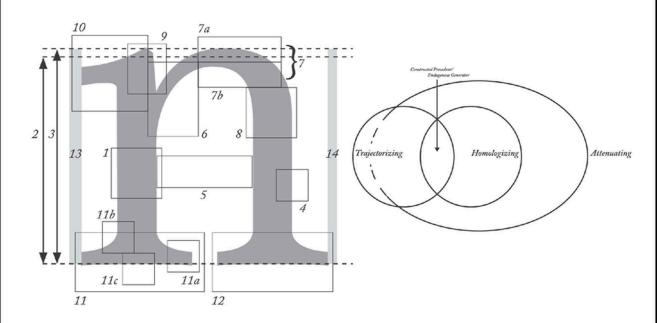


CONTEMPORARY PROCESSES OF TEXT TYPEFACE DESIGN



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MICHAEL HARKINS

Contemporary Processes of Text Typeface Design

This book addresses the paucity of published research specifically dealing with knowledge of text typeface design processes.

Dr Michael Harkins uses a Grounded Theory Methodology to render a tripartite theory resulting in explanation and description of the processes of text typeface design based upon the evidence of subject specific expert knowledge from world-leading practitioners, including Matthew Carter, Robin Nicholas, Erik Spiekermann, and Gerard Unger.

The book will be of interest to scholars working in design research, design epistemology, design process, typography, type design, information design and graphic design.

Michael Harkins is Course Leader of MA Graphic Design at the University of Portsmouth.

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Contemporary Processes of Text Typeface Design *Michael Harkins*

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Contemporary Processes of Text Typeface Design

Michael Harkins



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1 Introduction

Introduction

Although many contemporary works account for processes of printing and typography, the processes of text typeface design still remain relatively unexplored and unexplained. Some glimpses, insights and part accounts document the personal views and methods of designers toward text typeface design (e.g. Dwiggins, 1940; Goudy, 1940). Karen Cheng's (2005) book *Designing Type*, claims that it 'explains, in detail, how to design characters into a set of unified yet diversified forms' (p. 7). However, the book's core themes are formed around a comparative analysis of existing typeface glyphs with some commentary toward a methodological approach. It does not deal with knowledge of process to any great extent. The lack of documented knowledge with respect to text typeface design will be discussed further in Chapter 2. Little exists that attempts to address a methodological approach to typeface design in terms of research, specifically relating to knowledge of what text typeface designers do, why they make the decisions they make in designing typefaces, how they account for them and how they can be rendered as explication of process or processes. The current research is a response to this lack and presents developed theories, based upon analysis of knowledge in relation to interviews with world-leading text typeface design experts that were conducted specifically for this purpose.

Text typefaces are specifically designed to work optimally for the setting and reading of continuous text, for example, types set as the reading matter within book, newspaper, magazine and journal design, etc. The typical range of sizes at which text types would be considered for continuous reading are usually small sizes. Such sizes would normally be somewhere between 7pt and 14pt, depending upon the design of the typeface. Sans serif typefaces typically appear larger on the body in design than serif type designs and, therefore, are usually set at smaller sizes in text than serif types. Typefaces designed for use above these sizes (i.e. above 14pt) would generally be considered for display setting purposes only.

The focus of this research relates to knowledge associated with typeface design experts, what they do and the decisions they make in creating text typeface designs. Data is derived by way of testimonies via in-depth interviews with world-leading experts in the field. The use of experts in this sense is advocated by the likes of Nigel Cross (2007, p. 85) in terms of developing a greater understanding of design knowledge generally. The focus therefore is related to knowledge of the decision-making and actions of the expert – the processes of design. However, the author

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does acknowledge that by virtue of the fact that the participants of this research are experts in their field, the collected data pertains specifically to expert perspectives of typeface design. Although this may be perceived to create something of a tautological bind between epistemology and ontology, it is intentional in this research to study expert knowledge. It is not the intention to separate knowledge of process from expertise in this study.

This research adopts a Grounded Theory Methodology (Glaser & Strauss, 1967) as a simultaneous method of enquiry and analysis toward collected data in order to develop theory. This allowed for an emergent and inductive model of research enquiry to develop. Grounded Theory Methodology fits with the aims and objectives of this research in that 'Essentially, the methodology is most commonly used to generate theory where little is already known, or to provide a fresh slant on existing knowledge' (Goulding, 2002, p. 42).

Although research conducted in respect to design process has been established in other design domains, such as architecture (e.g. Akin, 1986; Darke, 1979; Eastman, 1970; Lawson, 1997); engineering design (e.g. Bucciarelli, 1994; Marples, 1960); industrial/product design (e.g. Cross, Christiaans, & Dorst, 1996); urban design (e.g. Levin, 1966), there is a specific lack of research regarding knowledge of the text typeface design process.

The research described in this book is intentionally limited to the collection and analysis of testimony from type design experts; the collected testimony discusses and describes designing with respect to Latin category typeface design – the basic Latin script used as the standard character set for most Western and Central European language bases. Such design in turn is found in other derived language bases worldwide. Further study that draws from this research in order to explore design for forms of non-Latin font language bases may be potentially useful.

This book accounts for research that results in a developed Grounded Theory and resolves in three core categories along with sets of sub-categories and dimensions (Glaser, 1978). Each of the theoretical propositions is raised from and grounded by data. The core categories are Trajectorizing, Homologizing and Attenuating. These identify and explicate significant characteristics pertaining to the collective expert participants' knowledge of practice.

In terms of contribution to knowledge and in answer to the research aims, this enquiry provides theoretical renderings of text typeface design knowledge in the form of these three main areas rendered as Grounded Theory core categories. This research also contributes knowledge in terms of the unique collection of interviews produced as part of the research enquiry.

Motivation for the Research

The lack of research in the subject area (discussed further in Chapter 2) presented the opportunity to conduct a study that would contribute to knowledge in terms of establishing research relating to text typeface design process. It was also envisaged that such a study would allow subsequent research to develop.

The identification of the gap in knowledge leading to this study partly developed from the author's interests as a design educator, as well as from his prior education and design interests in the area of typeface design and typography. He observed

there appeared to be little to consult with regard to the rationale of decisionmaking and the drawing and rendering of form relating to text typeface design.

An additional key motivation for this research was that it would benefit future research, practice and teaching in the subject area by means of establishing a research-based view of the processes of text typeface design. It was anticipated that such explication of process would also help establish formal descriptions of knowledge in the area, which in turn would aid toward professionalising such specialist subject knowledge.

Research Questions and Aims

Initial questions with regard to this study were based upon such thoughts as: Why was there a lack of recorded knowledge? What kinds of knowledge appear lacking? How would acquiring such knowledge be best approached? Who would hold such knowledge in order to address the problem? In relation to text typeface design process, this study is concerned with a main research question:

Can knowledge of text typeface design process be revealed and if so can this be explicated theoretically?

In relation to the questions and concerns of this enquiry, the aims of this research are as follows:

- To reveal and describe processes of text typeface design from accounts given by type design experts.
- 2. To evaluate whether it is possible to construct theory or theories of type design process from the accounts of practice and procedure given by type design
- 3. To offer possible, descriptive and/or generative theory/theories that will allow further study to develop in the area of text typeface design process as well as informing practice.

Contextual and Historical Framing for the Research

Often perceived as related to the subject domain of typography, typeface design is a specialist area that concentrates on the designing of letterforms, characters or glyphs conceived to work in relation to one another within specifically designed sets. These are, in turn along with spacing, designed relative to the glyphs, presented as a group of accessible functioning entities in the form of a font. Currently and overwhelmingly, these are in the form of fonts delivered as small computer software packages.

Text typeface design seemingly poses a somewhat paradoxical initial problem for the designer - in order to begin to see how a typeface may become whole, a designer must begin with looking at detail first by way of individual character design or details of character designs. Ultimately, a typeface must work on both micro and macro levels simultaneously - on the level of detail of the individual characters that make up that typeface and on the level of how these individual characters appear and behave when combined with spacing to form words, sentences and paragraphs.

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Text type designers must also work within obvious constraints. This enquiry relates to the Latin character set. There are constraints of adherence to forms recognisable as accepted letterforms for use within a given range of language settings/expectations. There are also constraints that govern issues relating to the legibility and readability of characters when set as words and sentences at small reading sizes. Text typeface design must adhere to particular norms for any given group or set of languages a character set may be deemed appropriate to represent. Therefore, there is something of a notional precedent in relation to acceptable form imposed upon the design problems from the outset.

The constituent parts that make up a typeface design must work independently of each other but also harmoniously in any possible combination. These may include various glyphs: letterforms (both lower and uppercase), numerals, punctuation, diacritical marks, symbols and any associated spacing required in order that glyphs are positioned appropriately in relation to each other when in use. Therefore, this research interrogates expert designer knowledge of the design process in relation to designing and/or making of text typefaces. The study does not concentrate per se on the creative or conceptual development processes toward letterform design. Neither is it concerned with the design of types intended exclusively for use as display types, individual letter designs or lettering and calligraphy etc. This research is concerned, however, with knowledge in relation to developing letterforms or indeed generalizations regarding the designing and development of letterforms that are intended to be part of a set or group of associated forms that will in turn become a text typeface design.

Early works relating to the subject of devising types also account for the crafts and trade of punch-cutting and type-founding (Fournier, 1995; Moxon in Davis, & Carter, 1958). Of these early activities and professions, the punch-cutting of letters was regarded as one of the more highly skilled, if not the most highly skilled, crafts. It is also acknowledged that distinct divisions of labour existed in association with such activities (De Vinne, 1900, p. 11). Punch-cutters worked in minute detail to punch, counter-punch and engrave the ends of steel bars in order to make reversed letterforms that, when struck into a softer metal such as copper, could be used as a matrix (Southall, 2005, pp. 3–4). This matrix would then be incorporated into a mould in order that a single lead type might be cast from it, these types being cast one at a time (Moxon et al., 1958, pp. 134–184). The process of punch-cutting and casting the moulds would have to be repeated for every individual letter or character needed to create a font of type, each related by the characteristics commonly recognised as being distinctive to any given particular typeface or design.

Divisions of labour between the various stages in the process and manufacture of types meant that the design of letters, the cutting of punches and the casting of types could be conducted by different workers. However, prior to the late nineteenth century and the invention of photographic transfer, there was no method to reduce the design of model letters to appear at text size on the ends of the small steel bars from which punches could be made (Southall, 2005, pp. 13–17). Early designs could only be used as a guide and would need to be interpreted by the skill of the punch-cutter.

By the end of the nineteenth century, the move toward industrial mechanisation in many areas meant the cutting of punches by hand was supplanted by mechanised methods of production (De Vinne, 1900, pp. 348–350). This move toward

industrialisation brought with it a clearer separation in the division of the designing and making of type (Southall, 2005, p. 19). Drawings relating to the designing of types became less of a guide, as was the case of model letters for the earlier hand punch-cutters; from this point they become the machine pattern or specification of the final letter designs for types.

As technologies advanced with time, the manufacture and use of metal type eventually gave way, by and large, to photo-type and typesetting. The designing of types or what could be described as the type-image became closer still to what would appear as the final form or delivered image of the type. Within the last few decades, digital type has become the common form of reproducing typographic matter for print and on-screen renderings. The removal of the image of the letter as photographic film from the process of production has meant that designers today are working with digital media with the forms of letters directly within the medium in which they will be delivered. Today the type designer is able to work with outline Bezier curves and/or coding/programming, producing outline digital type-forms as they may appear in final products - the digital drawings become the resultant typefaces within a font. This affords contemporary typeface designers to work more closely in connection with the delivered form or product of their design than at any other time.

Methodology

This research adopts a qualitative Grounded Theory (Glaser & Strauss, 1967) approach as a general method. This is a simultaneous method of enquiry and analysis toward collected data in order to develop theory. An initial 'key informant' (Goulding, 2002, p. 60) was utilized to initiate and orient the data collection; this facilitated continued 'theoretical sampling' (Glaser & Strauss, 1967), where sampling is determined on the basis of the emerging data, analysis and theory development in accordance with Grounded Theory Methodology. Comparisons and differences from the given expert accounts focus the analysis in relation to developing description and theory that elucidates contemporary expert text typeface design practice. It is anticipated that the Grounded Theory generated in this study will aid in the future description and articulation of text typeface design process. This may prove to be of value in terms of a descriptive and generative nature in approaches to practice, education and further research enquiry.

This research began with what the author identified as an emergent 'sensitized' (Given, 2008, p. 246) focus in relation to a lack of recorded expert knowledge. Grounded Theory Methodology involves systematic but nonlinear processes. These include the collection and coding of data via theoretical sampling and analysis by means of constant comparison leading to raising concepts that become theory through the method of memoing. In turn, this leads to developing theoretical categories, the sorting of categories and the writing up of research. This process has resulted in three significant theoretical renderings as 'core categories' that describe specific aspects of text typeface design process. These are Trajectorizing (Chapter 4), Homologizing (Chapter 5) and Attenuating (Chapter 6).

Participants and Data

The sample for this research consists of high-profile text typeface design experts. The participants were selected in accordance with Grounded Theory Methodology 'theoretical sampling' (Glaser, 1978, p. 36). The focus on such expert participants within this study was in order that insight to their knowledge of text typeface processes could possibly yield richer descriptions of understanding and articulations. The use of experts in this sense is advocated by Nigel Cross in developing a greater understanding of design knowledge generally: 'In some instances it will be necessary to study outstanding, or exceptionally good designers. This is analogous to studying chess masters, rather than chess novices ...' (Cross, 2007, p. 85). The use of experts allows their voices to be heard in relation to the aims of this enquiry via Grounded Theory Methodology. Developed theory and descriptions thus arise from, and are grounded by, expert participant testimony.

The interviews conducted as part of this research enquiry form a unique contribution to knowledge in themselves as a body of 'rich data' (Silverman, 2006, p. 110). Twelve in-depth interviews with nine participants totalling approximately fifteen hours of recorded, transcribed, coded and analysed data from which theory is developed was utilised in this study. All interviews were recorded as high quality digital video. From these, all interview dialogues within the video recordings were transcribed by the author. These were duly coded and analysed according to Grounded Theory Methodology. This in turn helped organise and manage the higher order theory development that emerges from this research.

Terminology

Some of the terminology within this book is comprised of specialist language around three main areas. These are Type and type design, this includes what may be deemed professional language and nomenclature related to letterforms and parts of letterforms; Grounded Theory Methodology, this includes some expansion on the definition of terms; and finally Terms for the theory generated in this research. This will give an overview of the theoretical labels devised in rendering theory specific to this research. It must be noted by the reader that the theoretical terms generated within this enquiry are developed to delineate the specific concepts they represent. It was the author's intention not to align such terms with terms of current practice per se. This was in part to abstract and make clear often nuanced knowledge phenomena that emerged from the research. It is anticipated that as research in this area develops further, clarity and consensus will emerge with regard to research and practice nomenclature. A glossary of terms has been included toward the end of this book.

Chapters

This book is comprised of eight chapters as outlined below:

Chapter 1 – Introduction

This chapter introduces the research report by means of contextualization. It introduces the research aims, outlines the background against which the

research theme developed and gives direction as to how the research report is structured.

Chapter 2 - Historical Context

This chapter considers the problem of a history of paucity in the context of recorded knowledge in terms of the literature and how this pertains to the identified research theme. This chapter includes a discussion of the perspectives from which accounts of practice have been written with respect to the history of the subject matter.

Chapter 3 - Processes of Text Typeface Design: An Introduction

This chapter introduces and presents the Grounded Theory overview developed in this research, including inductively generated core categories, sub-categories and substantive coding, whilst grounding the theoretical descriptions in relation to the collected primary data. This chapter gives an overview and context for the subsequent chapters.

Chapter 4 - Trajectorizing

This chapter provides theoretical explication as to how the text typeface designer initiates, negotiates and directs the early stages of text typeface design.

Chapter 5 - Homologizing

This chapter provides theoretical explication concerning actions and decisions relating to developing relational qualities within the emerging forms of text typeface design.

Chapter 6 – Attenuating

This chapter provides theory describing the ways in which expert designers continuously and critically test and adjust for incongruity in developing text typeface designs.

Chapter 7 – Discussion

This chapter discusses the core categories presented in the three previous chapters. This discussion includes the relationship and interrelationship of the main themes that arise within the categories. Aspects from the literature relevant to the developed theory are also discussed alongside additional relevant references from the data. The Grounded Theory is also extended to provide visual modelling in the form of diagrams that give an overview of text typeface design process.

Chapter 8 - Conclusion

This chapter summarizes and states the contributions made by this research. This summary includes how the contributions align with the initial aims of the research. This chapter also considers possible future implications of the Grounded Theory developed in this enquiry. Indicated are the possible implications and opportunities the theory may offer and support in terms of future research, pedagogy and practice.

2 Historical Context

Letter-cutting is a Handy-Work hitherto kept so conceal'd among the Artificers of it, that I cannot learn any one hath taught it any other; But every one that has used it, Learnt it of his own Genuine Inclination.

Joseph Moxon – Mechanick Exercises on the Whole Art of Printing (1683–84) (Davis & Carter, 1958, p. 87)

Introduction

Type design is often a lengthy and solitary endeavour on the part of the designer, an endeavour in which there is little in terms of guidance to draw upon regarding the processes involved. Few books or resources exist detailing the processes of this subject – this is both an historical and a contemporary problem.

There exists, to date, no contemporary single reference showing a range of processes of type design that identifies and details a range of working practices from a range of designers, including their explanations of and reflections on these processes. This is especially true for the design of text typefaces, in which considerations of design must be treated with great care in relation to the functionality of type; it must appear legible and optically stable at small reading sizes.

General anecdotal accounts can be found within professional graphic design and typographic publications and online accounts of many typeface designers claiming to be self-taught. Many typeface designers also regard themselves primarily as graphic or typographic designers. However, there is currently a healthy commercial type industry served by many proprietary and independent type foundries.

In relation to type and typography, there is a substantial body of work to draw upon in other aspects, such as legibility, technology, history, biography, culture and the visual form of type itself. This chapter will first outline and examine significant contributions to knowledge regarding type design process and how this has been accounted for. Second, studies of knowledge in relation to the wider field of design will be discussed. Third, accounts of design process and knowledge relating to a wider field or design research will be examined.

These areas have a bearing on the research based theory presented within this book; subsequent chapters will focus on elucidation of knowledge with respect to text typeface design processes.