

REFLECTION

Editor's Note

One means of advancing design is to encourage discourse, and one way to encourage discourse is to thoughtfully discuss what has been put forth as design knowledge in academic journals. With the following article, *Visible Language* launches a "Reflection" feature whereby scholars or practitioners engage with a recently published article in a considered, thoughtful, reflective way. In this inaugural Reflection article Professors Emily Verba Fischer and Reneé Seward, who both teach typography at the University of Cincinnati (UC), were invited to consider Maria dos Santos Lonsdale's article "Typographic Features of Text: Outcomes from Research and Practice" from *Visible Language* 48.3 and to reflect upon how it relates to their classroom activities. Emily and Renee's typography teaching often occurs in the early semesters in UC's Myron E. Ullman School of Design, just prior to students' first cooperative education, or "co-op" job, and thus their focus in these early courses is on using their personal research and the research of others like Maria to prepare students for immediate entry into practice.

We hope you enjoy Emily and Renee's reflections and that they stimulate others to write thoughtful Reflections on articles to be published in future issues of *Visible Language*.

Mike Zender, Editor

Typography Education:

Eco-System and

Excellence

Reneé Seward and Emily Verba Fischer

Abstract

The following two essays are responses to Maria Dos Santos Lonsdale's article entitled "Typographic Features Of Text: Outcomes from Research and Practice" (*Visible Language* 48.3, 2014). From the lens of two professors of typography from the Myron E. Ullman School of Design at the University of Cincinnati, these partner texts position Lonsdale's detailed information about typographic principles for legibility into a broader, typographic ecosystem. In Part 1, Reneé Seward defines this ecosystem as a complex relationship between two differing components of information processing: seeing and perceiving. In Part 2, Emily Verba Fischer explores the cultivation of aesthetic sophistication in design students through attention to detail within that ecosystem. Overall, these responses discuss the influence of the typographic ecosystem to education, research, and practice as a whole. They were written for the same audience as identified by Lonsdale in her paper, "typographic and graphic designers, teachers and students" (29).

Introduction

Maria dos Santos Lonsdale's article "Typographic Features of Text: Outcomes from Research and Practice" (*Visible Language* 48.3) aims to provide guidance for designers, teachers and students through the amalgamation of published resources on the legibility of text. The following two essays are responses to this article, and an attempt to relate selected ideas and principles from Lonsdale's text to the experience of type education at the University of Cincinnati's College of Design, Architecture, Art, and Planning.

Part 1: The Eco-System of Typography

Reneé Seward

1. Components of Typography

The main goal of typography is to organize text into structures that help people easily and enjoyably read and perceive written messages. Much of my personal research has been in the design and development of an innovative, interactive digital tool to help children learn to read (Seward, 2014). Just as reading is comprised of two main components, decoding and comprehending, so typography is comprised of two main components, seeing (the objective typographic mechanics) and perceiving (the subjective typographic messaging). The Seeing Component represents the objective typographic mechanics that allow viewers to easily and enjoyably process information whereas the Perceiving Component represents the subjective typographic messaging that allows viewers to convert what they see into meaningful content (gain knowledge). These components are not static—they are active principles that work interdependently with each other in order to comprise a whole. Typography can be described as an ecosystem that is a community of principles (typographic mechanics + typography messaging) living in conjunction with communication vehicles (environmental, mobile, print, desktop) that interact as a complete system. In Maria dos Santos Lonsdale's paper "Typographic Features Of Text: Outcomes from Research and Practice" in *Visible Language* 48.3 she summarizes principles that are good examples of the objective typographic mechanics, or the Seeing Component, that allows someone to recognize and process information. However, I believe that in many designed artifacts, there is another component working in tangent to these typographic mechanics which helps viewers comprehend and acquire knowledge—the Perceiving Component. I will describe the nature of a typographic ecosystem and a pedagogical ap

proach to teaching this ecosystem in typography courses and then go on to discuss the influence of the ecosystem to education, research, and practice.

2. A Typographic Eco-System

"The width of a grid column influences the line length of a paragraph. A typeface's contrast influences how small you can set the typeface so it's still legible on your phone. The tools we use and the choices we make affect a design up and down the supply chain." (Jason Santa Maria, *On Web Typography*)

Typography can be described as a dynamic relationship within and between two components—Seeing and Perceiving. Maria dos Santos Lonsdale's paper provides a thorough literature review of what she defines as legibility principles of typography, what I describe as the Seeing Component of the typographic ecosystem. Willi Kunz in his book *Typography: Macro + Micro Aesthetics* defines the Seeing Component on two aesthetic scales: the Macro and the Micro.

The Macro-aesthetics are noticeable at first glance. They consist of such things as overall format, type hierarchy, color, positive and negative space. The Micro-aesthetics requires a closer look in order to recognize them. They consist of such things as letterform anatomy, letter spacing, line spacing, line length, and kerning. (Kunz, 97)

The Seeing Component helps viewers mentally grasp or see the information being presented. According to Lonsdale the legibility component that establishes seeing allows viewers to read information quickly. I will go further to say that the Seeing Component allows viewers not only to gain speed in distinguishing letters (legibility) but also to ease and make desirable the decoding of information (readability) (Maria, 6; Lupton 2014).

Legibility is a function of typeface design. It's an informal measure of how easy it is to distinguish one letter from another in a particular typeface. Readability, on the other hand, is dependent upon how the typeface is used. Readability is about typography. It is a gauge of how easily words, phrases and blocks of copy can be read. (Halley, 2015)

If the Seeing Component of type is done well, the design can make visible the content. In the design of books, the Seeing Component is the dominant aim in the design.

From reading Lonsdale's paper, the number of principles within the Seeing Component is considerable, and while many of these principles are points of contention between research and practice, we teach the most basic of them in introductory typography courses. Emily's essay below details three of them, yet I believe there is still another set of principles at work in many types of design that aid viewers in perceiving intended messages. I define these principles as the Perceiving Component. Just like the Seeing Component, the Perceiving Component can be visualized on the two aes-

thetic levels (macro and micro). The macro-aesthetics consist of principles that synthesize type with imagery, sound, motion, physical materials, and/or interactive behaviors. The micro-aesthetics consist of the principles that allow for the strategic manipulation of principles within the "Seeing component" for the purpose of adding a distinctive voice to a design yet retain harmony among elements: for example, excessive letterspacing in a subtitle, alternative grids for an experimental book structure, and use of display typefaces in a title. After reading Londale's paper, I believe there is a need for a similar paper to be written that summarizes the principles that define the Perceiving Component of the typographic ecosystem.

The careful balance of these Seeing and Perceiving components pushes worthless data-driven messaging into knowledge. While in many books the Seeing Component is dominant, I still see instances within the table of contents, the cover, or the chapter introductions that utilize aspects of the Perceiving Component. The same is true of a movie title sequence; while it may be heavy on the Perceiving Component, there are still aspects of the Seeing Component seen in the typesetting of the actors' names on screen. In Richard Saul Wurman's book *Information Anxiety*, he explains a Continuum of Understanding theory which says that all messaging starts out as data, which is worthless and meaningless. Once data gets organized, it becomes information. Once information has stimulus added to it, the messaging turns to knowledge. Once readers understand that knowledge, they can turn the messaging to personal wisdom. The Seeing Component of typography turns the worthless amalgam of letters into information by giving them order and a visual system through the application of typographic mechanics. However, the Perceiving Component goes further to turn that information into knowledge through the addition of stimuli that make the information conversational, narrative-based, and experiential (see *Figure 1*).

Figure 1.

Layering the typographic ecosystem over Richard Saul Wurman "Continuum of Understanding", we see the progression of messaging from worthless data to information through the application of the seeing component of typography that gives structure, order, and a visual system to the perceiving component that adds stimuli to the messaging to make it conversational, narrative-based, and experiential knowledge.

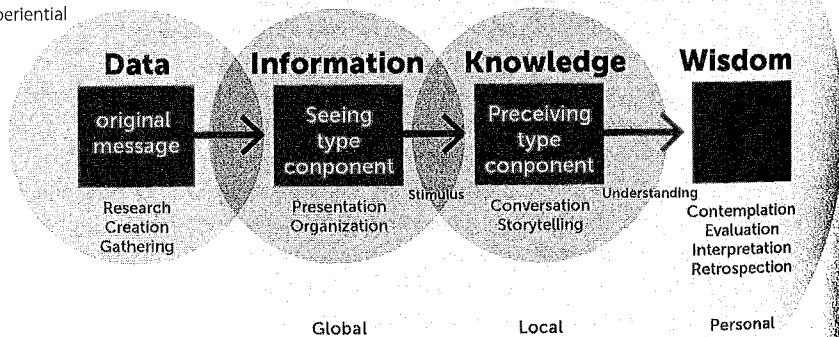
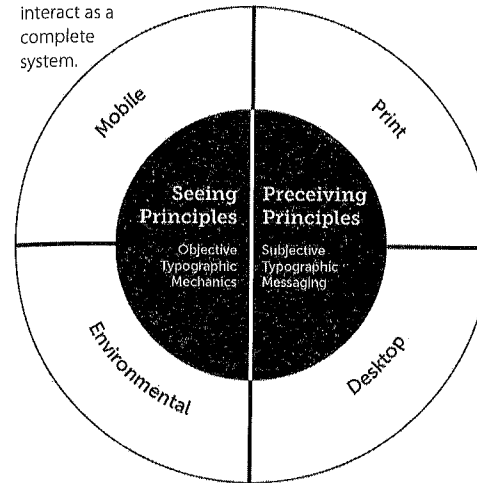


Figure 2.

The typographic ecosystem is a community of principles (typographic mechanics + typography messaging) living in conjunction with communication vehicles (environmental, mobile, print, desktop) within our environment that interact as a complete system.



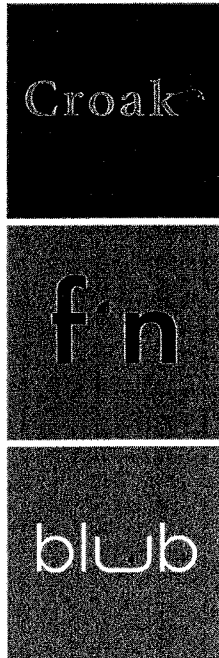
The dynamic relationship between these two components is the basis of the typographic ecosystem. Just as in an actual ecosystem where the living organisms function in conjunction with non-living components of their environment, these typographic components function in conjunction with differing communication vehicles of our environment. These communication vehicles consist of environmental, print, and digital based designed solutions (see *Figure 2*). The challenge of teaching this ecosystem is helping students gain sensitivities of the principles within each component and between each component. Furthermore, the challenge exists to help students gain sensitivities for how these components get applied differently to various communication vehicles. Some principles of type must be applied differently when being applied to environmental, mobile, print, and desktop solutions such as font size and font choice while other principles are more adaptive in application and apply more universally from one communication vehicle to another such as hierarchy and eye flow.

3. The Ecosystem in Pedagogical Application

In order for students to develop sensitivities for the components in the ecosystem and understand their inherent relationships, I teach these components in conjunction with each other. More specifically, I layer them together into typographic assignments. In a *Typography 1* assignment, students develop observational drawing of typefaces that they believe represent an adjective that describes attributes of an animal. Then students are asked to letter space the adjective word with a chosen typeface. Subsequently, students manipulate aspects of the typeset word in order to personify the adjective of their chosen animal. Lastly, students develop an animated .gif that layers moving behaviors into their type system to further personify the adjective that describes the chosen animal. The Seeing principles of consideration in the assignment are the accuracy of drawing a typeface, typeface choice, and kerning. The Perceiving principles of consideration are the manipulations of the Seeing components of the typeset word to further personify the animal (see *Figure 3*). Additionally, the layering of moving behaviors adds stimuli to further personify the animal adjective.

Figure 3

Three examples of adjectives that personify an animal. Students select a typeface and manipulate the word to further personify a chosen animal. The student works from top to bottom are Sarah Frey, Corinne Clements, Mackenzie Overmyer.



In a Typography 2 assignment, students develop a series of three posters for an event. Students first address the Seeing component by developing the type standards (ie. typeface choice, type size, hierarchy, grid, etc.) for the series that will make the posters legible in an environment. Then students investigate the relationship of the Perceiving component to their type standards in order to make a memorable poster series. Students consider the relationship of type to image and how they can manipulate certain type mechanics to articulate an expressive message of the poster yet build an unpredictable harmony between elements.

Sometimes that content has its own internal structure that a grid won't necessarily clarify; sometimes the content needs to ignore structure altogether to create specific kinds of emotional reactions in the intended audience; sometimes a designer simply envisions a more complex intellectual involvement on the part of the audience as part of their experience of the piece. (Samara, 120)

For example, in Figure 4 the paragraphs have been layered on top of each other and rotated in orientation to build harmony with the imagery and create a mood of an unsettled writing atmosphere. In Figure 5 the counterspace of the letter "O" in Oskar is filled in so that it builds harmony with the other circle elements in order to emphasize the geometric nature of Oskar Fischinger's work. In Figure 6 the name Jacques Derrida has been broken and the body copy has been justified at an angle to create very distinctive shapes, but they all work together to help express Derrida's philosophy.

In a Typography 3 assignment, students develop a publication that will be read in print and on mobile devices. The Seeing principles include considerations of typeface choice for an identity of the publication and type standards for the content of the publication. These standards have to be developed for both print and mobile solutions. Designing for print and mobile helps students understand how the typography components differ from one communication vehicle to another. Some of the Perceiving principles include the integration of image with text, the breaking of the grid, and the use of display typefaces to help create an unpredictable harmony among elements, as well as establish an expressive voice to the messaging. For example, in Figure 7 notice the manipulation of the letters in the magazine name and the rotation of the first few words at the start of a story. In Figure 8 notice the relationship of the magazine name to the cover image, as well as the free nature of the handwritten typeface that does not conform to the grid.

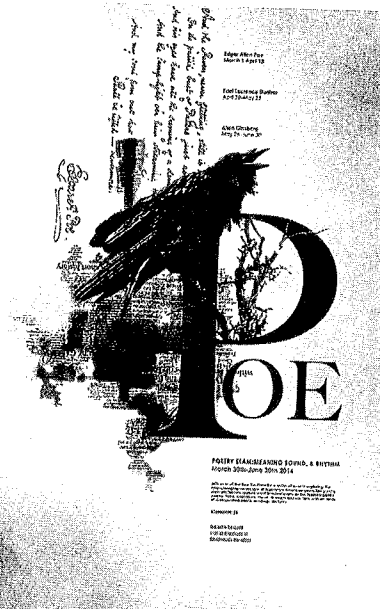


Figure 4

This poster shows the investigation of the relationship of the perceiving component to the student's type standards in order to make memorable poster series. The paragraphs that have been layered on top of each other and rotated in orientation build harmony with the imagery and create a mood of an unsettling writing atmosphere. This poster was designed by Sara Thompson.

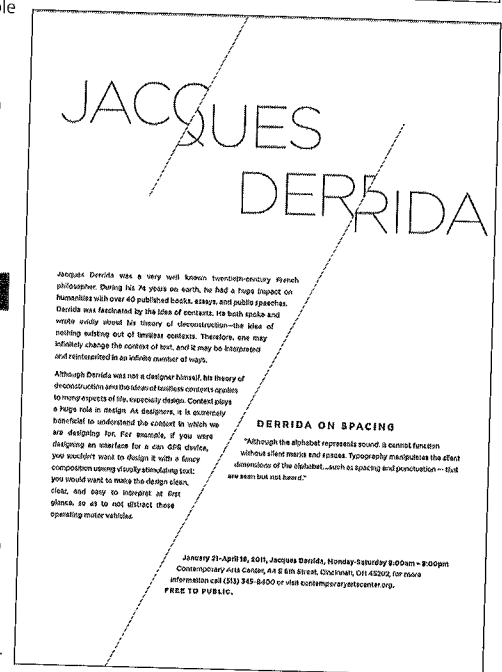


Figure 5

This poster shows the investigation of the relationship of the perceiving component to the student's type standards in order to make memorable poster series. The counterspace of the letter "O" in Oskar is filled in so that it builds harmony with the other circle elements in order to emphasize the geometric nature of Oskar Fischinger's work. This poster was designed by Andy Meyer.

Figure 6

This poster shows the investigation of the relationship of the perceiving component to the student's type standards in order to make memorable poster series. The name Jacques Derrida has been broken and the body copy has been justified at an angle to create very distinctive shapes but they all work together to help express Derrida's philosophy. This poster was designed by Brandon Kennedy



Jacques Derrida was a very well known twentieth-century French philosopher. During his 34 years on earth, he had a huge impact on literature with over 40 published books, essays, and public speeches. Derrida was fascinated by the idea of context—the idea of nothing existing out of someone's context. Therefore, one may literally change the context of text, and it may be happiness and reinforced in an infinite number of ways.

Although Derrida was not a designer himself, his theory of deconstruction and the idea of endless context equals to many aspects of life, especially design. Context plays a huge role in design. As designers, it is incredibly beneficial to understand the context in which we are designing for. For instance, if you were designing an interface for a car GPS device, you wouldn't want to design it with a fancy composition using vibrant colors and fonts. You would want to make the design clear, clean, and easy to navigate at first glance, so as to not distract those operating motor vehicles.

DERRIDA ON SPACING

"Although the alphabet represents sound, it cannot function without silent marks and spaces. Typography manipulates the effect dimension of the alphabet...such as spacing and punctuation—that we never but not have."

January 21-April 30, 2014, Jacques Derrida, Monday-Saturday 9:00am - 8:00pm
Columbus Arts Center, 44 S. Elm Street, Columbus, OH 43202, for more information call (614) 345-6200 or visit columbusartscenter.org.
FREE TO PUBLIC.

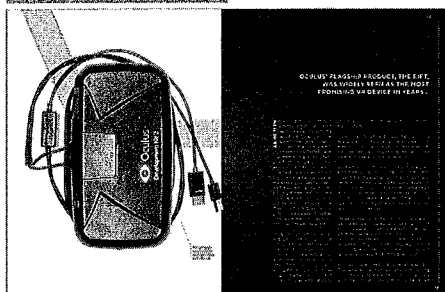
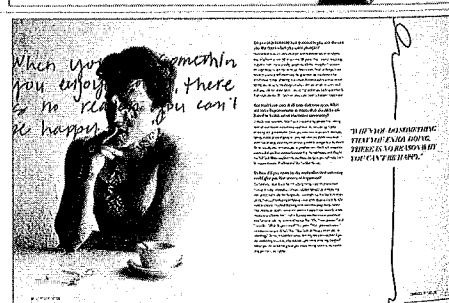
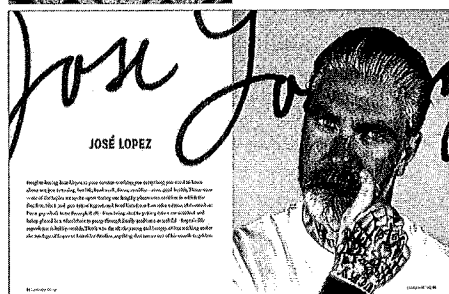
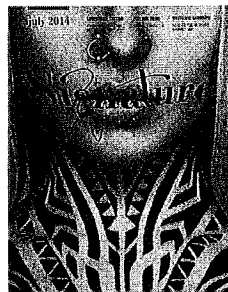


Figure 7

The spreads in this student project display the usage of both the Seeing and Perceiving components. Notice the manipulation of the letters in the magazine name and the rotation of the first few words at the start of a story. This project was designed by Josh Hill.

Figure 8

The spreads in this student project display the usage of both the Seeing and Perceiving components. Notice the relationship of the magazine name to the cover image, as well as the free nature of the handwritten typeface that does not conform to the grid. This project was designed by Elizabeth Cardone.

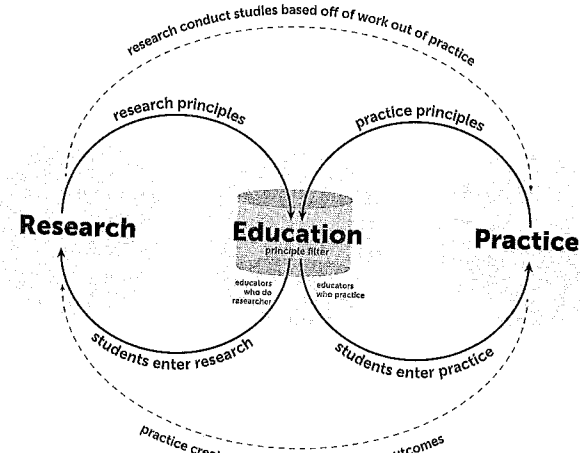


4. Education's Relationship to Research and Practice

In conclusion, the typographic ecosystem is as vast and complex as the world we live in, and it is important to understand its relationship to education, research, and practice. Londale's paper discusses the relationship of research and practice in establishing proven typographic mechanics. As the profession moves forward, we need to view research, practice, and education as three components working systematically together to execute, prove, and refine the entire typographic ecosystem integrating mechanical considerations of the Seeing Component with meaningful ones of the Perceiving Component. Figure 9 models the integration of research, practice, and education in which educators who serve a dual role as educator and researcher or practitioner integrate Seeing and Perceiving into a methodology that they teach to the next generation of designers. These designers will in turn enter into the profession and execute, prove, disprove, and refine, those same principles through their own work. The way that education filters the information from research and practice differs from one institution to another, which in turn produces designers with varied approaches to design.

Figure 9

The relationship of research, education, and practice is an ecosystem in which typography lives.



Our discipline, Communication Design, is in the process of growing up. We have been transitioning from what was originally a trade craft where designers only practiced into a discipline where they have a discourse between practice and research (Poggenpohl 2009). With any growth process there are growing pains and Communication Design is no different. The pains of growth within our profession can be seen in (1) the disconnect between research and practice and (2) the lack of integration of Seeing and Perceiving. I do not believe research and practice currently interact enough with each other to provide integrated principles that can advance the profession as a whole. Once integration happens, it will no longer be necessary for education to function as the filter of research information but a deliverer of a complete typographic ecosystem.

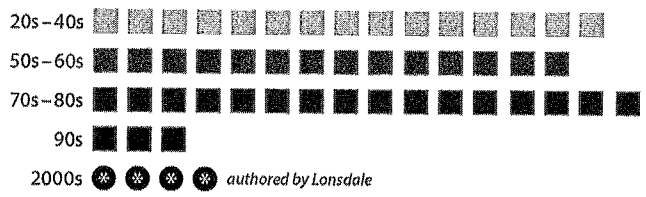
**Part 2:
Beyond Legibility:
Cultivating Excellence in
Typographic Education**

Emily Verba Fischer

1 —
Functionality Versus
Excellence

Legibility as studied from the 1920's until today (see *Figure 1*) is the focus of Maria dos Santos Lonsdale's article "Typographic Features of Text: Outcomes from Research and Practice." It is curious that the cited legibility studies seem to end just as the discipline of graphic design began "growing up" from a trade to a profession (and thus many developments of the digital age seem to be missing from the article). However, Lonsdale's article succeeds in laying out a body of knowledge on legibility to be critically examined with a fresh lens. A design educator like myself assumes the audience of her article (comprised of practitioners, teachers, and students) might be interested in something more than legibility. In order to communicate effectively in today's image flood, the design of text must be aesthetically sophisticated in addition to legible — that is of course if it wants to retain a viewer's attention.

Figure 1
Number of sources cited by
decade



Students must certainly learn the principles Lonsdale has outlined, but through rigorous heuristic approaches in the classroom — reading alone will not do. Then, they must learn to combine these "ingredients" meaningfully so that the typographic cake they bake may be appropriately analytical and/or poetic, depending on the context and content. The cultivation of typographic sensitivity in design education is what elevates merely functional typography to excellent typography. Typographic sensitivity may be defined as a group of elements arranged together (made of letterforms, lines or bodies of text —potentially combined with imagery) that live in harmony with one another. I teach my students that every element within a format needs to have some kind of relationship (if not multiple relationships) to everything else. There is so much visual pollution

In our virtual and physical worlds — merely knowing how to make type functional is not enough.

With functional typography, 1+1=2. The typographic result successfully accomplishes an intended communication task and is "legible." With excellent typography, 1+1=3. The typographic result is not only functional, but also aesthetically sophisticated. It is accessible and approachable. It succeeds in appropriately entertaining, informing, and/or persuading, depending on the intended audience. It may provide a visceral connection with the reader, if only for a short moment of delight or pause. It is well conceived and perfectly executed, promoting memorability and knowledge retention. If on the poetic side, it is imaginative. Beauty is a by-product of typography created correctly. In most cases though, excellent typography is invisible, bowing perfectly to its queen, Content.

The aptly titled chapter "Attractive Things Work Better" in Donald Norman's book *Emotional Design* illuminates how emotion is the bridge between harmonious aesthetics and the optimal functionality, or performance, of design. He states, "Emotions, we now know, change the way the human mind solves problems—the emotional system changes how the cognitive system operates" (page 18). Norman delves into how emotion touches upon the visceral, behavioral, and reflective parts of the brain (page 21); positive emotions can "broaden thought processes and facilitate better creative thinking, brainstorming, and the examination of multiple alternatives" (page 19). He cites a study performed in Japan where the perceived use of an ATM interface deemed "attractive" was easier to use than an unattractive interface. To prove the experiment wasn't culture-specific, the same experiment was performed in Israel, with success (page 17). Some conditions that tap into genetically programmed "positive emotions" include symmetry, brightness, saturated hues, and "sensuous" shapes (page 29). In a nutshell, harmonious design leads to positive emotions, which lead to increased knowledge and knowledge retention. This is the goal of typography.

2 — Typographic Features of Text:
Going Deeper (Examples from the
Classroom)

In her article, Lonsdale articulates published research on the following typographic principles: typeface choice, type variants, all caps versus lowercase, type size, color, micro spacing, macro spacing, configuration, and typographic structure. Of these principles, I will discuss only three in this article: typeface choice, micro spacing, and typographic structure. In my opinion, typeface choice and micro spacing are two of the most crucial for a student's early development of typographic sensitivity, and require rigorous focus on singular typographic principles. Typographic structure, on the other hand, illustrates ways students combine several principles in tandem to create harmonious compositions.

2.1 — Letterform Design:
In Response to Lonsdale's Principle
"Typeface Choice"

Choosing and using bad (or even worse—mediocre) typefaces is like digging through the garbage for dinner, while ignoring a Grade-A steak sitting in front of you. I always ask students to identify which typeface they are using and where it came from. Who designed it? Was it a middle school student with access to technology or was it a student at the Werkplaats Typografie? Was it designed in the past 100 years, or the past 100 days? Is it just a yard sale Futura, or the poor man's Bembo?

A great chef's training begins with learning the subtle nuances of flavor, just as the type designer begins with the letterform. One pinch of spice or mixture of spices completely changes the tone of a meal, just as the effects of a serif, for example, completely change the tone of a text body. Good students come to understand that a letterform's anatomic details have domino effects in a text body. Understanding nuances (such as how counter spaces, x and y heights, or small cuts in a serif will make a letterform feel less heavy overall on a page) sets them apart as designers with heightened sensitivity. Once the student understands the subtleties of sans serif and serif letterforms, they are ready to begin making informed typeface choices for bodies of text. In order to understand these subtleties, they must draw.

The structure of the Communication Design program at the University of Cincinnati has always been sequential and methodical. Students toggle between semesters of school with full-time, paid internships or "co-op" experiences. Co-op employers have praised our students for understanding the consequences of typeface choice on the overall tone and appearance of text. Meanwhile, there is discussion among faculty about whether there is enough time in our curriculum to devote to drawing letterforms. I maintain that learning the architecture of the letterform is one of the critical building blocks of a solid design pedagogy; a necessary step in cultivating typographic sensitivity. Repetition and attention to detail through analogue drawing establishes an intimate relationship between student and letterform — not for the ultimate goal of designing typefaces for a living, but to develop discipline, patience, and craft. A solid foundation using the hand, brain and eye is in place before moving to the computer to trace final drawings.

Students may draw type more accurately in later years, having been taught correct proportions earlier in their education.

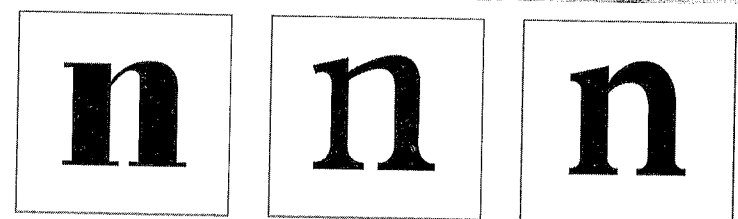


Figure 2A
Hand letterform design process (serif and sans serif).
Freshman level: Jonathan Baird

Figure 2B
Letterform Design Process (serif and sans serif).
Freshman level: Mykala Hayes



Figure 2C
Final "n"s. Freshman level:
Michael Emerick, Kendra Gullno, Evan Hoffman



2.2 — Tracking Exercise:
In Response to Lonsdale's Principle
"Micro Spacing"

You have to have philosophy or else you are {David} Carson.
Wolfgang Weingart, 2004

As a disciple of the Basel School of Design, I am one who firmly believes in typographic boot camp. Any analogy works here: learning the ABCs before writing, learning basic notes before composing, etc. As students progress through their typographic education, they must quickly begin to meaningfully weave the principles outlined by Lonsdale together. Before this happens, however, no micro detail is too micro. Sensitivity is always achieved through limitation. For example, consider tracking. Type foundries do not communicate a fixed 0 tracking to our favorite text robot, InDesign. Therefore, when a student types a line of text with no tracking, it is not regulated. Students must learn to optically identify the proper tracking, and harness the computer as a tool. This is often confusing — I am not suggesting that students grossly track body copy. I am requiring that they sensitively find the proper 0 value through intense optical training.

Figure 3A
Enlarged snippet of Avenir, size 10/14, base tracking set to 10. Freshman level: Mailcole Mamo

is a world renowned Swiss typographer, responsible for designing internationally known typefaces such as Avenir and Univers. He died on September 10, 2015 at the age of 87, thus ending a career that spanned over 60 years. Frutiger stands as one of the most important typeface designers of 20th century. Everyday, in the media driven world, readers encounter his fonts. Graphic designers and font users alike equate the Frutiger name with beautiful, functional designs that withstand the test of time.

designs resulted in the creation of "Prairie School" architecture which lead him to be considered the most influential architect of his time. Wright worked not only as an architect but also applied his talents to graphic art and writing. When asked about his process, Wright remarked, "I never design a building before I've seen the site and met the people who will be using it." Wright's Prairie Style architecture exemplifies how design should

2.3 — Achieving Sensitivity:
In Response to Lonsdale's Principle
"Typographic Structure"

Most design educators are familiar with the basic type exercise focused on variation with limitations in place. For example, students are only allowed to design using 10/14 type with one type weight in the first round of the exercise. Freshman find it difficult to connect what they are learning about composition in other courses to text layout. After several thumbnails are drawn, students begin exploring digital compositions. In class, we talk about dynamic margins and unifying the space between all typographic elements. After discussing this at length, I ask the students to close their laptops and chop up their pages in order to improve their compositions. They may choose whether to make micro-adjustments or completely change the composition. A student named Li Mo stated, "Somehow I am much more creative when I'm using my hands." If emoji were acceptable to place in academic texts, I'd place the clapping hands right here.

Figure 4A
Students happily rethinking their digital variation by manual means — eyes, brains and hands only!

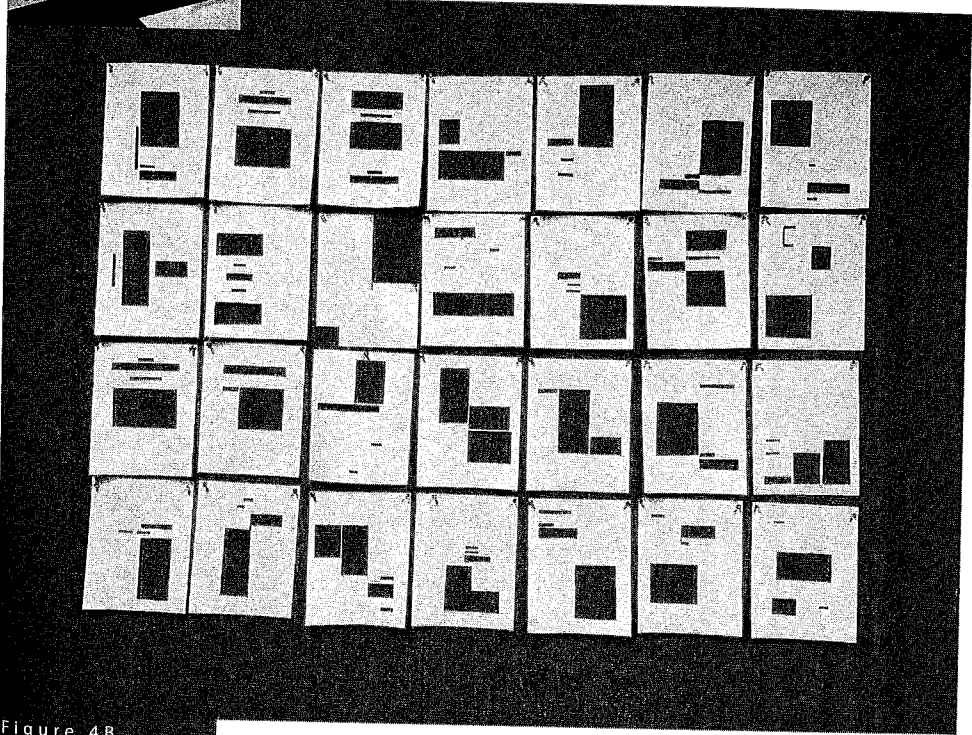


Figure 4B
Students analyzed the negative space from their manual refinement debris.

In his book *Visual Thinking for Design*, Colin Ware presents an opinion on the importance of structure from the neuroscience lens:

Visual space is divided up into regions of common texture and color. Long chains of features become connected to form continuous contours. Understanding how this occurs is critical for design because this is the level at which space becomes organized and different elements become linked or segregated. Some of the design principles that emerge at this level have become understood through the work of Gestalt psychology (gestalt means form or configuration in German). But there is also much that we have learned in the intervening years through the advent of modern neuroscience that refines and deepens our understanding. (page 14)

The ultimate goal he presents for visual design is to create such that "visual queries are processed both rapidly and correctly for every important cognitive task the display is intended to support" (page 14). The responsibility of visual communication designers is profound — we must understand thoroughly what the intended communication is for a specific audience, no matter how small the design task. Pummeling this mentality into the freshman skull can be challenging, as most of them still think of design as "art."

Attention to all typographic principles yields the harmonic balance of the syntactic, semiotic, and pragmatic. The following student example in Figure 5 exemplifies many of Lonsdale's outlined principles in combination (typeface choice, type variants, all caps versus lowercase, type size, color, micro spacing, macro spacing, configuration, and typographic structure), and attain a balance between functionality and intuition. It has become increasingly important for students to analyze and design with complex content (information architecture), organizing effectively to reveal hierarchy and sequencing.

Figure 5

(opposite page)
The Procrastination Equation, Information Graphic, Pre-junior level: Rebekah Leiva

4. Conclusion:

Design is situated in the center of a delicate continuum between art and science. We have all heard the old adage about form and function; we must continue to respect it as our profession evolves. In order to achieve excellence, sensitivity must be cultivated in the classroom by first practicing the typographic principles outlined by Lonsdale (in isolation and in combination). Through repetition, the principles are internalized and become second nature for the student. Once these functional rules are habit, it is possible for them to use their intuition, taste, and voice in conjunction with this internalized knowledge to arrive in the center of the continuum.

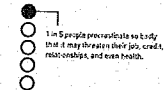
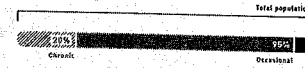
There is no shortcut to typographic sensitivity, which is why it remains the ultimate indicator separating the "men from the boys" in terms of graphic design skill. It is the difference between a functional graphic

THE PROCRASTINATION EQUATION

The Procrastination Equation was developed by Piers Steel as a tool to evaluate the key variables that drive procrastination: value, expectancy, impulsiveness and delay.

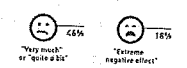
DID YOU KNOW...?

95% of the population procrastinates occasionally, with 20% being chronic procrastinators.



The Procrastination Research Group obtained 2,100 responses to the question:

"To what extent is procrastination having a negative impact on your happiness?"



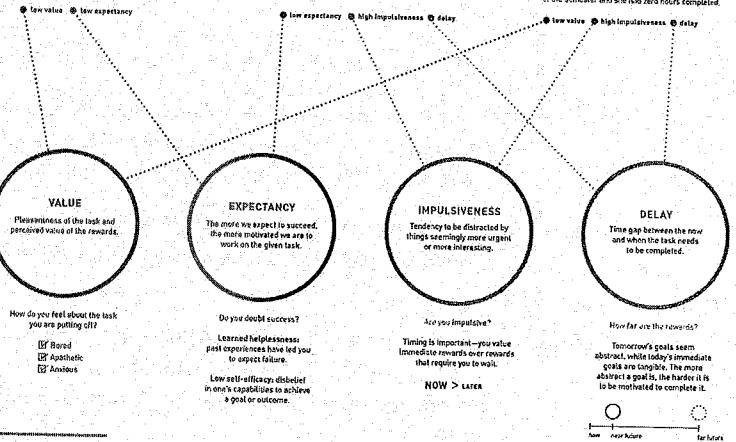
SO, WHY DO WE DO IT?



RACHEL
Rachel starts at a blank Word document, wondering how she managed to wait until Sunday night (again) to start her English paper. Not only is she apathetic towards the topic, but has already done poorly on the first three assignments of the course and doesn't expect a good grade.

TORI
Tori wants to apply for a job as a well-known architect's firm. Every time he sits down to fill out the application, he finds himself distracted by everything from organizing his desk to watching videos of his favorite comedian. As the deadline comes closer, Tori becomes too busy by thinking the job is most likely unavailable for him anyway.

SANDRA
Sandra is required to complete 15 service hours per semester to keep her scholarship. At the beginning of the semester, she did some research and was motivated to volunteer. Weeks passed and Sandra, seemingly too busy, didn't make any concrete plans. Before she knew it, it was a week before the end of the semester and she had zero hours completed.



GET MOTIVATED

Motivation and procrastination are inversely related—as motivation increases, procrastination decreases. According to the Procrastination Equation, the goal is to increase value and expectancy while decreasing impulsiveness and delay.

INCREASE VALUE AND EXPECTANCY

DECREASE IMPULSIVENESS AND DELAY

designer and an excellent designer. As the discipline of design continues growing up from its history as a trade to a profession, educators must cultivate the relationship between time and quality in teaching typographic principles — one by one, and then in combination. No detail is too micro. Once students understand the significance of these processes, they can achieve meaningful results faster when they are practicing professionally.

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