

Undescribed Ground: A PhD Case Study in Typography

Anthony Cahalan

School of Design and Architecture, University of Canberra
e-mail:Anthony.Cahalan@canberra.edu.au

Abstract

Technological and stylistic developments in the design, use and reproduction of text since the invention of the alphabet three-and-a-half thousand years ago have been exponential in the last two decades of the twentieth century, due significantly to the ready access of designers to the desktop computer and associated software.

This paper presents key features of one of the first Australian PhD theses in typography. Completed at Curtin University of Technology in Perth (Western Australia) in 2004, the PhD investigates the late twentieth century phenomenon of the proliferation of an estimated 100,000 Western typefaces by understanding and interpreting the phenomenon from the perspective of those studied—graphic designers and similar experienced users of typefaces, rather than the general population of computer users. The research involves three primary areas of enquiry: the phenomenon itself, the popularity of typefaces and the broader context of typefaces in society, which were framed in terms of three hypotheses and three research questions reflecting the themes of type, trends and fashion. This paper documents the reasons for undertaking the study, the research method utilised, the significant outcomes of the study and future directions for research in the field.

The methodology developed for this thesis draws significantly on research in the social sciences and began with broader brush strokes and gradually focused in—from the unknown and disparate voices of email discussion lists to the more focused results obtained from experienced type users and type designers who responded to an international questionnaire, then to targeted international interviews with experts in type design and type education and finally the application of the data to two typeface case studies.

The first conclusion of this investigation is that the explosion of typeface designs has caused a contraction in the typefaces being used by professional users of type and the appetite for an ever-increasing number of typefaces does not appear able to be sustained in the marketplace. The second conclusion is that a checklist of criteria which are likely to have an impact on the popularity of a typeface would prove invaluable to designers and distributors of typefaces in a contracting and highly competitive marketplace. The third conclusion is that the explosion of typeface designs has caused the significance of typefaces to move from being viewed as the products of a specialist area of printing craft with its own mystique and history to one of a tradable commodity of debatable value within visual culture, susceptible to piracy, and able to be considered in theoretical terms of consumption, trends analysis and fashion.

Keywords: Typography, Typefaces, Fonts, Typeface Design, Font Design, Visual Communication, Graphic Design

1.0 Introduction

The PhD thesis discussed in this paper was completed by Anthony Cahalan in 2004 at Curtin University of Technology in Perth (Western Australia) and is titled: *Type, trends and fashion: A study of the late 20th century proliferation of typefaces*. The study is one of the first in Australia in the field of typography and investigates the impacts this phenomenon of an estimated 100,000 typefaces is having on graphic design practice and typeface design. The focus of the study is on Western alphabet typeface design and typefaces as artefacts (both for text and display) rather than the broader area of typography. The study also focuses on the graphic design profession and experienced users of typefaces, rather than the use of typefaces within the general population of computer users.

Given the dearth of exemplars of PhD studies in graphic design, this paper uses my typography PhD thesis as a case study to open up possibilities for further research in the discipline. This paper contains five following sections: a background to the study; the reasons for undertaking the study; the research method utilised; the significant outcomes of the study; and future directions for research in the field.

2.0 Background

Technological and stylistic developments in the design, use and reproduction of text since the invention of the alphabet three-and-a-half thousand years ago have been exponential in the last two decades of the twentieth century, due significantly to the ready access of designers to the desktop computer and associated software. However, these developments of typefaces—commonly called ‘fonts’—have not occurred in isolation. Muschamp [12] described the broader societal and cultural background against which my PhD thesis is set:

It is scary to be living at a time when a particular creative field grips the public imagination as powerfully as design has in recent years...Today, the vigor pulses through fashion, furniture, art direction, graphics and product and image design with a similarly captivating verve. Design has taken on its own life, and this raises a problem often encountered in consumer culture. The energy is pure delight. But can we turn it off?

Twyman [15] provided one of the most forthright and persuasive exposés of the importance of the display of letterforms when he discussed the richness of typography as a subject of study:

It bridges the arts and sciences and offers an introduction to the technological and business worlds of our own time; it opens up avenues to the past through the study of the history of writing and printing, which is after all the study of the history of the civilised world; it is concerned with the three languages of words, numbers and pictures, and gives great scope for the creative solution of problems which tax both mind and eye; it involves manual dexterity and qualitative judgement; and, above all, it is concerned with ordering and making something, which seems to me to be a basic need of mankind.

Heller [9] confirmed Twyman’s view of the importance of type to designers when he said:

Type is the single most effective way in which designers communicate the ideas entrusted to them.

Stieven-Taylor [14] accentuated the role and power of the typeface or font in effective communication when she said:

The essence of communication is the choice of the font. It would be foolish to underestimate the power of the font in getting the message across, regardless of the conduit; whether it be via daily newspapers, books or the internet, the font is a designer’s most powerful tool.

A statement heard often during the education of a graphic designer is the desire for innovation: ‘If you’ve seen it before, don’t do it again’. In an article first published in FontZone in 1997, Dutch type designer Erik van Blokland (n.d., [Online]) discussed type design and typography in terms of this quest for the ‘new’:

There is an ever increasing need for new shapes, new ideas, new views in graphic design. Making new typefaces is an important part of typography and graphic design, and in a smaller way, culture in general.

The cultural aspect of type design is significant to this paper. High profile designers such as Massimo Vignelli [17] in Cato [5] have been vitriolic in dismissing the proliferation of typefaces, believing that a handful was sufficient for any purpose. Newark (2000, p. 5) made the point, however, that typefaces are the visual representation of written language and, just as language commands different voices, stresses, accents, jargon and idiom as it grows and evolves, so does the requirement for different typefaces to transcribe this diverse language into visual form. The postmodern plurality of late twentieth century society demanded plurality of visual expression through multiple typefaces for contemporary ideas, information and argument.

3.0 Reasons for undertaking study

There were a number of reasons for undertaking this study. Because of the rapidly changing nature of graphic design in general, and typography in particular—to which van Blokland referred—a research topic was sought which was not time-bound and which could grow and develop in synchronicity with part-time study and research and feed directly into my teaching of graphic design and typography. From my two different perspectives as design practitioner and educator, it seemed from observation that there would be an increasing number of typefaces being designed and made available to graphic designers.

My personal intentions were similar to Buchanan [3], [Online] when he stated that the reason for completing his PhD at the University of Chicago was: ‘to fulfill a personal exploration for better understanding of something that I had experienced’, but I wanted to go further, as suggested by Weber’s [18] Verstehen approach of ‘explanatory understanding’ and Kinross’s [10] call to ‘reveal ground that no one ever quite described before’:

I don't think that the troubled profession of the typographer ever really occupied the ground that some of us are now trying to lay claim to. It is, rather, that gaps have opened up to reveal ground that no one ever quite described before—which no one ever quite knew was there. It is important to try to be articulate about this ground, and to try to intervene in it.

Questions which arose in my own teaching and practice, which students and graphic design colleagues directed to me and which I therefore wanted to address in this research included the following:

- Why do certain typefaces from the many thousands in existence become ubiquitous in a short space of time, while others are designed and either never make it to distribution or else are not picked up and used by graphic designers?
- Is each graphic designer’s typeface choice and usage based on a recognition of the qualities, connotations and popularity of the typefaces with which they work, is typeface choice and usage a response to sophisticated marketing, or simply based on a designer’s adoption of pervading trends and fashions?
- Given the increased visibility of typefaces as a result of the phenomenon of the explosion of typeface designs and the interest in typefaces by everyday computer users and the mainstream media, where was typeface design positioned and what meaning in a broader societal context could be ascribed to typefaces at the end of the twentieth century?

My research thus involved three primary areas of enquiry: the phenomenon itself, the popularity of typefaces and the broader context of typefaces in society. In order to explain and understand the broader issues of the phenomenon of the explosion of typeface designs and their role in society, I needed to address the following objectives:

- Identify and analyse the major components and issues which are critical to our understanding of the phenomenon of the explosion of typeface designs.

- Provide a snapshot of the state of typeface design and the type industry at the end of the twentieth century.
- Identify the role played by typefaces within visual and material culture during this period of time.

In order to explain and understand the popularity of typefaces during this period of time, the following objectives needed to be addressed:

- Identify which typefaces were popular and unpopular.
- Identify what makes a typeface popular.
- Identify future trends in the design and future use of typefaces by professional users of typefaces.

Seeing the phenomenon of the explosion of typeface designs from the perspective of the type designer, Bell [1], [Online] summarised the frustration experienced by type designers and graphic designers during this period which I was wanting to reveal, describe and better understand:

It's like being caught in a riptide: not being able to tell which way is up or down, let alone which direction in to shore or out to sea. There are a lot of us just trying to figure out how to make a living and survive.

In an interview with me in 2000, design educator Teal Triggs (qtd. in Cahalan [4]) commented on the importance of what I was aiming to achieve in this thesis—pausing to evaluate the impacts of the explosion of typeface designs:

It got the public aware that there is this thing called typeface design and it is affecting how we do things, how we read timetables, how we look at magazines and so I think generally there has been an awareness-raising activity going on which is very, very good. Now I think we are at the point that we have got to stop and reflect that the '80s and the '90s were very much about this explosion and you can keep exploding, but it is going to implode at some point. And I think we are at that point now where it is this kind of void and we have got to stop and think and reevaluate the direction. Do we need to continue going on or are there enough acceptable faces that are being used? And what is the next step in terms of innovation moving the typographic profession ahead?

As a result of considering these issues, questions and objectives and the broader views of typographers, type designers and educators, I reframed my research in terms of the following three hypotheses and three questions which provided a focus to my research:

3.1 Hypothesis 1

The explosion of typefaces which resulted from late twentieth century developments in digital technology created an increasing market for the purchase and use of typefaces.

Question 1

After an initial explosion of typefaces created and made available at the end of the twentieth century, is there an appetite for an ever-increasing number of typefaces which can be sustained in the marketplace?

3.2 Hypothesis 2

The explosion of typefaces has expanded the design possibilities for type designers to create highly visible typefaces.

Question 2

Are there design criteria evident in the highly visible typefaces at the end of the twentieth century which make them distinctive and would working with these criteria allow for the design of new, successful typefaces?

3.3 Hypothesis 3

The explosion of typefaces has created an increasing appreciation of the value of typefaces as the products of a specialist profession.

Question 3

At the end of the twentieth century, what significance in cultural terms did typefaces possess?

4.0 Method

The research in this thesis has involved a process of investigation, analysis, synthesis and interpretation of data about the phenomenon of the proliferation of typefaces. Firstly, this involved analytical and comparative studies of information on the broader issues of the history and development of typefaces and typography gathered from a literature review of monographs, serials, papers, abstracts, theses, databases and the worldwide web. In this section the epistemological, theoretical and methodological assumptions which underpin my research are presented, followed by a description of the methods used.

4.1 Theoretical positions

Crotty [7] described four elements of any research process. As presented below, these elements inform one another from top to bottom:

- Epistemology: the theory of knowledge embedded in the theoretical perspective and thereby in the methodology.
- Theoretical perspective: the philosophical stance informing the methodology and thus providing a context for the process and grounding its logic and criteria.
- Methodology: the strategy, plan of action, process or design lying behind the choice and use of methods to the desired outcomes.
- Methods: the techniques or procedures used to gather and analyse data related to some research question or hypothesis.

I have undertaken this research from the following positions:

- Epistemology: constructionism.
- Theoretical perspective: interpretivism/symbolic interactionism.
- Methodology: ethnography.
- Methods: questionnaires, interviews, case studies.

I posit that meaning does not exist dormant in typefaces, waiting for someone to uncover it, but rather the meaning of typefaces as objects is constructed by a range of type designers and users as subjects interacting with these objects, and therefore a constructionist epistemological stance is appropriate to my research. Constructionism is the epistemological position often quoted by qualitative researchers. Crotty [7] described it in the following way:

Truth, or meaning, comes into existence in and out of our engagement with the realities in our world...Meaning is not discovered, but constructed. In this understanding of knowledge, it is clear that different people may construct meaning in different ways, even in relation to the same phenomenon...In this view of things, subject and object emerge as partners in the generation of meaning.

Given that I had worked with typefaces for some 25 years in the study and professional practice of graphic design, I was wanting in this thesis to investigate the construction of the meaning of typefaces beyond their physical appearance as letters on a page or screen and beyond their functional role as visual representations of language. My epistemological stance was more in keeping with what Crotty [7] said about research and constructionism:

Research in the constructionist vein...requires that we not remain straitjacketed by the conventional meanings we have been taught to associate with the object. Instead, such research invites us to approach the object in a radical spirit of openness to its potential for new or richer meaning. It is an invitation to reinterpretation.

Understanding and interpreting the phenomenon of the proliferation of typefaces from the perspective of ‘snapshots in time’ at the end of the twentieth century was integral to my undertaking this research and these two words are implicit in the Verstehen approach of Weber [18] which he described as ‘explanatory understanding’. The Verstehen or interpretivist theoretical perspective possesses three historical streams: hermeneutics, phenomenology and symbolic interactionism, but it is the latter perspective of symbolic interactionism from which I have approached this research. Symbolic interactionism is based on the pragmatist philosophy of George Herbert Mead and the following three interactionist assumptions have been stated by Blumer (qtd. in Crotty [7]):

- that human beings act toward things on the basis of the meanings that these things have for them;
- that the meaning of such things is derived from, and arises out of, the social interaction that one has with one’s fellows;
- that these meanings are handled in, and modified through, an interpretive process used by the person in dealing with the things he [sic] encounters.

As a theoretical perspective informing methodologies for research such as mine, symbolic interactionism directs the investigator to, as Denzin (qtd. in Crotty) stated, ‘take to the best of his [sic] ability, the standpoint of those studied’. In the case of my research, it is quite clearly the designers and users of typefaces whose standpoint needs to be studied. This required of me to put myself in the place of others and see typefaces from the inside perspectives of others—both designers and professional users. It is for this reason that the research methodology developed within cultural anthropology—ethnography— was most appropriate to my study. I saw my position as a researcher very much in the terms used by Hammersley (qtd. in Crotty [7]) when he said:

Ethnography is a form of research in which the social settings to be studied, however familiar to the researcher, must be treated as anthropologically strange; and the task is to document the culture—the perspectives and practices—of the people in these settings. The aim is to ‘get inside’ the way each group of people sees the world.

In the Handbook of Qualitative Research Denzin and Lincoln [8] stated that the contemporary qualitative researcher needed to become a ‘bricoleur’ (originally described by Claude Lévi-Strauss in 1966 in *The Savage Mind*), because of the many waves of theories (in sociology, but also elsewhere) that developed different methods at different moments, which have a certain validity and simultaneously operate in the present. Researchers thus produce research as bricolage—a pieced-together, close-knit set of practices that provide solutions to a problem in a concrete situation. The result is research as a construction that emerges and takes new forms as different tools, methods and techniques are added to the enquiry, depending on the questions asked. The questions, in turn, depend on their context and what is available in that context and what the researcher can do in that setting or framework. The bricolage Lévi-Strauss [11], Crotty [7] and Denzin and

Lincoln [8] have described is a concept which reflects the reality of my research experience in this thesis and also has relevance to describing the assemblage used in the design of both fashion and typefaces.

Due to the few books and the limited number of magazine and journal articles on the contemporary topic of this thesis, it was necessary to utilise contemporary sources of information such as websites and email discussion lists to gather material leading to an elaboration of the phenomenon of the proliferation of typefaces. The research in this thesis, therefore, required a methodology to be developed which is primarily based on the four instruments or methods described below: email discussion lists; questionnaires; interviews; and case studies.

4.2 Email discussion lists

The first research instrument was a four-year review from 1998–2002 of two (and later a third) email discussion lists selected for their direct relationship to type design and typography. The review of the discussion lists identified and fleshed out the critical issues occurring within this phenomenon, namely: the type design industry, typeface numbers, the type design process, intentions behind the design of typefaces, the debates surrounding the design of national typefaces, methods and difficulties of typeface identification, the monetary and cultural value of typefaces, issues of type education in a rapidly changing environment and the dominance of concerns by type designers and software manufacturers of the copyright and piracy of typefaces at the end of the twentieth century.

I acknowledge the concern in research terms about the authority and authenticity of voices which are heard on email discussion lists. Are the most vocal and the most prolific of message posters the leaders in their field and do these voices appropriately represent the views of the broader type industry or profession? If it had been the sole foundation of the thesis, this apparent drawback might have been problematic, but it was considered an appropriate method of gathering information as scene setting for the thesis. Once the email discussion lists had served this introductory and generalist purpose, they were then supplanted by three qualitative and quantitative research instruments.

4.3 Questionnaire

The second research method was an international questionnaire completed by type designers, graphic designers, design educators and design students which surveyed professional users of type on their access to typefaces, typeface purchases, favourite typefaces, least favourite, the visibility of typefaces, future trend predictions in type design and usage and responses to the marketing of typefaces. In keeping with the reflective practice paradigm [13], practising graphic designers, design educators and students were asked to describe and reflect on how the proliferation of typefaces impacted on their daily typographic design decision making in a combination of multiple choice and open-ended questions. Knowing from personal experience how much printed material graphic designers receive across their desks, I restricted the length of the questionnaire to one double-sided A4-size sheet of paper containing twenty questions so that it would not look too daunting to complete nor take up too much of the respondent's time. The questionnaire was based on the work of Converse and Presser [6] on guidelines for the writing of survey questions.

The questionnaire was then distributed via a national mailout to members of the Australian Graphic Design Association (AGDA), it was put up on a separate website, and also distributed via email discussion lists and by interested people who encouraged their graphic design and type design friends and colleagues to complete and return the questionnaire. The answers from a total of 120 respondents to multiple choice and open-ended questions were critically appraised, analysed and interpreted.

4.4 Interviews

In recognition that mail questionnaires do not have a high completion and return rate, the questionnaire was supplemented by the third research instrument, a series of extended one-on-one interviews conducted in Europe in 2000 with type designers, typographers and design educators in the UK and the Netherlands. These

interviews covered similar ground to the questionnaires, yet in far greater depth and were conducted in Europe to provide a shift in geographical focus from the completed questionnaires which had provided predominantly Australian perspectives. The United Kingdom and the Netherlands were selected as primary countries in which to undertake interviews due to the fact that they were seen as producing leading type designers, were home to two of the most internationally significant type design and typography courses (University of Reading and the Royal Academy in The Hague), and also did not present language and communication difficulties for an English-speaking interviewer/researcher from Australia.

The review of the email discussion lists identified a number of potential people to interview and emails were sent to a range of people who represented the fields of type design, design education and typography. Some were unable or declined to be interviewed because they were unavailable or did not feel confident or appropriate to be interviewed. The questionnaire focused on the users of typefaces, so it was appropriate that the interviews should focus primarily on type educators and typeface designers.

4.5 Case studies

The phenomenon of the explosion of typefaces proved to be broader and more complex than at first anticipated and it was apparent that the thesis required some more specific exemplars to better illustrate and elaborate upon the broader brushstrokes which were defining the research. To this end, I decided to include two case studies in the text: Barry Deck's ubiquitous typeface from 1990, Template Gothic, was used to exemplify the debates about the intentions behind the design of typefaces and the connotations and associations pertaining to their use; and Otl Aicher's highly visible typeface from 1989, Rotis, has been used to illustrate the adopting of typeface trends by graphic designers for a broad range of clients and communication purposes. In the case of both these typefaces, I had established from 1998–2003 a sustained enquiry into their use and obvious ubiquity by collecting photographic and actual examples of print and display materials in Australia and on overseas trips to conferences and study leave.

5.0 Outcomes

As presented in section 3 of this paper, three hypotheses and research questions were posed as a framework for the thesis. They are repeated below, with the addition of research results contained in the thesis.

5.1 Type: markets and appetites

Hypothesis 1

The explosion of typefaces which resulted from late twentieth century developments in digital technology created an increasing market for the purchase and use of typefaces.

Question 1

After an initial explosion of typefaces created and made available at the end of the twentieth century, is there an appetite for an ever-increasing number of typefaces which can be sustained in the marketplace?

Results 1

The explosion of typeface designs has caused a contraction in the typefaces being used by professional users of type and the appetite for an ever-increasing number of typefaces does not appear able to be sustained in the marketplace. This is evidenced by the fact that despite the extraordinary growth in the number of typefaces there are certain typefaces such as Helvetica which are highly visible in the marketplace and which regularly top surveys of the most commonly used or favourite typefaces of professional type users.

Comments and observations by questionnaire respondents and interviewees suggested that the type market was saturated, and that the giving away and bundling of typefaces had contributed to depressing the commercial typeface market by devaluing typefaces to the level of 'cheap pieces of software'. A significant

number of respondents to my questionnaire predicted a contraction of the market and a reduction in the range being used by professional users of typefaces.

In terms of predictions for typeface design and usage in the first decade of the twenty-first century, questionnaire responses featured the words clarity, simplicity, classicism and craft and, in most cases, these predictions were accompanied by the words ‘return’ and ‘back to’, indicating a desire to recreate a lost period, to return to a time when typeface design was simpler, easier, less complex and a desire to recreate a time when using typefaces was easier and less overwhelming. These descriptors all indicate a reduction and contraction in typeface design and usage. The untapped potential for typeface designers and marketers to make inroads into this contracting market is evidenced by the fact that over 50% of respondents to my questionnaire said they were only ‘somewhat aware’ or not aware at all of the marketing of typefaces.

5.2 Trends: criteria for successful typefaces

Hypothesis 2

The explosion of typefaces has expanded the design possibilities for type designers to create highly visible typefaces.

Question 2

Are there design criteria evident in the highly visible typefaces at the end of the twentieth century which make them distinctive and would working with these criteria allow for the design of new, successful typefaces?

Results 2

What makes a typeface popular, successful and highly visible? Answers to my questionnaires contributed to the development of the following checklist of tangible criteria which are likely to have an impact on the popularity of a typeface:

- Being bundled with computer hardware/software.
- Well marketed and receiving wide exposure.
- Able to be described as timeless, beautiful, classic, elegant.
- Appearing to be clean, clear, solid.
- Aiding clear legibility and readability.
- Being seen as dependable or versatile with a good range of weights.

The case studies and the interviews I conducted as research for this thesis suggested the following less tangible criteria likely to impact on the popularity of a typeface:

- The importance of a creation myth or narrative.
- Attunement to the moment/hitting a nerve.
- Bubbling as an idea/design from the bottom up.
- Receiving the approval of international design decision makers.
- Being used for high profile clients and projects by high profile designers.
- Filtering from the top down to mainstream consumer culture.
- Some noticeable, distinctive characters.
- Possessing an attitude, but not overt.
- Sufficient identity to denote difference, but not too avant garde.
- Safe, with enough variation to do different things.

While the above list is far from a perfect ‘recipe for success’, there is no doubt that such a list of criteria would prove valuable to designers and distributors of typefaces in a marketplace which, as was described in the previous section, is contracting and therefore highly competitive.

5.3 Fashion: cultural significance of typefaces

Hypothesis 3

The explosion of typefaces has created an increasing appreciation of the value of typefaces as the products of a specialist profession.

Question 3

At the end of the twentieth century, what significance in cultural terms did typefaces possess?

Results 3

When assessing cultural significance, different kinds of value need to be considered: the value of typefaces according to the time taken to design a typeface; the devaluing impact of giving away fonts; judging the value of a typeface design in terms of cohesion, proportion, balance and suitability to its intention; and value according to the enduring shelf-life of a typeface. From the research in my thesis, it was obvious that many type designers do not believe that their work is appropriately valued by users of type. It is little surprise then that type users might not see anything wrong with taking, using and trading typefaces without paying for them. The explosion of typeface designs has caused the significance of typefaces to move from being viewed as the products of a specialist area of printing craft with its own mystique and history to one of a tradable commodity of debatable value within visual culture, susceptible to piracy, and able to be considered in theoretical terms of consumption, trends analysis and fashion.

6.0 Future directions

Given the current acceleration of typeface currency and obsolescence, it is clear that to enhance visual communication between clients and their audience, professional users of typefaces require a better understanding of typefaces for competitive, creative and visual advantage. The previous sections have described a situation at the end of the twentieth century in which there was a devaluing of typefaces, a contraction in the type design industry and a reduction in the range of typefaces being used, yet the late twentieth century has also witnessed the creation of an incredible resource of as many as 100,000 typefaces. In a world in which the competition for an audience's attention is increasing exponentially, graphic designers require new knowledge about typefaces for visually branding or customising their clients' messages. The resource is there for the taking, but familiarisation, identification, appreciation and appropriate use of the vast resource of typefaces is needed to provide graphic designers with the visual and editorial edge vital to effectively compete in such an environment.

This situation suggests a number of research areas which could be further investigated. Type education is clearly part of the solution but tertiary education of typeface and graphic designers is another area of the type industry which requires a major overhaul. When the type designers and educators I interviewed openly described type education in terms of superficiality, increasing student numbers, dubious quality and limited opportunities for specialist study, it is obvious that there still exists great scope and opportunity for improvements to be made to type education in the future. Models for twenty-first century type education need to be researched and developed which take into account the realities of a dramatically different and challenging type industry.

Other areas to be addressed in more detail and depth than was possible in this research include the following:

- The need for greater clarity about—and the development of guidelines to address—the copyright and piracy of typefaces.
- Further probing to gain a better understanding of why so many graphic designers and professional users of typefaces choose the same highly visible typefaces as those already used for their clients' competitors.

In conclusion, I acknowledge that my understanding and interpretation of typeface design and the late twentieth century proliferation of typefaces is subject to Crotty's [7] caution when he said:

What is said to be 'the way things are' is really just 'the sense we make of them'. Once this standpoint is embraced, we will obviously hold our understandings much more lightly and tentatively and far less dogmatically, seeing them as historically and culturally effected interpretations rather than eternal truths of some kind. Historical and cross-cultural comparisons should make us aware that, at different times and in different places, there have been and are very divergent interpretations of the same phenomena.

There would most likely be alternative interpretations of the phenomenon of the proliferation of typefaces by a different researcher at a different time and place. This study has, however, made a contribution to our understanding of this late twentieth century phenomenon. It is clear that the research methodology applied to this investigation would be applicable to further research to ascertain how the state of typeface design has changed from this point in time to some later date chosen by the researcher.

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