Systematizing Studio Practice:
Working with the Known to Generate the Unknown

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A thesis submitted to the Faculty of Graduate Studies in
Partial Fulfillment of the Requirements for the Degree of Master of Design

Graduate Program in Design
York University
Toronto, Ontario

April 2019

Abstract

The following investigation examines the use of systematized methods to experiment with new ways of graphic design production. The research is informed by research through design (RtD), multiples as variation, conditional design, and practice-based research. This thesis offers strategies and practices for systematic methods of studio practice, asking designers to evaluate the way they work in the studio and critique the use of systemized methods when it comes to graphic design production.

Dedication

This thesis is dedicated to my incredible partner, Andrew Francesconi, for his unconditional love and support, and for always putting a smile on my face.

Always and Forever.

Acknowledgments

I want to express my sincerest thanks to David Gelb and Paul Sych for being an incredible supervisory committee. From the very beginning of my thesis investigation, they have been passionate and dedicated to guiding me through this journey. I am grateful for their professional insight and constructive contributions to my thesis, and for being such an encouraging team. I would not have made it to the end without them.

I was fortunate to enough to share studio space with such inspiring, wonderful and creative people, and would like to express my gratitude to Nadine Arseneault, Marija Bacic, Lucy Bilson, Angeline Buck, Carmela Cammisuli, Andrea Giambelli, Helen Han, Jesse King, Xi Mo, Christine O'Dell, Saarah Saghir, Aala Sgarfi, Frank Zhang, and Sarah Zou for their studio help, advice and support, but most importantly, for all the great laughs and smiles we had together.

Finally, thank you, Mom and Dad, without you I could not have come so far, I love you both.

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Key Terms

Term	Definition
Algorithm	A sequence of operations (often used in computing)—which is followed when solving a particular problem
Conditional Design	A design strategy, defined by a sets of rules and conditions that stimulate collaboration between participants and lead to unpredictable outcomes, this method was developed by designers Luna Maurer, Edo Paulus, Jonathan Puckey, and Roel Wouters.
Deductive	The process of reasoning from one or more statements to reach a logically certain conclusion.
Design Thinking	A method developed by Tim Brown, in which creative practitioners use in ideation and development in tackling problems that are ill-defined or unknown.
Formula	A method of doing or treating something that relies on an established model or approach.
If-Then	A conditional statement in computer programming.
Inductive	The opposite of deductive, it is more open-ended and exploratory.
Practice-Based Research	An original investigation undertaken in order to gain new knowledge partly by means of practice and the outcomes of that practice.
Process	A series of actions or steps taken in order to achieve a particular end.
Programmatic Approach	A long-term and strategic arrangement of individual yet interlinked projects, as described and developed by Karl Gerstner
Research through Design (RtD)	An approach to practice-based inquiry which takes advantage of the unique insights gained through the design practice, leading the practitioner to experiment with new materials and processes as described by Christopher Frayling.
Morphogenetic Making	An exploratory albeit impulsive or deliberately risky approach to creative practice. Allowing designers and artists to be more active and make a variety of work, leading to new ways of experimenting and developing their visual language, as described by Tim Ingold.

Multiples as Variation	An idea in which images reveal repetition and change, depict comparison, and represent a sequence of motions—defining all the visual elements of information; as described by Edward Tufte and Sol LeWitt.
Studio	A place for production, making and reflecting. This is where the designer/artist utilizes the studio as a place for research in understanding materials, techniques and theories to produce visual artifacts, as described by Dolad Schön.
Systems	A set of principles or procedures according to which something is done; an organized scheme, method or interconnecting network.

INTRODUCTION

Personal Background

The goal of my research is to further develop a design process by experimenting with a systematized approach to support my studio practice. I will first provide some background information to shed light on the development of my thoughts and exercises over the course of this investigation.

Before pursuing a Master of Design, I completed a Bachelor of Design in graphic design and specialized in printmaking at the Ontario College of Art and Design University. I had always interpreted 'design as a process and how the problems *themselves* can lead to surprising, original graphic solutions.'[1] Designers trained in this manner typically follow a process to develop a successful solution based on an identified problem:

Identify the Problem → Conduct Research → Produce an Idea → Development Stages →Final Outcome

However, I have always worked in the reverse order. As a designer, my visuals were often spontaneous, yet intuitive. I mimicked and integrated specific creative methodologies of designers I admired into my design process. When I started graduate school, I began to research and found out my method of making was considered to be a certain type of system of producing visuals. But I had to ask myself: What exactly are systematic methods? And how can I introduce other types of systemized methods into my practice as a tool to experiment with new ways to produce visuals?

I began to research systemized methods which led me to discover various designers, artists and theorists who talk about and work with multiple systems in their practice. By broadening my research, I found five crucial components of systemized methods: Practice-based Research, Emphasis on Process, Multiples as Variations, Studio and Researching through Design (RtD).

[1] Gill, B. (1985). Forget all the rules about graphic design, including the ones in this book. New York: Watson-Guptill.

Practice-Based Research

Since the 1990s, practice-based research has been an emerging phenomenon and has been a site of ongoing debates within academia. Various disciplines have brought into question whether or not practice-based research is indeed a form of researching. Donald Schön brings forth the credibility of practice-based research in his seminal book, *The Reflective Practitioner.* Schön writes:

> *"...practitioners themselves often reveal a capacity for reflection on their intuitive knowledge in the midst of action and sometimes use this capacity to cope with the unique, uncertain, and conflicted situations of practice."*[2]

In this statement, Schön discusses how design practitioners can often be in the midst of producing work and reveal a rigour of uncertainty. Practitioners can then reflect on this uncertainty in the moment that it occurs, leaving them room to introduce new acts into their practice. Schön also states that these 'rigours' are 'like and unlike the rigour of scholarly research.'[3] This prompts the question: what defines research in academia for practitioners, and how do practitioners bridge the gap to both study and practice?

Since the introduction of *The Reflective Practitioner,* further discussions have emerged about practice-based research. In 1993, Christopher Frayling wrote a paper for the Royal College of Art, titled *Research in Art & Design*, in which he builds upon Herbert Read's framework of the different ways research can be conducted in art and design, noting that research could be: research *into* art and design; research *through* art and design; or research *for* art and design.[4] To further explain, research *into* art and design is observing and understanding the existing processes stated by others (historical, aesthetic or theoretical); research *through* art and design is when the practice serves a research purpose (material, development or action); and lastly, research *for* art and design is when research aims are secondary to practice aims. Frayling later states that practice-based research within art and design is an amalgam of doing and thinking (i.e., the hand and the head) as equal components.[5] He suggests that practitioners

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[2] Schön, D. (1991). *The reflective practitioner.* Aldershot: Avebury [Ashgate].
[3] IBID., ix.
[4] Frayling, Christopher. (1993). "Research in art and design." *Royal College of Art, Research Papers,* Volume 1, Number 1, London.
[5] IBID., 4.

have to be able to work with *intuition* and *thought* to produce work and research through the process of making. Frayling concludes his essay with these remarks:

> *"I can only add, that research for art, craft and design needs a great deal of further research. Once we get used to the idea that we don't need to be scared of 'research' - or in some strange way protected from it - the debate can really begin."*[6] m

Frayling establishes primary criteria for validating research in art and design: this research follows components of *doing* and *thinking*, and that produces new knowledge and understanding about design and the artifacts constructed within it. Even now, there is still much debate about defining practice-based research, leaving room for growth and new preliminary findings.

[6] IBID., 5.

Emphasis on Process

During the 1960s, the world of graphic design was experiencing changes and advancements. One influential figure of that time was Swiss graphic designer and typographer Karl Gerstner, known for his technically-driven approach. Gerstner pioneered and coined the term *programmatic approach*, where designing programmes means inventing rules of arrangement and combining those rules, resulting in multiple visual outcomes. Gerstner pre-defined the parameters and variables before executing his designs, thus foregoing spontaneous decisions. In his book *Designing Programmes*, Gerstner states:

> *"instead of a solution for problems, programmes for solutions—the subtitle can also be understood in these terms: for no problem (so to speak) is there an absolute solution. Reason: the possibilities cannot be determined absolutely. There is always a group of solutions, one which is the best under certain conditions.*
>
> *To describe the problems is part of the solutions. This implies: not to make creative decisions as prompted by the feeling but by intellectual criteria. The more exact and complete these criteria. The more exact and complete these criteria are, the more creative the work becomes. The creative process is to be reduced to an act of selection. Designing means: to pick out determining calls for method."*[7]

Gerstner was redefining the truism of the graphic designer as a problem solver by adapting to systematic methods. He was shifting design from a focus on style, techniques, and intuitive "feeling" to an analytical process for problem-solving. In these methods, design decisions were driven by the designer as a set of predetermined constraints, such as a set number of variations in objects, colours, typefaces, photos or other graphic elements to achieve multiple outcomes. Gerstner was also able to translate his programmatic process to other forms of creation such as literature, photography and architecture.

Concurrently, as Gerstner was establishing these programmatic approaches in design, conceptual artist Sol LeWitt developed the manifesto, *Paragraphs on Conceptual Art*, introducing process-oriented art. LeWitt

[7] Gerstner, K., Geisler, H., & Gredinger, P. (2007). Designing programmes: instead of solutions for problems programmes for solution. Baden: Lars Müller Publishers.

determined that both the idea and process needed to be addressed in a programmatic or machine-like rationality in order for the artist to conduct their making. LeWitt supported this idea by claiming:

> *"To transform with a plan that is preset is the one way of avoiding subjectivity. It also obviates the necessity of designing each work in turn. The plan would design the work. Some plans would require millions of variations, and some a limited number, but both are finite. Other plans imply infinity. In each case, however, the artist would select the basic form and rules that would govern the solution of the problem. After that the fewer decisions made in the course of completing the work, the better. This eliminates the arbitrary, the capricious, and the subjective as much as possible. This is the reason for using this method."*[8]

LeWitt discusses how artists should follow a plan when producing visuals, and that it is possible, through millions of variations, for some results to emerge that the artist had not imagined. LeWitt demonstrated how process resulting from previously-defined rules and decisions relating to form and composition could be used to provoke reflection-in-action for the artist and spectators. LeWitt opened the door to viewing artistic direction as flexible instructions rather than as a set of rigid rules that must be followed. LeWitt would famously remark: "The idea is the machine that makes the art."[9] The idea for LeWitt was inherently systematic and capable of producing multiple results. In this instance, rules do not have to be a limiting element, but rather a guideline to explore multiple variations of the idea. LeWitt and Gerstner thus treated their creative methods similarly in that both defined their conditions before proceeding in visual exploration. This allowed room for uncertainties to occur when producing the visuals. Their approaches helped pave the way for various designers, artists and practitioners to conduct and expand upon practice-based research through systemized methods in art and design.

By pioneering the tourism of process-oriented practice for creative practitioners, LeWitt and Gerstner prompted the inception of Conditional Design, a group formed by designers Luna Maurer, Edo Paulus, Jonathan Puckey, and Roel Wouters in 2008. They are one of the most notable current groups practicing design through *programmatic approaches.* Conditional Design's focus is on a graphic process which is defined by rules and conditions. In their manifesto, they justify their logical approach to creation as a way to adapt the creative process to a world

[8] LeWitt, S. 2002. "Paragraphs on Conceptual Art" in A. Alberro (Ed.) & B. Stimson (Ed.), Conceptual Art: A Critical Anthology, (pp. 12-16). Cambridge: MIT Press.
[9] IBID.

"characterized by speed and constant change."[10] They believe that the creative process must reflect the complexity of a data-driven society, showing both its advantages and its limitations. Conditional Design reflects a method rather than a chosen medium of practice and highlights the process and its multiplicity rather than the final result. The essential characteristics of this process are "*time, relationship,* and *change.*"[11] The four principles that guide their methods are:

1. The *process* is the product.
2. The method is conducted by *logic* to design conditions.
3. The *input* is the material.
4. The *constraints* sharpen perspectives and stimulate play within limitations.

Through Conditional Design, participants do not have complete control of preconceived ideas of the visual result. This is the core value; participants do not have to evaluate the visual exploration in order to see if their specific requirements are met. There are no right or wrong visual outcomes. The goal is to let creativity flow according to how the "conditions" are set and interpreted in production. It is, therefore, fundamentally an evolving process towards generating the visuals. To demonstrate the process of Conditional Design, the group developed a series of workshops. The outcomes of the workshops vary by person and are influenced by other participants in the studio (see *figure 1)*.

[10] Maurer, L., Paulus, E., Puckey, J., & Wouters, R. (2013). Conditional Design Workbook. Netherlands: Valiz.
[11] IBID., ii

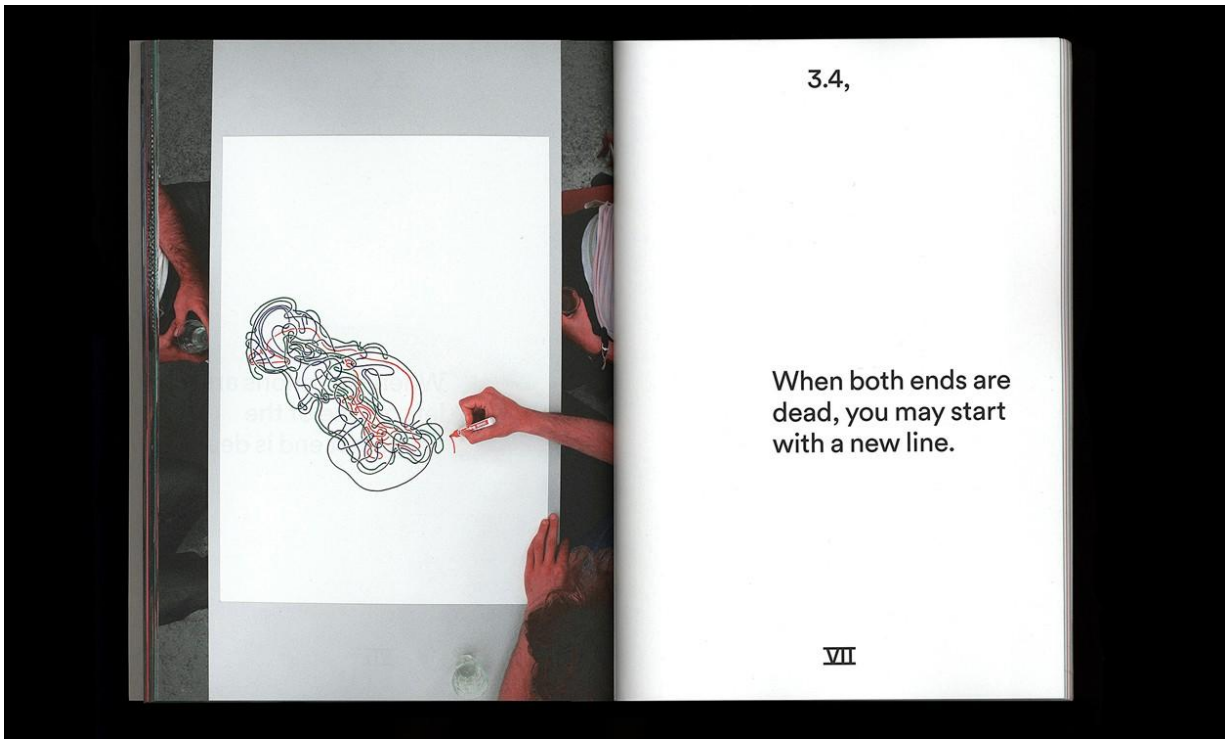

Figure 1. When both ends are dead, you may start with a new line.
Workshop VII — Knots, Stage 3, Player 4, found in *Conditional Design: Workbook*. pp. Vii. Pp., 56.

In each of these approaches, process embraces systematic methods as a tool for graphic design production. The purpose of this investigation seeks to understand *how designers use researching through design (RtD) to generate visual content through systematized methods in the studio practice*. My research has created artifacts which take inspiration from the *Conditional Design Workbook*, Karl Gerstner's *Designing Programs* and the philosophy of Sol LeWitt's *Paragraphs on Conceptual Art* as conceptual constraints and parameters for the practitioner to visually experiment, thus allowing the practitioner to make and then interpret the rules as a starting point or "prompt" for investigation. Although programmatic methods are gradually becoming more common in the field through computerization, the methodologies investigated in this study can introduce designers to an inductive design process: producing visuals based on existing theories and techniques through multiple variations and remediation. The creative outputs are part of the process and allow designers to reflect-in-practice, giving opportunities to reconfigure the visuals as a form of practice-based research.

Multiples as Variation

In graphic design, the idea of using *multiples* as a tool to drive the making can allow for a number of variations in producing and exploring creative output. In this section, *multiples* are looked at through the lens of graphic design, based on Edward Tufte's *Visual Explanations: Images and Quantities, Evidence and Narrative.* Multiples have been examined and theorized within contemporary art and design as a tool to distinguish "pattern, repetition, organization, change and surprise"[12] as seen on *figure 2*. In this section, a key question about the idea of *multiples* is: How can the organization of similar-looking objects, photos and typefaces be used to distinguish their changes?

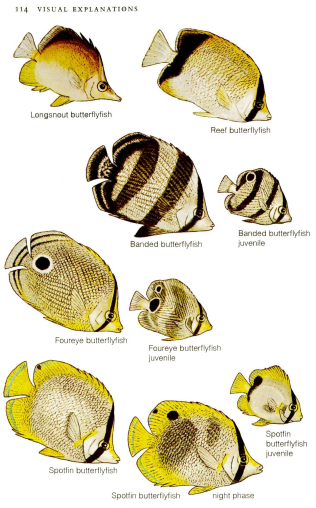

Figure 2. Waterproof Guide to Corals and Fishes of Florida, the Bahamas, and the Caribbean, found in *Visual explanations: Images and Quantities, Evidence and Narrative*. pp. 114.

The visual above (*figure 2*) distinguishes the patterns and visual elements based on the illustrated fish, and guides the user understand to how multiple fish can "depict comparison."[13] In this case, this visual reference helps the user determine whether or not a fish is poisonous or approachable. This display of *multiples* for comparison provides users with a guide to specific regions and specimens, assisting in navigating through the visuals in an "expressive way."[14]

[12] Tufte, E. (2012). *Visual explanations: Images and Quantities, Evidence and Narrative. Connecticut*: Graphics Press.
[13] IBID.
[14] IBID.

Multiples allow designers to discover new possibilities—recombining shapes, letters, and colours repeatedly in "defining elements in the idea of information,"[15] as seen on *figure 3*. In this example, Gerstner showcased the car by organizing multiple images in a grid, assembling "the integration of multiple elements into a common field."[16] The images of the car allow the user to see the object presented from various angles, and distinguishing them by allowing the object to be categorized based on the viewing point: bird's eye view, low angle, high angle and eye level view. Through the use of *multiples*, the car becomes positioned with temporal or spatial adjacency, movement or arrest, thus presenting differing perspectives of a single object.

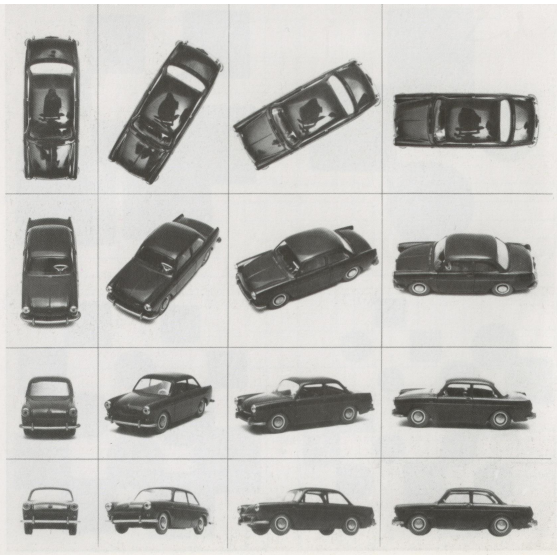

Figure 3. *Programme as Photography, found in Designing Programmes: Instead of Solutions for Problems Programmes for Solution. Pp. 18.*

Multiples were also theorized by German philosopher Walter Benjamin in *The Work of Art in the Age of Mechanical Reproduction.* He defined the idea of *multiples* in response to the reproduction of art through the technologies of mass production. He presented the idea that artistic reproduction is not a modern human activity but a result of the age of technology. For Benjamin, the original work went beyond the realm of art; these reproductive technologies questioned how artistic objects position themselves against the realm of tradition. This results in the question: does the reproduction of an object affect its original purpose? A dominant commonality between Benjamin's theories and Gestner's practices involves photography; this allows the design or artist to capture an

[15] IBID.
[16] IBID., 118.

object from various perspectives. Tufte, on the other hand, focuses on the visuals as a sequence that is dependant upon time and space. In all three approaches, multiples play a key role in developing visuals and representing change through a unique approach. Furthermore, *multiples* can extend to remediation, by taking an existing artifact or idea explored through various forms of media and material.

Studio

In recent decades, the design studio, or the shared space used for creation and production, has been widely discussed and its purpose questioned by creative practitioners. Practitioners have turned their studios into offices from which they organize and develop a multiplicity of operations and interactions; still, others use the studio as a developing exhibition space or make it mobile through technology. The studio in many ways is a place of inquiry, research and experimentation to broaden the practitioner's skills and knowledge, as well as a place of practice and production. Conceptual artist Daniel Buren theorized in 1971 about the purpose of a studio in his essay, *The Function of the Studio.* Buren stated that there are three purposes of a studio:

1. It is the place where the work originates.
2. It is generally a private place, in an ivory tower perhaps.
3. It is a stationary place where portable objects are produced.[17]

These three purposes can apply to any creative-practitioner working within a studio practice. However, Buren simplifies the use of a studio and only summarizes its utility. I argue, that it would be productive to add an additional function of the studio:

4. It is where design becomes an enacted process.

This *process* which occurs in a studio practice is where designers establish a relationship between researching and making. The process is iterative and progressive; ideas are shaped into images, and the resulting images develop further thought, iteration and response. These ideas of process and practice are discussed widely by multidisciplinary designer Elliott Earls, describing his approach to studio practice as *"Making — Idea."*[18] Earls defines this concept as:

> *"a process that can be organic, it can be thought of as linear or branching, but generally, the thesis or idea comes before the making. I have worked largely in opposition to that. I try not to come up with my idea before and then just go through the slavish process of making shit."*[19]

[17] Buren, D., & Repensek, T. (1979). The Function of the Studio. October, 10, 51-58. doi:10.2307/778628
[18] Earls, E. (2016). "Objet/Work/Studio" in P. Ahlberg (Ed), Please make this look nice (pp. 162-166).
[19] IBID., 162.

Earls clearly defines his formula for producing work, allowing himself to immerse fully into the studio practices, giving him the opportunity to make many projects, going through processes, revisions and multiple stages to produce a variety of artifacts, from similar-looking artists objects, paintings, videos, sculptures and installations. For Earls, the key component which drives his formula of *"Making — Idea"* is curiosity. He states that "curiosity leads me in a new direction, I follow it."[20] This curiosity allows Earls to be inductive with his work and remediate the outcomes through performance, typography, digital video, graphics or two-dimensional forms. Earls' concept of *"Making — Idea"* runs in contrast to Gerstner, LeWitt and Conditional Design, leaving the designer to be less systematic in producing designs in a programmatic or machine-like rationality. However, there are also similarities between them: experimenting with multiples as variations, remediation and the development of artifacts as the process. This indicates that Earls formula of *"Making — Idea"* can be considered a type of system in generating designs, even though it does not fall in absolute similarities to Gerstner's and Lewitt's machine-like rationality.

To further explore the ideas of process and studio practice, artist and educator Julia Marshall helps bridge the gap between the studio and the exploration. In her 2007 paper, *Image as Insight: Visual Images in Practice-Based Research*, Marshall defines the roles in which the studio helps creative practitioners reevaluate what already exists and how to construct from that, generating new perspectives. Similar to Earls' formula of "Making — Idea," Marshall introduces the notion of inductive reasoning in the studio practice through the process, and the evolution of pre-existing work, theories and perceptions. Marshall describes what happens in the studio as:

> *"[…] not [being]concerned with generating new information (as conventional research generally is) but with re-constructing existing information. Its goal is to transform perception: to change the way we see or intemperate things.*
>
> *Transforming perceptions generates insight: new understandings and new perspectives that make sense of perception and experience in new ways. New insights represent new knowledge and they create new knowledge. Studio-based research is well suited for this transformative role precisely because visual images are its primary medium."*[21]

[20] IBID., 166.
[21] Marshall, J. (2007). Image as Insight: Visual Images in Practice-Based Research. Studies In Art Education, 49(1), 23-41. doi: 10.1080/00393541.2007.11518722

In this statement, Marshall provides a perspective on what occurs in the studio for artists and designers, and how the ideas developed in the studio are primarily re-constructions of existing information. For Marshall, the goal of what happens in the studio is to change the way we see and interpret ideas by generating new perspectives from the pre-existing material.

The recurring question, prevalent in both Earls' and Marshall's approaches, is "What if…?" This question is asked by designers during their time in the studio as a prompt to explore various materials, programs and theories. Designers then have an opportunity for redeveloping and building upon existing methodologies and approaching the practice in a new way. The studio becomes an ever-evolving question of "What if…?" This question can be asked repeatedly by the designer throughout the making stages in the studio, resulting in the exploration of new materials, machines or programs. This "What if…?" question becomes a key integer within the studio leading to the exploration of various theories and methodologies to find new perspectives and formulas. Earls and Marshall do contradict Gerstner and LeWitt; however these are multiple perspectives, which take into consideration a means of production in the studio, and provide the designer with various methodologies. Thus, both Earls' and Marshall's reasonings can be considered types of system or practice-based research methods in producing visual outputs.

Research through Design (RtD)

Research through design is, by nature, embedded in the design process, whether that is looking at how designers work with new materials or developing connections between various theories. The designer works in the studio, orchestrating a relationship between methodology and theory.

Designers need to move to a place where they can take more risks and think about the uncertainties or failures which occur when making. Through (RtD), designers can develop a tolerance for risk and uncertainty in the development stages; of course, designers still need to reflect on those development stages to learn from their mistakes or successes. Through these reflections, designers begin to form an epistemology of practice, reflecting on their knowledge of theory and its integration into their practice. To further expand on the idea of (RtD) and reflection, typographer and graphic designer Neville Brody stated:

> *"we play a lot, we experiment a lot, we like when things go wrong. When things go wrong, you get new thoughts and new ideas and new expressions and new possibilities. You can't sit down and imagine a new possibility; you need to find a device which will put together incongruous elements and then something new comes out from that. It's about building process into your work that delivers something unexpected."*[22]

Brody identifies tactics designers use to be able to research through design, from doing things in reverse to finding new devices, material or programs which deliver these unexpected results. Brody establishes that designers enjoy unexpected outcomes and they build from those uncertainties to incorporate them into their process and practice. Additionally, Schön would describe Brody's method as an element of reflection—this occurs when designers, artists and creative practitioners research through design with a practice-based approach. The element of reflection supports the research being conducted by creative practitioners. The reflection is what bridges theory and making, giving designers, artists and other creative practitioners opportunities to expand, adapt and respond to their findings. Schön understood the difficulties creative practitioners had in describing their findings when it came to making. He felt the missing component was the reflection.

[22] "NEVILLE BRODY | OFFSET 2014." Vimeo, 20 Feb. 2019, vimeo.com/97413622.

> *"... many practitioners, locked into a view of themselves as technical experts, find nothing in the world of practice to occasion reflection. They have become too skillful at techniques of selective inattention, junk categories, and situational control, techniques, which they use to preserve the constancy of their knowledge-in-practice. For them, uncertainty is a threat; it's admission a sign of weakness. Others, more inclined toward and adept at reflection-in-action, nevertheless feel profoundly uneasy because they cannot say what they know how to do, cannot justify its quality or rigour."*[23]

To further expand on the idea of reflection-in-practice, Schön explored the attributes in the creative field and believed that creative practitioners should borrow or adapt from other disciplines, particularly from social science. These ideas developed by creative practitioners tend to emerge and develop on the move—sometimes impulsively, sometimes reflectively—rather than arising from the investigation of a hypothesis in controlled conditions. Schon states:

> *"a practitioner's reflection can serve as a corrective to over learning. Through reflection, he can surface and criticize the tactic understandings that have grown up around the repetitive experiences of specialized practice, and can make new sense of the situations of uncertainty or uniqueness which he may allow himself to experience."*[24]

For designers, this notion of reflection-in-practice and (RtD) as an activity has given rise to a new insight into the design process. Within (RtD), the idea of *"critical making"*[25] references the *"symbiotic relationship"*[26] between thinking and the making. Designers must reference the existing theories and methodologies and apply them into their practice. This process of *"critical making"* opens the designer to new possibilities for deep, expansive thinking and serious inquiry to stimulate discoveries. Throughout this *"critical making,"* designers approach their practice as a process of growth which occurs in the studio—exploring through materials and techniques in anticipation of what might emerge.

The occurrence of this *"critical making"* can be seen in the works of Studio Swine (SWINE is an acronym for Super Wide Interdisciplinary New Explorers)[27], established by Alexander Groves and Azusa Murakami in 2011.

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[23] Schön, D. (1991). The reflective practitioner. Aldershot: Avebury [Ashgate].
[24] IBID., 61.
[25] Frayling, Christopher. (1993). "Research in art and design." Royal College of Art, Research Papers, Volume 1, Number 1, London.
[26] IBID., X.
[27] About. (2019). Retrieved from https://www.studioswine.com/about/

They approach their practice as independent academics offering deep contextual narratives into the sphere of sculpture, installations and cinema through an immersive experience, as demonstrated in their piece Sea Chair, seen in *figure 4*. This particular project is the opposite of commercial work; the Sea Chair uses plastic retrieved from the nets of fishing trawlers and is assembled on the deck of the boat while at sea. Studio Swine use video as an additional medium to document the process and time dedicated to developing the object. However, the Sea Chair is not a solution to the problem; instead, the video seeks to raise awareness and depict the tedious process of producing the artifact. This method provides the need for practitioners to test techniques and address a project with a certain amount of knowledge, but also an element of uncertainty when researching through design.

Figure 4. Studio Swine — *Sea Chair, 2012, Video Stills*

Aside from *"critical making,"* (RtD) can transition into morphogenetic making, an exploratory—albeit impulsive or deliberately risky—approach to creative practice, which can be seen in the work of Earls and LeWitt. This particular approach to making, promotes designers and artists to be more active in making a variety of work, leading to new ways of experimenting and developing their visual language—a process of growth. Additionally, morphogenetic making has helped validate the process of making as a important research method and has inspired a wider audience of practitioners.

Across all of these approaches, the common thread is researching through design (RtD), which "provides environments that allow object and their makers to redraw the geographies of design."[28] The designs become places,

[28] Lambert, I., & Speed, C. (2017). Making as Growth: Narratives in Materials and Process. Design Issues, 33(3), 104-109. doi: 10.1162/desi_a_00455

the process becomes the paths, and the artifacts become inextricable mapping a new truism to explore the innovation and improvement upon the artifacts and methods. Whether the designer approaches their practice by critical making or morphogenetic making, at the end of the day the designer is researching through design as a means to bring an additional dimension to the artifacts, while contributing to the development of a new process.

Conclusion

In this investigation, I examined how designers use researching through design (RtD) to generate visual content through systematized methods in the studio practice, facilitating the creation of multiple visual outcomes and remediating an idea through materiality, programs and methodologies. In doing so, I considered five crucial factors that play a role in systemizing methods to generate visual content: Practice-based Research, Emphasis on Process, Multiples as Variations, Studio and Researching through Design (RtD). This research allowed me to investigate my own graphic design practice and experiment with a variety of methods and theories. It demonstrated how, as a designer, I often work in a spontaneous and yet sometimes intuitive way, through my personal process.

This research was beneficial to my practice, because working with various systematic methods allowed for the emergence of conceptual approaches that I had not yet engaged with. It led me to question the way I thought about graphic design and broadened my horizons about unfamiliar processes, especially the value of conditional and pragmatic approaches. This combination of conditions with systemized methods allowed me to develop new designs, techniques and multiple ways of producing visuals.

Thus, systemized methods can help designers position themselves in a constellation of other practitioners, learning from them and becoming better, more complete graphic designers. I hope that my research encourages designers to be curious about systemized methods as a tool to produce new designs through conditions. This investigation will continue to develop the use of systemized methods and expand on their incorporation through practice-based research for art and design.

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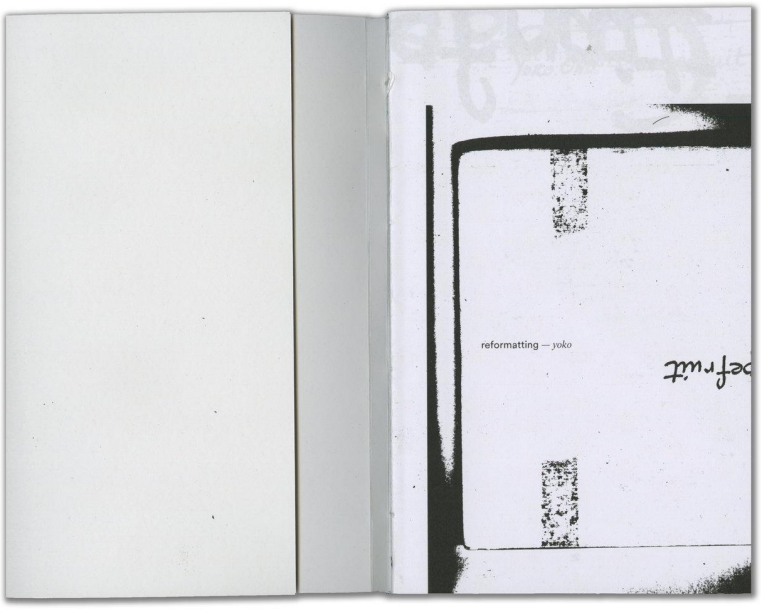
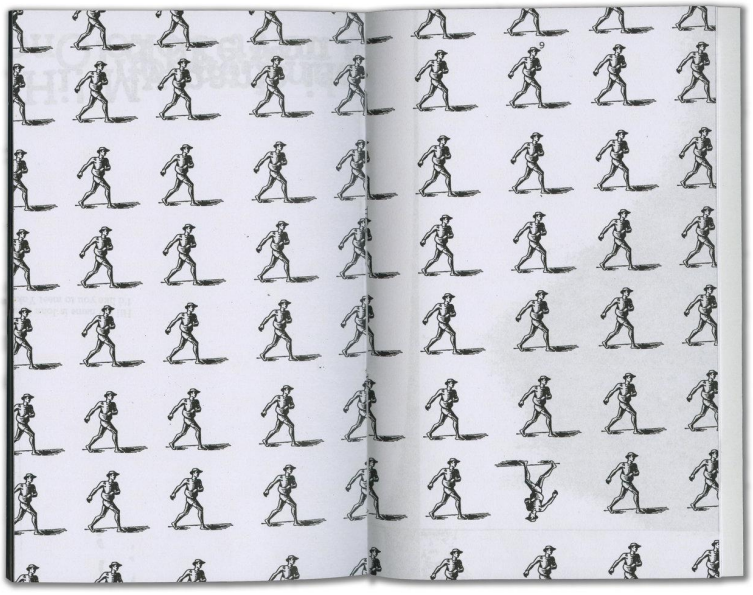
Appendix

This appendix is a collection of visual artifacts central to investigation. The visuals vary in size, medium and materiality, addressing the use of systemized methods to develop multiple visual outcomes.

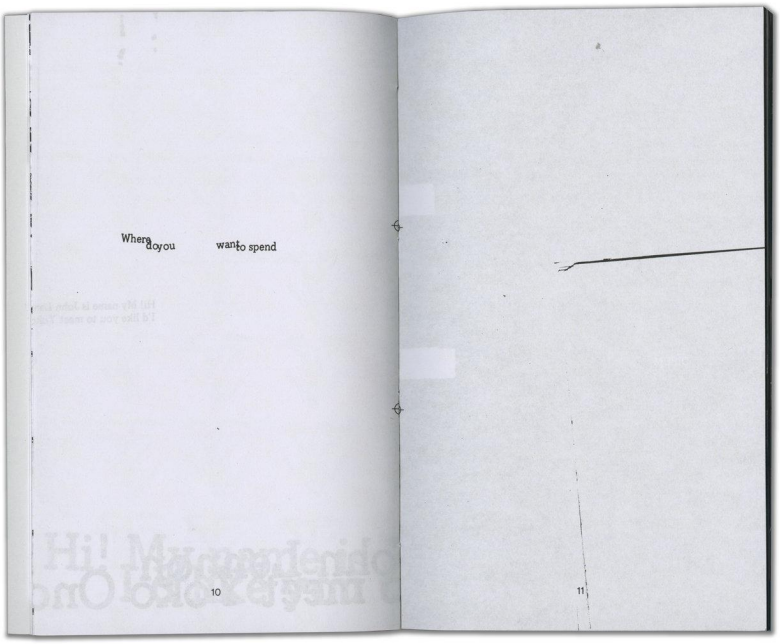
Figures 5.1–5.6 — A variety of spreads from the book titled *reformatting — yoko,* these spreads were created using the content provided from Yoko Ono's instructional paintings: words, images and textures were all extracted to develop the book.



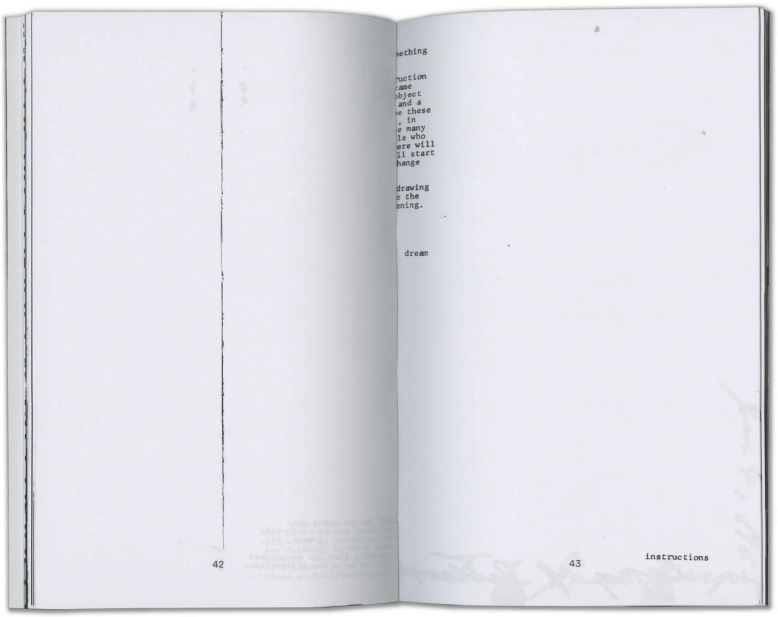
Figures 5.1



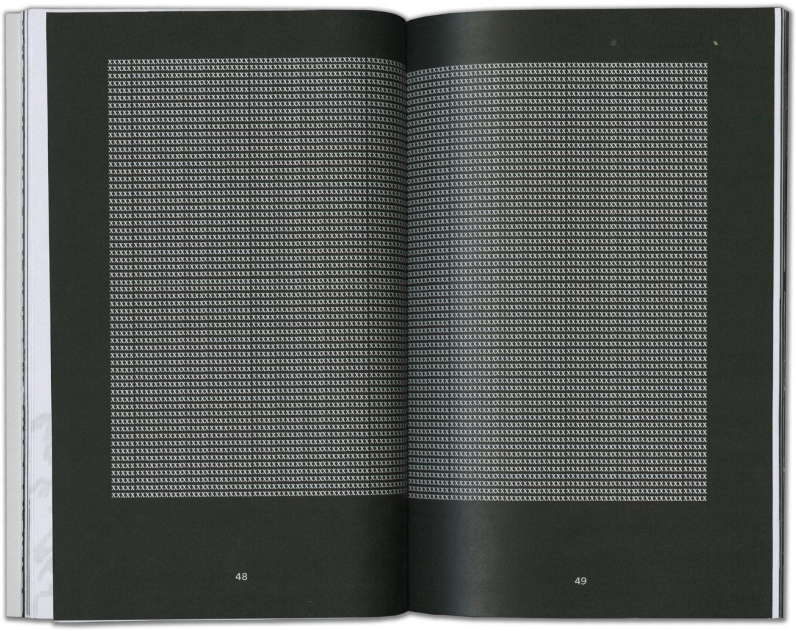
Figures 5.2



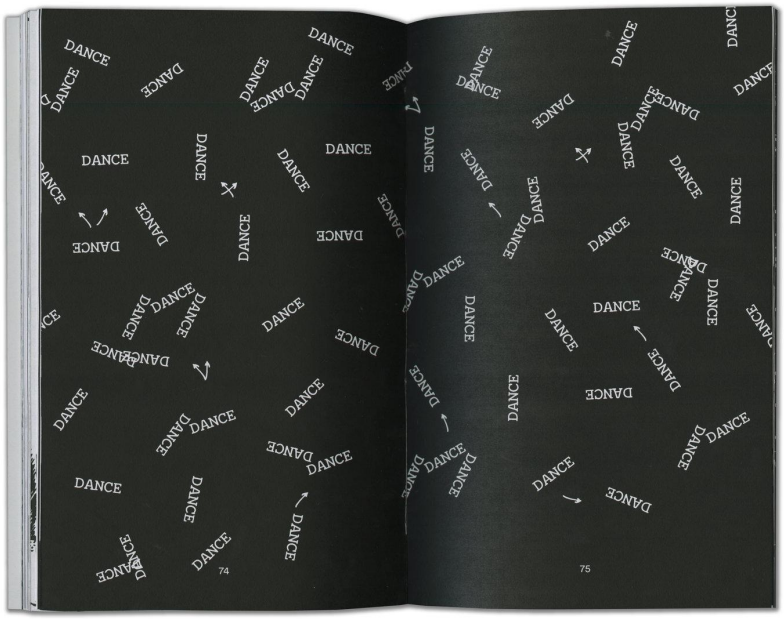
Figures 5.3



Figures 5.4



Figures 5.5



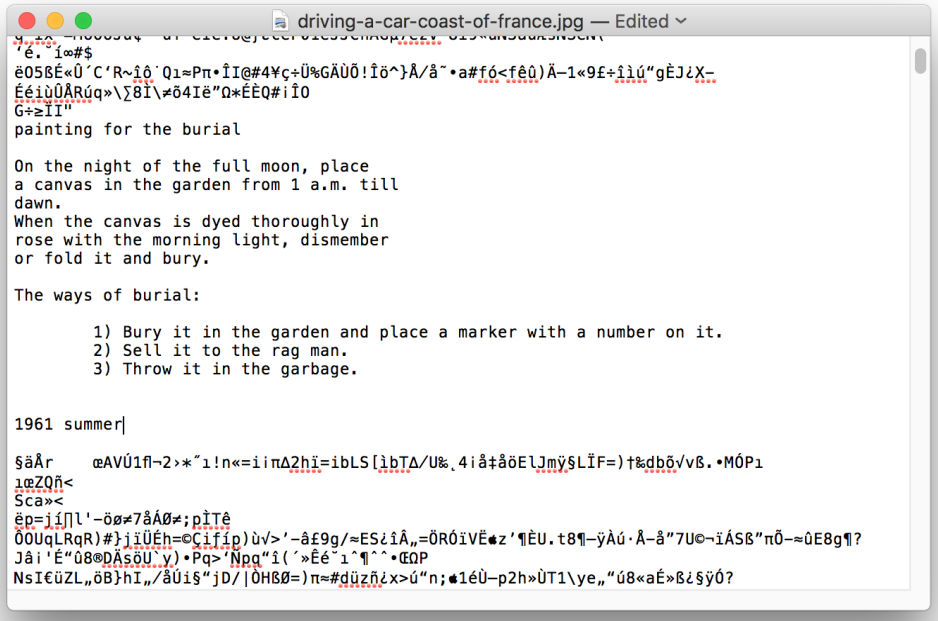
Figures 5.6

Figures 6.1–6.2 — Found photographs gathered from Kensington Market Toronto. These photographs were used as a condition to experiment in the studio practice. The pictures were all scanned and then opened in TextEdit — transitioning the images from image to data.

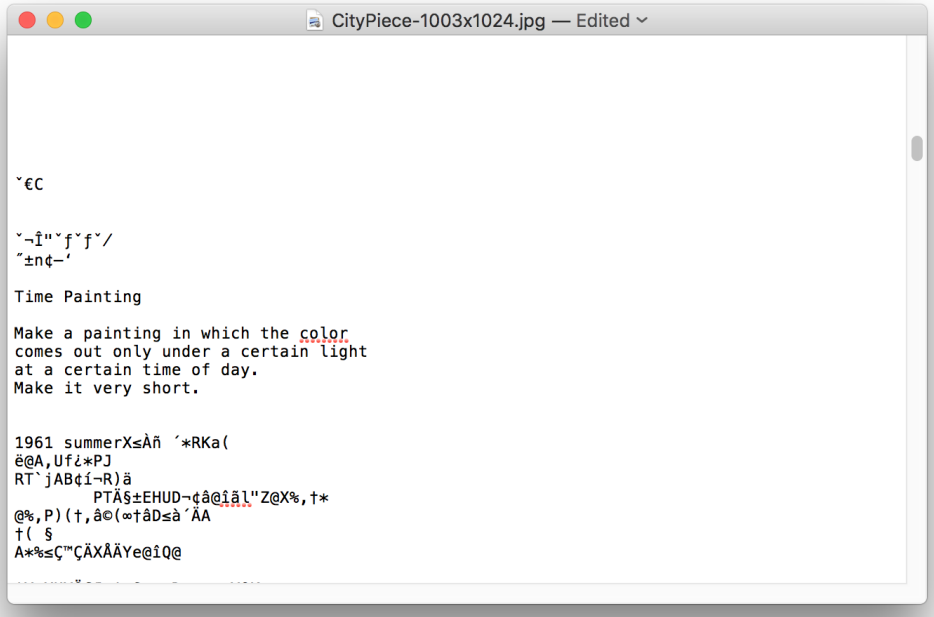
Figures 6.1

Figures 6.2

Figures 6.1.1–6.2.1 — Screenshots of the TextEdit file and Yoko Ono's instructional paintings in-between lines of data.



Figures 6.1.1



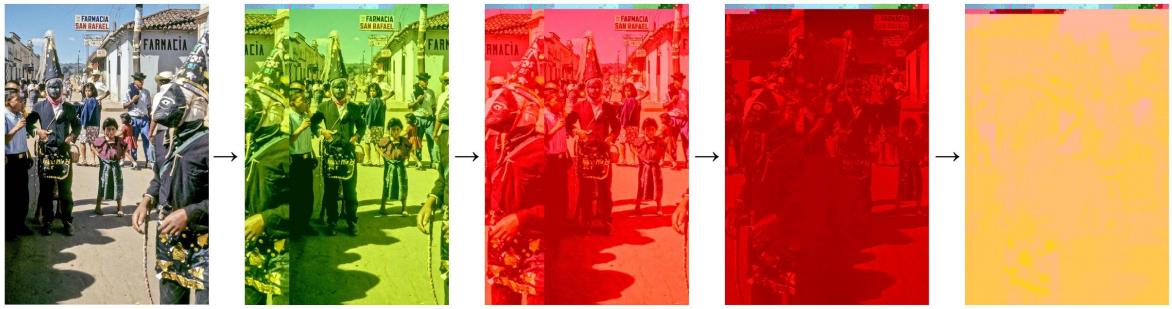
Figures 6.2.1

Figures 6.1.2–6.2.2 — Image results after Yoko's words were introduced into TextEdit file.

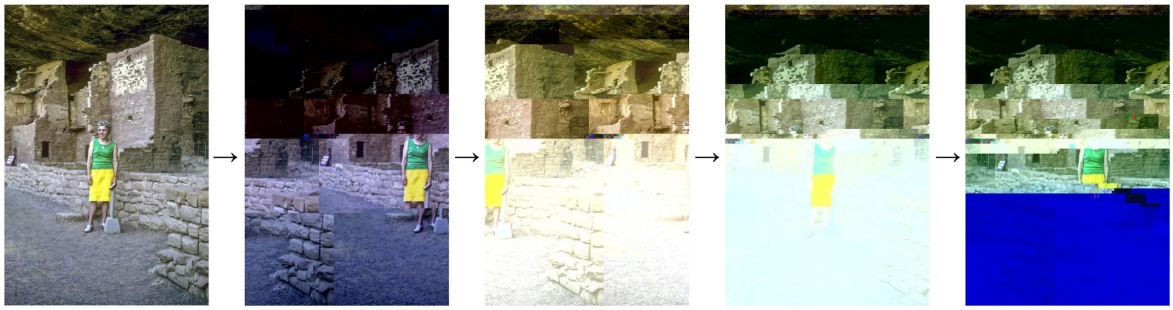
Figures 6.1.2

Figures 6.2.2

Figures 7.1–7.2 — Documenting the visual changes from the original image to the final outcome after 300 lines.



Figures 7.1



Figures 7.2

Figures 8 — Extracting data from TextEdit to create a 384-page handbound book with over 100,000 characters. The book was left with an open spine to show the data of a single image.

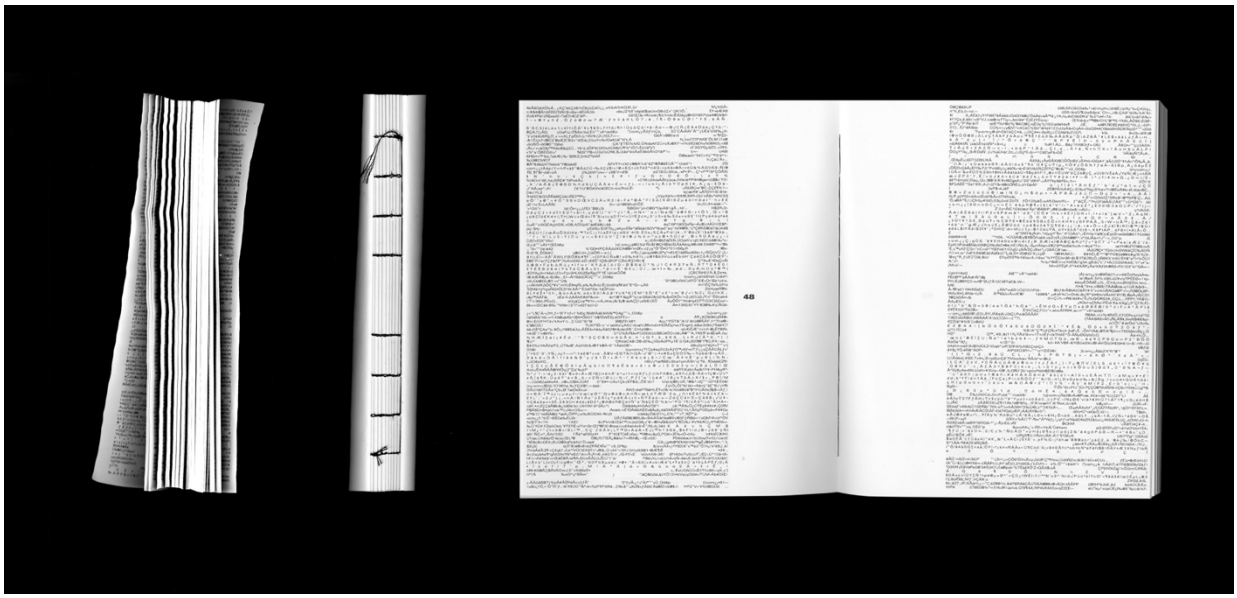
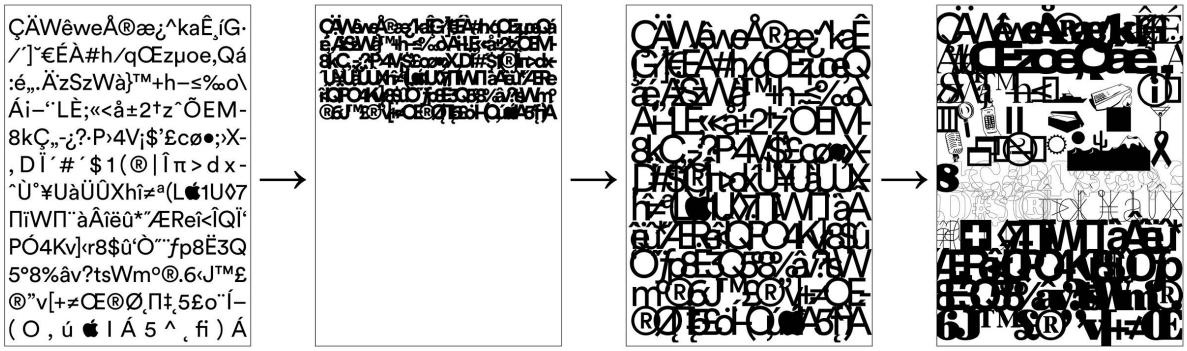


Figure 8

Figures 9 — Documenting the process of developing a typographic poster. 1) Importing a line of data into InDesign. 2) Tightening the leading and kerning. 3) Expanding leading, kerning and increasing the size. 4) Introducing additional typefaces and icons to produce the final result.



Original Digital Text

Condenced the Leading
Bolder Font
Extremly Tight Kerning

Expanded the Leading
Regual Sans Serif Font
Increased Point Size
Loosed the Kerning

Expanded the Leading
Regual Sans Serif Font
Serif Font
Wide Font
Added Icons
Increased Point Size
Loosed the Kerning in
Various Locations

Figure 9

Figures 10 — Remediating the final typographic poster with KNKMax Machine to create a digital drawn visual.

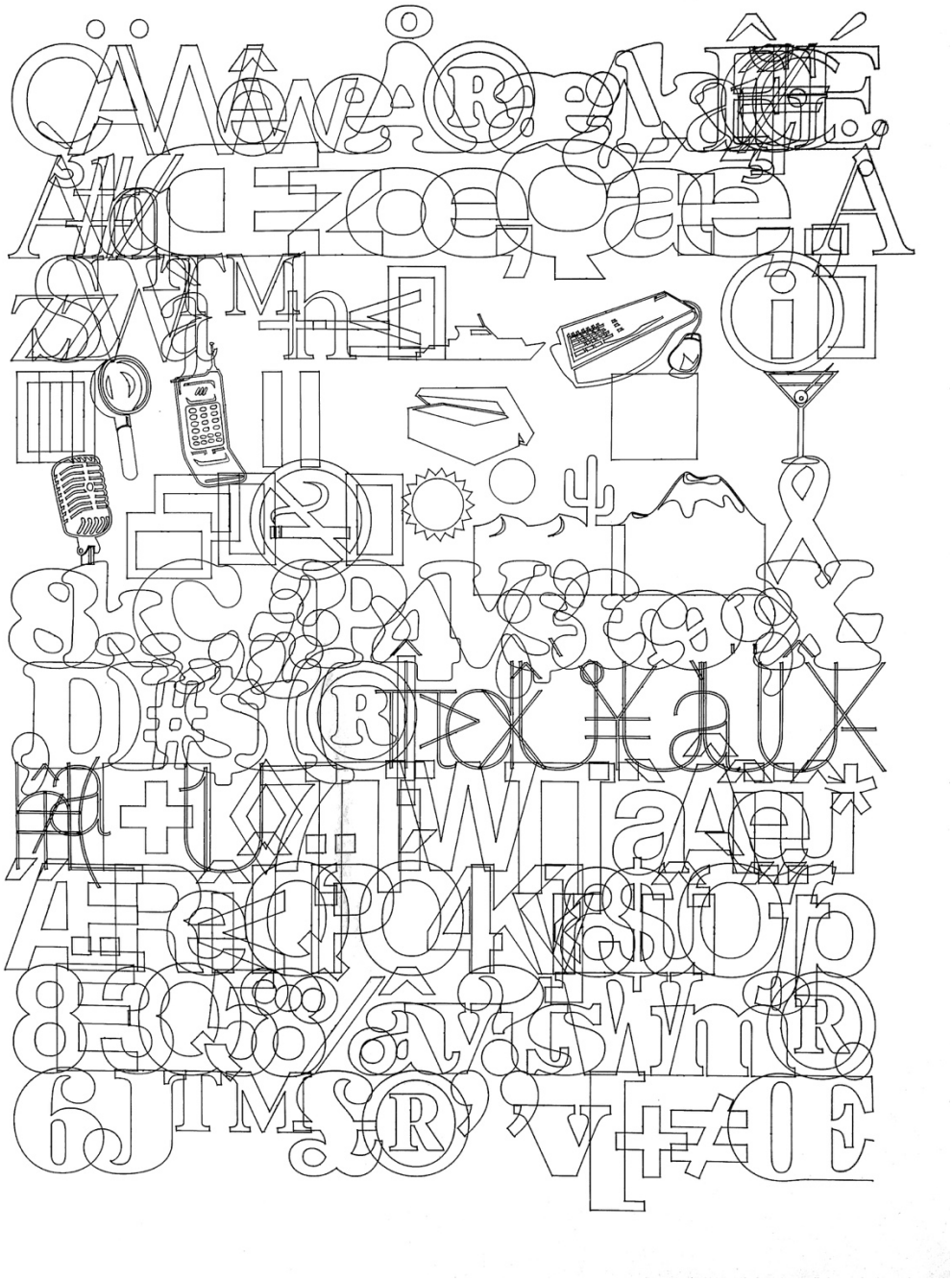


Figure 10

Figures 11 — Shapes extracted from Figure 10 laser cut and transitioned from 2D to 3D.

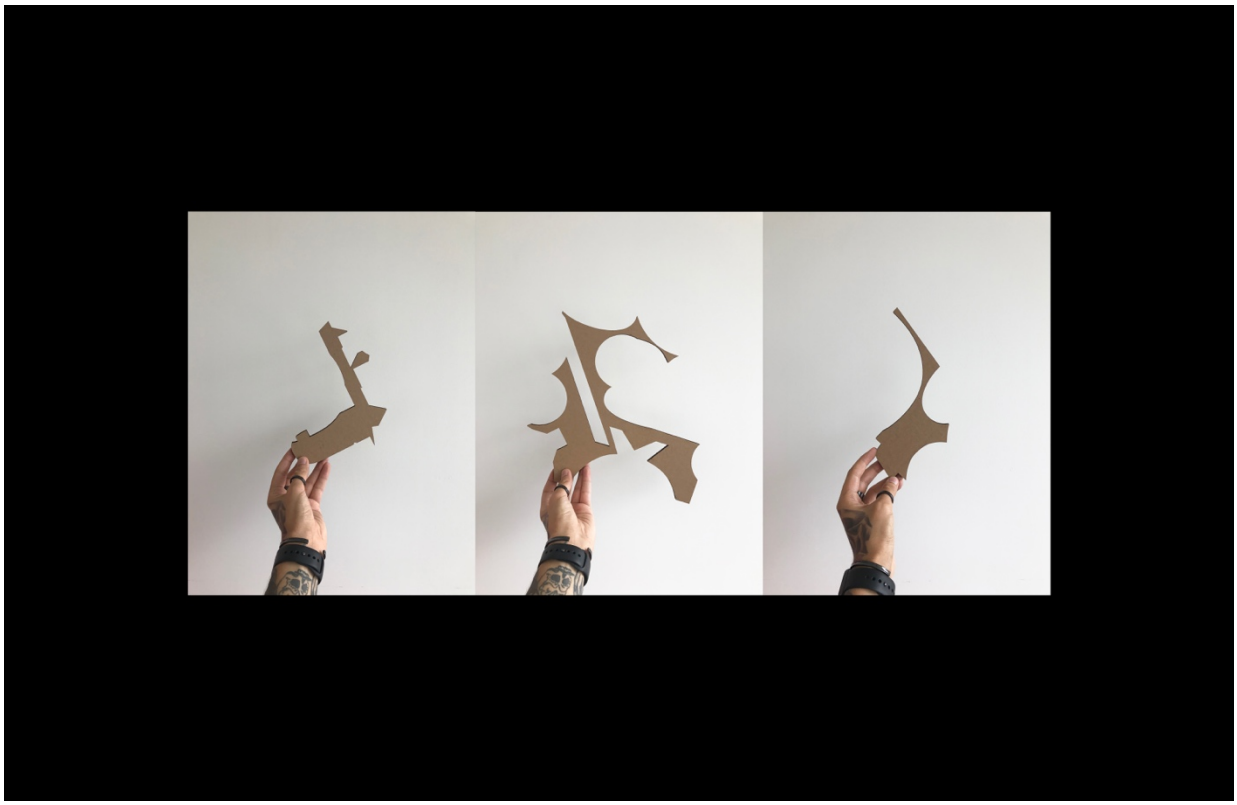


Figure 11

Figures 12-12.4 — The Prompt Cards used for designing multiple visual outcomes.

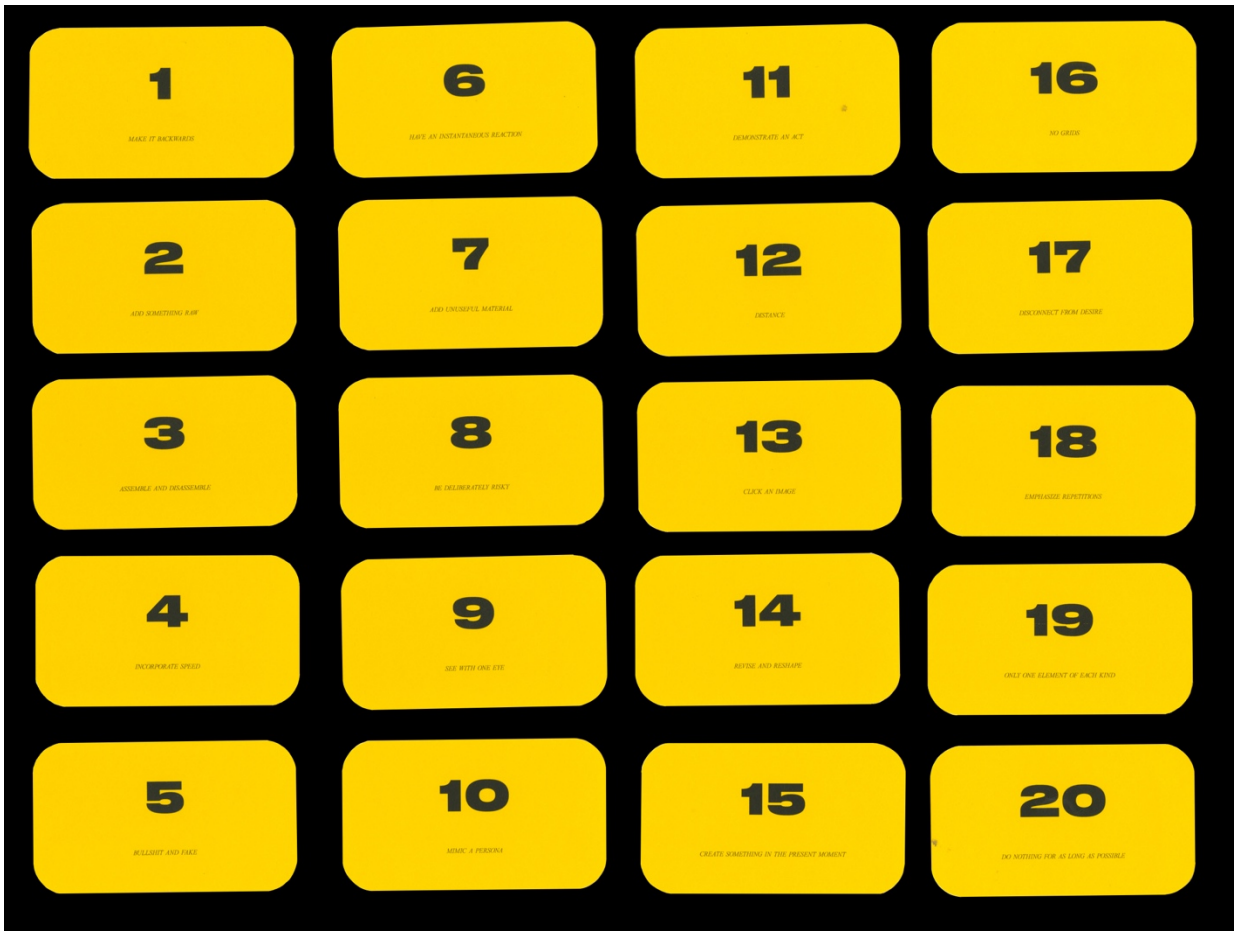


Figure 12

Figures 13 — Series of five posters developed from found photos and text using the photocopier and scanner.

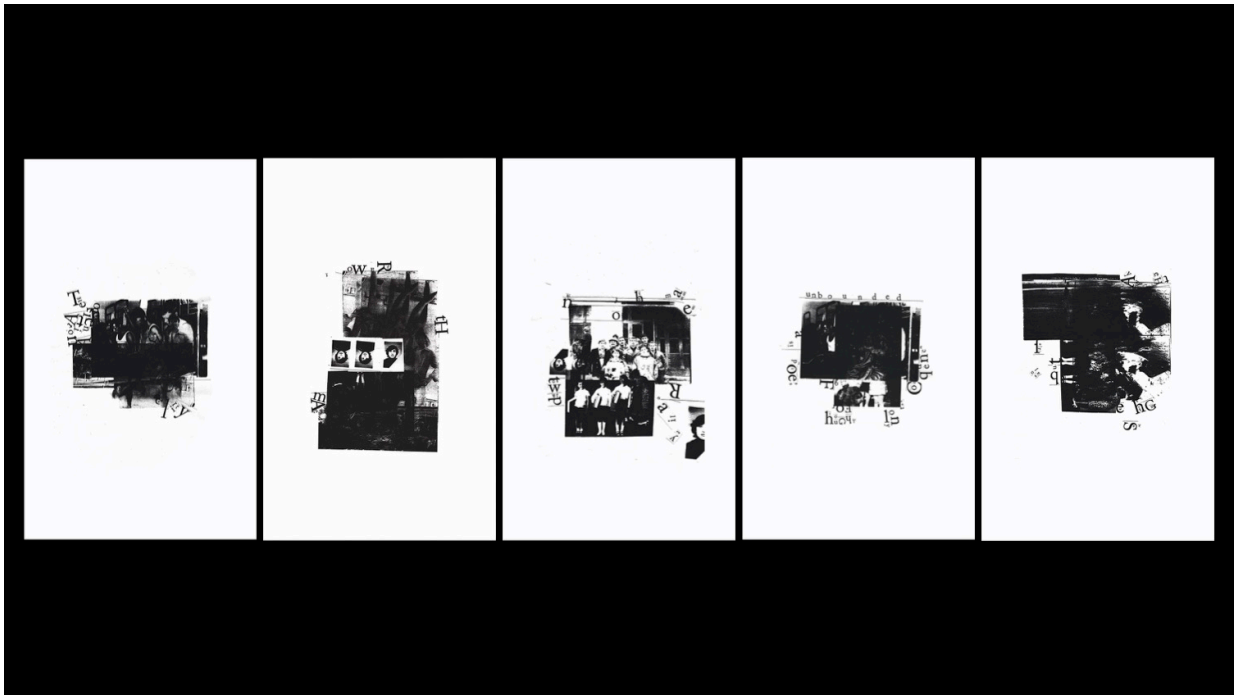


Figure 13

(additional images may be viewed at http://brokeboydesign.com*)*