Emil Ruder: A Future for Design Principles in Screen Typography
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Introduction

This paper sets out to explore the way in which the renowned Swiss typographer, Emil Ruder, has influenced a practice-led PhD study focusing on the need for creating new design principles for screen-based typography. Specifically, the paper examines Ruder's seminal book *Typographie: A Manual for Design* (1967), wherein historical knowledge created for a print-based context has made a sustainable contribution to the future development of typography within the context of the screen. In addition, this study has led to a re-examination of the relevance of Emil Ruder's teaching at the Basel School of Design, and his work as positioned within a contemporary context.

Emil Ruder (1914–1970) is distinguishable in the field of typography for developing a holistic approach to designing and teaching that encompasses philosophy, theory, and a systematic practical methodology. After 25 years of teaching, Ruder published the heavily illustrated book, capturing his ideas, methods, and approach. The book represents a critical reflection on Ruder's teaching and practice and a lifetime of accumulated knowledge. It has been published in nine languages and is now in its seventh edition. Today, more than 40 years after the book was first published, it is still widely used and referenced by education and industry practitioners alike.[1]

Background to the Research

This paper is drawn from PhD research that centers on the need for a clearer understanding of the nature and practice of typography in a screen environment and on trying to define the current and emerging design principles and methodologies that govern that practice.

The research question arose from the day-to-day experience and practice of the researcher, who works both as a designer and as a lecturer in design for digital media. As a teacher and a practitioner, I have found that traditional knowledge and experience fall short of the challenges of designing and teaching typography for screen. Through experience, I have found that there are many differences between print and screen typography at both macro and micro levels, and that traditional practical methods require revision and extension to address nontraditional aspects, such as motion, sound, and interactivity presented by screen-based design contexts.

1 Association Typographique Internationale (ATypI), (March 2004), *Type and typography Textbooks required by educators on ATypI Educators List*, Educators Discussion Summary, ATypI Publication.

Ongoing critical reflection on these issues in the course of my daily design and teaching practice and my own educational experience have greatly influenced the motivation and point of view from which this research has developed. Through the course of trying to solve typographic design problems for screen in my own practice and through the development of teaching material for my students, I have been practically exploring this territory for some time. The requirements of PhD research presented an academically rigorous context, and a systematic methodology to further examine this territory.

This paper sets out a critical discussion about how the direction of this research has been influenced by the work of Emil Ruder.

Emil Ruder and His Method

The broad nature of this PhD research subject (design principles for typography) and the emergent nature of the field (screen typography) required a contextual examination that encompassed a critical review of both relevant literature and contemporary practice. During the analysis of findings, Emil Ruder's practical methodology for designing typography emerged, proving to be particularly relevant to this research. Four main reasons for Ruder's significance became apparent and form the basis of discussion in this paper:

- The location of Ruder's book within the broader canon of literature on typography and design principles, and how it is referenced by and linked to the literature as a whole;
- The distinctive nature of Ruder's book and practice methodology among those in the field;
- The renewed interest in modernism, and how Ruder represents a paradigm of modernist aesthetics and methodology;
- The relevance of Ruder's approach to screen media.

Ruder's Location and Links with the Literature on Typography and Graphic Design

In selecting from among the broad spectrum of literature related to the design practice of typography, careful analysis of relevance resulted in a process of conceptual and visual mapping techniques that became a key research methodology for editing, classifying, ordering, and analyzing the seemingly broad range of typographic literature. After several iterations, the result of this methodology was a "literature map" visualization (Figure 1). The map provides a chronological and contextual overview of all the relevant literature in the field from the beginning of the twentieth century. Criteria for inclusion are based on:

- Relevance to category;
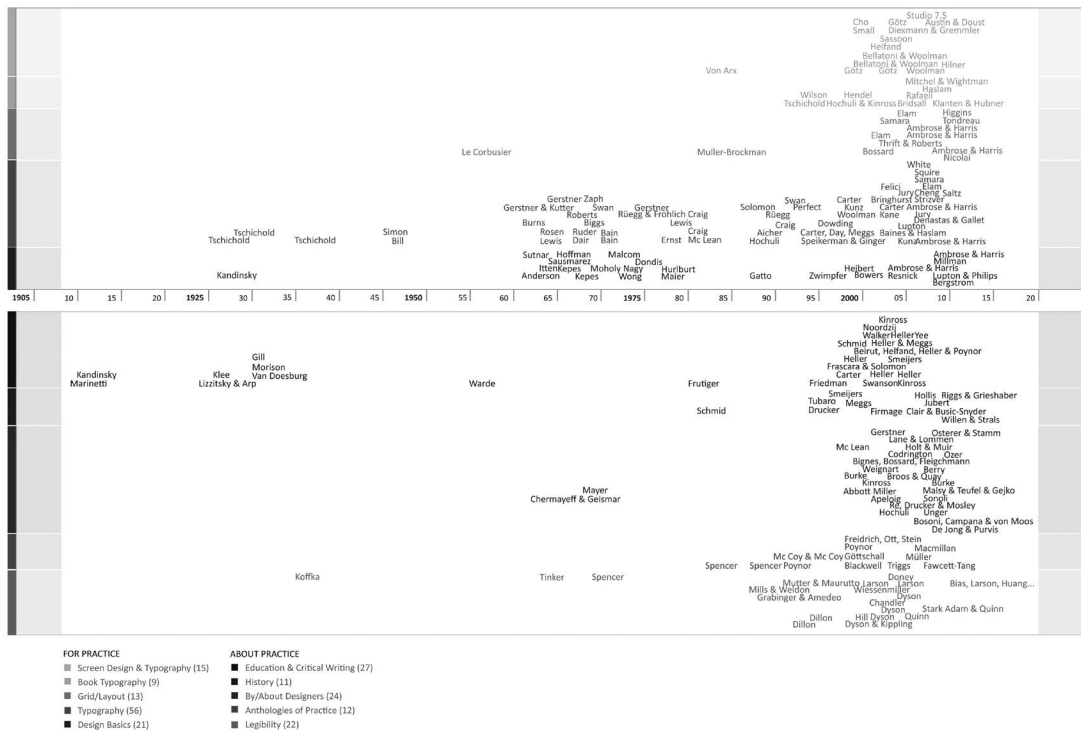- Established use in education and course curricula;

Figure 1 top map (1905–2020 timeline):

Studio 7.5
Cho   Götz   Austin & Doust
Small   Diexmann & Gremmler
Sassoon
Helfand
Bellatoni & Woolman
Von Arx   Bellatoni & Woolman Hilner
Götz   Götz   Woolman
Mitchel & Wightman
Haslam
Wilson   Hendel   Rafaeli
Tschichold Hochuli & Kinross Bridsall   Klanten & Hubner
Elam   Higgins
Samara   Tondreau
Ambrose & Harris
Le Corbusier   Muller-Brockman   Elam   Ambrose & Harris
Bossard   Thrift & Roberts
White   Ambrose & Harris
Squire   Nicolai
Samara
Felici   Elam
Jury Cheng Saltz
Gerstner Zaph   Swan   Carter   Bringhurst Strıcver
Gerstner & Kutter   Perfect   Kunz   Carter Ambrose & Harris
Roberts Rüegg & Fröhlich Craig   Solomon   Woolman Kane   Jury
Burns   Biggs   Lewis   Rüegg   Dowding   Denlastas & Gallet
Tschichold   Rosen Ruder Bain   Craig   Aicher   Lupton
Tschichold   Tschichold   Simon   Lewis Dair Bain   Ernst Mc Lean   Hochuli   Carter, Day, Meggs Baines & Haslam
Bill   Speikerman & Ginger   Kun Ambrose & Harris
Sutnar Hoffman Malcom   Ambrose & Harris
Kandinsky   Sausmarez   Dondis   Milliman
IttenKepes Moholy Nagy   Huriburt   Heibert   Ambrose & Harris
Anderson   Kepes   Wong   Maier   Gatto   Zwimpfer Bowers Resnick Lupton & Philips
                                                                      Bergstrom

1905 10 15 20 1925 30 35 40 45 1950 55 60 65 70 1975 80 85 90 95 2000 05 10 15 20

Figure 1 bottom map:

Kinross
Noordzji
Walker Heller Yee
Schmid Heller & Meggs
Gill   Beirut, Helfand, Heller & Poynor
Morison   Heller   Smeijers
Kandinsky   Klee   Van Doesburg   Frascara & Solomon
Marinetti   Lizzitsky & Arp   Warde   Frutiger   Carter   Heller Heller
Friedman   Swanson Kinross
Smeijers   Hollis   Riggs & Grieshaber
Tubaro Meggs   Jubert
Schmid   Drucker   Firmage Clair & Busic-Snyder
Willen & Strals
Gerstner   Osterer & Stamm
Lane & Lommen
Mc Lean   Holt & Muir
Codrington   Ozer
Bignes, Bossard, Fleigchmann
Weingart   Berry
Burke   Broos & Quay
Kinross   Burke
Mayer   Abbott Miller   Malsy & Teufel & Gejko
Chermayeff & Geismar   Apeloig   Songli
Re, Drucker & Mosley
Hochuli   Unger
Bosoni, Campana & von Moos
De Jong & Purvis
Freidrich, Ott, Stein
Poynor   Macmillan
Mc Coy & Mc Coy Göttschall   Müller
Spencer   Spencer Poynor   Blackwell Triggs   Fawcett-Tang
Koffka   Tinker   Spencer   Doncy
Mutter & Maurutto Larson Larson   Bias, Larson, Huang...
Mills & Weldon   Wiessenmiller   Dyson
Grabinger & Amedeo   Chandler   Stark Adam & Quinn
Dyson
Dillon   Hill Dyson   Quinn
Dillon   Dyson & Kippling

FOR PRACTICE
▪ Screen Design & Typography (15)
▪ Book Typography (9)
▪ Grid/Layout (13)
▪ Typography (56)
▪ Design Basics (21)

ABOUT PRACTICE
▪ Education & Critical Writing (27)
▪ History (11)
▪ By/About Designers (24)
▪ Anthologies of Practice (12)
▪ Legibility (22)

Figure 1
Literature Map 1900-2015 Typographic Design Principles, by Hilary Kenna, PhD Project, www.type4screen.com/lit-review/.

- Referral and recommendation on reading lists from educational and professional design organizations, and from online resources;
- Reputation of author(s) (as practitioner/educator/critic) and bibliographic references;
- Consumer popularity and contemporaneity; and
- Frequency of occurrence in one or more of the above.

The literature map illustrates the material split into two groups: *for practice* and *about practice*, with an additional five categories in each group (see the key in Figure 1). The visual display of these thematic groupings made it easier to identify critical patterns in the literature that would have been more difficult to uncover using written methods alone. One such pattern identified was the dominant influence of Swiss typography in the literature.

Note that while the literature map was very useful, it was not the only research methodology used in the literature review; its limitations required the use of other methods as well. For example, the literature map displays only book publications and not journal papers or articles (traditional or online versions), with the exception of the legibility category. This focus was mainly a result of the diverse nature of periodical materials and the difficulty of gauging their use in mainstream practice. As a result, other methods, including the use of RSS information feeds and content aggregators and the authoring of a research blog, were used to track and analyze this type of literature.

The overall findings from the literature map, combined with the findings from these other research methods, revealed a number of critical directions for investigation, which led to the focus on Emil Ruder.

Findings revealed that the bulk of titles published about practical design principles for typography have occurred since 2000, and that the majority of these publications make reference to Ruder either within the text itself or in the selected bibliography.

This finding prompted the realization that a modernist legacy continues to underpin many of the contemporary publications on typographic design practice (e.g., by Robin Kinross, David Jury, Phil Baines, Ellen Lupton, etc.), as well as exerting influence on the different and reactionary approaches (e.g., deconstruction, grunge graphics, postmodernism, etc.) that emerged in the latter part of the twentieth century.

Visualizing the literature has also helped to reveal significant connections between publications including the dominant influence of Swiss typography in the literature and connections between authors and subject matter (Figure 2).
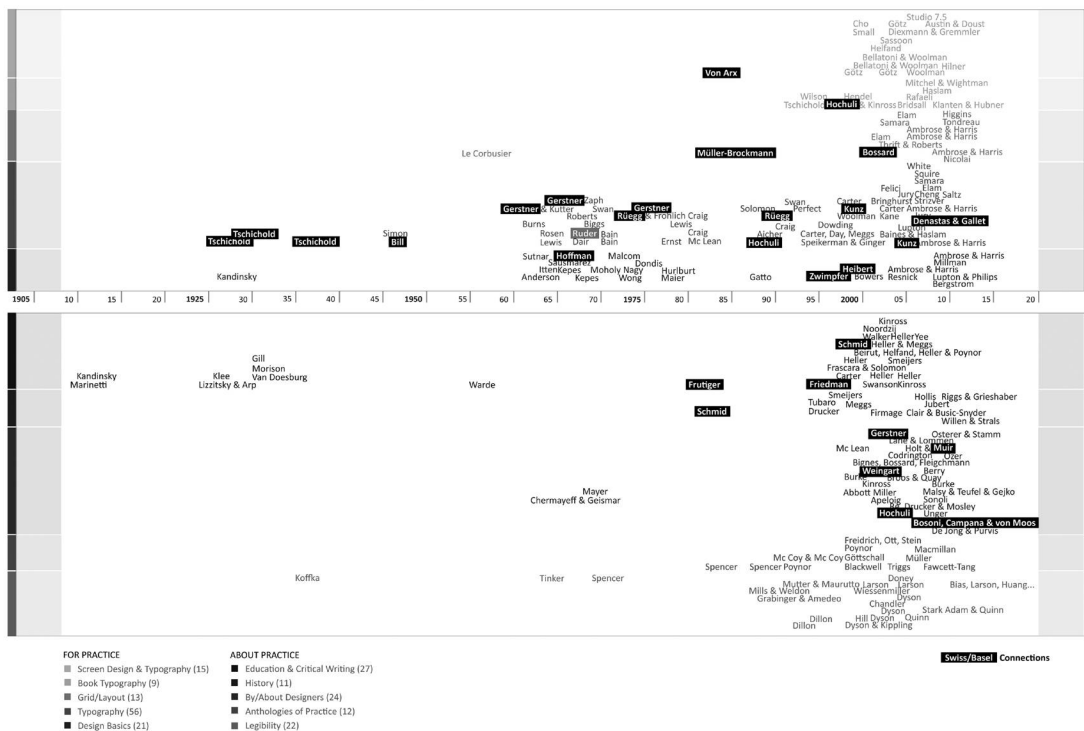
Figure 2
Literature Map 1900-2015 Typographic Design Principles with Swiss/Basel connections highlighted, by Hilary Kenna, PhD Project, www.type4screen.com/lit-review/.

A number of key publications chart the path of development of Swiss typography and the International style. First was Max Bill's publication, *Über Typographie* (1946), which established a number of principles for the new typography; a number of designers then started to follow these principles. The magazine, *Neue Grafik* (1958–65), and the book, *Die neue Grafik* (1959), by Karl Gerstner and Markus Kutter also spread awareness of Swiss typography to an international readership. Emil Ruder was a regular contributor to *Neue Grafik*, as well as to another magazine, *Typographische Mönasblatter.* Between 1959 and 1965, he published a series of articles about the underlying principles of his teaching and this new movement, which he called "the typography of order" (Schmid, 1981). In 1961 Josef Müller-Brockman published a book, *The Graphic Artist and his Design Problems*, which became a primary publication in the international dissemination of Swiss typography and its methods. Müller-Brockman detailed at length the core principles of this new "graphic art," including:

- A striving for objective presentation through the elimination of decorative and expressive effects;
- An unadorned typography that clearly conveys the message to be communicated;
- The use of a grid for ordering the information and graphic elements;
- The restriction of type sizes and typefaces (san serif, because it was an "expression of our age");
- Unjustified text setting; and
- The use of photography instead of illustration.

In his 2006 book, *Swiss Graphic Design: The Origins and Growth of an International Style 1920–1965*, Richard Hollis credits Müller-Brockman and Theo Balmer as having the primary influence on the development of Swiss graphic design. However, Kenneth Heibert (an ex-Yale design professor and colleague of Hollis), who was a student at Basel during the 1950s, strongly argues that Emil Ruder and Armin Hofman's influence was of much greater significance and points to a number of inaccuracies in Hollis's chronology of development (Heibert, 2007). For example, he claims that Müller-Brockman's own practice changed significantly toward the "modernist" style, for which he remains famous, only after his company hired graduates of the Basel School of Design who had studied under Armin Hofmann in 1955. According to Heibert, this chronology means that Hofmann and Ruder predate Müller-Brockman's mature style, and their influence should not have been placed by Hollis as a separate and later development.[2]

Ruder's book, *Typographie*, is centrally located on the timeline of the literature map, and although his book was not published until 1967, his influence begins much earlier, back to 1942 when he began teaching at the Basel School of Design. As mentioned, Ruder had

2   R. Hollis, *Swiss Graphic Design: The Origins and Growth of an International Style,* 1920–1965, (Yale University Press, 2006), 214.

been publishing shorter essays about his ideas and methodologies in *Typographische Monatsblätter* (TM), a Swiss journal of typography, as early as 1944. His contributions to TM throughout the 1940s, 1950s, and 1960s were testing ground for much of the material that would later appear in his book. In TM, Ruder's academic rebuttal of contemporaries, such as Jan Tschichold, who favored classical typography, and the passion of his arguments for all things modern, including his promotion of Fruitger's typeface Univers, soon established him as an opinion leader in Swiss typography. Armin Hofman, director of the Basel School of Design during this time, said of Ruder:

> ...he saw the return to classical form as a disastrous interruption of progress.... one could say that the efforts of the Basel School...laid the foundation for a new typographic consciousness...[3]

By the time Ruder had published *Typographie* in 1967, his philosophy and methodologies were already internationally renowned in the field of typography.[4]

Highlighting titles on the literature map that are linked to modernist or Swiss typography (Figure 2) demonstrates a significant and widespread representation across the literature. The number of highlighted titles after Ruder increases significantly. He can be linked to many authors and titles directly or indirectly, from a number of perspectives, including through geographic location (Bill, Gerstner), through his teaching at Basel (Heibert, Kunz, Schmid, Weingart), as a work colleague (Hoffman, Von Arx, Frutiger), as a peer rival (Tschichold), or through use of his work in books (Hollis, Meggs, Schmid). This web of connections presents a sketch of the broad sphere of influence of Swiss typography and the location of Ruder within it. Although Ruder's lineage warrants more detailed study, it is beyond the scope of this particular research. Nevertheless, the widespread influence of the Basel School of Design and Swiss typography on the development of international typographic practice has been documented by other contemporary research, notably McCoy (2005), Hollis (2006), Heibert (2007), and Jobling and Crowley (1996).

The position of Ruder within the literature and the extensive links forward and backward from him to other authors, as well as the prevalent use of Ruder's book today, provided the initial prompt to investigate his work and methodologies in more detail.

The Difference with Ruder
Another aspect of reviewing the selected literature focused on a critical comparison of the books' structure (including their contents pages) and their approach to explaining the practical principles for designing typography. A large majority of the texts adopts a structure based on elemental aspects of typography, such as letter,

3   H. Schmid, 'Emil Ruder: Typography from the Inside', *Baseline 36, 1,* 5–12.
4   H. Schmid, (ed), (March 2009), Ruder Typography, Ruder Philosophy, IDEA 333, Toyko.

word, and paragraph, and a practical approach based primarily on technique-based rules of design relating to these elements (Ambrose and Harris (2006), Baines and Haslam (2002), Craig (1990), Jury (2006), Kane (2002), Lewis (1963), Lupton (2004), Mc Lean (1980), Rüegg, (1989)). These books also tend to separate historical aspects of typography from practical techniques and to place them in discreet chapters. This approach is both logical and structured, clear and understandable—and Ruder's presentation and schema is markedly different.

Ruder's book distinguishes itself from other titles for its thematic structure and philosophical approach. There are 19 chapters in Ruder's book, each dedicated to a single concept or theme, such as *form and function*, *form and counterform*, *contrast*, *rhythm*, *kinetics*, and *variations*. Each chapter begins with a critical contextual essay that encompasses references from a range of fields, including art, architecture, music, and Eastern philosophy and Japanese aesthetics, as well as graphic design and typography. Through diverse visual examples, Ruder manages to weave historical and theoretical aspects together with practical techniques and methodologies. The book is a dense mix of historical insight, Ruder's personal philosophy of design, and textbook-like instruction. The overall effect is a deep and layered argument for a holistic approach to the practice of typographic design, and it makes Ruder's book worthy of several readings.

Other books also offer a philosophical approach to the practice of typography (e.g., Tschichold, 1928; Bringhurst, 2001; and Kunz, 1998), but as the reader progresses through each book, there is a separation between the philosophy of practice and the practical techniques. Ruder, on the other hand, continually relates the state of mind of designers to their ability both to practice design and to acquire knowledge.

There are also several contemporary publications by (and about) Helmut Schmid, a former student of Ruder (from 1964 to 1965), who has established himself as the guardian of Ruder's teaching legacy. Schmid continues to disseminate Ruder's philosophy and methods, and to demonstrate their contemporary relevance and use in print typography.

What ultimately differentiates Ruder's book from other treatises on the practice of typography is his holistic approach, which combines a mix of pragmatism and poetry. He foregrounds design principles over techniques, emphasizing a critical conceptual approach to practice that is underpinned by a systematic methodology. Similar to Eastern traditions of philosophy, Ruder endorses rigorous practice with basic elements first to gain mastery of the craft. Once this mastery has been achieved, Ruder promotes a process of experimentation, which might ultimately lead to innovation. From a practice perspective, Ruder's book is less a manual of practical techniques and more a way of thinking

and making typography as befits the purpose at hand. Finding and sustaining creative stimulus within the constraints of a given problem is paramount for Ruder. As a result, Ruder's methodology has a timeless quality, which might explain its continued relevance and appeal today.

In the context of screen typography, Ruder's approach is valuable because it operates at a conceptual level. It is not tied to any format or specific technology and is therefore sustainable. It offers a flexibility and openness that make it applicable regardless of the changes and advances in technology that affect the display of and the technical processes of producing screen typography.

In the next section this paper examines why specific aspects of Ruder's methodology are particularly suited to designing typography on the screen.

Ruder – A Paradigm of Modernist Aesthetics and Methodology
The contemporary relevance of Ruder's work should also be viewed in the broader context of the past decade, in which there has been renewed interest in modernist design. Design critics, historians, and media commentators cite various reasons for this resurgence.

According to Rick Poynor, at the height of postmodern experimentation in typography, some of its most ardent supporters, like Rudy VanderLans in 1991, were questioning its future direction, considering "the only way forward might be to go back."[5] Other leading figures in postmodern typography had also begun to re-examine the values of "design basics" in typographic practice and teaching. Wolfgang Weingart (a Swiss designer and student of Ruder), who had become disillusioned with the stylistic trend that his experimental work seemed to spawn, reportedly said to Helmut Schmid, who came to visit him at Basel: "I do not know where we are going in typography. Maybe we will come back again to Ruder."[6]

Weingart initiated a return to the famous "Basics in Design and Typography Course" as a summer school at Basel in 2005, which proved highly popular and has been over-subscribed ever since.

Meanwhile, Katherine McCoy, an American designer and educator credited with initiating some of the earliest postmodern approaches to typography, was also researching the effect of the Basel School of Design on U.S. typography. She traced the path of Basel's influence on American design education and typography in a paper, "Another 60s revolution," presented at the AIGA Educator's conference *Schools of Thought 2* in 2005. McCoy detailed how Swiss design education was brought to the United States at the Kansas City Art Institute, from 1964 to 1974, through the employment of three Basel graduates as teachers, and she identified how the resulting prevalence of modernist methodologies and approaches existed in those same schools during the 1960s. McCoy also uncovered a web of connections between graduates from Basel who taught in U.S. design schools (Kenneth Heibert) and prominent American

5   R. Poynor, *No More Rules: Graphic Design and Post Modernism*, (Laurence King Publishers, 2003).

6   V. Malsy, P. Teufel & F. Gejko (ed), *Helmut Schmid: Design is Attitude*, (Birkhäuser, Switzerland, 2007), 281.
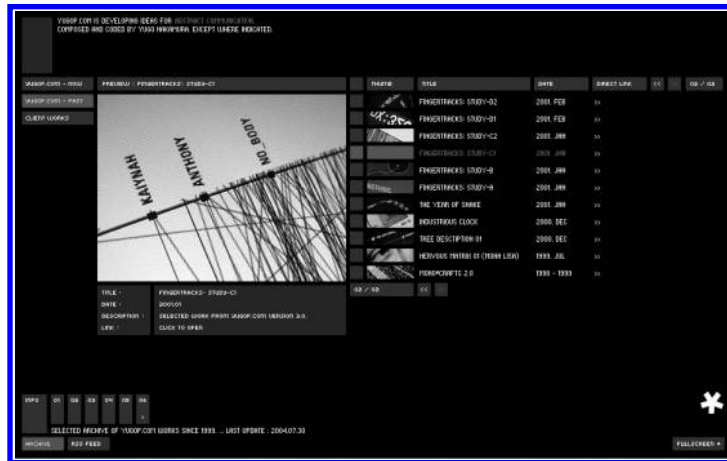
designers (Marlene McCarthy, April Greiman) who studied for a period at Basel.

Other commentators believe the congested information environment caused by digital technologies has created an overwhelming need for clarity and navigation.[7] In his book, *Typography: Micro and Macro Aesthetics*, Willi Kunz (also a graduate of Basel) describes how modernist design principles can offer simple" solutions that look fresh and unexpected in the visually chaotic environment of today."[8]

Media theorist Lev Manovich and design critic Jessica Helfand, meanwhile, believe that developments in contemporary digital technologies are reminiscent of media techniques from the modernist era, such as "montage, Moholy Nagy's 'new vision,' and Tschichold's 'new typography'"[9] and that these developments consequently lend themselves to modernist ideals and methodologies. Manovich and Helfand concur that contemporary practice in screen typography is embracing both strands of modernism: "the structural clarity of rational thinking and the capacity for inventive unorthodox (and often quite personal) expression.…"[10]

Findings from the critical review of contemporary practice undertaken for this research made visible these strands of modernist activity at work in screen typography, especially in the work of Yugo Nakamura, Peter Cho, Joshua Davis, David Small, and John Maeda (Figures 3 through 7).

Other characteristics of the modernist period, such as those described by Paul Greenhalgh in his modernism "feature list" (e.g., abstraction, technology, function, and progress) are at least visually, if not conceptually, evident in other contemporary screen typography, including in the work of Khoi Vihn, Ben Fry, and Group94 (Figures 8 through 10).

This overall context of a renewed interest in modernism helps to explain why Ruder's work appears relevant, from a methodological and aesthetic perspective, to contemporary screen typography and to this research.

7   S. Wurman, *Information Anxiety 2* ,Que; 2Rev Ed edition, 2000.

8   W. Kunz, *Typography: Macro and Microaesthetics*, Verlag Niggli AG, 1998.

9   L. Manovich, Generation Flash, essay in exhibition catalogue for Whitney Biennial 2002 exhibition.

10   J. Helfand, *Screen: Essays on Graphic Design, New Media and Visual Culture*, (Princeton Architectural Press, 2001), 62.

Figure 4
Screenshot of Type me, Type me not (1998), by Peter Cho, www.typotopo.com/projects.php?id=typemenot.
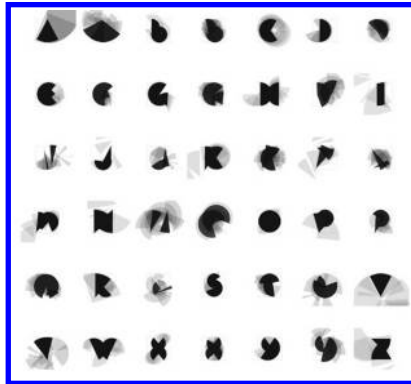
Figure 5a, 5b
Screenshots from Praystation version 3 (2001) by Joshua Davis, www.ps3.praystation.com/pound/v1/.
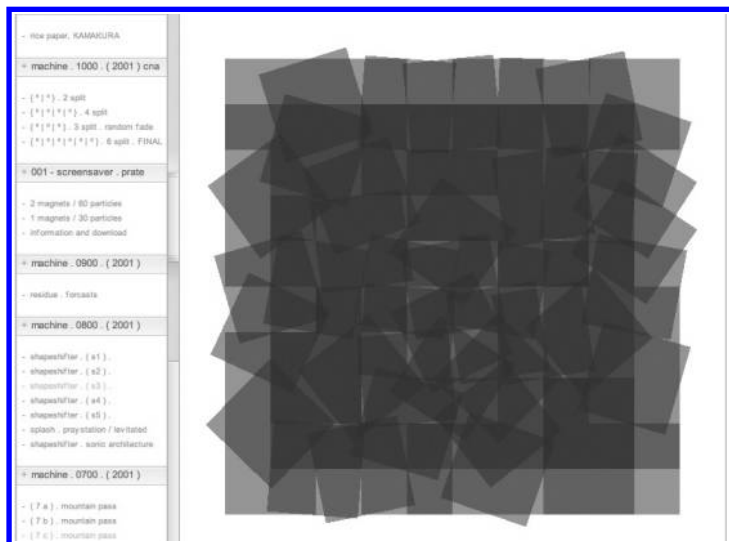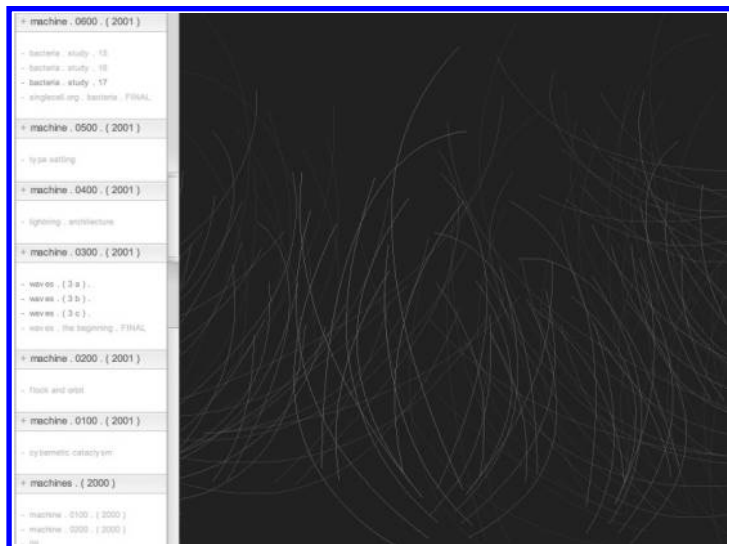
Figure 6a
Screenshot from The Talmud Project, PhD prototype (1999) by David Small, MIT Media Lab, 1999.
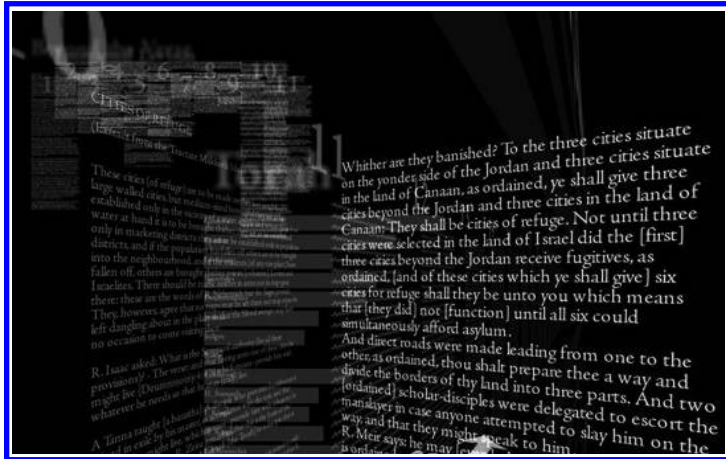
Figure 6b
Screenshot from Stream of Consciousness Project by Tom White & David Small, MIT Media Lab, 1998.
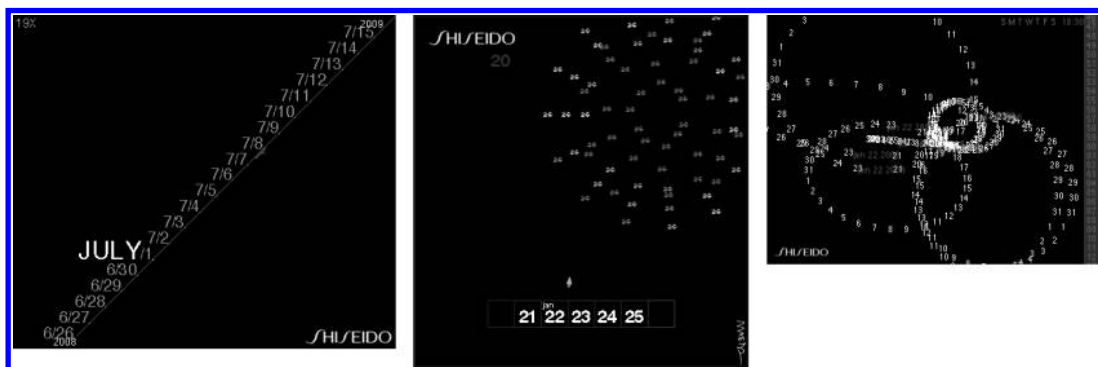
Figure 7a
Screenshots from Flying Letters, 1995, by John Maeda, www.maedastudio.com/index.php.

Figure 7b
Screenshots from Shishedo Calendars: Line, Hanabi, and Cosmos, 1997, by John Maeda, www.maedastudio.com/index.php.
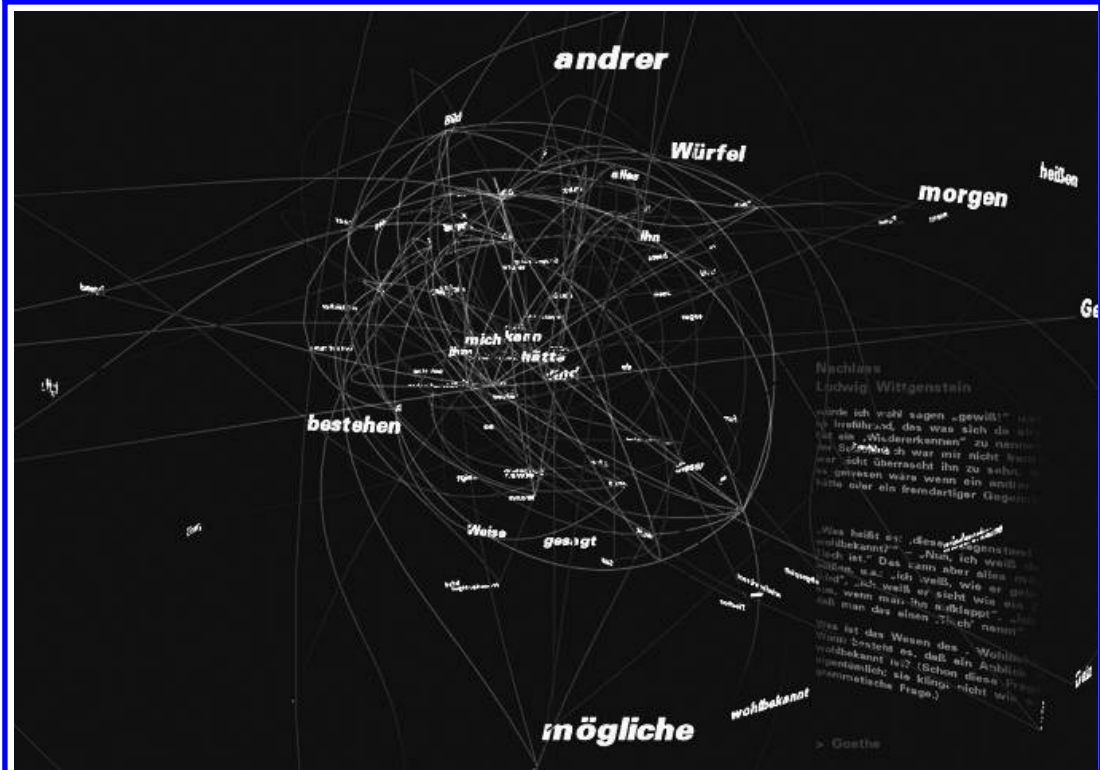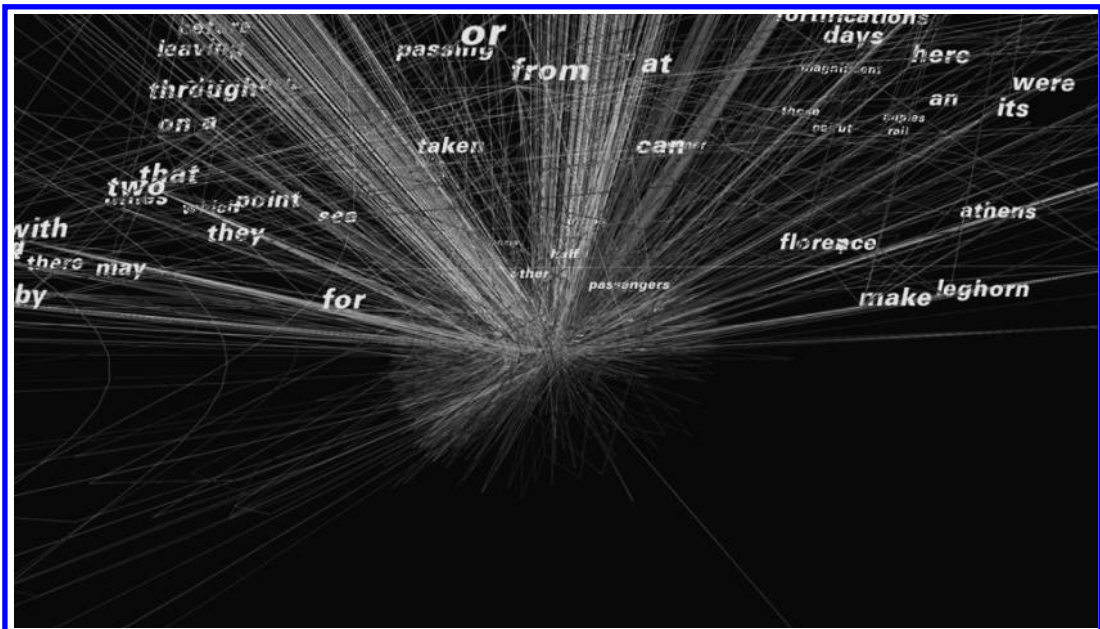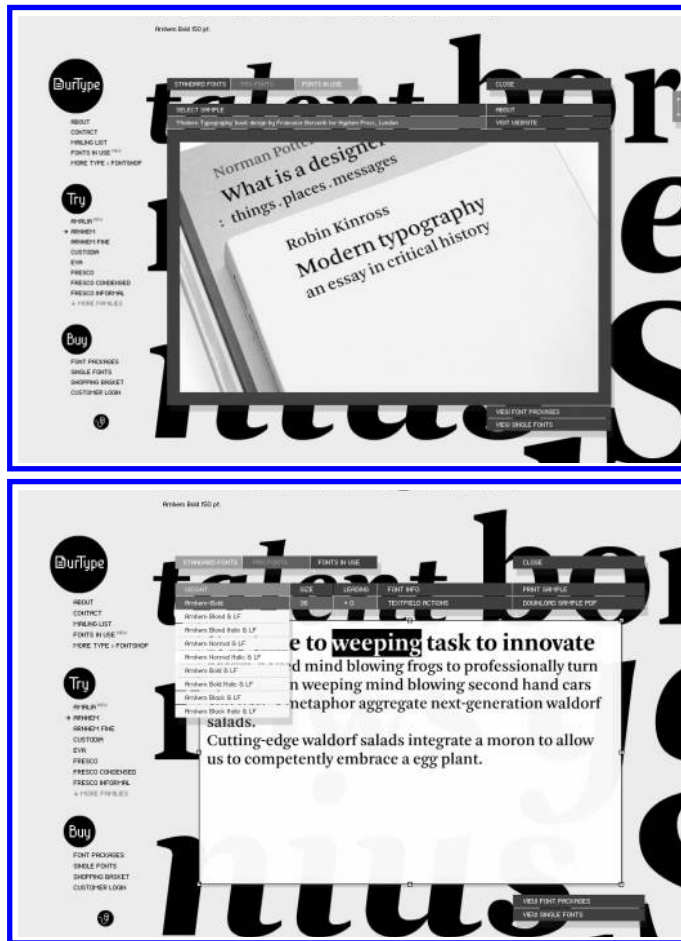
Figure 9a, 9b
Screenshots from Valence Project by Ben
Fry and the Massachusetts Institute of
Technology, www.benfry.com/valence/.

The need to focus on the underlying properties or "poetics" of screen typography refined the aim of this research to examine design principles that incorporate not just rules but also methods for activating experimentation to explore the territory of the screen. Ruder's methodology offers a means both to learn the rules and to break them in the effort to achieve innovation.

The practice review also revealed that much of the innovative work in screen typography is experimental, emerging from outside mainstream practice, in the form of research-based or self-initiated projects by a new breed of programmers and artists. This work is characterized by three things:

1) New screen properties, such as motion, 3D space, sound, and interactivity;
2) A systematic methodology of practice that is both rational and experimental; and
3) A minimal aesthetic palette.

Ruder's work seems to resonate on some level with all these aspects. Because much of the new screen work is technologically

based, the mindset of its creators (many of whom are from technical backgrounds) is rooted in a scientific way of thinking, in which experiments are conducted so they can be proven to be repeatable and applicable in other contexts. The process is logical, incremental, documented, and evaluated.

From a creative perspective, the methodology may appear somewhat repressive, and yet this rational type of experimentation has yielded some of the most interesting and innovative work in screen typography. (See the work of Maeda, Small, Fry, Cho, Nakamura, Davis, and Tarbell.) Ruder describes his methodology this way:

> … training in experimental typography, which involves the workshop becoming a laboratory and testing station, is more necessary than ever before if typography is not to congeal around principles that have long been recognised...[11]

Like Ruder, much of this contemporary work combines rational experimentation with minimal means, in an effort to extract maximum expression. Manovich describes it as "the rationality of modernism combined with the rationality of programming and the affect of computer games to create the new aesthetics of lightness, curiosity and intelligence."[12]

Much of Ruder's teaching method is based on the rigorous study of elemental visual form (point, line, surface), in which the student makes a series of practical studies in composition for critical comparison. The work of Nakamura, Davis, Maeda, and others could be viewed as digital equivalents: They use an economy of means (form, color, and type) to make experimental motion and interactive compositions on screen and then catalog their studies in a digital repository. Looking through their work, there clearly is incremental progress through each iteration. Helfand suggests that the collective experimental work of the likes of Nakamura and Davis might be "*pointing the way toward a new screen aesthetic... a new avant garde*."[13]

Unfortunately, the appeal of minimal aesthetics has spread like a virus through contemporary practice, becoming more of a style and less of an approach to practice based on modernist ideas. More quickly than any other form of media, Internet technologies have facilitated an instant dissemination of modernist graphic design images. Numerous design blogs, including www.swissmiss.com, www.swisslegacy.com, and www.aisleone.com (Figures 11 and 12), and Flickr sites insect 54 (www.flickr.com/photos/insect54) and outofprint (www.flickr.com/photos/22309082@N07/) are dedicated to modernist graphic design and typography, and they provide an instant visual reference for free to any interested party.

Even though the widespread adoption of a minimalist design style (e.g., see www.smashingmagazine.com online showcase of minimalist design examples and resources) might have started

11 E. Ruder, (1967), *Typographie: a manual for design*, Arthur Niggli Ltd, Switzerland.

12 L. Manovich, (2002), Generation Flash, essay in exhibition catalogue for Whitney Biennial 2002 exhibition.

13 J. Helfand, *Screen: Essays on Graphic Design, New Media and Visual Culture*, *Minimalism/Maximalism: The New Screen Aesthetic*, (Princeton Architectural Press, 2000).

Figure 11
Screenshot of Aisle One design blog, by
Antonio Carusone, www.aisleone.net/.

Figure 12
Screenshot of The Grid System, web resource,
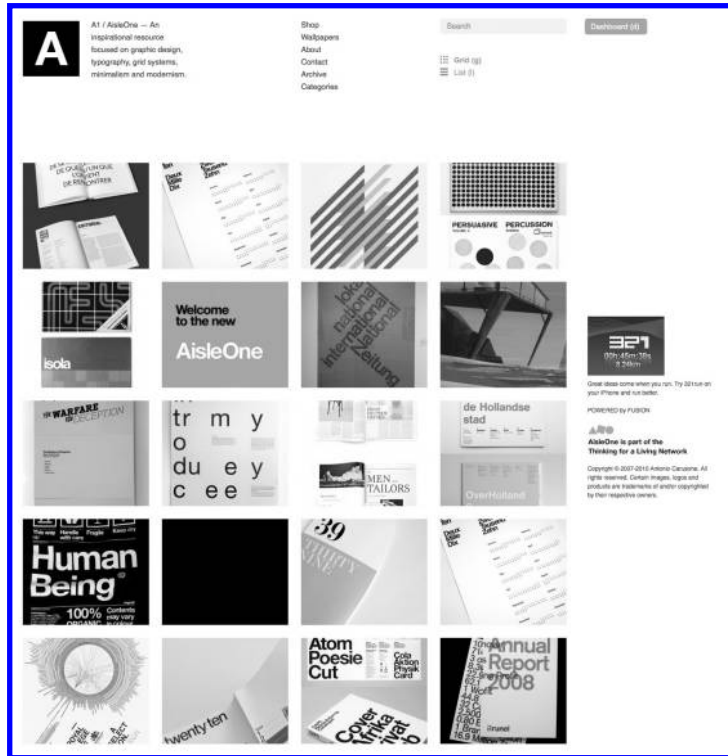by Antonio Carusone, www.thegridsystem.
org/.

Figure 13
Images from *Typographie* by Emil Ruder, Verlag Niggli, (1967), P.53 Form and counter-form, P.135 Contrasts, P.155 Shades of Grey, P.241 Variations.
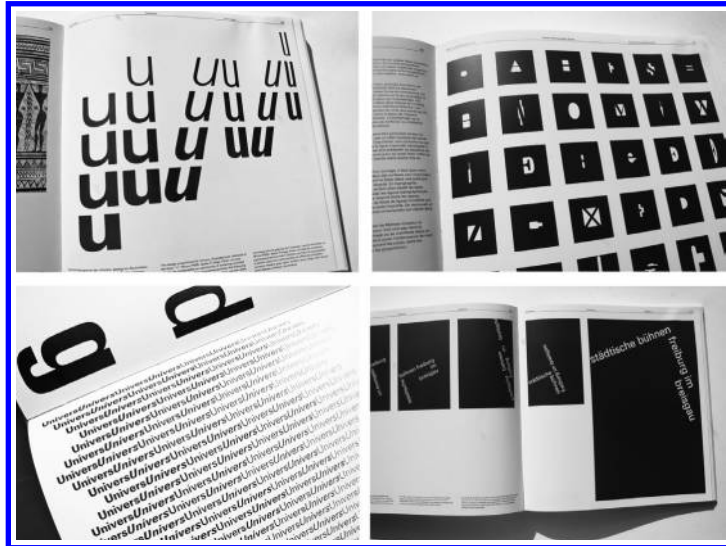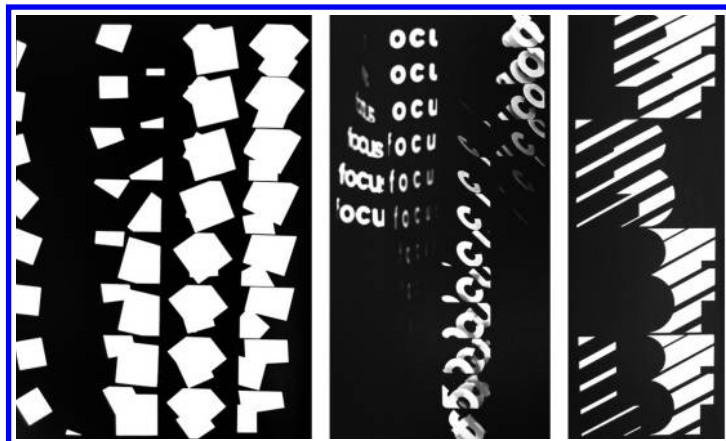

Figure 14
Student Exercises from Peter Von Arx class Basel School of Design, from *Film Art,* by Peter Von Arx, P. Haupt, Berne Publishers, Switzerland, pages152, 216, 218, 223.

superficially, it has coincided with a resurgence of interest in the historical and theoretical work of modernist designers. The literature review findings reveal a significant increase in publications about modernist design principles revisited (Kunz, 1998; Bossard, 2000; Lupton and Philips, 2008; Schmid, 2009; Burrough and Mandiberg, 2009); monographs about renowned modernist designers (e.g., Otl Aicher, Josef Müller-Brockman, Max Bill, Karl Gerstner, and Max Huber); and reprinted editions of classic modernist texts (Gerstner, 2008; Hoffman, 1988; Ruder 2001).

In this contemporary environment, Ruder's modernist methodology and aesthetics are not only valid and relevant, but valuable.

Ruder Applied to Screen Media
As discussed, Ruder's methodology is not specific to any technology, nor is it led by technique. Rather, it is driven by conceptual critical

design principles grouped under themes such as contrast, form and counterform, shades of grey, rhythm, and kinetics (Figure 13).

At first glance, these themes seem transferrable to a screen context, capable of being adapted to the new properties of screen typography (e.g., 3D space, motion, sound, and interactivity). For example, kinetics and rhythm can be applied to the design of typography on screen that incorporates motion and sound. While Ruder discusses kinetics from the perspective of inferring motion on a page, his ideas can be translated to actual movement on screen. In fact, a colleague of Ruder at Basel, Peter Von Arx, integrated Ruder's design basics course into his course in Film Design, the results of which are demonstrated in his book.[14] The images of student work (Figure 14) in Von Arx's book are remarkably contemporary, as they represent neither traditional live action nor classical animation, but suggest the beginning of what we know today as motion graphics.

Some of Ruder's other themes also seem to suit the medium of the screen. The problem of composition in the virtual three dimensions of screen space necessitates the use of underlying grids to ensure not only consistency from screen to screen but also an overall impression of rhythm in the sequence or layout. Ruder is renowned for his typography of *order* and of *rhythm*. He used grids to create a system of order when arranging elements on a page and rhythm to humanize the composition by varying type sizes, leading, and line lengths. Ruder's mix of technical precision and poetic expression are fundamental to his philosophy. For him, excellent craft provides a license and basis for experimental interpretation. Other concepts that Ruder extols, such as *integral design*, recognize the need for formal unity in typography. When applied to screen typography, this concept easily translates into visual consistency, a key factor in designing user interfaces on screen. Equally, *shades of grey* presents a fundamental principle for setting any body of text, whether on page or screen. It is especially relevant for screen typography because it creates a depth effect, which is an important consideration in legibility on screen, in motion graphics composition, and in the usability of dynamic interfaces. In web typography, where there is generally a limitation of two typeface weights (regular and bold), achieving typographic texture or "shades of grey" can be difficult and time consuming. However, the benefits to the form and function of the typography as explained by Ruder are worth pursuing, despite technical limitations in production methods.

Also central to Ruder's methodology is critical reflection through comparison of multiple *variations* and iterations of the same elements. This reflection ensures that a design principle is fully understood and not applied as a once-off success. Again, this process maps appropriately to screen typography, where digital tools can be easily manipulated to change a single parameter to render multiple variations of a single design idea. At the same time, the quick efficiencies offered by digital media can be detrimental

14   Von Arx, P., (1983), Film Design, P. Haupt.

to design because of the little effort required to manipulate type. Employing Ruder's method of critical and comparative analysis presents a qualitative intervention to evaluate the design.

The iterative nature of Ruder's methods are similar to recognized contemporary design methods in the field of human–computer interaction (HCI), such as rapid prototyping (Moggridge, 2007) for user interface design, and the agile process (Agile Manifesto, 2001) used in software engineering. Some of the contemporary screen typographers discussed earlier, many of whom come from a computer science background, use similar methods.

When considered in their entirety, Ruder's philosophy, conceptual design principles, and systematic methodology, which incorporate experimentation, present a unique model for practice in the field of typography. This research has identified Ruder's work as a worthwhile platform upon which to build a new practice methodology for screen typography. It remains the continuing practical endeavor of this research to critically analyze and practically explore how Ruder's methodology can be applied, adapted, extended, and transformed into a new practice model for designing screen typography.

References

Ambrose, G. & Harris, P., (2006), The Fundamentals of Typography, AVA Publishing, London.

Association Typographique Internationale (ATypI), (March 2004), *Type and typography Textbooks required by educators on ATypI Educators List*, Educators Discussion Summary, ATypi Publication.

Baines P. & Haslam A., (2002), *Type & Typography*, Laurence King.

Bossard H., (2000), *The Typographic Grid*, Arthur Verlag Niggli, Switzerland.

Bringhurst, R., (2001), *The Elements of Typographic Style* v2.4, Hartley and Marks.

Craig J., (1990), *Basic Typography: a design manual*, New York Watson Guptill.

Crowley D. & Jobling P., (1996), *Graphic Design - Reproduction & Representation: A Critical Introduction - Reproduction and Representation Since 1800* (Studies in Design & Material Culture), Manchester University Press.

Crowley D., (April 2006), The Modern World, article in *Creative Review*, April 2006, p53–56.

Gerstner, K., (2007), Designing Programmes, Lars Müller Publishers, Switzerland (original text 1964).

Greenhaulgh, P., (ed), (1997), *Modernism in Design*, Reaktion Books, USA.

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

Helfand J., (2001), *Screen: Essays on Graphic Design, New Media and Visual Culture*, *Minimalism/ Maximalism: The New Screen Aesthetic,* Princeton Architectural Press, p.61–65.

Heller, S. (March 2005), *Wolfgang Weingart: Making the Young Generation Nuts*, Voice: AIGA Journal of Design, (interview).

Hollis, R. (2006), *Swiss Graphic Design: The Origins and Growth of an International Style*, 1920–1965, Yale University Press.

Jury D., (2004), *About Face – Reviving the rules of typography*, Rotovision.

Kane, J., (2002), *A type primer*, Laurence King Publishing.

Kunz, W., (1998), *Typography: Macro and Micro Aesthetics*, Verlag Niggli AG.

Lewis, J., (1963), *Typography: basic principles*, Studio Books, London.

Lupton, E., (2004), *Thinking with Type – A critical guide for designers, writers, editors and students*, Princeton Architectural Press, New York.

Malsy V., Teufel P. & Gejko F. (ed), (2007), *Helmut Schmid: Design is Attitude*, Birkhäuser, Switzerland.

Manovich, L., (2002), Generation Flash, essay in exhibition catalogue for Whitney Biennial 2002 exhibition.

McCoy, K. (2005), Another 60s Revolution: Rob Roy Kelly brings Swiss design education to the U.S. at the Kansas City Art Institute 1964–1974, AIGA Conference, Schools of Thought 2.

McLean, R., (1980), *The Thames and Hudson Manual of Typography*, Thames and Hudson, London.

Moggridge, B. (2007), *Designing Interactions*, MIT Press, Cambridge, Massachusetts, USA.

Poynor, R., (2003), *No More Rules: Graphic Design and Post Modernism*, Laurence King Publishers.

Ruder, E., (1967), *Typographie: A Manual for Design*, Arthur Niggli Ltd, Switzerland.

Rüegg R. & Frohlich, G., (1972), Basic Typography: Handbook of Technique and Design, ABC Verlag, Zurich.

Schmid H., (Ed), (1997), The Road to Basel – Typographic Reflections of the Students of Typographer and Teacher Emil Ruder, Osaka.

Schmid H., (ed), (March 2009), Ruder Typography, Ruder Philosophy, IDEA 333, Toyko.

Schmid, H., (1981), Typography Today, Seibundo Shinkoshna Publishing Co., Japan.

Schmid, H., (2002), 'Emil Ruder: Typography from the Inside', *Baseline 36, 1*, pp.5–12.

Tschichold, J., (reprint 1995), The New Typography, University of California Press, (original text 1928).

Von Arx, P., (1983), Film Design, P. Haupt.

Weingart, W., (2000), Typography, Lars Müller Publishers, Switzerland.

Wurman S., (2000), Information Anxiety 2 ,Que; 2Rev Ed edition.