

Thinking through Making:

The Value of Letterpress in Contemporary Graphic Design Education

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Over the course of the last few decades, the primary emphasis of a graphic design education has evolved from teaching techniques of physical production to teaching individualized cognitive problem-solving. This monumental change is directly attributable to the development of computer technology as the primary tool of a graphic designer. This shift from a hands-on approach of making design objects to a cerebral approach of ‘designing’ in front of a computer screen circumvents significant and integral ontological and phenomenological aspects of a graphic design education.

A computer-mediated design education involves a student’s hands, eyes and mind within the limitations of a pre-determined, abstract environment. Whereas a letterpress-mediated design experience engages a student in a holistic relationship with the physical world. Letterpress (in addition to other physical design processes) offers a student of graphic design the opportunity to discover a sensitivity to typography and composition that is born from direct corporeal interaction with a tangible medium.

When I began teaching graphic design and typography (after years as a commercial designer trained on the computer) I encountered a classroom of students who had been taught how to design by being taught how to use a computer. To them good ideas were the most important part of graphic design and this is what they spent the majority of their time developing. Their ‘good ideas’ in this sense were limited to clever ideas without substance and their design process was deprived of phenomenological experimentation.

What I experienced in my classroom exemplified and amplified the state of graphic design education in the aftermath of the digital revolution. I encountered students who approached design with mindful engagement in a rational process - a true Cartesian success. I felt a need to share the educational experience of developing ideas through material exploration and help them to discover their own creative process through the ontological interaction of mind, body and material. What I ultimately realized is that I was adopting a teaching method rooted in the rich history of *experiential learning*¹ where forms of communication design are generated through an entirely engaged student.

One of the advantages of my teaching position at the University of Delaware is the inheritance of a fully functioning and supported letterpress facility managed and maintained by the Art department within a 2000 square foot space in a modern studio arts building. Previous to my

¹ ‘Experiential Learning’ means the act of learning-by-doing and relates solely to the meaning-making process of an individual's direct experience.

arrival, professors Ray Nichols and William Deering had spent countless hours and their own money putting the press together before donating it to the University. They named it Raven Press - in homage to Edgar Allen Poe who had reportedly stayed a night in a local Inn. Within the text of this article, any reference to letterpress is a reference to the equipment contained within Raven Press. We currently have a Vandercook 219, Universal 1 and Number 3, a Chandler & Price 8x12 (Old Series) and an R. Hoe Washington Style Hand Press. This is in addition to over 800 cases of metal type and 2500 individual pieces of wood type. I certainly would not have been able to develop the approach to teaching outlined in this article without Raven Press.

This article outlines a number of ways that I have found letterpress to be extremely valuable to an experience-based graphic design curriculum. My approach to teaching has been developed through direct engagement with all levels of undergraduate graphic design students working with both the letterpress and the computer. This is not intended as a comprehensive depiction of a pedagogy, rather as a thesis for the continued relevance of letterpress in contemporary graphic design education.

Much of this experience-based approach to design education has philosophical roots in British empiricist theory, (specifically John Locke), the methods of Maria Montessori and the words of John Dewey. These references provide the philosophical framework of this article. Dewey argued that “a school should be a place where the student learns about life by actually living it”², and I could not agree more.

Theoretical Framework & Definition of Terms

I believe that effective teaching methods balance theory and practice towards the active engagement of students. Theory and practice are reciprocally intertwined in the production and advancement of the graphic design discipline. For a student, understanding the basics of communication design theory leads to a deeper understanding of their own practice.

Communication design theory, rooted in the study of semiotics³ by Thomas Ockerse⁴ and derived from the philosophy of Charles Saunders Peirce, can be defined as the study of how meaning is constructed and transferred from a sender (designer) to a receiver (audience) through the use of signs. Ockerse’s conceptual model of a sign (and the process of semiosis) can

² Leon H. Canfield and Howard B. Wilder. *The Making of Modern America*, (Boston: Houghton Mifflin Co., 1962), 599.

³ Semiotics is generally defined as the study of signs, or a logic of relations (Peirce). It is the conceptual analysis of meaning and signification.

⁴ Thomas Ockerse has been developing applied semiotics curricula at the Rhode Island School of Design since 1977. References made to semiotics are based on my experience as a student of RISD’s MFA Graphic Design program and individual mentoring by Thomas Ockerse.

be described as the interaction between *form*, *idea* and *point of view* embedded into a human experience⁵.

In this article, *form* refers to the sensory aspects of a physical thing as perceived by the viewer. An *idea* is a mental concept, thus a metaphysical object. *Point of view* refers to human conditioning for interpretation and cognition (involving past experiences, associations and knowledge) by both the sender and receiver of a communication. Ultimately, communication design is the construction of a communication event in which the *form* communicates an *idea* from a *point of view* of the message sender and is perceived (interpreted and cognized) from the *point of view* of the message receiver.

Within the tradition of letterpress, 'form' also refers to the objects located on the bed of a press from which a relief print is created. To avoid confusion, references to this definition will be replaced with the word 'relief'.

Embracing Process

"It became apparent how little I knew about type when I started to work in letterpress. Having to literally sort out the type, a space here, more leading there, guided me in making the most fundamental decisions in design. I was able to take the experience of actually building the page, or business card, or whatever, with me when I approached a less analog project. Now I have the ability to fall back on those experiences in letterpress, and they reminded me that I have control of how each character of every word interacts with and has a purpose for being precisely who and where it is for that particular design. I felt that I developed a relationship with each character and face, and admired it or loathed it for whatever reason." - Megan Isom⁶

Each individual student will approach each part of the design process from their own *point of view*, based on their own unique life experiences, and with their own tacit knowledge. An individual's *point of view* influences their intentions and affects their behavior as it affects their reflex actions and reactions to new experiences plus their apprehension and comprehension of the results of their behavior.

A successful design process leads to results that are a reflection of the designer's individual skills, embodied in communication media, intended for an audience. The level of uniqueness, or creativity, embodied in a work of design is a gauge for the contributions that one's *point of*

⁵ To simplify Peirce's ideas, I have adapted Ockerse's simplified terminology for Peirce's principles and terms: 'Representamen' (as form), 'Object' (as idea), and 'Interpretatant' (as point of view) which comprise the conceptual model of a sign. In the text of this article, references to these terms will be italicized.

⁶ Megan Isom (University of Delaware, class of 2007), e-mail message to author, March 19, 2008.

view has achieved throughout the design process, although individual expression of creativity is not an end unto itself.

Letterpress requires a specific set of actions to produce form and within each step of the process - from selecting type, setting type, inking, proofing, composing the relief, selecting paper, adjusting the packing of the tympan, printing a run, drying the prints and finishing (cutting, mounting, usage, etc.) - the student printer is faced with decisions to make in response to their observations and experience with each part of the process. What happens when there is too much ink? How does this affect the print? How do the specific parts of the process affect the *form*?

A significant part of the letterpress process is composing the relief as a mirror image of the intended print. This means that the process is not a what-you-see-is-what-you-get kind of operation. Composing a relief (as a mirror image) to be printed is a step to achieving the intended result, which is a significant concept for the student. The process is a relationship of cause (the composed *form*) and effect (the printed *form*) that embeds natural phenomena. In this way students must learn to let go of some control of the process and, in return, be continually surprised by the results of their own actions.

When a student is forced to work through a physical process they learn to value this process as much as the final print. The acceptance and further embrace of a process that is contingent on natural phenomenon and experimentation helps to make a student more aware of their immediate position in time. Rather than sensing the immediate moment only as a step towards a future goal, students who are able to embrace their presence in the present tense take ownership of their own way of working and become able to affect their own creative process in unconventional ways.

Originality

Anyone who has experience with letterpress knows that every print is slightly different. This inconsistency means that every print is a unique object, every print is a one-of-a-kind original due to the specific situation in which it was created. The consistency and temperature of the ink, the amount of packing on the tympan, the arrangement and height of the relief, the placement and orientation of the paper - all these things contribute to the unique and original qualities of each print.

For a student of graphic design, technology is implicit in the design process and it is important for them to value what the computer does well and what it does poorly. For exactitude, infinite duplication and speed of production, the computer is a valuable tool (this paper was written on a computer). However when a student pulls an original print off the letterpress - something that only exists at that moment in time and as a result of their own action - they enter into a

relationship with that physical object that is physiologically significant. The one-of-a-kind authenticity of working directly with the material of production is a significant learning experience because the sensory experience evoked by engagement with materiality evokes a deeper perception of one's affects on the material.

Form Generation

“Physical knowledge arises from actions on objects, logical-mathematical knowledge arises from reflection on outcomes of coordinates of actions, which, because they are necessarily on objects, inform physical knowledge.” - Jean Piaget⁷

Within a design process are opportunities to discover relationships and ideas that one could not predict prior to engaging in the process (one must begin to search in order to find). If a design process is purely cognitive (existing only within one's mind) then the results of the process will be the result of knowledge of what already exists or what one has already experienced. However, if the design process engages with material objects outside of the body, then there is opportunity for things to happen that have not yet been experienced - things that one's mind has not been conditioned to recognize. Therefore, only by engaging with the material world and learning from the outcome can new forms of communication (new designed experiences) be discovered and then utilized.

For students, the letterpress requires physical action to manifest ideas and it is through physical action that design produces *form*. For example, a student may think they know what the letter 'A' in 72 point Helvetica Bold looks like, but until they print it (make it physical) then they do not know how the actual *form* communicates. Further, when printing the letter 'A', other things may affect the intended communication like the other printed matter on the page (including other letters, graphics and images), the dimensions of the page (height, width, thickness), the light reflected off the paper (the perception of color), and other sensual data like texture, temperature, and sound that affect the perception of the thing that is the letter 'A' to one person at one moment in time.

Throughout the process of generating *form*, a student who is aware of their own unique process allows him or her to discover new and unplanned design methods. If a student is attempting to print a relief locked up on the bed of the press, and they accidentally modify one part of the printing process (inking, paper feed, etc), then they will 'accidentally' generate a new *form* - something they did not plan on creating. Many times new *form* can be created from a 'happy accident' or a mistake within a process. For the student who is aware of these mutations within their process, a new species of print (a new *form* of communication) may be born.

⁷ Jean Piaget, *Biology and Knowledge* (Chicago: University of Chicago Press, 1971), 28.

Idea Generation

“Design that lacks ideas and depends entirely on form for its realization may possess a certain kind of mysterious charm; at the same time it might be uncommunicative.” “Good design satisfies both idea and form”⁸

Within the process of generating new *form*, new *ideas* are discovered, or uncovered, by a student with an open mind. A student may discover a new *form* which makes them think of a new conceptual direction for their design project. In this situation, the student is not changing the project, the intention of their actions remains the same, rather they are allowing the process to modify the *idea* that is communicated through the embracing of a newly discovered *form*. For many students this is a difficult task since it is logical to first have an *idea* that one wishes to communicate and utilize process only to manifest one’s *idea*. The challenge of an experience-based design curriculum is to provide the opportunity for a student to accept changes to their *ideas* throughout their process where the relationship between *form* and *idea* is constantly shifting as materials are generated.

Slowing Down to Pay Attention

When I teach typography on the letterpress one of the first things I ask the students to do is take a deep breath and relax. Letterpress takes time. Think Zen, or ‘mindfulness’ in Buddhism. It is important that students go through the laborious process of composing, printing and finishing a letterpress project in order for them to be aware of the value of time in the development of ideas.

Students must become absorbed into the experience of letterpress in order to learn the process requisite to letterpress printing. By absorption I mean “an outpouring of self into an object: being completely attentive, engrossed, intensely concentrated, and immersed or lost in an activity”⁹. By engaging in the immersive process of letterpress printing, students gain an understanding of what it means to work through their ideas. They begin to learn that the production of engaging, creative graphic design takes time due to the temporal necessity of the design process.

The Phenomenological Value of Form

The clean lines and unaffected forms of modernism are designed to communicate a message to the broadest audience possible. Corporate, modern graphic design is intended to “Minimize

⁸ Paul Rand, *Design Form and Chaos* (New Haven: Yale University Press, 1993).

⁹ Ciaran Benson, *Cultural Psychology of the Self: Place, Morality and Art in Human Worlds* (Routledge, 2001), 178.

difference. Maximize reproducibility. Make it easy, accessible, understandable to all. This is the univernacular, ultra-homogenized and distinction-free, the international language of the status-quo.”¹⁰

In contrast, many contemporary designers use fonts representing broken or textured letterforms as an attempt to communicate with an imperfect, individualized, postmodern voice. The fatal flaw in this action is that these designers are still selecting a font from a list that is available to many other people and by using a computer font each character will be the same, rendering the uniqueness they desire impossible. Designers who rely on a computer font to express meaning without further exploration of the *form* of the letters are disregarding the potential of material exploration and experimentation to contribute unique, original aesthetic attributes to the overall communication.

Studies in human facial features show that what is considered beautiful is slightly imperfect. The balance between perfection and imperfection contributes to the perception of beauty. Type that has unique inconsistencies in its *form* is reflective of personal individuality and the inherent flaws of human beings. Letterpress embodies the imperfect qualities of beauty. Typography printed by the letterpress creates a felt experience for the audience that is more significant than a mass-produceable copy of a computer print-out. Letterpress typography has character. The face of the type transcends the printed page and through its tangibility communicates and expresses intangible qualities of human nature.

It is important to note that letterpress printing has value within graphic design education as an educational experience, not an end result. As David Jury wrote in his book *Letterpress: New Applications for Traditional Skills* (2006), “Letterpress must continue to perform a function, not merely to decorate.” It is important to recognize that the educational experience of letterpress transcends the specific aesthetic style of letterpress printing. For a student of graphic design, the methods learned through letterpress can be applied to a wide array of design media.

Spatial Composition

When we perceive one object as different from another (sensing a relationship of *form*), we ascribe characteristics to each object based on prior knowledge (through signification, symbolism and experience). When one object is perceived to relate to another object, a relationship is formed and the meaning of each object is compounded by the meaning of this relationship. The construction of relationships, as an interaction of the mind and body, must take place in some form of field, or space, that relates to the objects within. Inherent to the action of relating objects to each other and to a space, is the person who is perceiving the

¹⁰ Jessica Helfand, *Screen: Essays on Graphic Design, New Media, and Visual Culture* (Princeton Architectural Press, 2001), 40.

composition. This person is also a physical object. When the perceiver acts on an object through physical manipulation, they are doing so as one object affecting another.

A design composition is a constructed relationship between objects (letters, colors, shapes, etc.) that represent *ideas* to an audience. When a student is composing *form* on the bed of the letterpress they are physically engaged in the roles of both the designer and audience. When the activity of composition is direct - meaning the designer is working directly with the production media - decisions to act and the perceived reaction occur quickly and without the translation of abstraction and representation (as it is on the computer screen). In this sense, the student composing on the bed of the letterpress is in complete reciprocity with *form* and their work becomes an extension of their body in space. The student's body is acting as an object of the composition, conceiver of the message, and the perceiver of the communication. The instantaneous interaction of person-as-object and person-as-perceiver is a physiologically significant event that allows a student to experiment with *form* directly and absolutely.

Power of Production

When you ask a design student what the term 'craft' means you will typically get one of two answers. Some will talk about craft fairs and things like quilting, needlepoint and other forms of hobbyists' obsessions. Others, such as my students, will relate to the word an object's integrity of physical form (i.e. with great attention to the details of construction). What is interesting is that these two definitions represent opposite ends of a value scale for these students. The term 'crafty' in the description of an object typically means that the object has 'hand-made' qualities and in the minds of contemporary design students this is derogatory description. Conversely, when an object has solid 'craft' a design student would consider this object more professional and of a higher quality than an object that is 'crafty'.

The industrial revolution and the machine age is embedded into the ethos of contemporary graphic design students. Everything around them is a product of mass production and this is what they learn to value. Inherent in mass production is solid craft (or at least a perceived solidity of *form*) because the integrity of a product's function is paramount. *Form* equals function and function equals value.

The value of something that is 'machine-made' is synonymous with a level of professionalism that has nothing to do with being 'crafty'. As a designer, to be professional is to be powerful because the more 'professional' an object of design, the more it is valued as a commodity. Like a seed pod or stone that has been polished in a river, things have value if they are packaged well and feel good in your hands.

Letterpress as both a tool for process and production puts the power of production in the hands of the student and they become energized to make professional things. They become

powerful. Their effort is manifest in an actual, real object they can hold in their hands - something that is a physical part of their life. They are both the producer and the consumer by making an object that carries the qualities they know to be valuable.

Limitation Breeds Creativity

A quick scan of my computer lists about 300 fonts available for use. A student of design today has at least this many fonts to choose from, and typically they try them all at least once (for better or worse). With the letterpress (specifically referring to monotype) the number of fonts (or 'founts'¹¹) is limited to the number of individual pieces of lead type sitting in cases, organized for use. With wooden type, which is much harder to obtain, the limitation is even more severe. It is rare to have a complete font of wood type, and even more rare to have multiple letters of a single font. For a design student, this limitation breeds creative challenges.

One example of limitation breeding creativity is the use of characters that look like other characters because the proper character is not available in the font they wish to use. An example is the use of the number "1" in place of the letter "l". As simple as this may seem, this process of creative problem-solving has led to discoveries of new relationships between *form* and content in the compositions of students because the juxtaposition of abnormal characters contributes to the discoveries of meaning by the audience.

When faced with a limited number of fonts, a student is challenged to utilize many design fundamentals like hierarchy, positive/negative space, scale, color, repetition, rhythm and juxtaposition. Through the realities of limitation, students are challenged to construct a composition that communicates an idea without reliance on the aesthetics of a font. This takes creative problem-solving and an awareness of tangential approaches, both of which are invaluable to the design process.

All-in-all, succeeding with limited options is an important aspect of learning and an ability that is needed in our society. All design problems exist within the context of some set of rules. Whether these are expectations, regulations, requirements, or a creative brief, making the most of what is available and pushing against these limitations are the marks of a great graphic designer and a highly creative human being.

Conclusion

¹¹ For this article, I decided to use the western term 'font' instead of 'fount', however these terms are interchangeable. I note the English word 'fount' here as a reference to the Middle French word 'fonte', meaning (something that has been) melt(ed).

Within the text of this article I have outlined a number of educational outcomes that are possible from graphic design curricula that utilize the letterpress as a teaching tool. It is my belief that letterpress and other 'analog' processes are crucial components of a contemporary design education. My position is based on direct classroom experience and the witnessing of young people being consumed by computer technology that fosters insulated, abstract life experiences. Letterpress offers students an ontological relationship to phenomena and the physical world which has the potential to transcend graphic design practice by teaching students to be active participants in the world around them.