity of salient imagery for memory in the following passage:

²⁵ Yates, *Art of Memory*, 14.

²⁶ *Ad Herrenium*, III, xxii.

²⁷ Neath and Surprenant, *Human Memory*, 56.

“When we see in every day life things that are petty, ordinary, and banal, we generally fail to remember them, because the mind is not being stirred by anything novel or marvelous. However, if we experience something exceptionally base, dishonourable, unusual, great, unbelievable, or ridiculous, we are likely to remember these items for a long time.”²⁸

Accordingly, things immediate to our eye or ear we commonly forget; we have been visually trained by way of evolution to not generate focus on the mundane aspects of our periphery. When we are presented then with striking, bizarre or emotionally charged images (either internally or externally), such forms internalize almost effortlessly. The determination of a lasting image, however, is highly subjective and as a result so too is the imagery produced while practicing the Art of Memory. The affective and emotional qualities of the salient imagery produced for the purposes of memorization are entirely unique to each individual. Because the Art occurs internally and the techniques are refined on an individual basis, universal or broad visual archetypes are not necessary nor are they encouraged.²⁹ However, it should be noted that certain archetypes can serve as a common language or reference point into memory images. The primary means of storing information stems from seamlessly integrating new information with previously remembered knowledge. With previous knowledge varying widely across individuals, it is suggested that practitioners of the Art utilize their own subjectively determined imagery for the purposes of memorization. In light of these factors, striking, bizarre and emotionally charged imagery provide a conceptual approach to form and visual making in my thesis practicum.

Experimental Practice: The Constant Search for New Forms

Although many individuals practice graphic design based on conventional standards, whereby form yields to the application for which to serve commercial production and not as a methodological avenue of expression and experimentation, this thesis approaches graphic design as a disciplinary practice in similar light to Edward Fella, Barry Deck, Jeffrey Keedy and many other designers who experimented with the revolutionary technological capabilities of the computer in the late 1980s and early 1990s.³⁰ As Rick Poynor noted in *Typography Now*, “For designers who are dissatisfied with the glib solutions and formulaic perfection of professional graphics, naïve vernacular approaches to type (and imagery) appear to offer a rich seam of authenticity, allusion, expression and meaning.”³¹

²⁸ *Ad Herrenium*, III, xxiii.

²⁹ Yates, *Art of Memory*, 21.

³⁰ Rick Poynor. *Typography Now*. (London, UK: Booth-Clibborn Editions, 1991), 12.

³¹ *Ibid.*, 11.

Adding to this statement, expressive forms of graphic design – specifically those apparent in the 1990s era of “grunge” typography – appear to be consistent with the visual atmosphere of memory, as human memory is often characterized by imperfect, displaced and noisy parameters. Barry Deck, a typographer and graphic designer who gained prominence in the latter half of the 1990s, noted his embracing of “type that isn’t perfect... Type that reflects more truly the imperfect language of an imperfect world inhabited by imperfect beings.”³² This approach to design provides an experimental and openly expressive framework for visually depicting various processes of memory.

Along with 1990s-era graphic designers and typographers, my work is highly influenced by contemporary artists, specifically from the post-abstract expressionist era between 1950 and 1975. Notable influences include León Ferrari, who employs methods such as collage, photocopying and sculpture and often uses text, particularly newspaper clippings or poetry, in his pieces. Ferrari’s art often deals with the subject of power and religion; images or statues of the saints, the Virgin Mary or Jesus Christ, for example.³³ His work usually materializes as text-like imagery that is within the realm of painting and drawing. Cy Twombly is another influential figure on my thesis practicum. Twombly’s work blurs the line between painting and drawing, and purposely discards painting figurative, representational subject matter, citing the line or smudge, each mark with its own history, as its proper subject.³⁴ Many of his later paintings and works on paper moved into what was deemed “romantic symbolism”, with their titles serving as ground for interpretations of the shapes, forms and words in the compositions. The approach of these artists influenced both my form-making techniques as well as a means by which to ground and intersect my work with meaning. Both artists resonated with my personal tension between figurative, realistic intentions in graphical forms. I welcome a design practice that attempts to absolve imagery of its direct and literal prescriptions and, as a result, searches for meaning elsewhere, be it in formal textures, cultural and social metaphors or meta-level concepts. What is evident in the work of these artists is their fundamental desire to assimilate a sense of wonder, so that the work may reflect multiple meanings and be engaged across various trains of thought and discourse. This desire also materialized as an objective in my thesis practicum. As it became increasingly clear that memory relied on a plural investigation that was flooded with subjective notions of the past, it was my unrestricted mandate to

³² Poynor, *Typography Now*, 13.

³³ Andrea Giunta, Luis Perez-Oramas, León Ferrari and Mira Schendel. *León Ferrari and Mira Schendel: Tangled Alphabets*. (New York, NY: The Museum of Modern Art, 2009), 9.

³⁴ Richard Leeman, *Cy Twombly: A Monograph*. (Flammarion, Paris: Thames & Hudson, 2005), 4.

create the sense of wonder that was apparent in these particular expressions of contemporary art.

Prior to beginning any design project, I typically undergo several phases that include reading and writing on the subject, developing a visual language through small-scale design studies and making various forms of graphic work. In most cases posters are my preferred method of developing a visual lexicon for the imagery and meaning that I wish to convey. The products may either become 'final' artifacts of the project or simply pieces that conduct my progression towards a decisive object. I do not sketch in the traditional sense, whereby individuals fill sketchbooks with a series of preparatory drafts of their potential artifacts. My process requires an increased level of openness in the nascent stage. As such, I tend to improvise the preliminary step into making, in that I typically utilize 'vicinity' materials in the studio to begin the creation of a print design. Typically, following a moment of spontaneous inspiration, I will pick up a piece of paper, canvas, wood or poster board and begin the analog process of making in which the tactile, improvised components of my work are realized. The typography and imagery may either be manipulated at this stage or at a later period when the work is digitally processed. The final work is usually composed, balanced and hierarchically delineated on the computer, as the digital graphic production process allows sophisticated capabilities of manipulating scale and placement of the graphical elements. With regards to this thesis, the process of making an artifact is equally important as the completion of one. My focus weighs heavily on recollection, memorization and meaning – integrating memory into my practice as a vehicle for experimentation and discovery.

RESULTS

My thesis is the culmination of an 11-month long investigation into communicating Art of Memory principles and techniques through contemporary graphic design practices. I intentionally situated and framed my work around these ancient principles for two reasons; the first being that the visually-driven, metaphorical Art of Memory principles form a seamless nexus between my past research in memory and the discipline of graphic design. In the first year of my graduate design degree, I conducted a series of experiment-driven form making studies on contemporary psychological theory in the domains of cognition, learning and forensic research. Reflecting upon these inquiries, I decided to investigate theories of memory that were external to psychology, as a means of developing a larger breadth of understanding towards visualizing memory alternative from that with which I was already familiar. A second reason for choosing the Art of Memory as a primary methodology was due to the highly abstract and diverse nature of the principles. The Art is in many ways interpretive and nebulous, affording various opportunities and possibilities into form making.

Studying the Art was also effective in transgressing my preexisting understanding of memory and welcoming a new visual lexicon of communicating remembrance in the visual domain. Taken further, I am particularly interested in the innate capabilities of the mind, wherein prosthetics are not used for aids in storage, calculation or simulation. This interest in the humane qualities of life, including authenticity, forgetfulness and imperfection can be experienced throughout all of the projects crafted under this thesis. The artifacts that I have produced exemplify a constant internal challenge to communicate messages, evoke emotions and make progress in my ability to produce graphic work that is expressive, elusive and thought provoking.

The results of my work can be largely divided into three groups. The Art of Memory employed a number of techniques that were grouped as architectural, graphical and textual in nature. Although these techniques did develop and appear independently of one another, they were usually employed in some combination throughout their period of usage. It is interesting to note that, at their most basic level, each of the three mnemonic techniques are undeniably relatable to the field of design in terms of their prescribed content. As a result, I developed projects that utilized one technique as a primary method. However, in certain cases it is readily apparent that a tangling between secondary methods became commonplace.



Figure 8. James March, *Ode on a Grecian Urn*, 2011. 17" x 24". Parchment, oil paints, acrylic paints, India ink.

Figure 9. "_____", *Ode on Melancholy*, 2012. 30" x 36". Canvas, India inks, Letraset transfers, industrial paints, oil paints, found paper.

Figure 10. "_____", *Ode on a Nightingale*, 2012. 38" x 50". 90lb Maidstone, industrial paints, acrylic paints.

The Textual Mnemonic

Mary Carruthers's studies of memory suggest that the images and pictures employed in the Art of Memory were not representational in the sense that we understand that term today. Rather, images were understood to function 'textually,' as a type of 'writing' and not as something different from it in kind.³⁵ If such an assessment is correct, it suggests that the use of text to recollect memories was, for medieval practitioners, merely a variant of techniques employing notae, images and other non-textual devices. Her work makes clear that for medieval readers the act of reading itself had an oral phase in which the text was read aloud or sub-vocalized, then meditated upon and 'digested' hence making it one's own.

In response to several readings on the textual mnemonic, I conducted a series of experiments in which text and image became formally unified within a composition. The work focused on the automaticity of reading in today's literate society and how our perceptual system attempts to "read" anything in the visual periphery that is glyphic in form. In one series of work, I developed large-scale compositions (ranging from 24" x 36" to 38" x 50") that used the text from John Keats' 1819 odes as content. In *Ode on a Grecian Urn* (see Figure 8) for example, the text of the poem by the same name transitions into imaginary abstraction; the text functions as a formal, subjective component detailing a personalized interpretation of the interconnectedness between the words and their meanings.³⁶

³⁵ Carruthers, *Book of Memory*, 222.

³⁶ With regards to this project, I am addressing the semantic activations and denotative qualities of text, rather than the deeper levels of meaning as discussed in the Barthesian view of 'reading text.'

Prior to composing the piece, I committed the poem to memory by manipulating the spatial and formal qualities of the text in my mind. In making the piece, the text became hierarchically composed in its interpretation of the words during the memorization process. Rather than being dictated by the content, the form and concept were the focal points of this piece. What is interesting to note is that all of the black scrawls contained in the work are in fact parts of letterforms that make up the words of the poem. Ode on Melancholy (see Figure 9) was produced in a somewhat different manner; the text of the poem was memorized by staring at a blank canvas, with the text – enriched by a variety of formal qualities – being mentally placed across various parts of the surface. The concept of this piece revolved around the tensions between the form of the text in its semantic abilities as well as its perceptual qualities. Ode on a Nightingale (see Figure 10) was produced in a rote fashion, wherein the text was remembered internally within a short timespan of six minutes and the markings were produced while blindfolded. The concept of this piece was the necessity of committing items to a prosthetic storage medium in an efficient manner in cases where the to-be-remembered information is not stored in a meaningful way.

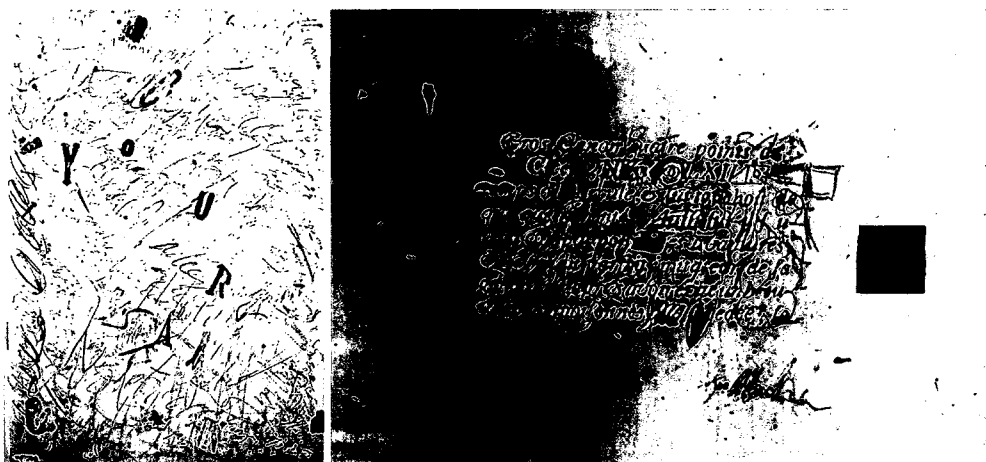


Figure 11. James March, *Ára Bátor*, 2011. 24" x 36". Domtar 200lb, India inks, acrylic paints.

Figure 12. "_____", *Caslon*, 2012. 25.5" x 17". Inkjet print.

In *The Book of Memory*, Carruthers continually emphasizes the distinct human ability to organize visual phenomena.³⁷ This ability can also serve as an aid to our other senses; notably hearing. In music, a commonly employed method of memorizing long passages involves complex, vivid portrayals of hierarchy and structure. The piece *Ára Bátor* (Rowboat) (see Figure 11) exemplified a visual response to how I recalled movements found in the composition *Ára Bátor* by the group Sigur Rós³⁸.

³⁷ Carruthers, *Book of Memory*, 7.

³⁸ Sigur Rós, "*Ára Bátor*," *Með suð í eyrum við spilum endalaust*, 2008, EMI.

The textual components of this piece are hierarchically related to the increased timbral intensity as the song progresses. In an improvised fashion, the text was handwritten using India ink on a 24" by 36" 90lb paper stock. The largest forms in the piece (which represent the climax of the song when the full orchestra is cued) were generated by painted wood type pressed onto the surface by hand.

The next piece that was produced, Caslon (see Figure 12), served to shed new light on my studies of the textual mnemonic. I began this piece by inscribing text that I could manipulate into imagery. Rather than having form drive the text, I decided to let text drive the form. Various images were derived from a Caslon type specimen, culminating in the observable transition from text to image. This piece served as thought-provoking alternative to the aforementioned methods of employing the textual mnemonic as a working methodological approach in that the underlying method was increasingly literal and typographic in nature.

The goal of these investigations was to demonstrate that textual activities (such as picturing and reading) have as their goal the internalization of knowledge, and that these experiences in memory differ greatly from the outward image that is normally associated with text. When literate individuals are presented with any piece of text, a series of semantic relationships in multiple forms are relayed that coincide with the meanings embedded in the glyphic forms.³⁹ These artifacts were exercises in exemplifying that transition from the written word into imagery and vice versa.

³⁹ Neath and Surprenant, *Human Memory*, 78.

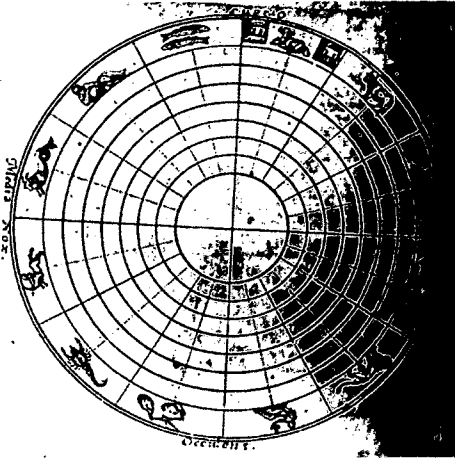


Figure 13. Robert Fludd, *The Zodiac*, 1612.

The Graphical Mnemonic

The graphical mnemonic focuses heavily on emotionally striking imagery within visualized locations, the chaining or association of groups of images and the association of images with schematic graphics or notae. Primary sources show that from very early in the development of the Art, non-physical or abstract locations and/or spatial graphics were employed as memory 'places'. Perhaps the most famous example of such an abstract system of 'places' is the memory system of Metrodorus of Scepsis, an early mnemonist who utilized graphical devices to aid in the storage of information. Metrodorus was said to have organized his memory using a system of backgrounds in which he "found three hundred and sixty places in the twelve signs of the zodiac through which the sun moves."⁴⁰ Some researchers believe it likely that Metrodorus organized his memory using places based in some way upon the signs of the Zodiac (see Figure 13).⁴¹ The signs of the Zodiac were actually devices to aid in remembering the path of the sun and planets. They were also used in ancient times as a set of cues to remember other types of information. Frances Yates details the information available on Metrodorus of Scepsis and his memory techniques at some length. She cites the following passage from an older article on ancient memory systems:

⁴⁰ Yates, *Art of Memory*, 40.

⁴¹ *Ibid.*, 44.

“I suspect that Metrodorus was versed in astrology, for astrologers divided the Zodiac not only into 12 signs, but also into 36 decans, each covering ten degrees; for each decan there was an associated decan-figure. Metrodorus probably grouped ten artificial backgrounds (loci) under each decan figure. He would thus have a series of loci numbered 1 to 360, which he could use in his operations. With a little calculation he could find any background (locus) by its number, and he was insured against missing a background, since all were arranged in numerical order. His system was therefore well designed for the performance of striking feats of memory.⁴²

As we know that these myths were often recited and passed down in generations, it is clear that Metrodorus' technique must have been used to recount these myths. This suggests then that the technique is far older than Metrodorus, and possibly dates back to 1500 - 2000 B.C., if not older. Though it included rooms and theatres as well for the ancient Greeks, Frances Yates argues that in medieval times, cathedrals as well as monasteries and pilgrimage churches utilized similar graphical systems to those recited by Metrodorus within these spaces that contained in them “mnemonic hooks” that allowed celebrants to more easily remember the Gospels.⁴³

⁴² Yates, *Art of Memory*, 40.

⁴³ *Ibid.*, 344.



Figure 14. James March, *The Test*, 2011. 18" x 24". Parchment, acrylic paints, oil paints, India inks.

Drawing from readings on graphical mnemonic devices, I was particularly interested in the concept of how graphics can become two-dimensional storage mediums. A project I produced called The Test (see Figure 14) involved practicing the Art of Memory techniques in order to achieve the reproduction of form. The video, which shows the making of a poster, establishes the process of making a graphic work that is later used to mentally store a series of random numbers. Gathering a variety of striking images in an improvised manner, I utilized the two-dimensional graphic piece as an aid to hold internally 60 digits that were chosen by an examiner. In developing this project, I became informed of the importance of hierarchal composition and making graphics that balance occupancy and white space. For this piece to serve its purpose and function, it required a series of emotionally striking images with perceptual distinctions between them so that each may exist autonomously in the mind. As a result, I could effectively place the to-be-remembered digits within each distinctive image and when the time came to recite them, I could utilize the imagery to recall the stored information. This piece effectively stimulated an interest in not only the formal investigations of memory, but the influence that memory can have on a designer's process in composing his or her work.

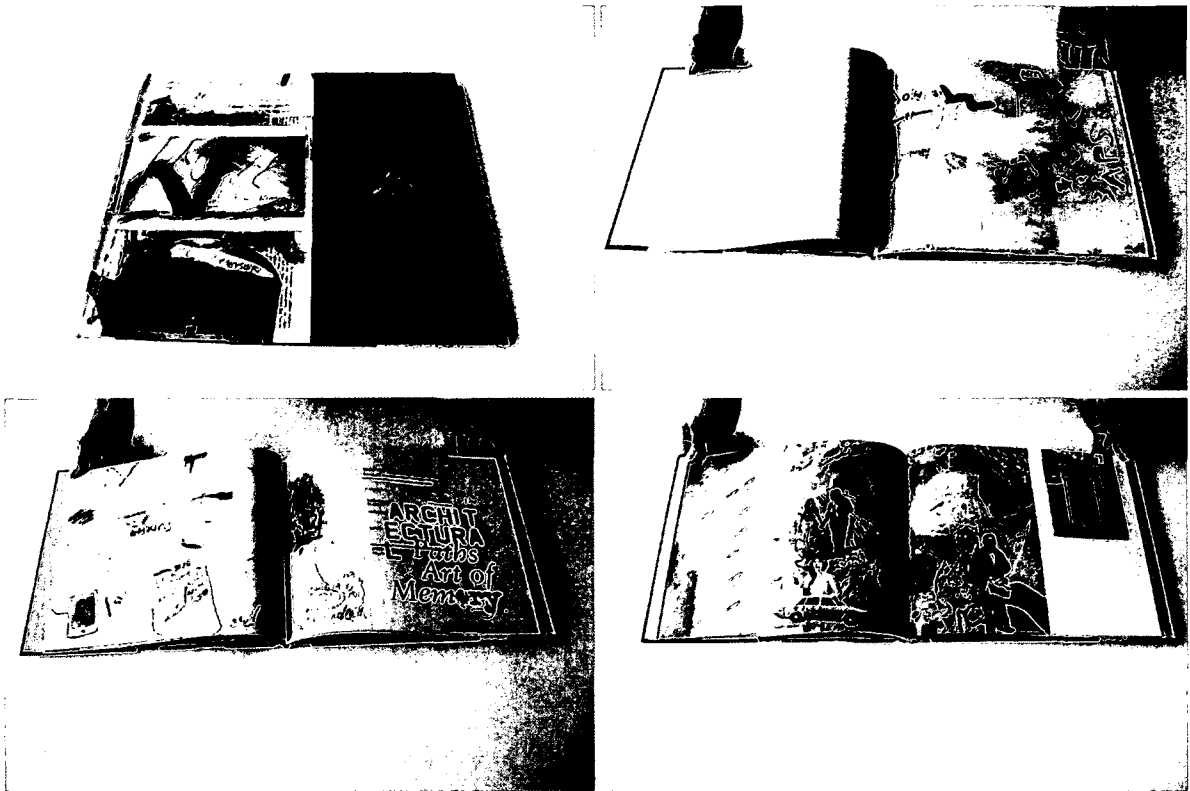


Figure 15. James March, *Atlas: The Peripatetic Nature of Memory*, 2011. 13" x 11". Premium image wrap book. Original compositions were made with graphite, a found atlas, found paper, oil paints, acrylic paints, charcoal, tempera, India inks.

In contrast to The Test project, where I focused on a demonstrating memory's active process in the pursuit of design composition, I began a series of formative experiments on the cartographic nature of an atlas and how it relates to the peripatetic nature of memory. The Art of Memory was in itself a means of mapping space and was traditionally an architectural affair that was often realized in graphical arrangements. In the first century A.D., Quintilian formulated his landmark understanding of the way memory works architecturally. To create a memory, one would imagine a building, and, peripatetically, populate each room with an image; then, to recall the memory, one would mentally re-traverse the building, revisiting in turn all the rooms that had been "decorated" with images. Deliberated in this way, memories appear more like motion pictures, whereby a kind of continual movement exists between spaces and individuals that occupy them. Before the advent of video-based technology offered a substitution for memory, the Art made room for a montage of images. By means of an architectural promenade, it enabled this process of image collection to generate recollection.

As part of the project *Atlas: The Peripatetic Nature of Memory* (see Figure 15), a book was developed that centered on cartographic and abstracted portrayals of vast space, serving as a platform in which I could traverse my own mental recollections of events as I became aware of them during the making of my work. A reciprocal process ensued, where memories invoked the act of making while the making invoked new memories. In order to pass through the doors of one's experiences, memories must be affectively charged. Emotionally striking images are then able to "move" us as they chart the movement of the living world. As Giuliana Bruno states,

"As its own 'Art of Memory,' an atlas itself draws these transcendental memory maps. In its memory theater, the spectator-passenger, sent on an architectural journey, endlessly retraces the itineraries of a geographical discourse that, reading memories as places, "sets" memory in place and in motion. As this architectural Art of Memory, graphical renderings of the subversion of space, embodies a particularly mobile art of mapping: an emotional mapping."⁴⁴

In this interface between the architectural wall and the graphic portrayal presented in *Atlas*, memory places and affects were searched and inhabited throughout time in interconnected visual geographies. Through the design making process visual remnants of present events became memories. This modern method of graphical manipulation highlights materially realized space in motion – not only from page to page or spread to spread, but also within each page and each crevice of the imaginary space. This space is in many ways both content rich and content-less, in that the possible formative arrangements and graphic production are purportedly tangential. Interestingly, this method of making functions similarly to active memory processes. It is rare for one to experience only one train of thought at any given moment. Rather, even our most focused considerations yield towards semantic networks and nodes of indiscriminate information. If our thought processes are intermingled then with large amounts of arbitrary information, and if it is one's desire to memorize large amount of information, how is it that one would do so without ending up in a cycle of digressions and departures from the topic at hand? How can we organize memory impressions so that we oppress exterior phenomena and store information in meaningful ways? The next project stemmed from a desire to address organizational techniques using graphic design practices. I began this project with research into mnemonic techniques developed by Italian philosopher, mathematician and astronomer Giordano Bruno.

⁴⁴ Giuliana Bruno, *Atlas of Emotion: Journeys in Art, Architecture and Film*. (New York, NY: Verso, 2002), 3.

Medieval methods of the Art of Memory differed very little from those of the classical world, but certain changes in the late Middle Ages helped lay the foundations for the Hermetic Art of Memory of the Renaissance. One of the most important of these was a change in the frameworks used for memory loci. Along with the architectural settings most often used in the classical tradition, medieval mnemonists also came to make use of the whole Ptolemaic cosmos of nested spheres as a setting for memory images. Each sphere from God at the periphery through the angelic, celestial and elemental levels down to Hell at the center thus held one or more loci for memory images. Between this system and that of the Renaissance Hermeticists, there is only one significant difference, and that is a matter of interpretation, not of technique.⁴⁵ Steeped in Neo-platonic thought, the Hermetic magicians of the Renaissance saw the universe as an image of the divine Ideas, and the individual as an image of the universe. These ideas raised the Art of Memory to a new dignity. If human memory could be reorganized in the image of the universe in this view, it became a reflection of the entire realm of Ideas in their fullness and thus the key to universal knowledge. This concept was the driving force behind the complex systems of memory created by several Renaissance Hermeticists, including most notably Giordano Bruno.⁴⁶

Bruno's mnemonic systems form, to a great extent, the high-water mark of the Hermetic Art of Memory. His methods were dizzyingly complex and involve a combination of images, ideas and alphabets which require a great deal of mnemonic skill to learn and adopt. Hermetic philosophy and the traditional images of astrological magic appear constantly in his work, linking the framework of his Art to the wider framework of the magical cosmos. One debate through much of the history of the Art of Memory was a dispute as to whether the mnemonist should visualize real places or imaginary ones as the setting for the mnemonic images of the Art. If the classical accounts of the Art's early phases can be trusted, the first places used in this way were real ones; certainly the rhetors of ancient Rome who developed the Art to a high pitch of efficacy used the physical architecture around them as the framework for their mnemonic systems. Giordano Bruno questioned the utility of real spaces and instead developed highly complex systems around abstract space.⁴⁷

⁴⁵ Yates, *Art of Memory*, Ch. 8.

⁴⁶ *Ibid.*, 134.

⁴⁷ Like any other method of memorization, the Art of Memory requires an initial amount of effort in order for the techniques to be proven as an effective means of memorizing material. However, following the preliminary mental labor, its rewards can be far reaching, enabling individuals to rely less on external instruments.

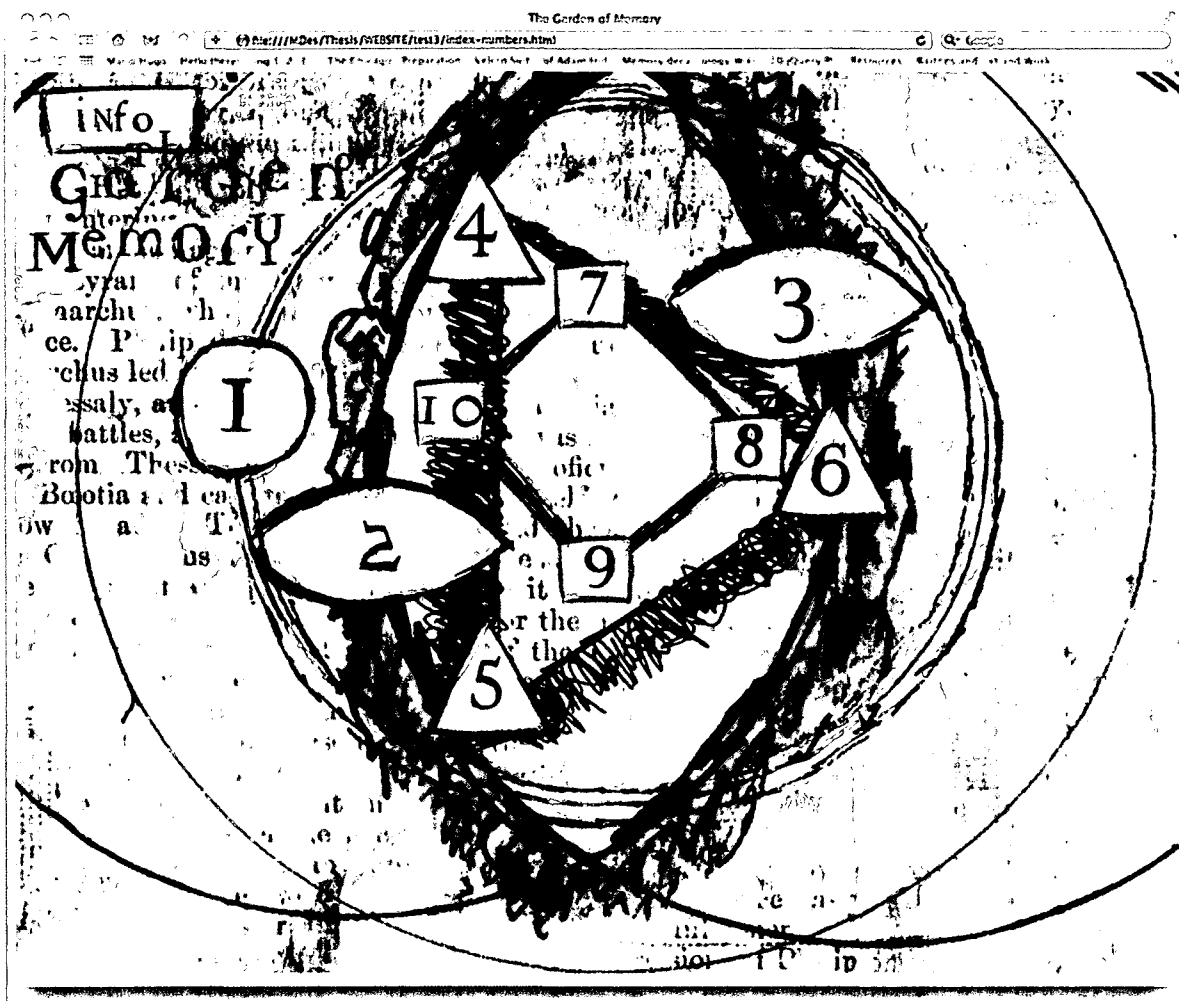


Figure 16. James March, Hortus Memoriae: Interactive, 2011. 1100px x 1200px. Standards compliant Javascript CSS/XML HTML5.

In order to convey the Hermetic tradition of the Art of Memory and to study methods in which an individual could organize and possibly store visual information via graphical instruments, I developed a project with a form that could handle the complex overlays of information. After several attempts through other mediums, I concluded that an interactive piece could generate an effective outcome. During the Renaissance, the age in which it reached its highest level of development, the Hermetic Art of Memory took on a wide array of different forms. Traditional writings on mnemonics generally divided the principles of the Art into two categories. The first consisted of rules for places – that is, the design or selection of the visualized settings in which mnemonic images are located.

The second consisted of rules for images – that is, the building up of the imagined forms used to encode and store specific memories.⁴⁸ The interactive system that was developed, titled Hortus Memoriae: Interactive (see Figure 16), uses a resolutely imaginary set of places, based on the numerical symbolism of Renaissance occultism. Borrowing imagery used by the Hermeticists of the Renaissance, this interaction piece presents a garden, *Hortus Memoriae*, or the Garden of Memory. The user imagines a garden that contains several places, each with a distinctive number and gazebo. In each gazebo one is able to store an image, idea, or text. In order to make each image memorable so that the user's items can be stored within them, striking, weird, obscure, distinct features are present so that each has a lasting and distinctive quality.

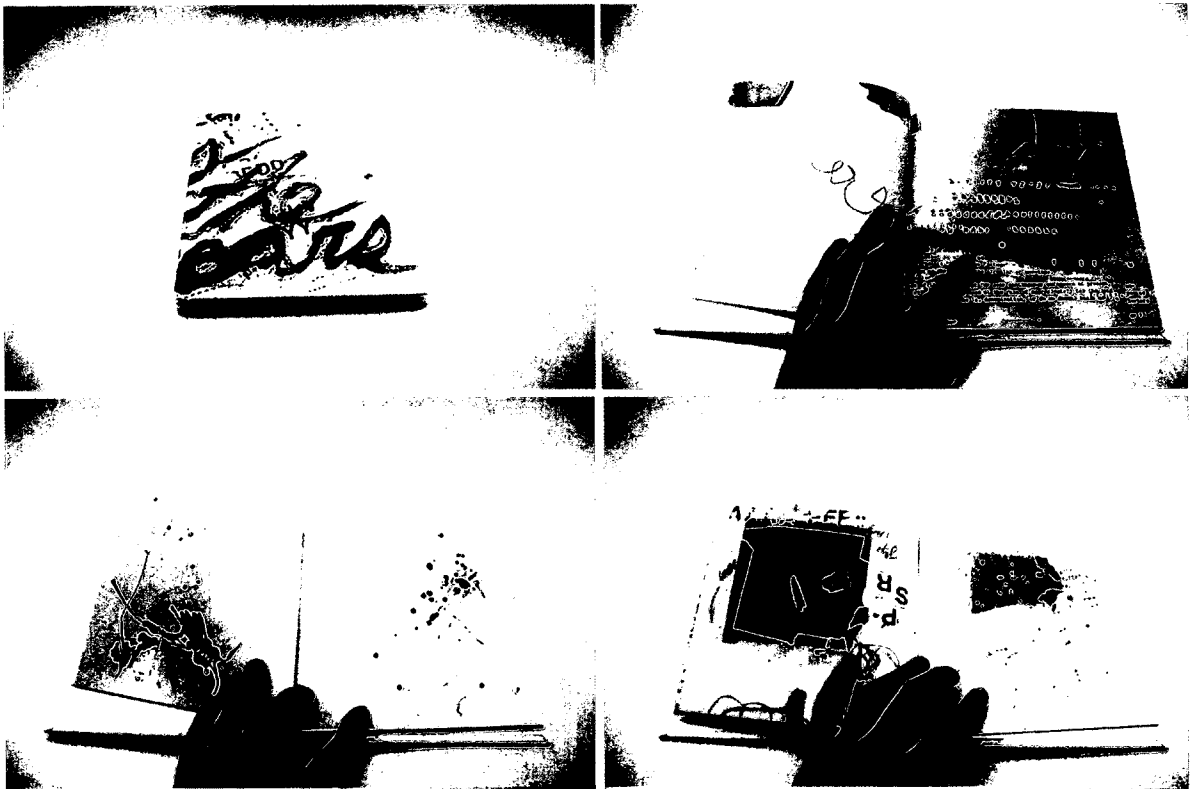


Figure 17. James March, *Alas, As the Years*, 2012. 7" x 7". Premium image wrap book. Original compositions were made with wood, leaves, flowers, twigs, mirrors, glasses, wire, shale rock, pencil, oil paints, charcoal, Letraset, wax.

⁴⁸ Also of equal importance are rules for practice, or the methods in which one approaches both the rules for places and rules for images. For the sake of being topical, I have chosen to not expand on this subject for this thesis.

The interactive study, while in obvious terms was a formative investigation into contemporary media technologies, also sparked a desire to question the concept of a distinctive image. How is it that only a small fraction of the information we are presented with actually becomes stored in memories? And how do particular images get stored while others become forgotten? Alas, As the Years (see Figure 17), a study comprising of found natural objects, arises from one of the most curious and surprising passages in the treatise of the Art of Memory: namely the psychological reasons for the selection of mnemonic images. We must enquire into this so as to know which images to avoid and which to seek. The premise behind this study was to integrate natural components of wood, chlorophyll, sand and rock into a composed piece of work. These mundane elements then become honored pieces and thus can be transmitted into a meaningful terrain. Furthermore, as the pieces themselves become memorable, so does the composition, in its entirety; a flat sheet of paper arguably resonates to an individual in a way that the twig or rock by itself cannot. Although the images may appear vague and non-distinctive, an exceptional beauty and a prolonged sense of disfigurement characterize them so that the forms become striking and active to the mind. In the majority of cases, the natural materials were composed onto the page wherein they became the primary component. As such, due to the hierarchical order, as well as the three-dimensional quality of materials being manipulated on a two-dimensional surface, the objects become meaningful within the composed layout of the page.

Studies on the graphical mnemonic resulted in an extensive collection of artifacts, perhaps due to its natural relationship with graphic design. On several occasions while reading discourse on this set of mnemonic devices, I found myself intrigued by its connection to contemporary graphic design. The Art of Memory, and more specifically the graphical mnemonic, was largely concerned with certain visual philosophies that are now at the forefront of what we refer to as 'basic design elements'. Successful works of graphic design usually comprise of elements of text and imagery that are composed using sophisticated methods that establish contrast, unity and balance across the surface of the piece. Rhetors discussed in ancient times that the positioning of images in virtual space leads naturally to an order to which we are naturally accustomed as biological organisms. This fact perhaps sheds light on the relationship between the artificial and the natural memory, which were clearly distinguished in antiquity.

“It is possible for one with a well-trained memory to compose clearly in an organized fashion on several different subjects. Once one has the all-important starting-place of the ordering scheme and the contents firmly in their places within it, it is quite possible to move back and forth from one distinct composition to another without losing one’s place or becoming confused.”⁴⁹

Also apparent in the rhetorical treatises was the desire to make items meaningful and affective in their formal or material qualities. Materiality, in addition to formal production in design can also serve to augment meaning. In many cases, the materiality of the work is strategic in the sense that meaning is ultimately induced by the physicality of the piece.⁵⁰ Generating meaning and significance is a constant concern for graphic design, and the foundations of successful design practices lie in the intersection between proper composition and order, and the production of meaningful text and imagery.

The Architectural Mnemonic

The architectural mnemonic was a key technique employed in the Art of Memory. It is based on the use of places (Latin *loci*), which were memorized by practitioners as the framework that would contain the images or signs placed within it to record experience or knowledge. To use this method one might walk through a building several times, viewing distinct places within it, in the same order each time. After the necessary repetitions of this process, one should then be able to remember and visualize each of the places reliably and in order. Applying this method to the memorization of speech, one could break up the content into images or signs used to memorize its parts, which would then be mentally placed in the locations previously memorized. The components of the speech could then be recalled in order by imagining that one is walking through the building again, visiting each of the *loci* in order, viewing the images there, and thereby recalling the elements of the speech in order.

⁴⁹ Carruthers, *Book of Memory*, 7.

⁵⁰ Imagine a series of industrial piping used to spell out the word “Industrial.” In this particular case, the material nature of the piece is solidifying its meaning and implications.

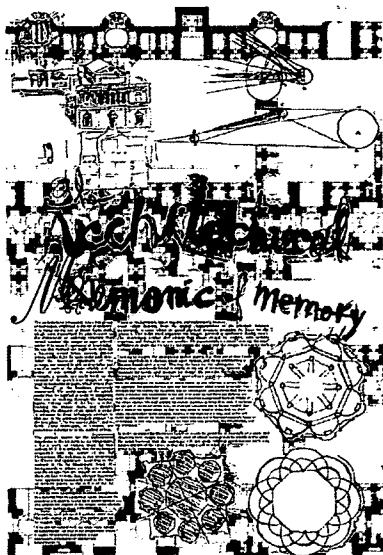


Figure 18. James March, *The Architectural Mnemonic*, 2011. 36" x 54". Architectural laser print.

Throughout various phases of my thesis, I conducted independent studies on what is known as the method of loci. The method of loci is a mnemonic device that was introduced in ancient Roman rhetorical treatises (in the anonymous *Rhetorica Ad Herennium*, Cicero's *De Oratore*, and Quintilian's *Institutio oratorio*), and differs only slightly from the architectural mnemonic in that the method refers to a broader set of visualization tactics. The practice relies on memorized spatial relationships to establish order and recollect memorial content. The term is most often found in specialized works on psychology, neurobiology and memory, though it was used in the same general way at least as early as the first half of the nineteenth century in works on rhetoric, logic and philosophy.⁵¹ The method is also commonly called 'the mental walk'. In basic terms, it is a method of memory enhancement that uses visualization to organize and recall information. Many memory contest champions claim to use this technique in order to recall faces, digits, and lists of words.⁵² Interestingly, these champions' successes have little to do with brain structure or intelligence, but more to do with their technique of using regions of their brain that are dedicated to spatial learning. In my primary studies on the method of loci, I was driven to further my knowledge of architectural theory and the process in which an architect sketches and visually depicts space. In doing so, I became informed of the means in which visual renditions of space could reveal itself in graphical form. The Architectural Mnemonic (see Figure 18) poster served to collect the research that was conducted in the initial phase of my study on the architectural mnemonic, the method of loci and the spatial methods of practice in the Art of Memory.

⁵¹ Yates, *Art of Memory*, 71.

⁵² *Ibid.*, 401.



Figure 19. James March, *The Mental Walk*, 2011. 720ppi. High-definition video.

Following the initial research that I conducted in the summer of 2011, I was led to investigate these spatial processes within new media forms, as the method of loci began to be seen internally as a series of complex hierarchical layers that desired a sophisticated operation beyond two-dimensional forms. As such, I expanded my investigation into new media works. Inspired by Japanese horror films from the 1990s and the film noir movement of the 1940s, I developed a short film entitled The Mental Walk (see Figure 19), which introduced several aesthetic and theoretical improvements in my design-making process. In theoretical terms, the narrative portrays the method of loci within one's mental recollection, wherein I reconstruct a grocery list of items using a familiar room as a storage medium. In order to remember the eight items, I simply placed each in a sequential order around the room and when the time came to recall the items, I reconstructed the space internally. To make each item meaningful, I attached with it two components: 1) a number; and 2) a place that was distinct from its typical place of usage (i.e., spinach in a toilet). In aesthetic terms, the introduction of various forms of memory deficiencies and limitations were presented in one product. As seen in the film, over the course of the playing time, the video is at various moments subjected to a time-displaced aura, whereby moments pass at varying intervals.

As construed in a typical memory trace⁵³, we rarely recall an event and replay it at the same running time as the event actually occurred. In light of this, time in one's mental recollection lends itself to lapses of momentary inductions of thought. It is significant to note that film introduces the variable of time into my work. As architectural and spatial experience occurs over time and is inherently sequential, film became a natural choice to represent the mental walk as a means of memorization.

As noted by Walter Benjamin in his comparison of photographs to memories, the past is unable to be retrieved in full⁵⁴; rather a memory is simply a subjective reconstruction of the past that contains both conscious and unconscious content and that is inherently flawed (demonstrations of this can be found in Elizabeth Loftus' work on eyewitness testimonies⁵⁵). In order to convey the anomalies found in the memory trace, several damaging elements were applied to the raw footage. As a result of these alterations, the aesthetical qualities of the film were in turn visceral, intrusive, noisy, overexposed, displaced and corroded. The visual renderings convey a sense of imperfection and insecurity that coincide with notions of loss within a memory trace. Parts of the film are overexposed, with colors bursting in saturation. Such aesthetics depict one's mental recollections and its commonly sensationalized results of color, in that color is typically remembered as being livelier and more vivid than it actually exists in reality.⁵⁶ In addition to the visual components, this piece was the first of several attempts to introduce other senses, notably sound into my work. The sound component of this piece assimilated the noisy parameters evident in the visual phenomena and added to the displaced, almost schizophrenic nature of the imagery.

In Roman schools of rhetoric, the architectural approach to memory was refined into a precise and practical system. Students were taught to memorize the insides of large buildings according to certain rules, dividing the space into specific loci or 'places' and marking every fifth and tenth locus with special signs. Facts to be remembered were converted into striking visual images and placed one after another in these loci. When needed, the rhetorician needed only to stroll in his imagination through the same building, noticing the images in order and recalling their meanings.

⁵³ I operationally define a *memory trace* as the supposedly stored information from an experienced past event. This trace is also acknowledged to be imperfect and subjectively reconstructed. Many scholars disagree with the defining characteristics of a *memory trace*. As a result, I chose to develop a definition based upon my own research on the matter.

⁵⁴ Walter Benjamin. *Selected Writings*. (Cambridge, MA: Belknap Press of Harvard University Press), 34. 1999.

⁵⁵ Elizabeth Loftus. "Our Changeable Memories: Legal and Practical Implications." *Nature* 4 (2003): 232.

⁵⁶ Nader T. Tavassoli. "Color Memory and Evaluations for Alphabetic and Logographic Brand Names." *Journal of Experimental Psychology: Applied* 7 (2001): 107.

At a more advanced level, images could be created for individual words or sentences so that, in the same way, large passages of text could be stored in the memory.⁵⁷

As previously stated, the movement into imaginary abstraction for memory places was a subject of debate that went on through much of the history of the Art of Memory. One quarrel in particular arose over whether the mnemonist should visualize real places or imaginary ones as the setting for the mnemonic images of the Art. Among the Hermetic writers on the Art, Robert Fludd insisted that real buildings should always be used for memory work, claiming that the use of wholly imaginary structures leads to ambiguity and thus a less effective system. On the other hand, many ancient and Renaissance writers on the subject, Giordano Bruno among them, gave the opposite advice. Perhaps the most effective method, considering both parties of research, is inherently relative and should actually be determined by individuals' personal needs and temperament.

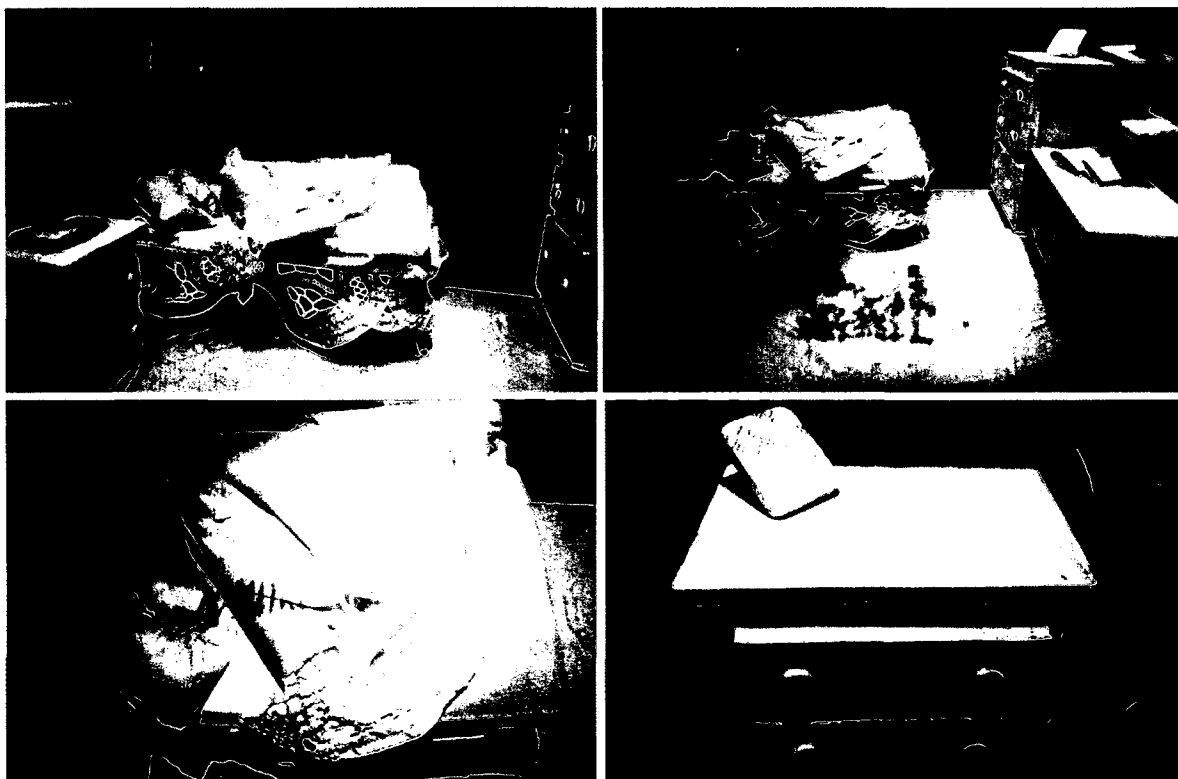


Figure 20. James March, *The Artificial Bedroom*, 2012. 12.5" x 19" x 10". Foam board, grommets, acetate, aerosol paints, tempera, satin cloth, wood, pencil.

⁵⁷ Yates, *Art of Memory*, 46.

As part of the latter stream of thought, I developed The Artificial Bedroom (see Figure 20), a model bedroom that can serve as a mnemonic device. Within this architectural foundation, a layering of information was applied by use of light projection to the various surfaces. The model then acted as a storage medium, whereby images and text were situated in distinctive places around the room for later retrieval. To exhibit the layering of information, acetate prints were superimposed over the space. When light is shone through acetate prints onto a particular surface, the stored information is then layered onto it, generating a metaphorical account of the architectural mnemonic. This experiment demonstrates that various forms of information can be stored: stanzas of poems, zodiac signs, and anatomical parts of the body, as examples. This project aimed to establish how a visual method of memorization could lead to impressive results in developing accurate memorization techniques and in producing creative work wherein memory is addressed directly. Moreover, the process of memorizing information in a visual manner lends itself effortlessly to comparisons between memory and graphic design in terms of their pedagogical and creative emphasis on placement, context, composition, and hierarchy to manipulate and inform the semantic associations across elements.

Spatial Practice

In January of 2012 I began working on a project that involved the making of a space that integrated several integral components of my thesis; notably the combination of text, image, space and mnemonic techniques. The principal goal was to situate myself in a spatial context wherein I would gain insights into the importance of developing internal, visually driven memory techniques. In addition, it was hoped that individuals who occupied the space were made aware of the importance of memory as a basic human trait and how enhancing one's internal memory capacity is not only conceivable but is also of great utility. The artifact titled as Spatial Practice (see Figure 21), in simplistic terms, is the architectural mnemonic in its most realized state. It is an installation piece consisting of common bedroom furniture (a bed, a chest drawer, a nightstand, a desk, a chair and a rug) that are painted pure white in order to deemphasize the coloring of the objects, with projections of shocking imagery overlaid and positioned accordingly onto the surfaces of the objects. In addition to the projected imagery, hand-lettered prose is coated onto various alternative exteriors to the projection surfaces. The room has been stripped of externalized color, with only texture and form remaining, and functions as a hybrid of real and imagined space. The space is 'real' in the sense that the storage mediums are common items found in a typical North American bedroom and 'imagined' in the sense that the bedroom is merely a prototype of a typical bedroom. Reflecting upon my work conducted in 2011, I decided that producing a large-in-scale installation piece was an essential step to fully realizing the theoretical underpinnings of the architectural mnemonic.

The architectural mnemonic is a spatial experience, and thus creating an actual room was necessary for the materialization of my final artifact.



Figure 21. James March, *Spatial Practice*, 2012. 12' x 3.37' x 12'. Twin bed, chest drawer, nightstand, 2' x 2' rug, desk, chair, industrial paint, primer, graphite, India inks.



Figure 22. James March, *Spatial Practice*, 2012. 12' x 3.37' x 12'. Twin bed, chest drawer, nightstand, 2' x 2' rug, desk, chair, industrial paint, primer, graphite, India inks.

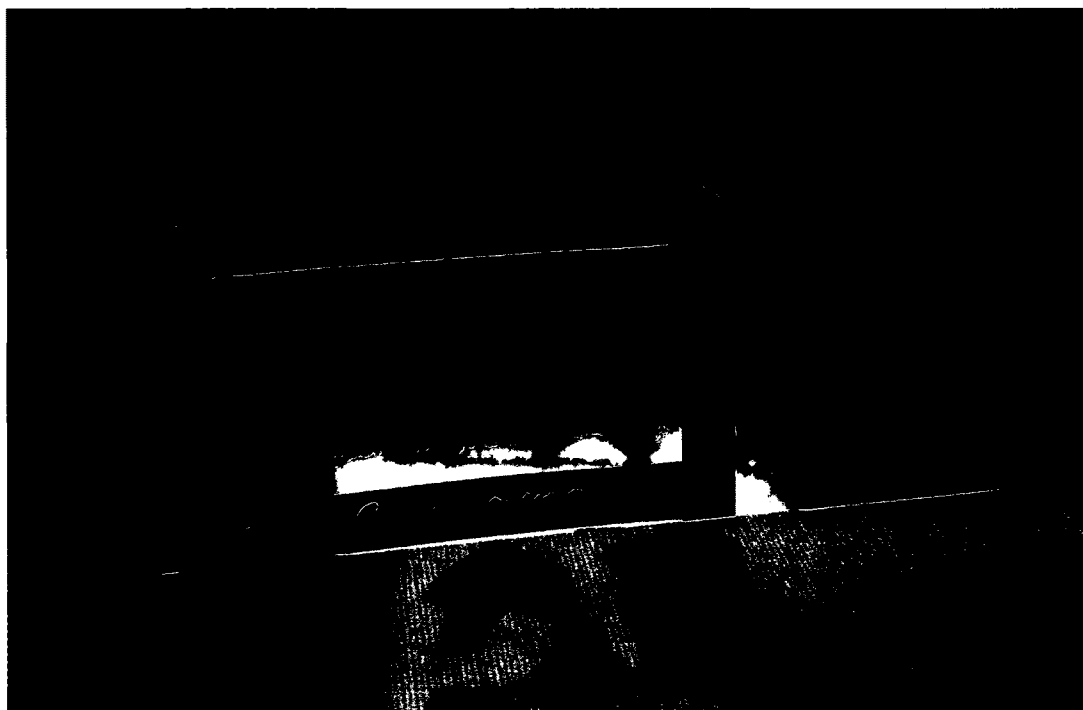


Figure 23. James March, *Spatial Practice*, 2012. 12' x 3.37' x 12'. Twin bed, chest drawer, nightstand, 2' x 2' rug, desk, chair, industrial paint, primer, graphite, India inks.

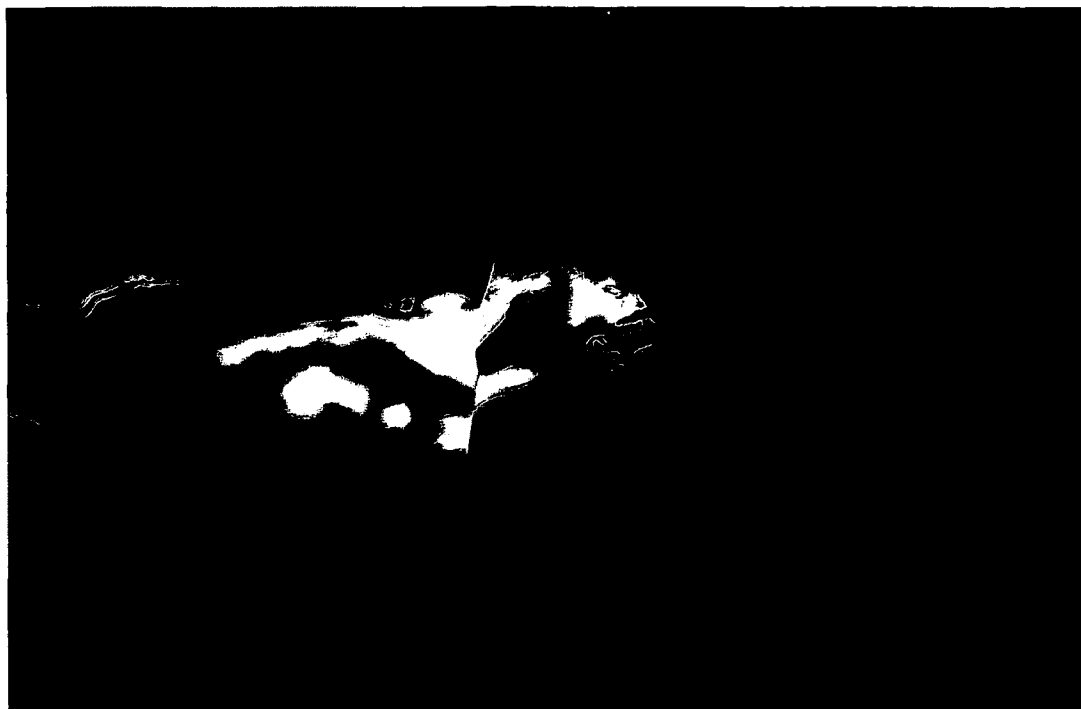


Figure 24. James March, *Spatial Practice*, 2012. 12' x 3.37' x 12'. Twin bed, chest drawer, nightstand, 2' x 2' rug, desk, chair, industrial paint, primer, graphite, India inks.

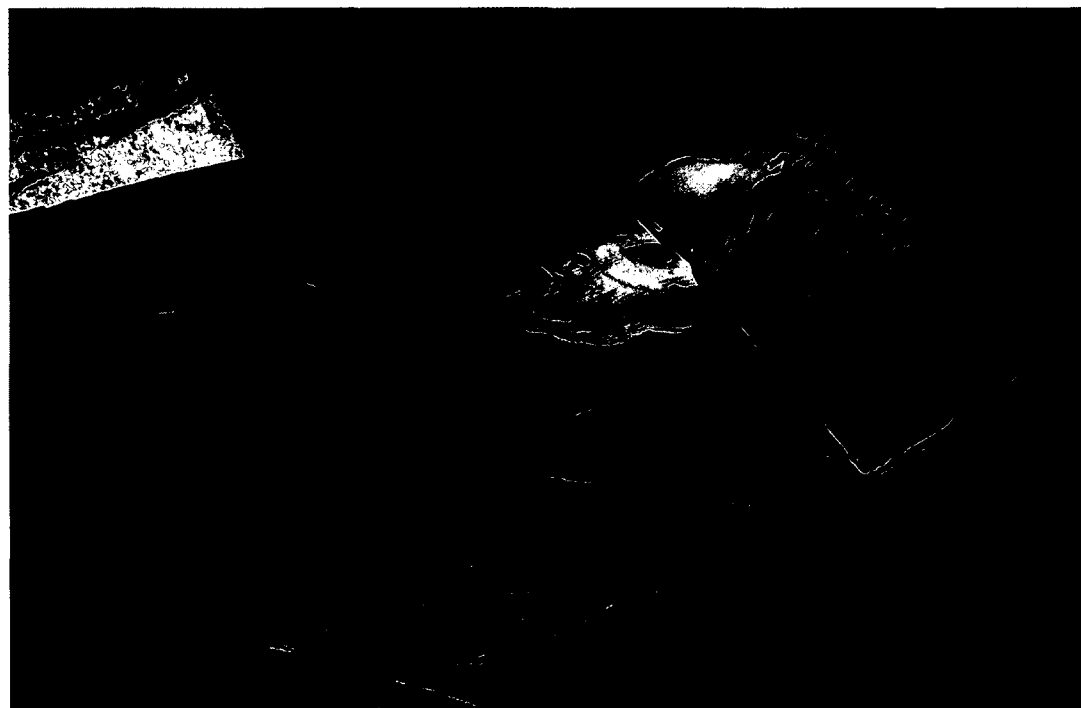


Figure 25. James March, *Spatial Practice*, 2012. 12' x 3.37' x 12'. Twin bed, chest drawer, nightstand, 2' x 2' rug, desk, chair, industrial paint, primer, graphite, India inks.



Figure 26. James March, *Spatial Practice Imagery*, 2012.

Bizarre, odd, striking and disgusting imagery was used for the projected overlays of information, as one of the essential ‘rules’ for a place in the architectural mnemonic is that the ‘image’ be ‘striking-hilarious’ (as per the *Ad Herrenium*)⁵⁸. It is by making the stored material memorable through striking imagery and locating in a remembered place that one is able to retrieve large sums of information. Images were produced based on actual internally created imagery from which I could retrieve a body of information. The sets of images visually stored the following information: 1) points to remember for a speech I have to give at a wedding in the fall of 2012; 2) the saddest moments of my childhood; 3) a small grocery list of items that I used on January 23rd, 2012; 4) the text of William Shakespeare’s *Sonnet 138*; and 5) the first 100 digits of pi. Figure 22 displays the image formations for the points I wish to remember for a speech I have to give at a wedding. I should mention that I met Jon, the groom, at a battle of the bands event (image 1, stored on the bed) due to a conversation sparked by his At the Drive-In (a musical group) t-shirt (image 2, stored on the nightstand) and that, following this initial encounter, we went on to play music together for seven years (image 3, stored on the chest drawer). My depiction of Adrienne, the bride (image 4, stored on rug), prior to meeting her was similar to Talia Shire, the woman who portrayed Adrian in film *Rocky*.

⁵⁸ *Ad Herrenium*, II, xxi.

My most memorable recent experience with Jon and Adrienne that I wish to recall is the day that the three of us went lamp shopping in Ottawa (image 5, stored on desk).

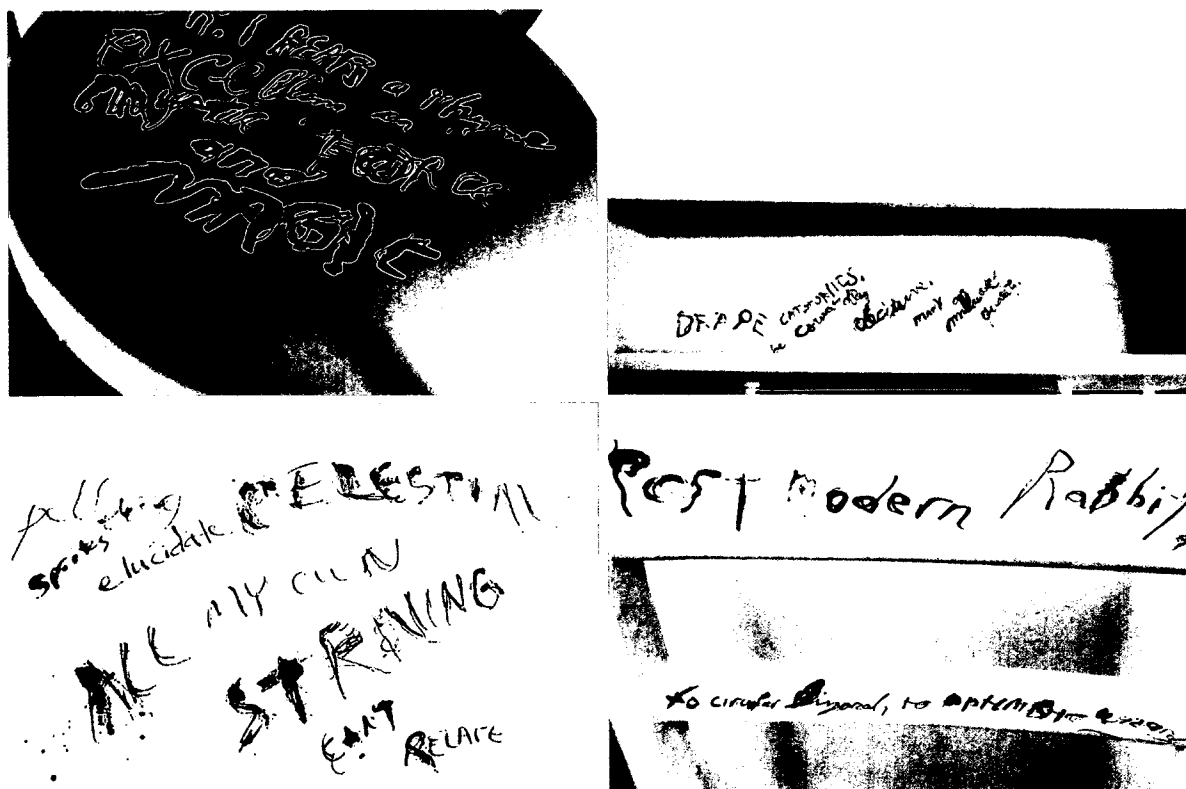


Figure 27. James March, *Spatial Practice*, 2012. 12' x 3.37' x 12'. Twin bed, chest drawer, nightstand, 2' x 2' rug, desk, industrial paint, primer, graphite, India inks.

The hand-lettered prose (see Figure 23) represents the storage of the first 80 digits of the number pi. In order to assign meaning to a rote set of digits, I developed a piece of prose whereby each word could represent the sequential digit of pi and generate some form of imagery:

*Sir, I bear a rhyme excelling in mystic force and magic
 Spelling celestial sprites elucidate all my own striving can't relate.
 To locate they who can cogitate and so finally terminate.
 Drape catatonics, be cowardly decisive, many a malicious quality.
 A pillow, miserably sad, elevating typically the chapter after
 I demolished chest cabinets in mercantile fragments, instant even alcoholic – shed tear.
 Large container to eat mechanical pudding, pleasure a frisky lynx.
 Postmodern rabbit, to circular lizard, to optimistic wizardry, spatially disobeyed.*

The first line (*Sir, I bear a rhyme excelling in mystic force and magic*) allows one to store the digits 3.1415926535 using words. The words can then be used to induce semantic activations based on their formal and affective qualities. Following the transition into words, I separated the prose into manageable chunks (lines) and dispersed them onto the various furniture pieces. I was then able to retrieve the 80 digits in full using the room as a mnemonic device.

Similarly with my other work, I sought to construct a sense of wonder and contemplation in experiencing the artifact. My ultimate desire was for viewers to question their internal methods of memorization and to ponder the archetypally recognized creative process attributed to graphic design. I also made contentions that the piece should imply that there are a variety of ways to visually depict memory and that memory itself lends to subjectivity in making, as every individual has a distinctive way of understanding memory, recollection and experience. My artifact expresses the objectives that I set for it prior to the making process. The artifact culminated in the manufacture of a space in which memory is communicated on a particularly succinct level.

GENERAL DISCUSSION

“Place,’ as I understand it, refers to spaces that can be remembered, that we can imagine, hold in the mind and consider. They are territories that can be lived in with special satisfaction because they resonant with associations that engage our interest. Places bring things to mind. As designers our task is to find ways to make places that are especially memorable and to consider how we may absorb and direct attention through the thoughtful making of places.”⁵⁹

Buildings, rooms, and areas of space may intentionally or unintentionally serve as excellent mnemonic devices that possess the ability to record and transmit vital aspects of culture and history. Memories remain embedded in the form, to be unearthed, read, and decoded – however imperfectly or incorrectly at a later time. Human memory is acquired and is inherently subjective. We as individuals are born with a clean slate upon which experience makes its marks. Like memory itself, the study of memory resembles that of an onion, with its countless layers to be peeled away in search of its core. Despite the limitations and the possibility of never reaching the core, the search is both stimulating and informative on a scholarly and emotive level. It is hoped that this thesis has contributed significantly to personalized accounts of past experience informing the present.

The practical value of the Art of Memory in its ability to store knowledge, as relayed by Hermeticists, is that sole reliance on prosthetics tends to weaken one’s natural abilities; one who uses a car to travel anywhere more than two blocks away will come to find even modest walks difficult. The same is equally true of the capacities of the mind. In my thorough investigation of the Art of Memory, I challenged myself as a designer as well as a memorizer in order to delve into the very essence of my thesis. It is my belief that much can be learned through alternative methods of making and by channeling preexisting theory into graphic design practice. Over the course of my thesis practicum I have investigated numerous methods and approaches that have culminated in the refinement of my practice as a designer and a visual thinker, and the discoveries that I encountered in my making exercises were stimulating on both a personal and practical level.

⁵⁹ Donlyn Lyndon. “The Place of Memory,” in *Spatial Recall: Memory and Architecture in Memory*, ed. Marc Treib (New York, NY: Routledge, 2009), 63.

The visual sphere of consciousness has been drastically altered when compared to medieval times. The way in which individuals engage in visual phenomena in the modern era is determined largely by currently available technology and its implication for addressing visual space. Since the turn of the twentieth century, graphic design has remained a core creative process in the public sphere, wherein designers produce compositions for informational or commercial use. As a part of this intricate integration with the public sphere, graphic design becomes a holder of information and a storage medium of experience. Furthermore, although the artifacts themselves are static in the sense that each individual experiences them in a similar manner, the stored information and experiences are highly subjective and idiosyncratic. It was with these notions in mind that I carried out my thesis, using various methods of practice and upholding content from my own personal recollections. In doing so, my aim was to gain further insight into the metaphysical workings of memory through graphic design practice. The Art of Memory provided a satisfactory methodological framework to achieve these insights, as contemporary memory systems place significantly less emphasis on the visual rendering of information and thus lack a direct association with visual communication practices. It was discovered that the discipline of graphic design and its assignment and development of meaning to visually composed imagery results in the sharing and distribution of information as well as recollected experience. Through the engagement of form, composition, hierarchy and affect, graphic design alters both the meanings and the experiences of the public space.

AFTERWORD

In the spring of 2011 when I was deciding on a topic for my thesis, I made attempts to discover interests outside of my realm of comfort. While I encountered memory systems previously in my studies of psychology, I was continually intrigued with the act of memorization and the way in which one makes a piece of information meaningful. Such a notion was not a particularly intriguing area of investigation for cognitive scientists during the twentieth and twenty-first centuries, though it was my belief that much could be learned through a contemporary discourse of internalization methods. I eventually came across the Art of Memory and, with its use of distinctive imagery and visualized compositions, appeared to be exceptional for developing a visual lexicon of work that could be channeled through its own methodological practices. While understanding the scientific and objective nature of memory certainly informed my practice at the nascent stage of my thesis, challenges quickly arose that resulted from a new process of engaging memory within a postmodern framework. Gone was a rich database of preexisting research, a plethora of accessible scholars and a common set of methodologies and principles in which I could simply replicate procedures and build upon foregoing research. Instead, I was drawing a new and exciting connection between a vital human component and contemporary visual communication within a methodological practice that came to fruition in medieval times. The Art of Memory, with its visual richness, was in itself a stimulating methodological approach, which enhanced my form making abilities as well as my aptitude to conceptualize salient material. The combination of this methodology within a postmodern framework and a scholarly arena for challenging graphic design practice and discourse made possible significant development in my abilities as a graphic designer.

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