

Between a Book and a Soft Place

An investigation into the
Contemporary Teaching of
Typography and Book
Design at South African
Higher Education
Institutions

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Contemporary Teaching of
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by
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MIS (Publishing)

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Faculty of Engineering, Built Environment,
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Liam Borgstrom – 16 November 2016

Abstract

This dissertation addresses the teaching of typography and book design in South Africa and how the literature relating to its education has changed during the course of the twentieth century. Several scholarly and educational book titles are compared to one another based on their approach to the subject and this is compared to the historical development of typographic technologies as they were developed in Europe. Based on the theoretical pool of the assessed books, a list of theoretical topics was drawn up and used to survey the current teaching intent of graphic design study programmes at South African tertiary education institutions.

It was found that in spite of a less direct technical focus in the teaching and learning materials, training institutions within departments and faculties of arts have developed their graphic design programmes with the intent of developing students who are technologically proficient, readily employable, artistically fluent, and aware of industrial and historical conventions in their fields. However, they do not necessarily teach historical book design conventions, focussing rather on the skills and software required for contemporary design practice.

Keywords: typography, book design, education, typesetting, type composing, book production, print history, graphic design, information design, print design, layout, printing,

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Chapter 1

Introduction



At the time of writing this dissertation, I have been teaching principles of graphic design and print reproduction for seven years. Since my time in taking the second year course myself, I have become absorbed by the mechanics of print production, especially as it relates to my academic field of study, books.

The challenge of teaching any subject matter outside of one's own field will always be a task fraught with failures and errors of basic comprehension. However, the benefit of re-developing a course is that one is able to criticise it first. At the beginning of this study, my perception of graphic design courses was that they were focussed on creating capable graphic artists ready for employment primarily in the advertising and promotions industry. While books were studied as design objects, they were approached as works of art, and not as tools for communication.

Coming from the perspective of publishing studies, the artistic value of a book must be supplementary to its content, and the type of design required is highly specialised communication design, and more fundamentally typography and book design. It is fundamentally from these latter fields that graphic design has developed, and it is in the tradition of subtle visual rhetoric that a book designer must be well-versed.

However, it is all too easy to romanticise the work of letter-press typographers as the work of geniuses and angels. In my own studies I have found it more appropriate to study it from the point of view of craftsmen and their technology. Much of the capabilities of modern design are hinged on the capabilities of digital tools, such as desktop printers; illustration, photo-editing, and layout software; image libraries; pantone libraries; automated rights management; and digital capture hardware. In the same way, early typography and book design was hinged on the application of alloys, punches, matrices, furniture, and presses.

Looking at the development of typography and book design from this perspective provides context for the conventions we now take for granted, and – one would think – greater understanding of them. This dissertation seeks to question that. Are there really different approaches to this subject, and do they impact on the education of the developing typographer?

1.1. Rationale

This dissertation addresses the relationship between the design and production standards of books and the technologies associated with them. This researcher hypothesises that with each technological breakthrough the technology and methodology itself has a quantifiable impact on the form of the book. This is due not only to the physical reproduction technology but to the training that such technology requires as well. This is especially true in a modern era (21st century) in which graphic design has become an all-encompassing field for the creation of any form of encapsulated knowledge.* Yet while graphic design covers the

* The ‘encapsulation’ referred to above is information which has been rendered in a distributable and consumable form such as a book or pamphlet.

practical requirements for creating printed materials it is in contrast to the book publishing industry which is not founded on purely visual principles, but rather uses a mixture of visual and linguistic rhetoric for communicative, as well as logistical and economic purposes. Publishing as a physical, industrial, and scholarly venture has been responsible for the norms of structure and design which we associate with the book form, yet as publishing has diversified within the broader landscape of multimedia it seems as though there is confusion on how one should properly define a book and therefore differentiate it from other text-based media.

One can trace design norms of advertisements, magazines, even web-design* back to the early manuscripts and later printed works.

Typography has historically encompassed the setting of textual material through the use of a printing press, and this is responsible for some of the visual norms we see in publications today.

To explain, a novel can be typeset in any number of configurations, making use of multiple columns, lavish colour, horizontal layouts, sans serif fonts, continuous section breaks, inter-paragraph spacing... and so forth. However, while any combination of these factors may be used to influence the aesthetics and subsequent consumption of the novel, convention would state that the preferred design consist of a single column, serif typeface, unspaced indented paragraphs, and page breaks between chapters – preferably beginning on a recto page each time. There is no rule to follow, but rather guidelines established by convention (and brought to the fore by certain authors and practitioners). These guidelines are based on the common understanding of the norms of a genre, and can extend towards culturally-informed decisions – such as the adoption of right to left pagination for Middle-Eastern languages. This becomes an important area of concern in the teaching of book design in the modern context where the theory is applied within the space of graphic and information design, in which the aesthetic taste of the individual may strongly influence the design. This is true of traditional

* When speaking of web design here, I refer more to the grid-like textual layouts which were prominent prior to development of material and responsive design which have been gaining prominence since approximately 2014.

typographers too – who will have used their own preference for font and spacing – to impart a considered and standardised design (often based on personal design rules and typefaces), but also to fit within the craft of the common to the genre.

This dissertation is inspired by the now centuries-old practice of traditional Western book typography and typesetting. The compositor, a once invaluable craftsman on the factory floor, was responsible for page design and the handling of type until as recently as the early 1970s. This man or woman needed an in-depth understanding of printing and its associated materials, as well as a comprehensive understanding of style and history. With the rise of the graphic (now information) designer, the compositor's role began to lose its importance, as a relic of an out-dated technology. While this may be a natural shift and the newer and current page production technologies do allow for adequate replication of all of the compositor's practices, by assigning these contributions to be a subset of a much wider field, it seems as though that specialised and once-prized understanding of book anatomy may not be receiving the full attention it once did. That is to say that while publication design is taught in the majority of tertiary design programmes, with a curriculum split between digital animation, photography, illustration, poster layout and more (individually) artistic endeavours, over the course of three to four years it begs the question as to how much attention is given towards the practice of typesetting – which itself once required up to seven years of training and apprenticeships.

Another related issue which must be considered is that the design profession in its current state is one dominated by technology, in particular software from companies such as Autodesk and Adobe. In addition to being a master of visual communication, the modern designer also requires an in-depth understanding of their software, which is undergoing constant upgrades and innovation; along with the changes in display and input technologies as well as increased pressure to perform within digital spheres the demands for a designer's skill set are greater than ever before. While typesetters experienced their own technological shifts, the rate of change was a fraction of what it is today. And, the expectation for

performance and creativity is now much higher owing to the prevalence of visually-rich marketing and advertising.

The more focussed practice of typesetting before the practice of digital and pasteboard page layout was a focussed craft within the printing industry. Today, the design and printing spheres have undergone a respectful but industrial divorce, the printer's role has become to reproduce the designer's work faithfully, and in many circumstances, little more than a brief consultation is needed.

Some of the reasons for this shift can be explained in this anecdote:

Dorothea Hodmann, a graphic design student at the Schule für Gestaltung Basel, explained the situation from her experience: "I just remembered once Hans-Rudolf Lutz [a typographer student at the time] saying to me, 'We were always in the basement with our black hands and we admired you who were upstairs.' Ruder did an enormous amount of work to promote the typographers and printers. He was trying to have these professions standing all on the same level. He was one of the typographers who searched for the combination and the contact to graphic design." Ruder believed in a harmonious relation based on mutual respect between typesetter and graphic designer. With the evolution of metal typesetting to photocomposition and finally to the computer, accompanied by reforms in education following the adjustments to these new technologies, these two professions came to be seen fairly much as one. 'Visual Communication' programs around the world now cover the fields of both typography and graphic design. Of course some professionals develop a typography speciality, but overall the two professions appear to be more or less fused.

(Früh et al. 2013, p.112)

With this shift in professions it is important to assess how much of the knowledge of the previous era is still transmitted, and how much of it is still relevant. This dissertation is not concerned with trends in graphic design or teaching methodologies, but rather with the attention given to the core theory and practice of the typographic craft.

This dissertation will attempt to best describe the changes in design and skill sets that have occurred as different technologies have influenced

the manufacturing of books over the course of the last century, with a focus on the training provided in South Africa.

My hope is to establish, on a wide scale, whether or not we are still training competent book designers with the same understanding and appreciation for historical practices that was required for the past 550 years. This is best assessed by analysing current training programmes and assessing not only their content, but their intent behind the programmes' development to better understand the programmes' objectives and to see how closely they cover the theoretical concepts of previous generations.

1.2. Research question

'With the practice of typesetting and book design moving from a highly specialised profession to a function of graphic design, how are South African tertiary institutions teaching the principles of the craft?'

1.2.1 Sub-questions

1. What are the historical conventions of book design?
2. What of the historical theory is seen in contemporary literature on book design?
3. Within academic programmes at South African tertiary institutions, what is the intent behind the teaching of typography and book design?
4. How are students assessed in typesetting assignments?
5. How are the historical conventions reflected within academic programmes?
6. What is the influence of other media, for example magazines and digital publications, on contemporary book design as it is taught?

1.3. Hypothesis

The teaching of typography and book design has changed from a product and consumer-centred craft to a producer-centred means of artistic expression. In this study, this shift is referred to as a ‘shift in intent’.

This study is undertaken with the above hypothesis, in mind and will address its validity in Chapter 5.

1.4. Value of the research

This research is intended to assess the state of a professional field as it is being taught at tertiary level. The intention is to gauge whether or not there has been any significant loss in taught skills as far as capability is concerned, and whether or not previous technologies can be considered redundant, or contain essential information.

The research revolves around the intent behind the teaching of the subject matter surrounding typography and book design. Many of the modern tools (software) include all the capabilities of their predecessors, and while the operational theory of those tools is no longer of importance, the aesthetic – and now historical conventions that define the genres of books – are still relevant. The extent to which theory is being taught either as a tool for artistic expression by the graphic designer or in the spirit of the typographic practice of the last 600 years is the key focus of this study. The researcher has ascertained through general observation that the style and practice of book design has changed in the face of new technologies (beginning with the development of photographic composition in the early twentieth century). The rapid succession of artistic movements moving through modernism, constructivism, Bauhaus, punk, and so forth within the international design community and the subsequent inclusion of typography as a subset of information and graphic design has meant that the influencing practitioners within typography and book design have changed. This has led to the modern hybrid designer who is expected to manage all forms of communication. As a result while different aspects of, for example, font selection may be taught in current programmes, the approach to content has changed to embrace more artistic and cultural movements as opposed to competen-

cy on the machinery, and this is evident in the instructional literature as will be discussed in Chapter 3.

As will be shown in later chapters, this study adds an original contribution to the field of design education by linking old and modern design theory and typographic history together, and providing a novel method for the assessment of teaching methods.

1.5. Methodology

This dissertation makes use of a mixed methods approach incorporating an in-depth literature review, a targeted survey, and exploratory case studies of contemporary books. Loosely structured interviews will also be used to add contextual information.

As so little secondary literature is available on design education in South Africa primary research must be obtained by the survey. This survey forms the bulk of the primary research by obtaining first-hand information about contemporary South African courses in typography and book design.

The methods are described in more detail in Chapter 2.

1.6. Limitations of the study

This dissertation is constructed and inspired by the practice of typography from its inception in Western Europe in the 1450s to the present day. All terminology applied and concepts explored are taken from literature of the twentieth century, a period when ‘traditional’ and ‘modern’ typography could coexist. Therefore the focus of this dissertation is based entirely on the production of print material. While typography as a craft may be applied to media as diverse as invitations, newspapers, magazines, posters and packaging (referred to in the field as jobbing work) this dissertation is concerned particularly with book work. Allied trades may include binding, artwork reproduction, printing, proof-reading, publishing, bookselling and book publishing.

This study will thus not address electronic books or books in any interactive or artistic form. What’s more, this dissertation is not concerned with the design of book covers. The main focus here is on the inside

(the book block) of hard and soft cover books studied and produced by students.

It must be noted that the field has changed in the face of photographic and digital technology, and while ‘traditional’ letterpress and/or stereotyped printing may take place today, the general range of typographic work is done digitally using modern graphic design software, and is taught as part of graphic and information design. This dissertation works under the assumption that such training is being done in tertiary education design programmes and that the older apprentice system has fallen away. This is mostly owing to the division of labour that has occurred in the industry, as will be discussed in chapter 3.

The study is limited to South African tertiary institutions with a typography and/or book design teaching component. The primary data collection for this project occurred between November 2015 and February 2016 during which time the academic world in South Africa, especially at universities, was disrupted by student protests. Every effort was made to contact all identified institutions, however the disruptions to the academic year as a result of the protests were given as a major reason for declining to participate in the survey.

While this dissertation is based on the content being taught, it is not based on educational methods and will therefore not be citing any educational theory as may apply to teaching methodology. This dissertation focuses rather on the intent and philosophy behind the taught curriculum irrespective of the method of education.

1.7. Division of chapters

1. Introduction
 - a. This chapter introduces the study and explain the core objectives of the work.
2. Methodology
 - a. This chapter explains the methods through which the survey is carried out as well as laying out the key terms and concepts being used.
3. Literature review
 - a. This chapter presents an historical overview of the development of typography and book design, and discusses the influence of several influencing factors in the field, as well as presenting case studies for demonstration.
4. Findings
 - a. This chapter presents the computed data and analyses from the primary research drawn from the survey questionnaire and interviews.
5. Conclusion
 - a. This chapter will address the findings of this survey in accordance with the research questions as well as reflecting on the study as a whole and on the room for further development.

1.8. Summary

Throughout the chapters to follow this dissertation will attempt to provide an understanding of the nature of typography and book design, and how the presentation and teaching of it have adapted in the face of contemporary industrial change. This chapter has introduced the topic to be explored while outlining, in brief, the structure and methods to be used. The hypothesis has served as a guide in the selection of literature, and in the development of interview questions.

The purpose of the study is not to challenge institutional programmes but to provide a measure against which institutions and programme co-ordinators may measure themselves against each other.

Chapter 2

Methodology



2.1 Literature Review

This dissertation will first seek to establish itself within the fields of book design, production and history. To this purpose the dissertation will address the literature referring specifically to the practice of typography and composition as a function within book production. The term ‘typography’ will be used in place of publishing and design owing to the historical development of the fields. During the course of the late nineteenth century the modern practice of the publisher and printer being separate entities became more prominent, and for this reason one must view the typographic function as separate from the publishing function even if done by the same person. While decisions of house-style

from a publisher could still hold weight in the application of typography, the specific application of the theoretical concepts discussed in this dissertation rests primarily with the hands of typographers employed in printing the work.

This chapter will largely take the form of a historical narrative making reference to several sources, and including detailed analyses of specific sources where appropriate. The primary purpose for this method is to establish the historical conventions which can be found in the literature.

Literature for this review will be collected from books, articles and essays on the subject of typography and book production primarily written and published from the twentieth century. Literature earlier than this is limited largely to typesetting by hand; it is from 1890 that mechanised typesetting becomes established and the trend of technological advancement continues. The literature from this period covers the different methods of composition and their implications for book production while providing a unique vantage point as it is written by typographers and designers dealing with the new technology during the time of its implementation, and provides a largely objective viewpoint on the circumstances and capabilities surrounding the various methods. Bias within this literature is generally directed more towards aspects of design (margins and typefaces) rather than towards the methods of composition themselves. Other formally published articles and discussions will also be included in the review, though the focus will be more towards books which are used as teaching materials.

To establish the core theory which the study will test, aspects of the theory will be distilled from sources within the literature review. It is primarily in the era from approximately 1970 to 2005 where we see the practice of typography and page composition as practiced by a compositor being contested by the rival graphic designer due largely to the influx of new book production technologies.* As such the literature review will identify the trends in the requirements, rules and standards expected in the process of designing a printed page. Resulting from the analysis, will be a comprehensive and descriptive list of the theory

* Primarily photographic and later digital typography and desktop publishing.

and topics which can be compared against modern syllabi. The design principles addressed are only those within the book and covers will not be addressed.

Many published books on the subject matter can be found within libraries, independent bookshops, and within education institutions as prescribed or recommended study material. Typography specifically is addressed in book history as well as design journals as a paratextual element and is an essential part of modern graphic design curricula.

An alternative method which could be used in this study would be a textual analysis of study materials and curricula based on keywords, and terminology. However, the intent of this survey is to understand and qualify the underlying movements and intentions behind the teaching of typography and book design. For this reason, it is important to try and understand the varying forms in which the theory is addressed rather than the only the occurrence of theoretical principles as the nature of the instructional material is not fixed. A literature review serves best to assess the varying iterations of books on printing, binding, and typography, as the nature of the texts range from subjective essays on ‘good form’ in books, to example-driven explorations of poster type. Given the mixed terminology in use, often typographic arguments are concerned with page proportions, while another source may refer to typeface design.

It is seen in the range of books available that even where keeping to convention is paramount to continuing the craft of ‘good’ typography, the authors’ views are often both personally and contemporarily biased.

Working through the differing texts, however, is best done without too rigorous an approach, and open criteria. Information sought is therefore done on the basis of keywords: book design, typography, printing, binding, layout, type-setting, composition, type design; however the sources are then analysed and selected based on their content rather than the intent of it – for example being intended for tertiary education, or historical insight.

2.2 Case studies

Four books have been selected in an instrumental case study (Pickard 2013, p.102) in order to show some of the methods in which book design is applicable. This type of selection may be referred to as ‘exploratory’, ‘explanatory’, or as ‘theory-testing’ (Bassey 1999, p.62). ‘Theory-testing’ may be the most appropriate here as they display the discussed concepts in practice. Using sources in this way forms the beginning of a collection which may be (and is) used in classroom settings in order to theorise about related and similar titles (Hancock & Algozzine 2015, p.sp). Some researchers, such as Baxter & Jack (2008, p.545), recommend this form of analysis when a phenomenon cannot be separated from its context.

These books have been selected, for how they demonstrate the application of effective book design as seen by myself. Rather than using these books for exploratory research, these books are used (with visual examples) in order to demonstrate how the principles of typography and book design can be used and misused, to different effect.

These titles occur within the twentieth century of the survey literature, and are able to serve educational functions. They have been selected as they convey an internal visual rhetoric which displays the practice of a trained book designer. Rather than critiquing these titles, these case studies serve to analyse this rhetoric and its relation to their own content.

Four sources have been selected two being specifically focused on book design and typographic education: *Practical Printing and Binding* (Cooper et al. 1965), and the Ava Academia series *Design Basics* (Ambrose & Harris 2006; Ambrose & Harris 2005c; Ambrose & Harris 2005a; Ambrose & Harris 2005b). *Practical Printing and Binding* goes beyond the implications of its title and teaches the complete skill set required for the printing of books, from the founding and setting of type, to the application of various kinds of machinery, and reproduction. It is an extensive manual previously prescribed to apprentice typographers. The *Design Basics* series is a more recent instructional series which demonstrates practical applications of various design features. While there are volumes dealing specifically with typography and print production, the design of the books is modern and intelligent, showing a bold use of modern media influence to create a working design.

Two other titles have been analysed as educational aids: *I Wonder* (Bantjes 2010a), and *Seraphs* (Daly 2014). These are not textbooks or manuals but published titles which can serve as examples. *I Wonder* is a teaching aid used in one of the surveyed courses for its plethora of design approaches. It is not an educational title, but a short collection of articles each of which has a unique page design. *Seraphs* is a computer generated book which uses images collected from the Voynich Manuscript in a rearranged package according to book design principles.

The case studies are examined to illustrate how principles of book design may be put into practice, as well as further demonstrate the different types of books which may be used for training.

2.3 Interviews

In order to contextualise the data, I have also – throughout the course of the study – made use of interviews with composers who use / have used prior and current practices. This is primarily a convenience-sampled group, and the interviews loosely structured, as the intended purpose is more concerned with capturing the sentiment and general attitudes surrounding the craft. These key informants have been sourced primarily based on association with teachers and industry professionals.

As a field, typography has changed not only hands, but generations. These interviews not only contextualise the information, but help us ascertain sentiment first-hand, by asking the informants to elaborate on their preferences.

These interviews assist in supporting and triangulating the data received from the questionnaires, and provide answers from a more personal viewpoint, which provides a some context for the results gained from the survey.

A semi-structured interview format was used either in person or via Skype, and the questions are provided in Appendix 3. The semi-structured nature of the interview allowed for often lengthy discussions, and the content of this was recorded in the researcher's notes. These notes were examined later, and used to assist in the interpreting of the data, as discussed under heading 4.7 'Rationalising intent'.

2.4 Survey of tertiary institutions

In order to establish to what degree knowledge from previous generations of typographers has been included in modern syllabi a questionnaire will be created and disseminated to educators in South African tertiary design schools. The sample will be primarily focussed on universities, but will also include other institutions which have a qualifying graphic design syllabus – that is to say, it will exclude those programmes with a clear bias towards digital and multimedia practices, as the information required is fundamentally print-based. The core sample group will therefore be criterion sampled based upon the information brochures (and if needed closer interviews) concerning their graphic design programmes. The sample is detailed in the section below on ‘Sampling’.

This survey will primarily highlight key points of theory and practical work as identified within the literature and seek to determine the perceived importance (as it is taught, not as it may be perceived and used by the lecturers and students personally) and the true application, relevance, and time allocated to teaching it within the syllabus. Thus while the survey may reflect the bias of certain educators it aims rather to provide a snapshot of teaching as is currently occurring within South African institutions.

With the above primary research, I intend to evaluate the perceived value of the knowledge of the previous era (in terms of book typesetting) in modern South African design syllabi. That is to say, the survey will make use of ranking and Likert-scale based questions to map out an average perception index while also making use of semi-closed questions to map out that content which is included in the syllabi. The survey will be conducted entirely on an institutional basis and no identifying information will be included in the report as there is no intention to rank the institutions, rather the opinions and practices within the community as a whole.

This survey seeks to answer the remaining research sub-questions by directly addressing teaching intent, as well as assessment, use of examples, and historical influence.

The questionnaire allows the best opportunity to capture the data within the categories determined by the study. While it is possible to

capture this information through interviews, the questionnaire mitigates problems of distance between the sampled institutions (allowing for an increased sample size) as well as providing an easier means by which the qualitative data can be represented logically.

By creating the questionnaire in a digital format, it is possible to easily and efficiently extract the data and represent it in a fashion which is suited to analysis. Where the questions ask for numerical answers, using the data can also be easily aggregated into tables and graphics which to assist in analysis.

Interviewees have agreed to be identified and quoted for the purposes of this study, but participants in the survey are assured of anonymity, as the data presented is solely an aggregation of the data received, and participating institutions have not been mentioned.

2.4.1. Survey design

The questionnaire is arranged in three sections. Section A captures basic screening data from the participant to ensure that their input fits with the goals of the study, and provides an optional field for contact details. Section B is composed of investigative questions, with accompanying text fields, on the organisational nature of the programme in question, including means of assessment, reading and reference material, and course descriptions. Section C makes use of a combination matrix of identified aspects of typography and book design theory, and contains, per aspect, a manipulable Likert scale as well as a multiple choice field.

The core goal of the questionnaire is to gain understanding towards the intent behind the typographic curriculum and therefore the intended philosophy intended to be instilled in students of typography and book design. To this purpose the questionnaire has been designed with several questions allowing respondents to explain the curriculum in their own words (Section B), as well as a question matrix (Section C) to capture the intent as determined by the hypothesis of the study.

The matrix contains a list of practical aspects of book creation and tests on a Likert scale the encouragement given by educators towards either the artistic expression of the student, or to the conformance with the genre. The scale here addresses the research question of programme intent by directly testing the hypothesis (see page 5).

The criteria are based on the core terms and components as seen in the surveyed instructional materials and are organised according to the different facets of a comprehensive book design – being typography, layout, features specific to books, and aspects for printing (an ‘other’ choice was also provided).

A second section of the matrix asks for the nature of the theoretical information given to the student, whether it is taught based on style, historical evidence, or as a software feature. These categories were not exclusive, and any one or combination could be selected.

These categories were chosen based on the nature of the surveyed literature in the field. It is not often the case with the surveyed modern titles that example designs are given with analysis, even when they may be influenced. Therefore it was deemed worthwhile to assess whether or not instructors focussed on the historical aspects of a particular design, or more on the artistic and personal aspects of it. The third category was chosen as much of the literature is based around the application of typographic design through Adobe software, and it therefore seemed pertinent to assess whether the nature of the teaching was done from a technical standpoint.

This is in line with the hypothesis as it seeks to explain how the apprenticed craft of typography has been able to be absorbed within the field of graphic design.

2.4.2. Limitations of the survey

The questionnaire is a primary means of research here in order to address the hypothesis. However, as a method, there is both a chance for misunderstanding and for untruthful answering of the questions. Assessing the answers requires that the respondent is able to interpret the questions correctly and respond in a useable manner. A problem of the Likert scale system is that it allows respondents to choose a safe middle ground. It needs to be clear here that there is no wrong or right, merely a question of the educators’ encouragement for innovation in a genre with historic norms.

Open ended questions pose a problem to the researcher who will have to interpret the responses based on his own understanding. The open ended questions give the respondents an opportunity to explain and/

or defend their responses. In cases where the matrix is unclear, use of the course prospectus material can assist in intuiting the intent behind the course. However, it must be noted that prospectus material may be out-dated, or simply not updated to reflect changing staff influence.

Independent research on the institutions (based on their prospectus and marketing material) can be a useful element in intuiting the teaching intent behind the programme. However, as mentioned above, it is not enough in itself, and so any additional information sought here is included in the methodology of the questionnaire to provide supporting material. This survey will be a contemporary snapshot, only truly applicable at the time of its data collection, and the collection itself may influence how this field may be taught in the future.

If successful, this method arguably shows that intent can be measured, and may be applicable in other educational fields. The most effective means for this study would be to retroactively carry it out over a course of several decades, and to compare the results to the philosophies of the changing programme co-ordinators.

2.5 Data analysis

The primary research data collected in this study has been collected electronically by means of a digital questionnaire which has captured the input of the participants, and organised it according to pre-determined data categories.

Textual input from Section B of the questionnaire was placed into a table and examined for key concepts, trends, and opposing ideas. Each input field is discussed in Chapter 4 under headings 4.2 to 4.6.

Additional material collected within the questionnaire includes motivations from the respondents as well as course riders and promotional information. The information taken from the formally published material with which the institution advertises its programme can be used to corroborate the findings determined from the theory matrix in Section C.

Section B also made use of a table which asked the participants to give their preference for typographic examples used in teaching. This

is discussed under heading 4.5. This table was used to ascertain what material is considered to be important in typographic teaching.

Data collected from Section C of the questionnaire has been compiled into a comparative matrix from which a graphic ‘fingerprint’ for the current sentiment surrounding typography and book design within South African may be created.

The matrix was designed according to the categories defined in the questionnaire where the Y-axis will represent the theoretical subject and the X-Axis the degree to the teaching intent is focussed on either artistic expression or upon the generic conventions of the craft.

The input from this matrix was placed into a data table which converted the raw input (values between 1 and 5) into values which would be easier to represent (values between -2 and +2). The multiple choice component of Section C could not be included as the participants did not complete this section consistently. The findings here are discussed under heading 4.6.

2.6 Sampling

A criterion-based sampling technique has been applied in order to create a short-list of those institutions viable for the study. Higher education colleges and universities have been sought out based on recommendations from largely informal websites which have pointed out institutions which teach design (Devenish 2013; SABS DI 2012a).

Simple criteria were put in place, namely:

1. Is the institution a higher education institution?
2. Does it offer a course in graphic or information design?
3. Is it based in South Africa?
4. Is there a stated focus on print media?
5. Is it a vocational offering longer than three months?

These recommended institutions were then evaluated according to the advertised descriptions of their design programmes. From this it was possible to remove schools with a focus in industrial and machine design, fashion design, animation design, photography, illustration, and print making.

Courses offered by PrintSA, for instance, were evaluated for possible inclusion, however – and this is a testament itself to the changing landscape of the field – these do not show any focus on the visual nature of the product but are concerned with industry-specific business practices, machine maintenance, tender procurement, and financial matters.

Given the practical nature of the subject under study, institutions will also be excluded where there is no practical component in the curriculum. The study is looking at the training of future practicing typographers and therefore a purely theoretical course is not of use.

It should be noted that the programmes researched are generally undergraduate courses where the focus can be more practical and vocational pursuits than on academic ones.

Given the wide scope of the term design, I find it useful to make use of the SABS distinction between Applied and Engineering Design, where the former deals with the visual design associated with the subject matter of this dissertation and the latter with industrial manufacturing (SABS DI 2012b).

It should also be stated that courses advertising themselves as document design are also considered to be inapplicable as the document design theory is concerned more with communication theory and while document design does address readability, it has developed as a field independent of both graphic design and typography.

In a similar vein, print-making is also excluded as this is generally taught as an artistic and decorative medium, and this study is concerned specifically with communicative typographic means.

With the initial sample calculated as shown in tables below (and based on recommendations from 2012 and 2013), targeted institutions are encouraged to distribute the questionnaire amongst colleagues in their own institutions – the so-called snowball sampling method. The current sample targets all major institutions within the country and should capture the bulk of the eligible population.

The original sample size, based on these criteria, was 46. Universities were further scrutinised and ten were removed for not fitting the criteria, this made for a total sample of 36.

Distinctions were made in schools and departments focussing explicitly on fashion or interior design. Keywords looked for were information or graphic design. Communication design was also accepted.

Institutions offering short courses and software training shorter than three months were excluded.

Figure 1. Final Sample of 13 Universities

University of Pretoria	University of Witwatersrand
University of Johannesburg	University of KwaZulu-Natal
Nelson Mandela Metropolitan University	University of Stellenbosch
University of North-West	Cape Peninsula University of Technology
Durban University of Technology	Tshwane University of Technology
Central University of Technology	North-West University
Vaal University of Technology	

Figure 2. Final sample of 23 other Higher education institutions

College of Cape Town - City Campus	Central Johannesburg College	Concept Interactive: School of Communication Design
Midrand Graduate Institute	AAA School of Advertising - Cape Town	Greenside Design Center
Centre for Fine Art, Animation and Design	Damelin	Open Window School of Visual Communication
5 th Dimension College of Visual Arts	Prestige Academy	The Design School of Southern Africa - Pretoria
Inscape Design College - Cape Town	Stellenbosch Academy of Design & Photography	City Varsity
Ruth Prowse School of Art Art, Graphic Design & Photography	Cape Town Creative Academy	Style Design College
Artshub Institute	DADA	Keyline
Oakfields		Red and Yellow GD

2.8 Conceptual framework

The concepts and terminology used in this dissertation are derived from personal experience based on reading and through discussion. Many terms are standardised in the literature, however some may have multiple names, or differ slightly in meaning depending on the author. What is included here is list of technical terms which have been identified and are used to provide a standard vocabulary and assist in the interpreting of respondents' answers. These definitions, unless otherwise indicated, reflect my own personal understanding of the taught terminology of the theoretical components of typography.

Other concepts are also defined in order to express the logic being used throughout this dissertation.

The approach used in this dissertation is, as far as I'm aware, unique, and does not follow on the approach or framework of another study.

2.8.1. Concepts and terms

Teaching philosophy: An abstract educator's concept existing in tangible or intangible form consisting of 'a moral and social compass, behavioral, attitudinal, and value guideposts, essential personal and professional prescriptions, and a consistent but alterable assessment means for professional evaluation.' (Petress 2003)

Intent: The underlying motivations guiding the application of teaching philosophy.

Programme: When used in the context of a qualification programme refers to the total arrangement of modules which make up the qualification.

Module: Used to describe the sub-sets of a programme, and is characterised as consisting of specific assessment projects, tests, and exams.

- Course:** Used generically to refer to the academic context being discussed, depending on the surveyed institution this can refer to either a programme, module or project. As these are being analysed according to their content and not by academic category, the terms module and programme will only be used when necessarily relevant.
- Book design:** The practice of creating a total layout plan for the placement of text, graphics and imagery within a printed book.
- Graphic design:** This field incorporates the production of visual aids for communication, including typography, graphic manipulation, illustration (of complex artworks, digital renderings, and iconographic elements such as instructive icons and border elements) Different tasks may be added as adjectives such as cover designer (one who design the covers for books), or type designer (one who creates typefaces). This may also be referred to as Information Design.
- Compositor:** One who prepares visual and textual material for a print book. This term is used in a historical context; other terms which have been applied include typesetter or typographer.
- Typography:** The practice of placing text in accordance with the book's design. This includes but is not limited to: font selection, indentation, ornamentation, leading adjustment, justification, kerning, and tracking. In a historical context this can refer to the physical placement of type,

	as it was inseparable from the above described activities.
Typesetting:	Also referred to as composition, and may refer to the setting of type according to a brief, as well as the implementation of corrections, and final preparation for print.
Type design:	The conceptual process of creating a typeface and associated font variations.
Manuscript:	The draft work before any typography has been carried out. Given the contemporary nature of the dissertation, this definition does not refer to any pre-typographic book production.
Ornamentation:	This may refer to any visual characteristics added to the page, including, but not limited to: borders; corners; icons; bullets; and drop-caps.
Flowers:	Characters designed exclusively for ornamentation.
Leading:	The spacing placed between lines of type.
Justification:	The arrangement of type whereby the length of the line is fixed, and therefore typographic spacing may be adjusted in order to ensure the preservation of the appearance of a rectangle in the type space in all areas excluding the end of the paragraph.
Kerning:	The adjustment of the space between individual characters of type.
Tracking:	A contemporary means of addressing justification in non-justified lines, whereby the total word and character spacing is manipulated. This is a feature of modern typography software.

Text:	The core linguistic material which forms the basis of a verbal publication.
Type:	The chosen alphanumeric characters employed to portray the text. In a historical context this may refer to type in the physical sense, as metal characters for use in printing.
Typeface:	<p>The foundational design for a set of type, containing within it the full range of characters, which includes but is not limited to: alphanumeric characters of multiple languages; diacritics; ornamental characters (wingdings); alternative ligatures; super- and sub-script characters; alternative figure styles; and default kerning and tracking.</p> <p>A typeface may be defined as serif, sans-serif, blackletter, monospace, or novelty.</p>
Serif:	The accented terminal points of type characters. A line of type containing these arranges itself into a linear pattern, allowing for faster character recognition at smaller sizes. This is a traditional for large bodies of text.
Sans-serif:	Describes a typeface in which the termini of characters are left unaccented. This resembles non-cursive human writing, and is a modernist contribution to typography. Its visual characteristics give it a larger appearance than serif typefaces.
Blackletter:	This is the typographic style of Gutenberg and contemporaries designed to resemble the Germanic calligraphic characteristics of the period.

Monospace:	This is a product of the typewriter, as the mechanical limitations of the device made it unfeasible to allow for typographic manipulations. Each character in the typeface exists in a fixed space. This style has also become reminiscent of the early computer.
Novelty:	In typefaces this refers to any design that does not fit into the above categories. It is usually designed for display purposes and is not fit for long bodies of text.
Readability:	This refers to the effectiveness of the type in fulfilling the needs of the text. Readable type effectively draws attention to its function and allows the reader to isolate content effectively.
Legibility:	This refers to the physical ability of the type characters to be recognised as linguistic characters.
Font:	A formatted set of typeface characters containing the characteristics of point size, weight, slant, horizontal and vertical scale.
Ligatures:	The extensions of type characters that may extend into other characters. These are often used functionally to enhance readability and/decoration.
Figure styles:	Many modern typefaces contain variable versions of numbers which may be either modern (resting on the same base line as the alphabetical characters) or old-style (resting below the base-line).
Genre:	An identified set of characteristics which define an item as belonging to a particular family, in this case by its visual identity.

2.9 Reliability and validity of the study

This is a qualitative study and makes use of a combination of explicit written information and tacit understanding from the literature and respondents.

The survey has been designed to be repeated and replicated. By making use of a standardised questionnaire which requests data from established study guides and course curricula, as well as data specific to the professional understanding of the participants, it is possible to repeat this study over time to assess the changes which may or may not occur during a programme's development.

The categories by which the intent has been measured (genre-based convention and artistic expression) do reflect the limited perspective of the researcher, and it must be assumed that the survey participants understood these categories as they were defined. However, if the instructions were followed properly, and are repeated by the same participants one should see similar results.

The applicability of this study is based largely on the size of the sample. While one cannot expect two institutions to be the same, with a large enough sample, trends do show themselves (Figure 16) and in order to create any sort of 'genetic template' of typographic education amongst South African tertiary institutions, a more inclusive sample is required. With a larger sample the findings of this study may become generalizable. The final response rate was 22.2% of the sample (this is described in 4.1). Student protests and academic disruption were frequently blamed for this, as well as the pressure of course preparation at private institutions. Given a longer survey period, it may be possible to elicit further responses.

Transferring this survey to another field is limited to educational contexts I believe, as the triangulation between written and perceived outcomes is necessary to validate the findings of such research. That is to say, in an educational context one is able to make use of the formal material such as study guides and course prospectuses and compare it to the personal views of the educators. One may use this methodology

to establish how closely the stated and personal objectives link to one another.

In this study the findings do show a correlation between the intentions of the programme co-ordinators, and goals set out in the study material and course prospectuses.

2.10 Summary

Through the use of an extensive literature review, qualitative survey and interviews, it is hoped that this dissertation will be able to present valuable qualitative findings on the teaching of typography and book design in South Africa.

As indicated, the findings will likely be of relevance to other contexts as well.

Chapter 3

Literature review and historical influences



Since the time of the incunabula (1450-1500), typography has been a revered craft and a welcome evolution from the scribal tradition. This chapter seeks to describe the development of typography as an industrial craft and provide an overview of the theoretical views and approaches to typography and book design, through the use of a broad literature review. It will also comment on various educational materials, and on

the development of several international design education programmes. Finally it will demonstrate the application of some of the theoretical concepts through the use of a set of four case studies.

3.1. Historical development

It is worth noting that publishing has never been an easy task. It can be portrayed as the humblest duty or the noblest profession depending very much on whom you are speaking to, and when they lived. This section is focussed on the development of typography and book design as a profession and the technological capabilities of the craft. Sources referenced here are largely from material intended for practising professionals, owing to the largely vocational nature of the training. These professional titles are more common than ‘textbooks’ – as we now understand them.

A humorous account from Charles Jacobi in 1893 for the London Bibliographical Society illustrates this, as he takes a good deal of time in his introductory section to bemoan the time-strapped and money-focused practices of the modern publisher (1893, p.2). It seems that this particular meeting (and this paper) was well reported on in *The Publisher*, *The Publishers’ Circular and Booksellers’ Record of British and Foreign Literature* (Volume 60), *The Dolphin* (issue 1), *Bibliographica* (volume 2), and *The Academy* (volume 45). It is available as a reprint of the presented paper, presented to the society at what today we would consider an AGM, and it should be considering that the previous paper was *The Ideal Book* read by William Morris himself (1908).

A good deal of Jacobi’s paper is concerned with the practices of publishing, and he argues that ideally publishers should not approach printers with a price in mind, but rather the objectives of the book, so that it may be designed together and so that the printer can make use of the appropriate methods and machinery to produce the required output within a reasonable budget (Jacobi 1893, pp.2–4). What is note-worthy are the seven points he provides for bibliographers (1893) on what is important to printers in the cataloguing of books:

1. That the size of the type for the main part of the volume be determined.
2. That the character of type be described, whether black-letter, italic, or roman, and further classified into old or modern face.
3. Whether leaded or solid (though leading is, comparatively speaking, a modern innovation).
4. The exact measure of the type area, both in width and in length, either in inches or in printers' ems.* This measurement should include head-line, but not the signature at the foot of the page.
5. The number of lines of type comprised in a page of text matter, excluding headline and signature.
6. The various characteristics and peculiarities of the type face and general appearance of the page as a whole.
7. The name and date of the Printer,† with date, when given in the book.

For the printer and typographer, these are the important issues identified by Jacobi: how to set type comfortably, economically, contemporarily, and as some proponents may say, morally.

What makes the seven points worthwhile is their treating of the book as an engineered object, something made by craft. Just as architectural plans are stored, so should the architecture of a book be captured, alongside the description of its content. For the practice of creating a book cannot be separated from the content intended to be reproduced.

* Units of 12 points. It is interesting to note that ems are still used as a unit of measurement in web design where an em is equivalent to 16 pixels. Therefore making it proportionately adaptable to different screen resolutions (W3Schools n.d.).

It should be noted that being born out of Imperial measurements, the system of points, picas, ems, and quads, and their usage could vary greatly between printers and countries. One could, after some standardisation, refer to the system as the Empirical System, though it would be terribly ironic.

† It should only be expected that this is capitalised.

However, it would seem that the role of the printer, as a labourer is what is remembered by the general public and carries into practice today, while within the circles of typographic study the craft is illuminated and brought to an almost religious fervour as authors may wax lyrical about the importance of curve and shape, ink coverage and margin, only to be dismissed – or enjoyed without appreciation – by the allied trades.

These points are made from the point of view of a Western typographer, and the remainder of this study is focused on Western printing and typography as developed in Europe.

3.1.1. Typography in Europe

Typography is a unique invention different from the preceding print technology of xylography. Xylography refers to the practice of printing of carved images and characters in relief in wood, and has commonly been reported as existing in China during the Han dynasty, and being developed in the region later for objects such as playing cards, as well as in Egypt dating from between the 10th and 14th centuries CE. Typography, as a craft, requires that individual type characters are created with the intention of being used in different combinations. It is common to merge printing, type-setting, typography, book-design, into one field, however what set the ‘Western model’ apart was its obsession over letter form. This began with the first printing efforts during the period of the incunabula (1450-1500) and whether from the standpoint of communication studies or the more philosophical views of McLuhan (1967), the Incunabula were the seeds of an information revolution. When looking into the works about early printing (Carter 1969; Gill 1936; Janssen 2010; McLean 1958; Moran 1965; McLean 1980; Morris 1908) it is clear that the nature of the practice itself, the obsession over strength of colour, elegance of form, clarity of character, and dedication to the various arts is what makes Western typography what it is.

Lu (2014, pp.209–32) comments on the use of varying methods for casting moveable type blocks and on the various materials useable from wax to wood, tin, and copper. Gutenberg’s innovation was not the development of the process but of the casting metal made up of lead, tin and antimony. What is elaborated on, specifically by Carter (1969) are the various roles required to produce a book. What it needed firstly is

someone to design the type to be employed. What is then required is the punch-cutter who can reproduce this with the knowledge of how metals react, and therefore how to sculpt the letter forms and refine them for the intended point size. The punch-cutter can then strike the letter forms into a solid copper or bronze sheet. Next a caster and mould-maker must be employed who understands the physical properties of liquid alloys, who can ensure that a strong and consistent piece of type is developed.

Once the mould is made another person can be employed before the casting takes place. As a skilled caster will ensure that each piece of type will come out effectively, to ensure that the matrix (mould) is as pristine as can be, it may be justified by a justifier (Carter 1969, p.9), who will further improve on the form of the letter and level the matrix so that good ink coverage is guaranteed.

The caster may then produce justified or un-justified type that will reveal the great hand of the typographer, who will scrape, place, and space the type within the carefully measured-out furniture.*

Ink would be masterfully mixed and applied to the type and the great platin brought down to make permanent the enlightenment of the printed word.

If this sounds overly romanticised and reverent, it is stated as such only to try and capture some of the mood which is created by print historians. It is a small niche which appreciates the whole craft, and sees it as such. In today's digital age where the physicality can fade away, it would seem that often only the two-dimensional, virtual design is given attention.

The design of books has always been dictated by the capability of the hardware. Within the scriptoria of medieval Europe, book-making was alive and well (if catering for a highly select and erudite audience). It is from these early efforts that we see the first typeface Textura (or Blackletter) being developed by Gutenberg (and others) as an acceptable approximation and substitute for hand-written script (McLean 1980, p.17). The so-called incunabula of this period laid the foundations for all printed books in the European tradition. While these books may have been studied and understood by practitioners of the day McMurtrie

* One cannot speak of justification in this period as the creation of the rectangular form of the type area, as at this time, there was not an alternative.

(1927, p.156) notes Georg W.F. Panzer's *Annales Typographici* (1793-1803) as the first reference book which lists incunabula alphabetically according to the town in which they were printed. While many such references existed, by placing more emphasis on the locations, it becomes easier for typographic scholars to search for 'English' books, or 'Venetian' books. McMurtrie (1927, pp.157-8) notes that it is this period from the 18th century to the beginning of the 20th that holds a large canon for study of the early books.

Further studies of books after this period reveal developing trends of Roman type, smaller page sizes, and engraved graphics.

The earlier works of stationers and copyists preceding 1450 saw the development of the book form through regular line spacing (leading) and line length, as well as margin spacing and illustration. From this we see the initial design that Gutenberg and later printers had to copy. The study of these books therefore reveals a continuation of scribal tradition, and it is from that tradition that we can appreciate some of the romantic mystique people often associate with books. Are they works of art? They certainly can be, however their communicative functions are always apparent. The heavy weight serves to keep them open (Morris 1908, p.11), the margins frame the content to separate from distraction, while the large fount makes it easier to read from a distance at low light. Church lecterns are still made in this fashion, are they beautiful? Certainly, but more importantly they are easily readable from a podium.

With the introduction of printing we see truly the invention of typography, which according to Daniel Updike (2002, p.39) is 'the craft of rightly disposing printing material in accordance with a specific purpose of so arranging the letters, distributing the space and controlling type as to aid to the reader's comprehension of the text.' More practically typography is concerned with the design and composing of type, that is: letter-forms cast in a solid form with the intention of being arranged for printing. From here we also see the development of the many [now] norms we associate with book design, such as headers, footnotes, title pages, italics, and so forth (Eisenstein 1979; McLean 1980). From this we see printing developing as an increasingly industrial art with ever-improving production standards but with the methodology of printing

not changing much until the 1884-90 period which saw the invention and regular production of the punch-cutting machine (for creating type matrices) by Linn Boyd, the Monotype by Tolbert Lanston, and the Linotype by Ottman Mergenthaler (McLean 1980, pp.80–1), which brought about the rapid development of new typefaces, along with the ability to set copy quicker than before.

The 19th century saw the development of true mass production and the industrialisation of the craft. While steam power brought faster running presses, mechanical pantographs allowed for punch masters to be made more effectively for multiple type sizes (see Cooper et al. 1965, chap.1). The development of composing machinery, while based on hand-setting techniques was the beginning of the transition into our current mode of graphic design. The division of labour allowed for the development of specialisation on the new machines, meaning that a page could be designed, set, printed, and bound by different people.

3.1.2. Composing machines

While numerous composing machines can be elaborated on, two are worth due consideration for having the greatest impact not only on typography (including the designers themselves and skills required by practioners), but on the science of the composing machine itself. These will be elaborated on in more detail:

3.1.2.1. Linotype

Credited to Ottman Mergenthaler in 1884/6 (McLean 1980, p.24; Linotype n.d.) the Linotype was a major innovation as it offered compositors a space-saving work area, with quick access to different fonts and composed type into solid lines making it easier to handle when setting type in the furniture. The Linotype design was improved upon and later rebuilt by the manufacturer Intertype from 1910, though the machines were identical in functioning (Spencer n.d.).

The system revolutionised the process of typography. While it was used alongside hand setting, rather than making use of a large desk filled with type, the Linotype housed the brass matrices in magazines which could be shuffled between using a lever on the machine. Using a large

90-character keyboard* matrices would fall into a tray with a set column width. In this way it was possible for the operator† to judge the spacing and compensate for justification – which in this period now refers to alignment, as the matrices are factory made. With the pull of a lever the composed matrices would then be placed into an automated mould wheel which created a slug from hot lead, cool it, and set it into a tray next to the operator. Meanwhile the matrices would be lifted back into the magazine by an elevator system, and the matrices – which were fitted with stepped grooves unique to each character – would fall back into place in the correct slot in the magazine.

This process was able to speed up composition immensely, and several machines could be placed alongside each other, three possibly taking the place of a typographer's bench. Specific fonts could be ordered for the needs of the printer. Often these machines were used in newspaper printing rooms, and so could allow for fast, standardised composition. Once set, if corrections needed to be made, a new line would have to be cast.

While the principle is the same, the new technical ability demanded by the machines could create great upheaval. When the machines arrived in South Africa between 1898 and 1903 the Linotype was seen with great aversion by the Typographic Union, and while operators were eventually allowed to join the union, many were dismissed owing to the machine's arrival (Downes 1952, pp.89–109), leading to an eventual strike at the *Pretoria News* in 1904 (Downes 1952, pp.142, 152). As with many revolutions in industry, the reduction in man-power for greater production output does cause disruption. However, its economic benefit was undeniable. The Linotype not only saved on labour costs, but on space and materials too as, while it would need to be maintained, the type, once used, could be melted down and used over again, reducing wastage, and storage space.

* The keyboard was based on the layout of a compositor's type-tray and therefore had keys for upper- and lowercase letters, as well as numbers, punctuation, and spacing. Extra non-standard characters could be added by hand from the Pi tray.

† Often referred to as this rather than as a compositor or typesetter.

3.1.2.2. Monotype

The Monotype machine designed by Tolbert Lanston coexisted with the Linotype for much of its life. The Monotype was brought to market in 1891, and received a US patent in 1899 (Haynes et al. 1974, p.449; Lanston 1899).

In many ways the Monotype was the beginning of digital typesetting. While the Linotype's matrix return system did use a physical encoding in the matrices to determine the drop-off point, it was all an analogue mechanism. The Monotype truly abstracted the manual process of selecting matrices by using an encoded perforated tape. The machine was designed in two parts, a composing keyboard, which produced the encoded tape on a roll, and a composing machine which 'read' the role and composed the line.

At the keyboard the Monotype operator would read the copy to be printed, and retype the work while keeping an eye on the justification meter, which would alert the operator as to how much space was left in the line. Like the Linotype, the Monotype made use of a complex keyboard to produce all manner of characters, and to affect spacing between characters and lines.

The perforated tape, once taken to the composing machine, would be interpreted through a pneumatic system which reads the line spacing and justification settings, and positions the mould nozzle under the designated character on the font matrix. Unlike the Linotype, the Monotype matrix was a single unit which contained multiple characters, and the tape would indicate the co-ordinates of the required character on the matrix.

This two-part system would set the stage for the future of composing machinery, when as the machines developed and adapted for photographic development and the inclusion of the electric typewriter, this system would become the standard for mechanised typesetting.

These machines continued to evolve with other manufacturers creating versions, as well as with new fonts and eventual development into filmsetting machines which replaced the metal type matrices with photographic negatives. Later these technologies came to be manipulated through computer interface – which at the time relied on a combination

of an electric typewriter, as well as a unit for creating coded (punched) tape (Cooper et al. 1965; Jennet 1973; Williamson 1966). Filmsetting opened the doors for lithographic printing and brought about the end of type as it had been known.

3.1.3. An aside on the changing methods of printing

It must be noted that as typography and printing were so integrated, a change in one, could necessitate a change in the other. For this reason, the study of printing presses themselves forms a different but parallel branch of study. This section is simply to mention one of the parallel developments which should be acknowledged, as a change in layout techniques could only be realised with a change in the techniques for reproduction.

The printing press was gradually improving alongside the available typography. The bed and platin press of Gutenberg's time was improved upon, adopted screw systems, gaining better fixtures, becoming industrialised through steam power* and later electricity (during the twentieth century). The platin was replaced by a cylinder and the type-bed itself by curved stereotyped sheets. The development of printing presses makes for a fascinating study in itself, and one would do well to begin with James Moran's compendium *Printing Presses* (1973).

While the traditional bed and platen press was still in use, the use of steam-powered machines led to the development of the rotary letter-press which while it still made use of a flat bed of type, but now paper could now be fed in continuously and automatically through the use of cylinder paper feeding systems. The automation extended to inking of the type, and so vast quantities of material could be produced with greater speed. The second development, which was mainly found in newspaper presses, was the development of curved type beds. These beds were produced generally by two methods. Both methods involved placing standard type into furniture curved to fit a large cylinder. Where the methods differed was in using custom furniture and wedge-shaped

* One of the earliest steam cylinder presses is credited to Koenig and Bauer in 1814 (APHA n.d.)

leading to fit the type, versus shaving the type's base to allow it to sit flush against the convex surface of the cylinder.

This practice could be somewhat dangerous, and was certainly time-consuming. The solution came with the development of stereotyping. In this process, type would be cast in the standard manner on a flat bed, then a flong – layers of wet paper – would be pressed over the type. Once dry, this flong made a flexible and reliable stereo mould from which several curved sheets could be cast. These relief sheets could be fitted to the main printing drum, and printing could commence at speed with there being no danger of flying metal.

The method of stereotyped printing was very much the last great use of letterpress for printing at volume. The next great revolution came in during the 1950s when photography was being used on an industrial scale. Most importantly, the old practice of lithography, which had long been used for illustrations, now showed itself to be a modern, and efficient means by which to reproduce photographic material, including type.

3.1.4. Photosetting and lithography

The use of photographic techniques for typography had several great implications for practice:

1. Type could be developed onto printing plates through exposure, allowing for the development of fast photolithography (replacing the practice of stereotyped letterpress).
2. Typefaces could make use of a smaller amount of font matrices, as sizing and skewing lenses could create variation. This would also allow for the inclusion of multiple fonts on a single matrix – such as that used by the Photon-Lumitype (Cooper et al. 1965).
3. Type, illustrations, and photographs could be placed alongside each other on a single page without the need for separate plate pages.
4. New layout structures, such as diagonal and shaped type, as well as integration with images was made more possible with paste-up methods.

5. More training was required to make use of the new equipment.
6. Workspaces had to be redesigned.
7. Type was no longer directly involved in printing, and its design served only to inspire a new field of typography.

Photosetting came at a time when typesetting itself was sufficiently mechanised, and so the practice of hand photosetting never occurred. Rather there was film-stripping for layout purposes in the making of printing plates. A benefit of the machinery was that the matrices used to expose the film type negatives onto photosensitive paper required the use of focussing lenses. From the early days of photosetting it was possible to use lenses to size the type, creating enlargements or reductions. As early as 1877 (Moran 1965) machines were capable of creating oblique or *faux italic* type through the use of lens adjustment. Coinciding with these developments is the growth of computer-assisted equipment such as the Linofilm, Monophoto, and Photon-Lumitype, which allowed for typed output preview and corrections (Cooper et al. 1965).

While photosetting was introduced in the 1920s, it seems to be the general consensus that letterpress was still preferred for its quality of black (Bluhm 1968, p.30,51). This is something corroborated in the literature (Cooper et al. 1965; Williamson 1966) as while photosetting was indeed capable of doing full book layouts, it would take another two decades for it to completely succeed metal type. The photosetting machines of the time often mimicked the mechanism of earlier machines, as was the case of the Intertype Photosetter, making for a more comfortable transition. This is seen not only in the companion literature (Haley 1980) but in the design of the time. In the USA particularly we see the rise of graphic designers such as Paul Rand, David Carson, and Saul Bass making full use of the capabilities provided by photographic layout for poster and logo design. While posters and pamphlets were previously referred to ‘jobbing’ work for printers – supplying an income while they waited for *serious* book-work – the ability to directly create artwork by hand and reproduce it efficiently allowed for the explosion of graphic design. While previously design was limited to the block-like forms of the technology,

and then later the operators, in this period graphic designers were no longer bound by what could be done. While for long-form content a layout sketch would be drawn up for compositors to follow, for short artistic work a designer could work directly with the graphics and create the shapes they imagined. Tschichold and Schriver defined typography and graphic design as different practices, the former being a ‘service endeavour’, and the later an ‘artistic endeavour’ (Tschichold 1991, p.8). In this way, the responsibility for the design now rested with the designer rather than the typographer.

Advertising changed the nature of the game. Typography was now a tool of the rockstar advertising-designer. It had ‘begun to split – into an industry (printing) and a profession (design)’ (McVarish 2010, p.298), and we’re still in this thought-mode today. That’s not to say that the past practice was ignored, but it was now a source of inspiration, rather than a hallowed tradition.

Steven Heller proposed in *Education of a Typographer* that:

Perhaps typography doesn't have to be taught. Just maybe, all those courses that attempt to instil canons of typography aren't necessary.

If you think about it, the craft of typography is little more than the combination of three very simple things: attention to detail, common sense, and visual acuity. Sure, there are typographic rules and guidelines, but they are, for the most part, just based on what is sensible and pleasing to the eye.

(Heller 2004, p.8)

Heller’s commentary may sound like sacrilege to the dedicated typographer, however, the less restrictive print layout technology became, the more hands-on and ‘artistic’ it could be. A good architect may not lay a brick himself, but he knows exactly what it is made of, where it should go, and how it should lie. A graphic designer may not be a typographer, but they have the trained eye and mind to understand how a page *should* look.

3.1.5. Computer-based typography and the present day

The development and roll-out of the personal computer had important implications in the development of desktop publishing and word processing. While word processing functions more as a replacement for the use of the typewriter, the concept of being able to manipulate different fonts and layouts as a writer (not as a compositor) affects the power relationship within the industry. This started already with the introduction of typewriters such as the IBM Selectric which enabled quick font substitutions. With the control of spacing afforded by word-processing, a viable alternative to heavy compositing systems was able to develop, helped along by digital formatting systems such as TeX.

However the great influence in this period is not so much the composing systems themselves as it is the allowances of a new printing form. Beginning in the early 1960s, photographic composition and offset lithography allowed for a new method of composition with a completely new set of restraints, which superseded the limitations of hot-metal composing (McLean 1980, pp.9, 26). Owing to the process of developing lithographic plates via film and later with direct digital systems, the method of composition became less important. Rather the development of a good image is important, and in modern times this is solely reliant on the capabilities of computer image encoding and design software.

There is a surplus of literature (Updike 2002; Cooper et al. 1965; Moran 1973; Williamson 1966; Jennet 1973; Webb 2011; MacNeill 2005; McLean 1980) to explain the history of these technologies, what they allow for, and how to use them. What marks the development of computer-based typography is that with the use of graphic user interfaces and mark-up languages, the practice of typography becomes completely removed from its physical history. The computer itself formed a vital part of photosetting, however the programming was still achieved by the encoding of tape, and thus still required a clear understanding of justification, and the ability to work within a limited range of fonts on the matrix. Computer-based typography requires not that a compositor thinks abstractly about the intended type, but deals with it directly (albeit virtually) through a mouse, and a programmable keyboard. What's more

it allows for the integration of type and image in a composed layout with physical intervention. The capability of the modern computer with advanced layout software means that computer and visual literacy takes the place of machine literacy.

Truly we have more freedom than ever before, we have lost the gravitas of pressed page with dark tacky ink, but we can (re)create the form and function perfectly. Four-colour process printing has drastically reduced the cost of colour printing and the technology does not limit us to any format. We can apply old and new principles to printed material, digital material, and interactive material. Our websites make use of print design principles (Daukes 2011), and we can print on plastics, and fabrics at any angle, with in-line foiling and embossing. In the next few decades we'll likely have to wrap our heads around holographic typography, and we'll bemoan the lost beauty of the crisp two-dimensional letter.

In summary, then, the skills required in typography and book design, have historically been linked to the technology of the period. Typographers were first required to manage the setting of physical type for placement in a platin press. With the development of typesetting machinery, 'typing' through a keyboard became a parallel requirement. With phototyping, type was no longer the centre of the page layout process and type was created for the process of laying out of a pasteboard. Pasteboard layout required the use of simple tools, such as scissors and glue, to create artistic layouts with the possibility of increased visual rhetoric. The desktop computer allowed for the creation of digital graphics and page layouts, and today modern layout software is able to mimic and refine the pasteboard practice.

During the twentieth century, the implementation of lithographic printing allowed for full-colour, graphically rich advertising, paperback novels, and illustrated magazines, which placed classical typography into the background, as now type could be part of the message, rather than the full message.

For this reason, it has become vital for the specialist in printed typographic and graphic material, to not be beholden to a single technology or method of production, but rather to be a visually insightful crafts-

person capable of applying a multitude of techniques to solve a visual problem.

3.2. Writing about design for education

This section presents various approaches to design education in the format of a more focussed literature review.

Hand-setting of type, as done from the days of the incunabula, was still taught in books well into the 1970s, as while other technologies exist, there is still in the workforce an element which understands the visual impact of letterpress work. With most of these practitioners having retired it is interesting that in our current age of neo-historicism (the ‘Hipster Aesthetic’) in the UK and USA (British Letterpress n.d.) we see a resurgence in limited edition letterpress jobbing printing. Letterpress printing is also sometimes present in modern fine arts courses – with myself having made contact with such courses in South Africa (Pihlajasaari n.d.), and in Australia and New Zealand (Cope 2012, p.23).

If there is to be a single element responsible for the production of this dissertation, it must be the apparent disparity seen between the learning materials available for the aspiring book-designer or typographer – in which some materials offer highly instructive advice, while others display successful designs without explanation (as will be shown in ‘3.4 Case Studies’). It appears that with the increase in accessible worldwide communication the desire and practice of imitation has become a more common occurrence. We see this in international fashion styles, in music particularly, with every nation having their own versions of Snoop Dogg, or other generic popular figures. This can be seen in all aspects of visual design, the plethora of designed material from crockery to toilet paper, and every electronic device we own. It is even possible to automate an ‘artistic nature’ with photo-filters, digital paint brushes and web-site templates. It is a bizarre phenomenon, as if everything can be pre-designed. However, who creates the template, and how are we learning what is acceptable?

The access to the technologies which we do have is part of the answer, I believe. While so many artistic and artisanal ventures are linked to

the media in which they were created, digital production technology allows us now to (re)create the feeling of paint, or the texture of clay with pixels, and with access to so many examples – whether physical or only a Google Image Search away – it is possible to learn by imitation. This is by no means a new concept as that is the very theory behind an apprenticeship. Being able to practise the concepts of fine typography without a print studio, on a personal computer allows us to explore and discover the benefits of earlier efforts through imitation.

It is my opinion that our technologically enabled generation, over-brimming with self-confidence, seems to prefer this way of working. It's faster, it's more individualised, and it has been noticed by publishers. Much of the learning material we have today for typography and book design is referential, rather than instructive. I am speaking in terms of my experience amongst my peers, however this can be noted before my time as well.

The theoretical sources used to teach this information vary, according to publisher and year. If one were to sum up how the books have changed over time, the single over-arching trend is that as the technology changes, so too do the applications, typography for display becomes more prominent, as well as the creative ability of the designer to use the tools of typography to create a combined multimedia* visual rhetoric.

3.2.1. Books of examples

There are various types of books on design. One prominent category is books of examples. Such titles are important as they provide a bedrock to the aspiring typographer or book designer. Emil Ruder notes in *TM RSI SGM 1960-90: 30 Years of Swiss Typographic Discourse in the Typografische Monatsblätter* (Früh et al. 2013, p.111) that, 'There are two essential aspects to the work of the typographer: he must take into account knowledge already acquired and keep his mind receptive to novelty.' In this way, a typographer's workstation functions as a laboratory.

A particular example book is *The Art of the Book* (Ede 1951) which is made clearly as a labour of love. Produced in 1951, the typography

* In the context of print design I am here referring to media such as photography, illustration, engraving, computer-drawn graphics and typography.

is created in Monotype Perpetua and the graphics are printed by colotype (intaglio). The effect of this is rather startling; while the book possesses a natural physicality that the methods apply, the resolution of the colotype plate is so high that it replicates the texture of the original substrate. This is particularly interesting to note as it gives a sensation of realism that admittedly is lost in some of the photographs later in the book (from page 178). Photographic reproduction and lithography allow for many modern titles to display clear photographs with accurate process colouring. However the use of colotyping to display flat colour reproductions (even sometimes misregistered)* produces a startlingly realistic representation. As a book of examples it provides mostly bibliographic descriptions of the examples, however it does contain much prose detailing the historical influences presented by the examples. This makes for an interesting and instructive book, as the material is carefully curated to display different aspects of bookwork, from title pages, to prose and illustrations according to the country of production.

John Lewis' book *Printed Ephemera* (1962), is a reference book much in the style of modern books such as *Design: Type* (Burgess & Seddon 2012) but with some startling differences and similarities. Both books offer a range of typographic examples, but differ largely in their approach. *Printed Ephemera's* contents are 'jobbing work'. Jobbing refers to miscellaneous printing that is not book work, or newspaper work. Jobbing generally encompasses the production of posters, labels, business cards, certificates, pamphlets, and so forth, that is to say small commissioned works providing an income between 'serious' publication prints. As a result, the focus is not on artistic achievement, but on artisanal endeavour: the consistent application of colour, arrangement of space, quality of ink on paper. *Design: Type*, rather, treats its examples as visions into the creative mind. The examples provided are not 'jobs', they are showcases. What little explanation is given is provided as short chapter editorials, designed to give the reader an insight into the capable mind of a designer.

Printed Ephemera (Lewis 1962) begins with examples of indulgences, wanted notices, playing cards, stationer's labels, and moves on towards

* That is to the say, the multiple overlaid prints needed for the layering of colour are sometimes misaligned.

packaging for tobacco, various groceries and pharmaceuticals. As indicated by the title it does not include books. What is interesting is its commentary. As it covers ephemera from Gutenberg's time to Lewis' own day, and given his own profession as a typographer, there is a clear bias towards letter press printing, and the examples up until the end of the 19th century are supplied with rich commentary detailing the use of ornament and type choice. For 20th century examples, the commentary is more or less bare, giving nothing more than the size, and printer's details, and perhaps a small description of the medium. It is interesting that there is little criticism to be given to the work of his own time, even when the visual elements are comparatively rich enough to warrant it.

This is somewhat validated in the modern book *Design: Type* (2012) which contains absolutely no commentary at all. Rather it has a selection of business cards, posters, signs and book covers, and is arranged in varying degrees of conservativeness in four chapters: Minimal type, Ragged type, Free-form type, and Traditional type. Despite the name, 'traditional' here refers to Victorian display type. Each chapter does interestingly begin with an essay encouraging various practices for aspiring designers. Tony Seddon (Burgess & Seddon 2012, pp.10–11) in his essay on minimal type does give some very traditional advice however, in focussing on 'information-led layouts' and suggests that designers make use of a limited set of typefaces (each family containing a full-set of roman, italic, bold, semi-bold, condensed, light... fonts) and become familiar with those – much in the way a metal-type artisan would have to.

Apart from such advice, nothing is said on any of the examples apart from creative credits. What's more, the main focus stems from advertising,* even when books are presented, it is only the cover pages that are shown any attention. The focus is on attracting attention to objects, rather than sustaining it for pages.

* Massimo Vignelli, who Seddon credits for using a small selection of typefaces as a rule, states the influence of advertising, in trying to make every brand unique, has led to the plethora of typefaces we know, as each client 'should' be unique (Anon n.d.).

There are many more books of this nature to be found in the libraries and the book shops, and it goes hand in hand with the multi-faceted nature of design. The mere matter of teaching within schools of art and not engineering is testament to the temperament that one should expect. These books are therefore invaluable for inspiration, though one would hesitate to call them academic, or even instructive.

3.2.2. Textbooks

On the other hand there are books which do aim to be primarily instructive.

One of the most informative titles I have found is *The Making of Books* (Jennet 1973). Sean Jennet operated as a typographer for Faber & Faber and as a professional writer – much in the way of PG Wodehouse’s fictional alter-ego James Orlebar Cloyster (Wodehouse 1907) – writing books of poetry, biography, photography, and travel, as well as being a German translator. This book – in its fifth edition from 1951 – is a richly instructive tome and as stated in the preface, has had to be updated with the unprecedented developments in technology (1973, p.5). He covers the full breadth of book production from paper manufacture to type composition and letter-press, imposition, illustrations, printing methods, and binding. For the student wanting to learn about book production it contains a comprehensive set of knowledge.

It is particularly interesting to compare this with the more recent book *Book Production* (Bullock 2012) which while it details much of the various many physical factors of books from paper types to binding methods, it adds in modern considerations for environmental impact as well as schedule and project management. Nowhere in the title is any mention made of design or typography. Mention is made of the necessary digital files and of linking publication methodology with digital workflows across departments. Perhaps this best demonstrates the rate of change we are experiencing. There has been more development in the last hundred years than in the previous five hundred.

In the in-between period between Jennet and Bullock, many books were published on the nature of photocomposition* and graphic design and production. One notable book, *Production for the Graphic Designer* (Craig 1974), follows on from Jennet giving instruction in all the related fields of print (and book) production. Being in the age of lithography this contains updated information and the preparation of half-tone screens (1974, p.94) and complex imposition – making use of multiple page sizes on a single signature (1974, p.141). At this time it is still important to instruct the graphic designer in composition by hand, machine, photo, and, of course, typewriter. Most interestingly, it is tied to the different printing machinery available – which Jennet believed would eventually be replaced – and so gives instruction in a way suitable to the different brands of machinery available as well as providing all the contact details for the manufacturers.

At this stage however there is also literature available which instructs the designer from a more professional (less technically concerned) aspect such as *Phototypography* (Haley 1980) which like Seddon above also recommends following Vignelli's mantra – selecting seven typefaces for all possible typographic work. Interestingly it does work for the limitations of the age, in that the available fonts of the time are linked to the manufacturers of the composition machinery. This means that much of the advice of being familiar with a close set of typefaces, is not so much out of regard for professional practice, but out of necessity, and financial stability.

As we see the evolution of graphic design with that of technology, the influence of previous generations does not fall away. More modern titles do focus less and less on the machinery and more on the end result† and this can be seen in titles such as those by Ambrose and Harris (2005c; 2006; 2005a; 2005b discussed in 3.4.1.) which offer essential and concise knowledge in a colourful and inspiring format, highlighting

* Many of the machines for this process are mentioned in Jennet's updated edition.

† Modern instruction in graphic (information) design is so advanced in its current iterations, that the contemporary designer, while they may choose to specialise, are capable in almost every visual art.

examples from only the most innovative text designs (often used for advertising). What they neglect – which is taken up by Lee a year earlier – is how these designs are influenced by computer tools; how to estimate the costs involved; what are the rights implications of using outside content; how should one begin preliminary sketches for book projects; mathematically determining page extent based on font choices; and so forth. The opening preface specifically refers to books as having hard covers and states that:

A well designed book means one that's (a) appropriate to its content and use, (b) economical, and (c) satisfying to the senses. It isn't a 'pretty' book in the superficial sense and it's not necessarily more elaborate than usual.

(Lee 2004)

While the book may at first seem to be ‘old-fashioned’, its design deliberately combines old-style margins with informal illustrations and modern typography to create an accessible guide to making books. It is also quite clearly stated in Lee’s book that he was born in 1921, and its current (third) edition was specifically rewritten to address the influence of computer-based typesetting. Thus it is arguable that Lee’s book is intended more for the current practitioner, as its narrative style is clearly based around the older formats of the technology. What makes this an important book however is the fact that it does give some direction as to what a **book** should look like. It is a core assumption of this researcher that we can differentiate certain printed and bound material as books specifically because of their physical form. While this applies to the whole book’s size and extent, there are also set design standards that help to define **books**. This is inherently tied to its history as the book introduces us to typographic units* and standards of margins, type arrangement and type and graphic arrangements. While tradition is bound to change, and it should do so, understanding the historical conventions can influence

* Headers, footers, rules, decorative ornaments, indexes, tables of contents, and so forth.

the quality of contemporary design. What's more, Lee pays special attention to the economics of producing a publication. Designing for books is not just about doing the job, it requires a detailed understanding of a book's intention.

In many ways Lee's book follows the tradition of Williamson's (1966), in which the visual opportunities are not only displayed, but discussed – and from a personal point of view. Graphic design in the twentieth century has seen the rise of superstar designers with a status equivalent to that of artists. Consider the influence of Paul Rand, David Carson, Saul Bass, and Paula Scher, names any new design student should be familiar with. But less considered names such as Erik Spiekerman, Eric Gill, and Daniel Updike, are confined specifically to typography. Cross-media integration of text and imagery – brought about strongly by the creation of photographic composition methods – has meant that traditional print design related to books has been replaced by design needed for posters, magazines, packaging, and advertising. It is notable that those books available from older-generation typographers do not highlight their own achievements, but rather provide a guiding role which seeks to lay down some conventions for the field. Modern titles rather encourage innovation, by displaying artistic achievement and practical possibility. This approach provides inspiration to the aspiring design student, however it also appears to deliberately ignore the tradition. Given the movement towards Modernist design – which coincides with the development of photographic layout and typesetting – this is not wholly unexpected as new work must be seen as 'new'.

A final title worth commenting on here would be the 2005 edition of *Production for Graphic Designers* (Pipes 2005). This title seems to largely stand out owing to its fine balancing of celebrity knowledge, and practical advice. The book contains a small introduction on the history of design based around milestones in technology (beginning from the printing of images) and from there moves on to specifically address type, illustration, 'computers and their peripherals', prepress, on press, and digital design. Despite this edition existing in 2005, it carefully balances the uses of new and old technologies as methods for visual design. This focus on the process of production seems to come and

go with the material available for aspiring graphic designers. Keeping to modern trends there are suitable examples of print and digital design for various media as well as dedicated sections (two per chapter) for ‘Design Trailblazers’ to provide the student with the necessary inspiration for their inherently creative work.

It must be said that part of Pipe’s objective approach may come from his training as a physicist (Wikipedia n.d.). Being a professional writer and illustrator by trade he has written extensively on issues of production, similar to the way Jennet was able to write on book-work more as a professional reference and interest than to share artistic ideas.

It is interesting to note *Production for Graphic Designers* addresses important points for the practising designer such as planning one’s workspace, dealing with suppliers, being compliant with workplace health and safety (he is based in Britain), and designing for print disability. The quality of this book can be found in how it addresses the workplace. In that way, it reveals perhaps that not only has the profession changed, but the people involved in it have changed. Coming from a technical background, a hands-on practical and technical description of the required tasks is most useful; but coming from an artistic side, perhaps the best a book can do is provide artistic guidance.

This section has tried to address a number of available titles focussed on the practice of graphic design, book design, and typography. It should be noted that there is an extensive amount of literature of the history and nature of graphic or information design found within many books with history often forming a sub-sector of the title, and these titles make for solid foundational teaching. What has been addressed here is focussed more on books available for practical instruction as available for students locally in South Africa.

3.2.3. Design Education

3.2.3.1. Defending the crystal goblet

Some literature exists on the nature of design education itself, though the focus tends to be mostly biographic. While much insight can be gained from these accounts, for the most part, histories of design education seem to focus on critical theories or on training regimes. Some

books, such as suggested by Cumpston (2008) here is a brief excerpt of the content: Roger Fawcett-Tang, *New Typographic Design* (with an introduction and essays by David Jury, ‘entertain more than they educate’).

However, the power of modern tools has allowed designers and typographers to also work from informal learning sources, such as YouTube. For a comparatively small investment, one can access all the tools one needs within a computer, as opposed to requiring a studio or a workshop, complete with physical reproduction technology. Many of our standards are drawn from the best that the technology can produce, and with modern technology we are able to produce any style of print (or digital) publication.

The other edge of the sword however, is that this can also be distracting.

Beatrice Warde’s famous essay on ‘The Crystal Goblet’ (1930), put forward the idea that fine printing work should be invisible. She compared the function of typography to that of a fine crystal wine glass, one that allows the observer (reader) to appreciate all the colours and complexities of the liquid, without being distracted by the ornamentation of the glass. Where ornamentation does exist, it enhances the colour and the shape, and only better conveys the visual beauty of the crafted wine.

With this argument, teaching by example or through exposure may be highly inappropriate as the intended outcome is invisible and in need of professional insight. This is argued by Cataldo (1962, p.24), who in reviewing Aaron Burns’ *Typography*, criticises the lack of analysis given to ‘exquisite specimens of advertising typography’. The fact that advertising type is included in this book is particularly relevant as it reflects, already in the 1960s, the move towards teaching through example.

However, the crystal goblet approach is focussed on the setting of long-form typography over advertising type and this is an area over which the definition and application of typography is always debated. For many, fine typography is expressed through advertising. It stands out, projects a clear message and presents the typographer as an artist. Long-form typography, rather, frames the content, and aids in communication through the use of contextual gestalt.

Warde’s crystal goblet should therefore always be argued in the appropriate context. Type itself is suited to different uses and is often

classified accordingly. While some may argue that Warde's views are out-dated, they are only out-dated when considering typography from the perspective of advertising and display type.* This is also influenced by the perceived culture of the time with writers such as Herbert Jones noting the influence of business executives requesting an excess of type-faces (McVarish 2010, p.296), and Warde's own commentary on the development of the 'agent-designer' influencing the trade-ability of the printer (Warde 1945, p.90). What's more, she emphasises the need for typographers to work without regard for commercial or artistic acclaim:

I once was talking to a man who designed a very pleasing advertising type which undoubtedly all of you have used. I said something about what artists think about a certain problem, and he replied with a beautiful gesture: 'Ah, madam, we artists do not think---we feel!' That same day I quoted that remark to another designer of my acquaintance, and he, being less poetically inclined, murmured: 'I'm not feeling very well today, I think!' He was right, he did think; he was the thinking sort; and that is why he is not so good a painter, and to my mind ten times better as a typographer and type designer than the man who instinctively avoided anything as coherent as a reason.

(Warde 1930, p.3)

From a philosophical stand-point, Warde defines good typography as Modernist, and therefore in a post-modern era what can one do but reject it, accept it, or use it ironically? Her points however are not meant for the artist, but for the artisan fulfilling a brief.

3.2.3.2. Italo Calvino's six memos

The attachment of graphic design to the advertising profession has been noted often. The term 'graphic design' is, according to Jacob (1998, p.103), ascribed to William Dwiggins in 1922. This term was used to describe his activities in 'bringing structural order and visual form

* The term 'advertising type' is used often here due to its historic use as for many typographers advertising type was different for that used for book-work, or for other ephemera such as notices, certificates and so forth.

to printed communication’ (Meggs 1992, p.xiii). Heller (1995, p.28) confirms this, seeing the rise of advertising linked to the shaping of graphic design into a marketable commodity. This commercial success also reveals how ‘[g]raphic designers prefer to see themselves as visual communicators who use theoretical discourse to reflect, comment and verbalize our cultural world with the goal of communicating “ideas”’ (Jacob 1998, p.103). With this in mind it is understandable to see how graphic design could have an artistic function as well, as it is greater than presenting an idea, but interpreting it as well. This higher thinking grants graphic design its place in the fine art faculties of universities, as opposed to the long workshop apprentices that traditional typographers would work through.

Jacobs’ analysis in 1998 does represent the industry at the time. However, given that the majority of graphic designers are employed in advertising and marketing roles much is still relevant. She makes an interesting statement on the type of education that designers are exposed to:

What the education of the graphic design profession lacks is a theoretical and critical position that situates graphic designers outside the context of the marketplace. If the profession defines itself only in the context of the marketplace, the ability to improve, expand and strengthen itself is limited. Most professional programs battle with the conflicts of theory versus practical preparation, which would properly train them for the job market.

(Jacob 1998, p.104)

This leads Jacob to comment on the application of Calvino’s six memos:

1. Lightness
2. Quickness
3. Exactitude
4. Visibility
5. Multiplicity
6. Consistency

These memos stem from a series of essays for lectures written from 1985-6. Calvino presented these as literary devices, but Jacob interprets them through the lens of design, and matches them to graphic design principles. **Lightness** is the management of space (positive and negative), while **quickness** addresses legibility and recognition, **exactitude** the 'precision of execution' and the ability to convey the intended message (Jacob 1998, p.110); **visibility** the arrangement of images to present a clear image; **multiplicity** the use of systematic objects to convey a focussed message or brand; and **consistency** which conveys the identity of the client or the designer.

Providing rules and guidelines for designers is nothing new. And it is interesting that every generation seems to wish to apply some standards for good practice. Jacob makes use of these in her explanation of some of the functions and objectives of design. While focussed mainly towards education, she provides several important general points. On quickness she provides a comparison between Calvino and McLuhan and points out that good design is non-linear and can be used to provide short-cuts in communication. This is best achieved through the use of exactitude:

Calvino defines exactitude in three ways: 1) A well-defined and well calculated plan, 2) evoking a clear and memorable visual image, and 3) language as precise as possible both in words and imagination.

(Jacob 1998, p.110)

Interestingly this confirms Warde's commentary on the need for a thinking typographer, for an artisan over an artist. This is not to criticise the artistic focus of modern design programmes, but rather to address the need for humility and craftsmanship, which will achieve commercial success as well, if history is anything to go by.

3.2.3.3. Training by official bodies

Here I would like to discuss the influence of four institutions that have been involved in typographic education. Many of the comments made above giving the opinions of professionals are delivered in official lectures, and may be used in education. The following four articles analysed reflect the views of various authors as experienced in their training in

the USA, Switzerland, and Australia. While these observations cannot, of course, be generalised, they can reflect the international nature of training, apart from the influence of design trends – which in itself is a separate area of study.

Prescott (1909) is a good place to begin as he relates to the view above that the nature of the individuals entering the profession has a large influence on the profession itself, and therefore on the training. It is mentioned that:

While the old apprenticeship system was decaying the quality of the printed page was improving. The improvement is due in great measure to the influence of commercial artists who design work to the last detail, which the artisan copies with more or less fidelity. This precludes even the most capable compositors exercising their ingenuity or skill, thereby reducing them to the grade of mere copyists, which is fatal to the development of originality or mental growth.

(Prescott 1909, p.179)

This is stated from the point of view of the typographic union in Chicago, and reflects the influence of artists in the printing industry. This distinction between artists and artisans is important, and reflects the view of Früh et al (2013, p.112), who comment on the role of the designer as the creative force in the work-place and the person responsible for the overall design. In order to improve the capabilities of printers the Inland Printer School – a school operated by *Inland Printer* trade journal, under the influence of the International Typographic Union in the USA – had begun to ‘teach craftsmanship scientifically – to expound the principles of design and colour harmony’ (Prescott 1909, p.180). This ‘scientific’ approach is again reminiscent of Pipe’s approach.

Prescott goes on to comment on the early disconnect between artists (designers) and typographers, but also comments that when more artistic training was introduced typographers progressed at a rapid rate, as if they were being made aware of their sub-conscious talents (Prescott 1909, pp.181–2). This article being written in 1909 in an age when reproduction was done primarily in metal type, may seem somewhat

irrelevant today, however, as will be seen in chapter 4, it shows that already the growth of the typographer into the designer and the designer into typographer was an occurrence that was not only influenced by technology, but by the changing expectations for printed works as well.

The term artist and graphic designer can be misleading as they are not necessarily separate. It has been said that in the USA, before the 1960s, 'graphic design perhaps was more of a label than a profession' (Kelly 2001, p.3). While the typographic union was seeing the need for more artistic training in the beginning of the twentieth century it is in 1951 that Yale University introduced its 'graphic arts' programme. It was a pivotal step for a major university to recognise the need for this specific focus – away from the advertising programmes that were otherwise in existence – and establish it in a faculty of art (Kelly 2001, pp.3–4).

The history of the Yale programme is an interesting one as it was the result of several developments occurring in the university through the programmes of Fine Arts, and the library which focussed on painting, book production and typography, with some students even taking extra courses in architecture (Kelly 2001, p.6). This eventually culminated in a course which may be considered as a template for modern programmes as, 'Every graphic design student was required to take six-week courses in photography, printmaking, and typesetting' (Kelly 2001, p.8). 'Most, if not all the students were from fine arts' (Kelly 2001, p.10), and interestingly the programme was largely workshop-based with all lecturers sharing the same space as well as students of different years, in which 'design, typography, printmaking, and photography' were all taught and to fail in a single discipline was to fail the whole programme (Kelly 2001, p.9). The course also had a strong focus on history of typography, while including history of art and architecture (Kelly 2001, p.12). What is interesting to take from this apart from the historical interest in the creation of a course, is that the instructors involved, and the disciplines which they were involved in were able to come together for the teaching of this increasingly artistic role. Students were still taught technical printing tasks for methods such as intaglio, lithography, and relief, and instructed to take type seriously in the traditional manner, though also embracing the capabilities of typography. It is this marriage

of disciplines that makes for such well-rounded professionals today, and as technology develops and converges, it seems natural that the professions should as well.

With the artistic influence being formally recognised in universities, the impacts can be seen in other parts of the world. At the Basel School of Design in Switzerland (which opened in 1968) Weingart (1985) comments on how the school, while exploring the design paradigms of the time, had a philosophy of providing its students with a ‘typographic backpack’. With this methodology, students are exposed to aspects of colour harmony and printing methods, not from the point of view of practical application, but as a tool for practical demonstration. The curriculum began with letterpress techniques and progressed to film and computer systems (Weingart 1985, pp.5–9).

A vital comment is made by Weingart who asserts that a school should not train ‘typographers or graphic designers, but rather people who, upon entering the profession, have a firm grasp of the design process – the ability to analyse, explore, conceptualize, recognize, apply and execute solutions to a vast range of design problems’ (Weingart 1985, p.17). This description seems to highlight the modern idea of what a designer should be. Not one who designs graphic elements, or organises information, or even an artist, but a creative problem solver. The solution need not be accomplished by Adobe Illustrator, or using a Canon enlarger, or whatever tools are needed. Solutions can come from new, current, or out-dated technology, what matters is that a solution is reached; and this cannot occur when one is limited to the specific medium to which one is assigned.

This is expanded and linked to the role of the individual in the following statement:

School is an institution free of the concrete demands made by existing standards in the profession. Teaching programs should be open, constantly evolving and never bound by fixed opinions. It is important for society that school be a place for experimentation. Students should not be given irrevocable truths or absolute values, but instead should be guided in developing their abilities to independently search for knowledge and personal values.

(Weingart 1985, p.16)

It is perhaps this philosophical stance which best illustrates the education of the modern graphic/information designer. While book design, specifically, may be included in a syllabus (as it was in the Yale programme), the goal of design education is nowadays to foster creative thinking within the graphic arts, rather than training copyists.

As a final reference for comparison, Young (2015) writes on the development of commercial art (and graphic design) in Australia and makes mention of an interesting contributor to the distinction between artist and artisan:

The South Kensington System was a system of training in art and design that resulted largely from the perceived threat of superior French products to English industry in the 1800s. Whilst the 1835 Select Committee on Arts and their Connection with Manufactures proposed a concerted effort to increase artistic skills within the manufacturing workforce, a clear distinction was made between art training for industry and the loftier ambitions of fine art. The resulting Schools of Design (1837–1852) were thus constituted as a highly regulated system of art training in purely ‘ornamental art’. Skills included the copying of large capital letters, then diagrammatical renderings of simple objects and copying of ornament and symmetrical forms, followed by simple solids and casts of ornament, and geometry and linear perspective. The purpose, as Weston notes, was to produce ‘the highly skilled copyist’, and the effect was to eliminate absolutely in the students any possibility of creativity or expression.

(Young 2015, p.2)

The influence of this system on commercial art may have lingered well into the practice of typography. In Australia certainly, Young notes that the influence was strong well into the 1920s at the School of Applied Art,* and only after 1930 did the school take on a more creative focus

* This school was set up, like many institutions, alongside technical colleges after the discovery of gold and was previously known as the Melbourne

with ‘commercial art’ as a subject and by 1932 with an extensive focus on lettering practised ‘in each stage of the course’ (Young 2015, p.9).

Young’s article primarily focuses on the establishment of discourse in design in Australia, but the insights into how that discourse is influenced by cultural trends are invaluable. International trends come to influence the work of local institutions and he cites the prospectus of the RMIT (Melbourne) on its ‘Bachelor of Design (Graphic Design)’ course which addresses all manner of visual design challenges, from advertising to packaging and even ‘publication design’ (Young 2015, p.12)

He particularly provides useful concluding remarks on the changing individuals in design. He cites Beatrice Warde’s Modernist doctrine (as discussed above) as having a greater influence on ‘those open to the intellectual tradition of fine typography’ rather than to career printers. Particularly with the introduction of computers, Young states, ‘new technologies allowed for small companies using commercial artists to replace compositors, ... this favoured a more educated, artistically sensitive individual, working, often independently, with image and typography in layouts for production’ (Young 2015, p.11).

Technical School, and before that the Working Men’s College.

3.3. Views on typography

This section is intended to highlight the general views and opinions of typography and book design as seen by its practitioners. This being an international field, and primarily influenced by American and European literature, the focus here is on professional views from various eras in the profession's recent history. As the profession grows and changes along with technological advancements, the nature of the training has changed, especially in the current digital era where the tools of the trade can be fully encased in a laptop.

Being linked to technology, the majority of South African training has followed that of the international industry. This chapter does not seek to comment on design theory, but rather on how the theory is conveyed as technology changes.

Waller (1980, p.241) comments on the means of typography as a tool in aiding comprehension. He differentiates between writing in the literary sense (that is, composing), and writing in the graphic sense (making sense of meaningful marks, such as punctuation and alphabet). In the context of writing in the graphic sense, the typographer has an immense responsibility to the reader, and the craft (which must of course be understated for function) cannot be overlooked as a means for constructing visual sense.

This dissertation highlights an important shift within the publications industry. It is an influential shift in the practices of graphic design as well as in book history. With the development of non-mechanical typesetting systems, the practice of typography and book design has been completely redefined and as such what we see is a re-writing of the publishing system. While previous materials addressed book-making and printing as a combined entity, with the shift, literature on the practice of publishing has largely – and rather simply – re-written its description on book production so as to be in accordance with modern methods. Owing to this current books on the principles of text design have largely overlooked the theory concerning typography and composition leaving the wealth of literature published in the previous decades to become largely irrelevant, and only of interest to the scholar of history. This is not so much owing to a difference in theory, but to a change in the

technological landscape. While mechanical composing could still enjoy some success with the development of photographic systems – which were largely based on the mechanical devices – the dominance of digital systems today has led to a focus on teaching the theory within the construct of the popular and prevailing software.

The development of the personal computer is the primary driver in the shift of the profession – largely owing to the influence of companies such as IBM, Apple and Adobe. The changing ‘workbench’ has resulted in instructional material required to be written for specific software packages and can often result in theoretical components being taught alongside or as software features rather than as pure theory (examples include McCue 2009, French 2014, Blatner 2007 and Strizver 2010). Some texts published in the mid-twentieth century (such as Moran 1964) only hint at the possibility of using computer technology to automate typographic layout.

As a field, typography and book design has been written on extensively (examples include Carter et al. 2001, Graver & Jura 2012, Harkins 2011, Gill 1936, Jenet 1973 and Tschichold 1991), for the most part for educational purposes. The field is also one considered within book history and bibliography. With the movement towards the field’s inclusion within graphic and information design, the concrete distinction in the professions seems to show not a gradual shift, but rather an end and a new beginning, an end to physical means and a beginning to digital. With electronic publishing already having made some strides (specifically within the field of hypertext) this is an author-specific method and outside the reach of this study.

The transition has been noted, and studies have been done which recognise its influence such as Tatiana MacNeill’s thesis on the changes to *Vancouver Magazine* as a result of desktop publishing (MacNeill 2005), and Paul Cleveland’s article on the visual evidence of different technologies in publications (Cleveland 2004). However, while these studies analyse the impact of the technology, nothing is said on the teaching of the theory which forms the core component of this dissertation.

With regard to literature on book design specifically Jan Tschichold (famously associated with developing the *Penguin Composition Rules*)

highlights that ‘The work of a book designer differs essentially from that of a graphic artist. While the latter is constantly searching for new means of expression, driven at the very least by his desire for a ‘personal taste’, a book designer has to be the loyal tactful servant of the written word’ (Tschichold 1991, p.8). He goes on to state that book typography is an egoless practice consisting of tradition, craft and dedication. Tschichold makes a clear distinction between books published before and after 1770, where a disregard for ‘traditional’ book design begins to surface. As a trend, this movement away from the norm is one that keeps the design and artistic standard high and varied, as it allows for greater contrast. Though an older and wiser mind may argue that there is a clearly discernible difference between experimentation and inexperience, the opening up of the halls of book design into the graphic arts and its ubiquitous software has clearly brought in the influence of modern marketing and artistic gimmickry.

3.3.1. Contemporary views

In a capitalist market-place dominated by visual media the words of Caroline Roberts strike home when saying:

It is hard to generalize about current trends in book design. Editorial design (like other type of design, such as packaging, annual reports brochures, etc) is forever subject to the constantly shifting directions and stylistic approaches that influence graphic design as a whole. While it is possible to note the popularity of a certain sans-serif typeface, or the growing use of a certain style of photography, the most significant trend in design at the moment is ‘anything goes’.

(Roberts 2004, p.7)

While she does go on to state that, ‘Designers will go to any lengths to create the design that is most appropriate to the book’s content and its intended audience’, the influence of other media into the publishing space is a dominant one. So much so that the literature now reflects more upon cover design and unusual layouts, than on traditional principles of typography and book-specific design.

Noted book Jacket Designer Chip Kidd makes an interesting remark when he notes that the cover is not a sales tool, but rather a representation of the book's content (Zevelakis 2012). In stating this he shows how well the jacket is suited as a sales tool, yet in the new space of the graphically rich book it needs to be more than that. Both Tschichold and Allen Lane of Penguin notoriously disdained the practice of flaunting books with cover images, but when cover imagery is embraced with the same integrity as one would the internal typography, the technical method and approach leads towards the same goal: 'What do stories look like?' (Kidd 2012).

Arguably this shift has occurred before, and the myopia it causes is well-described by Eisenstein who states, 'The more rapidly new inventions proliferate, the less conspicuous earlier ones tend to become' (1979, p.20). Printing and typography at one point was the new technology, and its introduction saw not only disruption of the scribal craft, but eventually its extinction as an industrial endeavour. It is because of the technological shift that we have the form of the book as we know it today, complete with its identifiers of footnotes, tables of contents, title pages... this shift which enabled 'Typographic Fixidity' and thus established the place of the book as an authorised account (Eisenstein 1979, pp.112–7). But, the practice of book design utilising appropriate endpapers, margins set according to ideal ratios, manual justification and all the tools of the typographer also, until recently, have defined the form of a book. With the proliferation of paperbacks and perfect binding the definition of codex is already at its bleeding edge, without saying anything of e-books. As written material moves across media from paper to screen there is the issue of the value of information when publishing is ubiquitous. However, it is worth noting that it is not only the content which may give away faulty, untrue or poor-quality information, but the design itself. Wikipedia has proven its popular reliability through its interface, not its content. It looks the part. In the same fashion, modern books too look the part. There are elements of design which highlight trustworthy authority, elements which have descended from

the traditional book form.* A well designed publication is identified by its precise leading and justification. Book typography is built as a solid form consisting of individually identifiable and comprehensible words, letters and figures which signifies authority. While Eisenstein (1979, p.186) rightly asserts, 'Almost anything can be proved by playing with words' it is also true that this can be achieved through design. With the desire for well-designed material the forms of design available for books are more fluid than ever before. The design takes precedence in defining what the material is, and so in an age where traditionally book-bound material is moving onto electronic screens the design that defines it is imperative for comprehension and recognition.

Therefore it would seem vital that the traditional knowledge base is kept alive as the very means of interpreting textual content is tied to the design itself.

3.4. Case studies

What follows are a set of case studies on four specific titles intended to comment on the design of the books themselves and their relevance for educational purposes. These examples have been grouped together based on my own exposure to the books before and throughout the study. The first two titles are textbooks, full of instructional material. The AVA Academia *Design Basics* series, is a popular modern textbook series which approaches typographic design from the perspective of graphic design, and presents examples based on contemporary practice.

Practical Printing and Binding is part of an older generation of instructional material. Its chosen perspective is from that of a master typographer teaching his/her apprentice. The book deals with the direct practical methods of preparing material for print by describing contemporary machinery and printing processes, and rather than providing exercises and projects for the student, serves as a hand-book for the different printing situations they are likely to come into contact with.

* It should be noted that word processing norms such as 12/14pt Arial or Times New Roman are not included in these elements.

3.4.1. Ava Academia Design Basics – how to practise what you preach

These books operate firstly as student textbooks, and as is common among current contemporary materials teach design principles as separate from the technologies that make them. The authors, being from design and printing fields, respectively, have compiled these materials with direct application to book products.

All surveyed books (*Typography, Format, Print & Finish, and Layout*) in the Design Basics series (Ambrose & Harris 2005b; Ambrose & Harris 2005c; Ambrose & Harris 2006; Ambrose & Harris 2005a) make use of a consistent style in which vivid colour is used alongside unjustified sans-serif typography. A consistent black band across the top of the page contains all header information, and both page numbers are indicated in the header on the recto page – something which is seen more commonly in modern books. The books also contain several standard grid forms dividing the spread horizontally or vertically depending on the nature of the text e.g. prose, instruction, quotation, explanatory, and so forth. The nature of the content determines which grid is used, and is in itself an instructional tool.

The books define theoretical concepts while providing examples as well as provide exercises in a decidedly modern form – giving the teacher freedom to determine the means of execution – for example:

Project 6: Three-dimensional text

Take a well-known phrase and turn it into a three-dimensional typographic object. Consider the way the phrase could exist in space and how it might be viewed. Is the work static or could it be moving (for example, a mobile)?

Research and inspiration

Kinetic sculpture, installation art, Braille and the work of Fiona Banner, Stefan Sagmeister, Eric Gill, Christopher Wool, Lawrence Welner, Barbara Kruger, Edward Ruscha.

(Ambrose & Harris 2005c, p.83)

While the above project is rooted firmly in the art of graphic design, it deals with the need to understand both the form of type and the means by which it can affect the interpretation of its content. While it references numerous fine and graphic artists the mention of Eric Gill is an interesting one considering that his work is rooted in traditional typography and engraving.

Consistently, the Design Basics series, while indeed dealing with the basics, seem to find a means by which to demonstrate their content, and most importantly do so in a way which is decidedly 'bookish'. In spite of the sometimes bright choice of colours employed there is a balance between the type and other imagery. At no point do the books feel as though they'd be better suited to web-presentation. The form of the book is used well to place related information together, and provide well-structured navigation between the different elements.

When compared to older books and their specific instructions and measurements, the Ava Academia books manage to give the essence of a theoretical element such as type kerning, without prescribing rules for it. Rather they seem to show good practice, and do it so consistently that the student can rely on the visual surface of the books themselves to teach.

This is in opposition to a book like *I Wonder* (Bantjes 2010a, discussed below) which challenges traditional book design and deliberately uses graphic elements to toy with the idea of bookwork as artwork. While it is a very artistic approach to see the book as an art-form and treat it with suitable reverence – especially when looking towards the manuscript tradition, and *I Wonder* is in the physical nature of its development very much influenced by that – the Design Basics series clearly is intended to have functional (rather than artistic) design. A book is a technological device for conveying information, and Ava seems to have found a way to suitably balance the design aesthetics of today with the need to communicate.

Print and Finish (Ambrose & Harris 2006), covers the essential information concerning different paper types, imposition, finishing and binding methods, as well as technical issues regarding print production.*

* Colour modes, ink influences, inserts, and so forth.

However, these are discussed at surface level, and at no point indicate the influences that these might have on the design.* For example, perfect binding relies on removing the spine from imposed pages and then gluing the individual sheets into the spine of the cover. While a practical and affordable method if done correctly, it prevents the book from opening flat – as would occur in a thread sewn book.† As a result, it is imperative that the page design make use of a larger page gutter in order to prevent text from becoming illegible. This physicality makes book design unique as the form will ultimately determine the usability of the content. Bullock (2012), for instance, illustrates this issue in indicating that the book can become fragile from readers trying to open it flat, and so provides guidance by discussing the nature of the different types of glue involved.

Similarly, in *Typography* (Ambrose & Harris 2005b) Ambrose and Harris provide essential information on the form and use of different typefaces, including the setting of alignment and even the implication of different printing techniques. What makes this example interesting is that in using the title *Typography*, for readers with a background in print, it is completely adequate for practical use, yet the series is intended specifically as a subset of design. This comes in contrast to a book such as *Bookmaking* by Marshall Lee (2004), which by its title is aimed specifically at the field of books. Its content is almost identical material to the Ambrose and Harris titles yet also with a focus specifically towards its place as a publishing function, and towards current and historical practice.

Below are two scans from *Layout* (Ambrose & Harris 2005b, p.66,67,82,83). These page spreads illustrate the typical layout of these books. Figure 3 shows the broad grid structure which is applied to sep-

* For example, how the section of white space in between a pair of facing pages (the gutter) is determined by the inside margins of the page design in order to provide appropriate space for the binding.

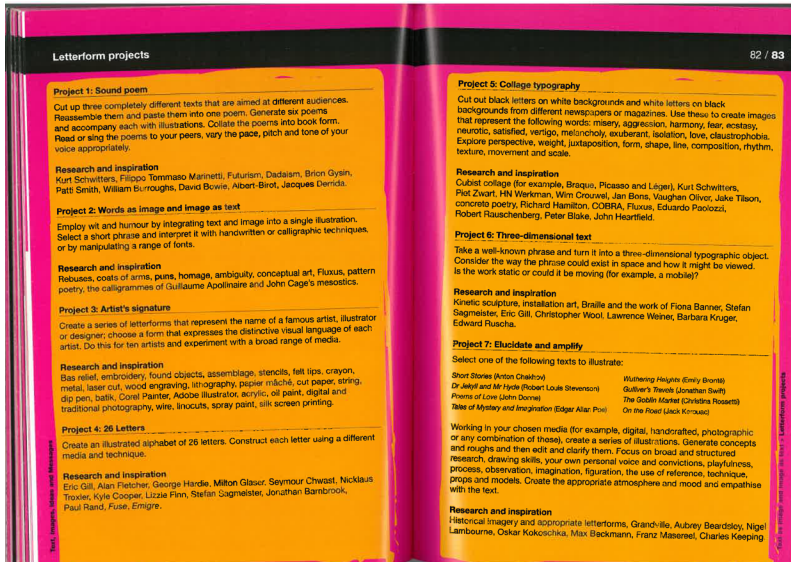
† One must digress here to share a view of William Morris (1908, p.9), who in his effort to create beautiful and ornamented books notes that, “I think you will very seldom find a book, produced before the eighteenth century, [that] has not been cut down by that enemy of books (& the human race), the binder...”

arate theoretical aspects from examples. Figure 4 is an example of an activities section which is made to be vibrant, but structurally simple so as to place emphasis on the type of the exercises.

Figure 3. Page sample from Layout p66-67



Figure 4. Page sample from Layout p82-63



3.4.2. Practical Printing and Binding – The book that started it all

It seems very apt to include this title as it is the book which inspired this research. It was a hands-on practical textbook for the aspiring compositor, and would aid them greatly during their (up to) seven year apprenticeship.

Practical Printing and Binding (Cooper et al. 1965) follows the trend of other books from the period in that it focuses on the occupation of the typographer and printer in the workshop. In the period during which this book was published different printing and typographic design methodologies were in practice, and as such the book covers all manner of print reproduction before the influence of the computer. The book is divided into four parts: Letter-Press Printing; Lithography, Photogravure, and Collotype; Allied Trades; and Bookbinding.

The book presents its content in a profession-neutral format. That is to say that it does not assume that the reader is a designer, or a machine minder, or a typographer, rather it describes in detail the processes from

creating type, to preparing plates, managing a warehouse, and machine preparation. Some monochrome photographs and illustrations are used (as well as tables), with a single section of printed colour plates. It deliberately sets bookwork in its own chapter and describes page layout, parts of the book, recommendations for title page designs, unique typographic artefacts (such as drop initials and indices) and goes on to address imposition and proof work before moving on to ‘commercial printing’.

In comparison to the Ambrose and Harris books, this does not contain a large amount of visual examples to explain theoretical components, but rather describes the actual activities in the workplace. On a topic such as imposition: Ambrose and Harris (2005b, pp.11–16) describe the process as the ‘sequence and position in which [pages] will appear when printed’ and go on to describe the influence this will have when combining paper stocks and present examples where this has been done in innovative ways, to manipulate the physical aesthetic of the publication. Cooper *et al.* (1965, pp.67–81) however rather look at imposition from the printing floor and detail the standard paper sizes and folding schemes (4, 8, 12, and 16 page plans) with instructions on to implement them.

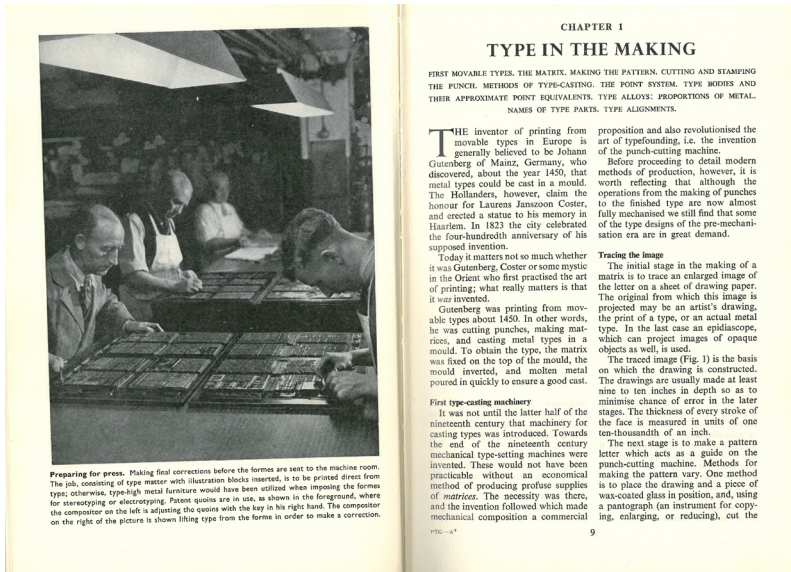
This book makes for interesting reading for the design scholar as it details the physical engineering that goes into print production, and suggests that this may be work that a typographer could come into contact with. It represents an industry when the design and physical production were in union.

At 448 pages, comprising mostly of text, it is more on par with a modern software training guide, than a textbook in graphic design, however it fully covers the range of methods and techniques used in typographic reproduction at the time of publication, and describes it with consistent reference to the tradition of typography and printing.

Below are two scans from *Practical Printing and Binding* (Cooper et al. 1965, p.8,9,208,209). Figure 5 is an example of a chapter opening displaying the overall format of the book. Rather presenting theoretical components as stand-alone entities, it is intended to be read as prose. Figure 6 is an illustration of a chapter which deals specifically with the

mechanics of a particular type of machinery. Spreads such as this use a combination of prose, lists, and illustrations.

Figure 5. Page sample from *Practical Printing and Binding* p.8-9



Preparing for press. Making final corrections before the formes are sent to the machine room. The job, consisting of type matter with illustration blocks inserted, is to be printed direct from the type; galvanies, type-high metal furniture would have been utilized when imposing the formes type; electros, type-high metal furniture would have been utilized when imposing the formes type; electrotyping or electrolytic. Patent quoins are in use, as shown in the foreground, where for stereotyping or electrotyping. Patent quoins are in use, as shown in the foreground, where for stereotyping or electrotyping. The compositor on the left is adjusting the quoins with the key in his right hand. The compositor on the right of the picture is shown fitting type from the forme in order to make a correction.

CHAPTER I
TYPE IN THE MAKING

FIRST MOVABLE TYPES. THE MATRIX. MAKING THE PATTERN. CUTTING AND STAMPING THE PUNCH. METHODS OF TYPE-CASTING. THE POINT SYSTEM. TYPE SODS AND THEIR APPROXIMATE POINT EQUIVALENTS. TYPE ALLOYS. PROPORTIONS OF METAL. NAMES OF TYPE PARTS. TYPE ALIGNMENTS.

THE inventor of printing from movable types in Europe is generally believed to be Johann Gutenberg of Mainz, Germany, who discovered, about the year 1450, that metal types could be cast in a mould. The Hollanders, however, claim the honour for Laurens Janszoon Coster, and erected a statue to his memory in Haarlem. In 1823 the city celebrated the four-hundredth anniversary of his supposed invention.

Today it matters not so much whether it was Gutenberg, Coster or some mystic in the Orient who first practised the art of printing; what really matters is that it was invented.

Gutenberg was printing from movable types about 1450. In other words, he was cutting punches, making matrices, and casting metal types in a mould. To obtain the type, the matrix was fixed on the top of the mould, the mould inverted, and molten metal poured in quickly to ensure a good cast.

First type-casting machinery

It was not until the latter half of the nineteenth century that machinery for casting types was introduced. Towards the end of the nineteenth century mechanical type-setting machines were invented. These would not have been practicable without an economical method of producing profuse supplies of matrices. The necessity was there, and the invention followed which made mechanical composition a commercial

proposition and also revolutionised the art of typesetting, i.e. the invention of the punch-cutting machine.

Before proceeding to detail modern methods of production, however, it is worth reflecting that although the operations from the making of punches to the finished type are now almost fully mechanised we still find that some of the type designs of the pre-mechanisation era are in great demand.

Tracing the image

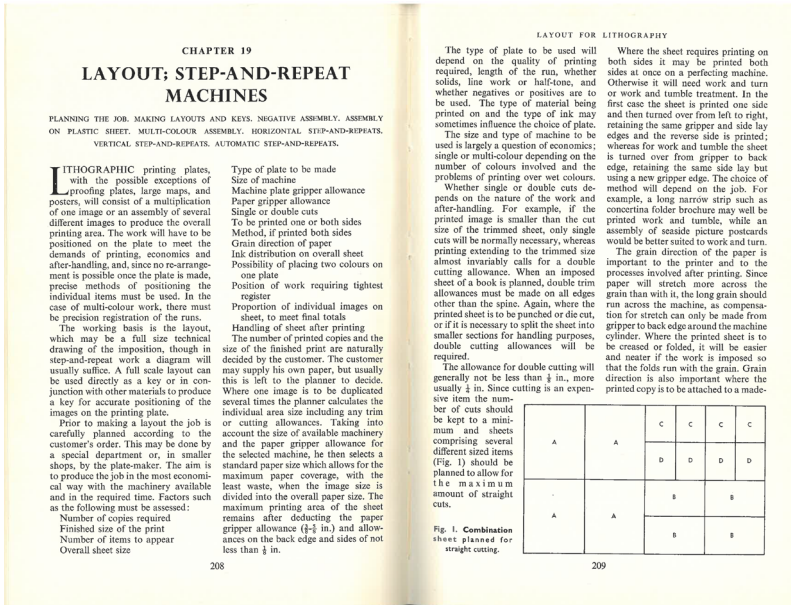
The initial stage in the making of a matrix is to trace an enlarged image of the letter on a sheet of drawing paper.

The original from which this image is projected may be an artist's drawing, the point of a type, or an actual metal type. In the last case an epidiascope, which can project images of opaque objects as well, is used.

The traced image (Fig. 1) is the basis on which the drawing is constructed. The drawings are usually made at least nine to ten inches in depth so as to minimise chance of error in the later stages. The thickness of every stroke of the face is measured in units of one ten-thousandth of an inch.

The next stage is to make a pattern letter which acts as a guide on the punch-cutting machine. Methods for making the pattern vary. One method is to place the drawing and a piece of wax-coated glass in position, and, using a pantograph (an instrument for copying, enlarging, or reducing), cut the

Figure 6. Page sample from Practical Printing and Binding p.208-209



3.4.3. Artbooks as examples

The following examples are presented as instructional tools rather than textbooks. Both display principles of classical book design, and show how they can be applied creatively and as a rule. Both books make for useful teaching aids and demonstrate the capabilities of modern design tools for creating books as an artist and as an algorithm, respectively.

3.4.3.1. Marion Bantjes ‘I Wonder’ – a case study in counter-productive design, and magnificent art

I Wonder (Bantjes 2010a) is a strange work in that it is a marvel of graphic art, as well as an impeccably designed book. It draws on inspiration from Islamic and Christian manuscripts while clearly making use of modern technology and referencing modern typographic designs. It is also a book which could only work as an art piece. As a text-based book, the design is overwhelming and counter-productive, yet makes use of solid book design principles to enable readability.

In a TED Talk Bantjes explains (Bantjes 2010b) 1908. \n\n"Un-ornament is a sign of mental power."\n-same as above”, “publisher” : “TED.com”, “title” : “Intricate beauty by design”, “type” : “paper-conference” }, “uris” : [“http://www.mendeley.com/documents/?uuid=2ebaf5e5-896e-494b-b6e9-2fd215e48d54”] }], “mendeley” : { “formattedCitation” : “(Bantjes 2010b, ‘These days, I call myself a graphic artist. So where my work as a graphic designer was to follow strategy, my work now follows my heart and my interests with the guidance of my ego to create work that is mutually beneficial to myself and a client. Now, this is heresy in the design world.’

This candid attitude marks out Bantjes’ awareness of her work, and that awareness is something which continues to show throughout her projects. Her commissioned work is not made to specification for a client, it is for her own unique style. It is something which seems to have become more commonplace in the graphic design world where designers are given artist status and commissioned for original works. This occurs even in more typographically-specific scenarios as Erik Spiekermann points out, ‘I mean I am German after all, so it has to look stark and Germanic otherwise people won’t believe it. It’s true, I do get people who say, “Do us one of your thingies,” so... I can only use black, white, and red, otherwise they will say, “this is not like you”’ (Daukes 2011). While he goes on to say that he considers himself a typographic designer who likes to experiment, his own success has constrained him somewhat.

While Spiekermann is able to hold onto his profession as a designer, Bantjes has re-labelled herself as a ‘graphic artist’ (Bantjes 2010b) 1908.\

“Un-ornament is a sign of mental power.”
 same as above”, “publisher” : “TED.com”, “title” : “Intricate beauty by design”,
 “type” : “paper-conference” }, “uris” : [“http://www.mendeley.com/
 documents/?uuid=2ebaf5e5-896e-494b-b6e9-2fd215e48d54”] }],
 “mendeley” : { “formattedCitation” : “(Bantjes 2010b, as this allows her
 more freedom to pursue her work based on personal motivations.

The figures below serve to illustrate the means by which Bantjes has created a modern take on the classical Western book.

Bantjes therefore provides an interesting study as a character with training in typography and book design. *I Wonder* relies heavily on the ornate framing such as used by William Morris, and yet has the colourful and mosaic quality of Middle Eastern book design. While the type varies by theme, typeface, size and colour for every chapter, it is consistently set within a rectangle based on the broad spread, seated equidistant from the top and bottom of the page, with the distance repeated in the spread’s gutter.

Bantjes elegantly divides the spread by manipulating the value of thirds using a common width (x in Figure 7) to space the upper and outer margins, as well as the inner gutter. Mathematically this creates a somewhat odd ratio of width to height at 3.2:4.8, though visually it creates elegant proportions similar to those of classical page dimensions (as seen in Figure 9 which illustrates one example of a possible arrangement of page margins according to fixed margin ratios). This displays not only a keen grasp of historical conventions, in terms of the visual aesthetic, but also in terms of the practice. One of the key aspects of classic book design is the reliance on the rectangle and its ‘divine proportions’ (Janssen 2010, p.2).

Figure 7. Analysis of I Wonder page dimensions

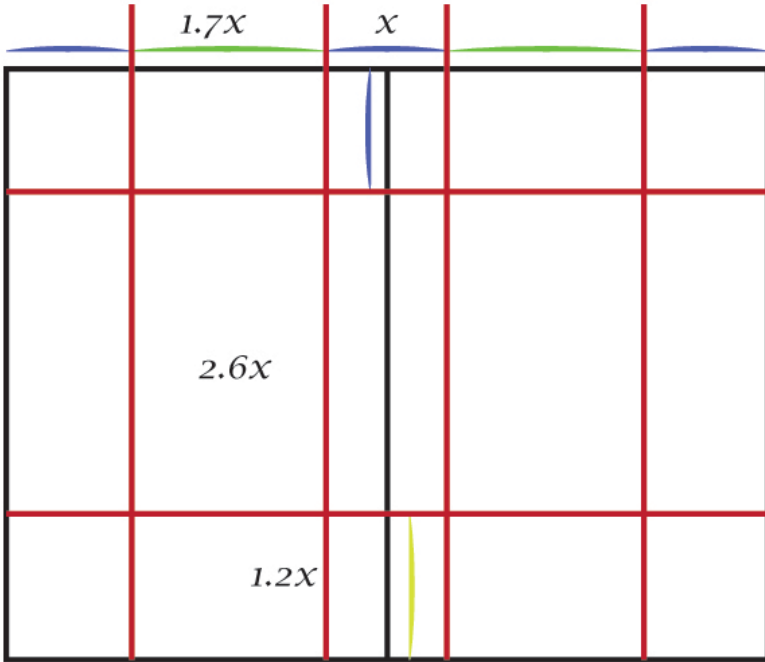


Figure 8. *I Wonder* page dimensions super-imposed on a spread

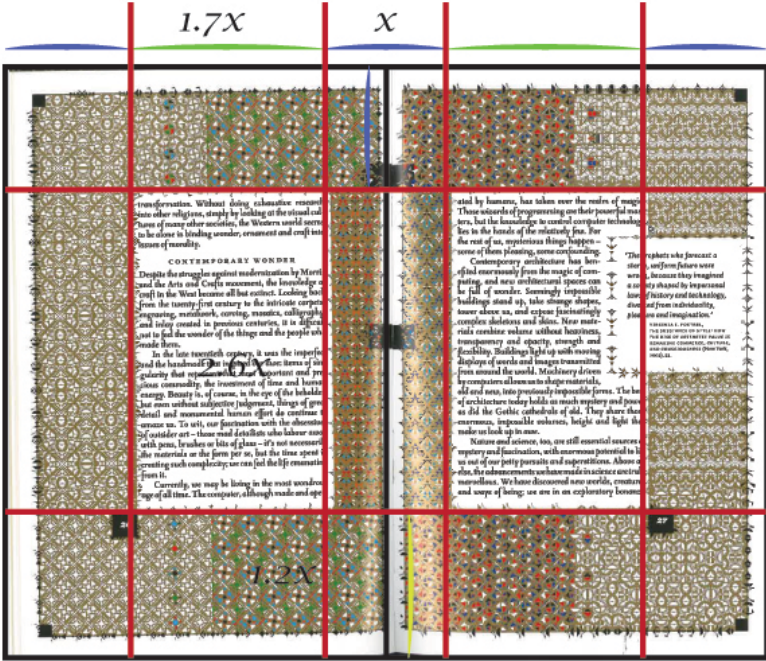


Figure 9. Example of classical book dimensions

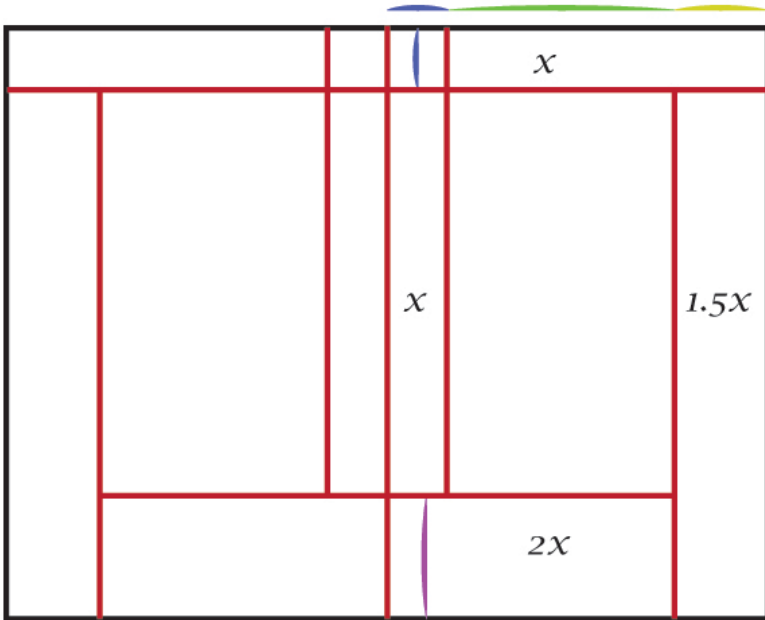


Figure 10. Page sample of I Wonder p.26-27



transformation. Without doing exhaustive research on other religions, simply by looking at the visual cultures of many other societies, the Western world seems to be alone in finding wonder, ornament and craft into issues of morality.

CONTEMPORARY WONDER

Despite the struggles against modernization by Morris and the Arts and Crafts movement, the knowledge of craft in the West became all but extinct. Looking back from the twenty-first century to the intricate carpets, engineering, metalwork, carving, mosaics, calligraphy, and ivory created in previous centuries, it is difficult not to feel the wonder of the things and the people who made them.

In the late twentieth century, it was the imperfect and the handmade that inspired our awe: items of singularity that represent that most important and precious commodity, the investment of time and human energy. Beauty is, of course, in the eye of the beholder, but even without subjective judgment, things of great detail and monumental human effort do continue to amaze us. To wit, our fascination with the obsessions of outsider art – those mad detailists who labour away with pens, brushes or bits of glass – it's not necessarily the materials or the form *per se*, but the time spent in creating such complexity; we can feel the life emanating from it.

Currently, we may be living in the most wondrous age of all time. The computer, although made and oper-

ated by humans, has taken over the realm of magic. Those wizards of programming are their powerful masters, but the knowledge to control computer technology lies in the hands of the relatively few. For the rest of us, mysterious things happen –

some of them pleasing, some confounding.

Contemporary architecture has benefited enormously from the magic of computing, and new architectural spaces can be full of wonder. Seemingly impossible buildings stand up, take strange shapes, tower above us, and expose fascinatingly complex skeletons and skins. New materials combine volume without heaviness, transparency and opacity, strength and flexibility. Buildings light up with moving displays of words and images transmitted from around the world. Machinery driven by computers allows us to shape materials, old and new, into previously impossible forms. The best of architecture today holds as much mystery and power as did the Gothic cathedrals of old. They show those enormous, impossible volumes, height and light that make us look up in awe.

Nature and science, too, are still essential sources of mystery and fascination, with enormous potential to lift us out of our petty pursuits and superstitions. Above all else, the advancements we have made in science are truly marvellous. We have discovered new worlds, creatures, and ways of being; we are in an exploratory bonanza.

'The prophets who forecast a sterile, uniform future were wrong, because they imagined a society shaped by impersonal laws of history and technology, divorced from individuality, pleasure and imagination.'

WILLIAM S. BISHOP, THE HISTORY OF STYLE: HOW THE IDEA OF ARCHITECTURE BECAME AN AESTHETIC CONSCIOUSNESS, OXFORD, AND COMING TOGETHER (New York, 2002), 33

Figure 11. Page sample of I Wonder p.102-103



Figure 10 and Figure 11 are two example spreads from the book which serve to illustrate how Bantjes does not stray from her set dimensions even as the ornamentation become more extravagant. In Figure 10 Bantjes shows the influence of Eastern manuscripts. The graphic art in this book is displayed most carefully in the margins and background, where individual shapes have been recomposed into new patterns. In Figure 11 the page dimensions displayed in figure 5 are still applicable here, however the dimensions are overshadowed by the eclectic type and graphics which convey the chapter's theme on signage and information overload.

This book makes for an interesting case, it is an artist's book intended for mass production, though not necessarily intended for the masses

who may miss the humorous play on the conventions of typographic design for books.

3.4.3.2. Seraphs: NaNoGenMo2014 – accident by design

This is a book of nonsense, in the truest sense of the work, yet it fulfils the visual requirement of an art book perfectly.

This book was created for NaNoGenMo2014. The internet event, based on Github, originated in the United States of America, and declares November as National Novel Generation Month. The event is a challenge to write a piece of computer code that will generate a novel of at least fifty thousand words (Kazemi 2015).

For many, projects uploaded are based on algorithms for combining characters or words and the ultimate attempt would of course be to have the grammar and logic work out, in order to create a readable novel. In 2014 Liza Daly submitted a book called *Seraphs* (Daly 2014) which is a reconstitution of the Voynich Manuscript.* Being impossible to interpret as it is, Daly took the opportunity to reform extracts from the manuscript as a purely visual artefact. It is even available for purchase.

Daly explains her process in creating the book by using python code to ‘fetch’ images from Flickr and Internet Archive commons, analyse the colour scheme and match it to a solid background shade, and then inserting text based on randomised fragments from the transcribed manuscript reinterpreted in a digitised font (Daly 2014).

What makes this book an interesting one to study in this context is that while it uses a very simple layout, it is very clearly a designed book. It is missing header and footer content, it has an order defined by user-de-

* The Voynich Manuscript is a mysterious book suggested to be authored in the 15th century CE. No known author or exact date is known. The book contains a variety of scientific drawings of bizarre life forms (plant and animal) and is written in an as yet unique and indecipherable script (Zandbergen 2016).

fined tags, and is made to fit on a 244 x 209.5 mm page – slightly smaller than an A4 page. What makes it stand out as a book creation though is that while the language is indecipherable, the text isn't. It is readable at approximately twenty points, is well spaced and lines up neatly. Each page hosts a single illustration and no more than two paragraphs of text. With a varying two column or wrap-around text configuration the illustrations are given ample space and the book can be enjoyed.

There is much to criticise of course. The type's baseline has not been matched across a page and the columns are far too wide for a work of this sort, not to mention the irregularity of it having a horizontal layout. However, as a modern book, it is hard to stop paging through it. What makes it worth the time to 'read' it is that it has a consistent proportioned layout.

While the original iteration of the Voynich Manuscript is something which can very much be conceived as an artwork, *Seraphs* is like a scholarly edition, reducing the content to image and commentary. Its size and proportions make it seem intended for study and easy to handle.

As Daly herself describes it, it is a 'nonsense book' (2014), but it manages to capture one's imagine by its matched colour, consistent geometry, and the bookish title-page and chapter openings (which occur on the recto page as they should by Western standard book norms).

It is as though the book is an accident gone right, but while the content is randomised, the styling is note-worthy. The careful application of CSS* has made it acceptable as a book. While not directly instructive as the Design Basics books are, or as flamboyantly artistic as *I Wonder*, it nonetheless teaches an important lesson about the physicality of books, that a book is not simple pages which are bound. It is a structure with a visual code giving necessary emphasis and framing the content in

* Cascading Style Sheets, a web standard used to style mark-up languages.

a way which provides space for interpretation, and for the fingers to comfortably grip.

Seraphs is not a standard book. There is no logic to the textual content, or to the imagery, apart from that implied by the selection algorithm. However, it is able to masquerade as an artbook owing to its visual style. Daly seems to have proven that with the considered application of margins, as well as consistent typography and colour, *Seraphs* is able to make the leap from content to book.

As a final comment, Jacob (1998, p.110) makes a valid point worth considering here, when she states, ‘In the past, the designer’s craft was in the precision of its execution. Technology has blurred that relationship in favour of an automatic precision that is delivered in the form of ‘default’ settings’. There is a ‘default’ plan for a book, and it is the application of creativity within that plan that the book designer proves their worth.

Below are excerpts from *Seraphs* (Daly 2014, pp.3–6). It should be noted that there is an error in the pagination. Ordinarily the recto page is always an odd number. The result is a book that will print without error, but with unconventional pagination, as the front matter has not been suitably numbered in the digital format. Figure 12 is a chapter opening spread, placing the chapter title on the recto page on top of a bled image. The landscape format is typical of ‘coffee table’ book, intended to highlight imagery. Figure 13 is an interior spread showing the arrangement of type and image in which the page backgrounds match the colour tone of the image. Displayed as well are two variations of type layout. The verso page employs two columns, while the recto uses a single column – a text wrap is applied to the images in both variations.

Figure 12. Page sample from Seraphs p.3-4



Figure 13. Page sample from Seraphs p.5-6



It is hoped that the case studies presented above have served to illustrate how a book's physical design may be applied for the benefit of education, and for the creation of art.

3.5. Summary of literature findings

Through a survey of instructional material from the mid twentieth century to the present day, it appears clear that the modern graphic designer is the result of a long heritage in the technology of printed information.

As technology has evolved to a point where a design may be fully realised and simulated, in full colour, with a variety of fonts, various illustrations, as well as photography, it is evident that the graphic designer is now fully removed from the physicality of print reproduction.

The technology of printing from physical type required that the design form a physical part of the reproduction process. However as printed communication became more wide-spread in the twentieth century, the requirements of the industry have changed to include new fonts, new styles and new styles of illustration. Advertising has played a major role in this development and the delivery of quick and efficient visual rhetoric is a different skill from the setting of long-form content.

Printed communication today serves a variety of needs, from technical instruction, to entertainment, and decoration (to mention only a few applications). Therefore the modern graphic designer cannot only be a typographer, or a printer, but must be an illustrator, engraver, photographer, and creative architect in order to create the most applicable visual solution to the challenge presented by a client.

If a classical book layout is required, it is within the modern designer's capability – owing to the skills and technology they have access to – to recreate said style. What may have once been considered immutable, and sacrosanct is now a style to draw influence from.

The twentieth century has been host to a variety of visual communication styles, including modernism, art deco, war propaganda, psychedelic art, punk art, historicism, and post-modernism. All these styles have made use of a distinctive visual identity, and a designer may live through several of these in his/her lifetime. As a result, what is of current value is not an understanding of unused machinery, but an understanding of rhetoric and visual literacy, along with technical knowledge on the foundational theory of design components, and the capability of software.

Chapter 4

Findings



*In the words of Paul Renner: “Heed this professionals:
Typeface design is technology, and it is art.”*
(Serrats & Cano 2007)

This section reveals the data from primary research conducted for this study. The data was collected in the form of a three-part questionnaire (see appendix 1) which captured screening information, course information, and the professional intention behind the teaching of the current

curricula. The survey was distributed on 18 November 2015, and the final response was recorded on 25 April 2016.

4.1. Typographic Design in South Africa

South African typography is generally studied in regards to early mission presses, government printing, and newspaper printing with all expertise being imported from Europe. The influx of European settlers established official printing hubs primarily in newspaper workshops at the major ports, this being based at first on hand-setting, and later with mechanical systems. Many hand machines were taken further inland by missionaries who were able to establish small presses for the publishing of religious and community material, while also training locals. More official training was conducted under the auspices of the South African Typographic Union which was involved in commercial typography and printing.

Currently the South African Print College (now under the direction of PrintSA) offers training in the management of printing processes, such as machine maintenance, and job estimating, though it does not teach typography or typesetting.

At tertiary level, typographic design is a field limited to visual communication studies, including graphic design, information design, communication design, advertising, and document design.

4.2. The respondents

As stated in Chapter 2, the study set out to establish what the contemporary typography and book design curriculum is – and its intended effect upon the student – in the current typographic courses offered at South African tertiary institutions.

Out of the original sample of 36 institutions only eight responded in filling out the questionnaire, while one respondent preferred to do an interview. 14 institutions initially showed a willingness to participate, with a 15th institution actively declining. This makes for an initial response rate of 38.8% from the sample group responding to the call to participate. Additional interviews were conducted with three educators

which provided overall qualitative insight into the construction of their courses. However, the remaining five institutions did not return any data after agreeing to participate. This was likely owing to the pressures of the academic year being affected by the numerous #feesmusfall student protests, which greatly affected course timelines.

The general response was that the subject matter was appreciated and the questionnaire in itself not necessarily difficult, however the impact of the academic year – especially one disrupted by nation-wide student protests – put much pressure on the participants.

While emphasis was placed on design for books specifically, this needed to be applied in the broad context of print design. For the most part, graduates would most likely find themselves working on material for marketing purposes, be it for advertising directly, or creating logos, newsletter and report templates, branded stationery, and signage (amongst other products). Typography is an essential tool for many design objectives alongside illustration, photographic manipulation, and animation. The book however still seems to occupy a place as a pinnacle of artisanal achievement, and therefore book (or publication design) is taught often within programmes, as can often be inferred from the publically available course descriptions.

Owing to the diverse nature of typographic courses, special focus was placed on the teaching of print materials and book design as far as was applicable. Those institutions that did respond provided a large degree of reference material and fully described their courses and assessment (see appendix 2).

4.2.1. The profile of the respondents

The final respondents consisted of departments at four universities and four technical and vocational colleges. These institutions are accredited academic institutions and offer between them seven degrees and one diploma in design. The institutions were based in Gauteng, North-West, and the Western Cape. This brings the final response rate to 22.2% of the surveyed sample (8 out of 36).

Design subjects are taught at departmental level (where the department is design focussed), which in universities* falls under a faculty of either ‘arts’ or ‘humanities’. Colleges† are divided into departments based on the focus of the qualification. One respondent spread modules throughout departments as the course was presented on a ‘programme basis’ – based on the shared expertise of the various departments rather than those of one.

A generally standard terminology is used across the courses with ‘graphic design’ being the primary subject descriptor, though the study programme as a whole is generally called: Graphic Design, Information Design, Visual Communication, or Communication Design.

All programmes are taught using the current industry-standard Adobe Creative suite software, primarily Photoshop, Illustrator, and InDesign.

Learning modules focussing specifically on typography or book production can vary from a semester to a year, with one programme having an in-depth typographic component in every semester.

When book projects are given the average assessment time is 3-4 weeks, during which the students are expected to produce a physical book, book sample, or catalogue of at least 24 pages.

4.3. Course descriptions

The first question of the questionnaire asked the respondents to provide descriptions for their courses which were generally either from their study guides and programme prospectuses, or by personal explanation.

* Universities are characterised as public institutions whose primary focus is on academic research around a range of subjects normally with the broad subject areas of engineering, economics, natural sciences, and human and social sciences.

† Technical and Vocational Training Colleges are characterised as predominantly private institutions whose primary focus is on providing training for specific occupations, such as graphic designer, accountant, supply chain manager, and so forth. Private colleges for artistic careers have become numerous in recent years.

Course descriptions differ in their placement of typography being in either editorial, or communication design. While sometimes used interchangeably, editorial design generally refers to the setting of content for magazines, newspapers, and books, while communication design may refer to this as well as design for signage and advertising.

In general the courses use a tightly controlled vocabulary focussing on ‘good’ design and ‘accepted’ practice, as well as differentiating between cover and editorial design – the latter referring to the setting of long-form textual content. Communication is also a common theme in which the students must demonstrate their ability to establish a clear visual rhetoric. All courses contain a historical component, with the focus being primarily on the application of type, with a contemporary focus on digital and non-static type – such as that used in films or in ‘kinetic typography’.

The courses do have an element of printing theory, which is approached more from the perspective of finishing techniques than on the mechanics of printing. One of the courses focuses on ‘unusual’ and ‘novel’ applications of finishing techniques and bindings, however none seem to focus on the technical aspects of printing particularly, though students are expected to be able to liaise with printers.

Readability was a commonly addressed theme and was linked to the teaching of good practice.

A second question asked the respondents to comment on their ‘narrative of instruction’ (referring to the balance between vocational and theoretical study). All participants described their courses as being primarily vocational, with input from industry being essential. Each student should be capable of producing a portfolio demonstrating their creative skills, and while purely academic research can be conducted at post-graduate levels, at the under-graduate level, the primary intention is make the students fit for their roles in the creative industries.*

* These generally include commercial design, animation, print and digital publishing, advertising, branding, and marketing.

4.4. Intended outcomes

A third question asked respondents to comment on the aims and expectations (outcomes) of their courses.

The participants provided a range of student outcomes for their courses which centre primarily on vocational skills, and the ‘creative problem solving process’, that is to say gearing their students – academically – in order to interpret the situation presented to them, and effectively evaluate the possible options. Key outcomes include:

- Software programs (Adobe Creative Suite) form an important part of the curriculum and the operation of them is frequently cited as an important goal, especially in the design of multiple media, such as books, posters, booklets, leaflets, catalogues, and magazines.
- Professional skills are also highly stressed, and students are expected to be able to work on campaigns and according to the needs of a client. Added to this is a focus on ethics, which draws together both the professional and communicative goals. One participant particularly remarked on the expectation for their students to be ‘ethically responsible citizens’, with ‘the focus of the degree [being] not just on commerce but ... on design as a way of communicating a particular ethos ... [in order to] foster thoughtful designers and illustrators.’
- Using design as an ethical tool is a function which encourages quality work. Participants stated that their students should be agile, highly skilled, and critical thinkers. In this way, it is hoped that students avoid the pitfalls of the ‘commercial artist for hire’ and have the excellence with which to advance the field, as well as their individual careers.

While the majority of courses focus on the design professional as a whole, some courses do have a specific typographic focus whether it be in the continued revisiting of theory, or the deliberate research on the applications of a particular typeface.

While based in ‘artistic’ departments, interestingly the objectives of these courses is not to make commercial artists, though the ability is present.

4.5. Assessments and syllabus development

Questions four and five asked the respondents to describe how the syllabus was developed and the means by which they assess their students. The respondents used the question on syllabus development to justify their assessments by reiterating their outcomes.

Various forms of assessment are used to teach various aspects of typography. Book (or publication) design projects are highly vocational and take place over 3-4 weeks and require the students to produce material appropriate for a particular brief. These project briefs can vary largely, from fully realised publishable products, to redesigns and analyses.

The descriptions of assessments are the most varied among the respondents and emphasise the focus of print and typography in their syllabi. The ISTD (International Society of Typographic Designers) briefs in particular focus on personal engagement with typography and thoughtful development of concepts. While practical in nature they force an academic approach to the scenario.

Two participants make use of the ISTD student briefs. The ISTD annually produces a series of Student Assessment Briefs which can be made available to institutions as student projects. Institutions can then submit these projects for ISTD assessment, which if favourable allows for inclusion in the ISTD educational archive. The assessment for degree purposes however rests with the institutions.

Students are also assessed on the principles of layout specifically, this includes the application of grid structures and the integration of type and imagery within a print publication.

Two participants stressed cover design projects as part of their courses, while another two have pushed for creative writing. There is a focus on creating not just a ‘designer’ but a generally creative professional, who should be able to apply their creative thinking in all forms of visual media. This relates to the expectation of a designer as a problem-solver.

The assessments often include specific analysis of a chosen font or designer, and require the students to demonstrate their understanding of the applicability of the visual style. In one instance, a participant requires its students to prepare a presentation on an influential ‘graphic designer / typographer / type designer’. In this way (and through the curriculum) students are introduced to historic concepts.

In many cases the typographic assessments (for various media) occur throughout the course, and require the students to build upon their previous experiences. However book projects are not emphasised, but assessed only as one of the many applicable media for typography – which includes posters, websites booklets, brochures and catalogues.

4.6. References and source materials

Questions six and seven asked the respondents to list their prescribed and recommended source material for their students. The source material could be books, periodicals, and films, as well as blogs, websites, and on-line videos.

Websites (which may or may not be sites about graphic design) making use of good design principles were cited, such as:

- iGuitar Magazine (www.iguitarmag.com)
- I Love Typography (www.ilovetypography.com)
- Graphic Design Forum (www.graphicdesignforum.com)

Students were also expected to gain inspiration from the work of previous years’ students, and from films such as *Helvetica*, and *The Machine that Made Us*.

Some respondents frequently cited magazines, and magazine design reference material such as:

- ‘How to start a Magazine’ – Bates Creative Group (www.batescreativegoup.com/align/how-to-start-a-magazine)
- MyMag, a portal for South African on-line magazines (www.mymag.co.za)
- Turning Pages: Editorial Design for Print Media – A Losowsky
- Mag-Art: Innovation in Magazine Design – S King

When providing references for students recent sources seem to be preferred. No books published earlier than the year 2000 are provided. Most participants show work from previous students, as well as making use of their own compiled class notes and visual examples. The most frequently used examples are contemporary design focussed websites, blogs, and digital magazines. Online videos are also an acceptable source for typographic theory.

Several instructional sources are common to the various programmes. Different books can be used to illustrate different learning outcomes (as described in 3.4 Case studies). Mentioned already above are *Thinking with Type* (Lupton 2010a), and *Design Basics 03: Typography* (Ambrose & Harris 2005c).

Lupton's title is particularly useful as it provides a personal form of instruction from the physical book (Lupton 2010b) and the on-line website (Lupton 2009) which divide typographic theory into theoretical constructs similar to those assessed in my own questionnaire. She expresses theoretical components in a tangible form with concise definitions and visual examples allowing for instant visual recognition. Her on-line course (Lupton n.d.) continues the form of neat personal explanations while requiring a small deliverable that serves to introduce the prospective student to functional typographic work.

Working alongside this is another popular title, *A History of Graphic Design* (Meggs 1992) which provides a concise view of graphic communication relevant to the Western world. Full of visual examples, it demonstrates visual communication in a neat package making it easy for the student to assimilate the generic attributes of various graphical styles.

In several cases instructors act as curators and compile articles and videos of interest (often on-line), as well as compiling their own class notes and tutorials. In two cases respondents clearly indicated that students were encouraged to perform their own research after being given a 'starting point'.

A total list of provided references is given in appendix 2.

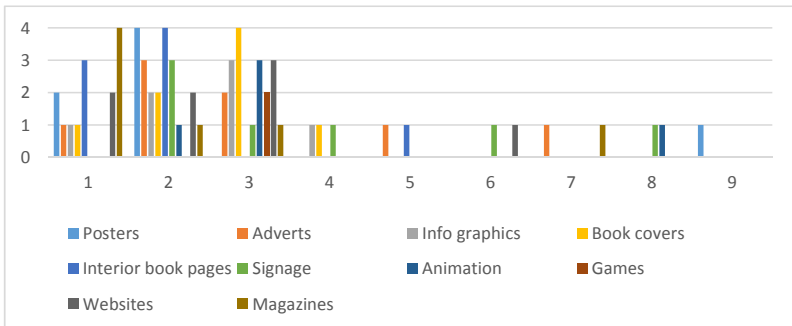
Question 8 asked the respondents to indicate what software they used in their programmes, and all respondents indicated that they made use

of the Adobe Creative Suite, primarily InDesign (page layout), Illustrator (vector graphic manipulation) and Photoshop (image editing).

Question 9 asked the respondents what other media (if any) were used in teaching. The response was that lecturers tried to provide as many examples as possible. Students are exposed to web design, ambient media design, corporate identity design, advertising design, packaging design, brochure design, poster design, type animation, magazine design, and book cover design.

Question 10 asked respondents to rank their preferred examples of typography according to a provided list of examples. No other suggestions of examples were provided and the results of this can be seen in Figure 14 below. Overall high preference was shown for book covers, interior book pages, magazines, and posters. Often participants ranked examples of equal importance – for instance ranking advertisements, interior book pages, and posters with equal preference. Rather than confusing the results, this seems to demonstrate the multi-disciplinary (multi-media) approach of modern typographic design education. Interestingly advertising was given either high or low preference, and an even more extreme spread is seen for signage. This is an indicator that not all programmes value traditional advertising in the same way. Posters are consistently the most highly ranked examples. Websites and info-graphics share a common spread of preference. These examples are based on the preference of the educators, and may change year on year as different examples are discovered.

Figure 14. Preference of Typographic Examples According to Rank (n=8)



4.7. Intent behind teaching

This dissertation hopes to understand the intent behind the formation of modern curricula, and as such asked instructors to indicate their intent between cultivating a student's vocational and artistic outcomes. These two outcomes were represented to the respondents as opposing poles on a continuum between 'genre-based convention' (the vocational outcome), and 'individual artistic expression' (the artistic outcome). These two poles were chosen owing to the perceived characteristics represented in the literature for graphic and typographic design education as explored in Chapter 3.

In order to indicate how these potentially opposing outcomes were being approached in design education programmes in South Africa, a selection table was presented (Section C, Questions 11-15, see Appendix 1 Survey questionnaire) on which several criteria were posed which could be described in terms of the balance between these outcomes ('genre-based convention' versus 'individual artistic expression') by use of a five-point Likert-scale. The criteria were grouped into five categories deemed necessary for the teaching of typography and book design: Typography, Layout, Book specifics and extra features, Aspects for printing, and Other. Each category contained the criteria to be described. These criteria were chosen based on this researcher's understanding of the fundamental theory and terminology required for a course on typography and book design, based on the literature surveyed in Chapter 3. These terms are generally standardised across the contemporary literature. Where there was an option of more than one term, the more common one was chosen.

The Likert-scale used to measure the focus of training between the two ends of the spectrum (from 'genre-based convention' versus 'individual artistic expression') seemed to be the most appropriate method for the task, as it allowed respondents to indicate a middle ground. When searching for methodologies specifically developed to research intention or motivation, the only recurring theme was in the medical literature, where intent referred to the 'intended' outcome of procedures. These methodologies were clearly not applicable to this study.

What is tested here refers more towards the teaching philosophy, but as this is generally provided as a statement (much like a company's business philosophy) the term intent has been chosen in order to guide the respondents towards analysing and indicating their internal motivations.

For this study, when illustrated per subject, the results can provide an interesting representation of the intent of the whole (Figure 15).

Being a qualitative study, the results should be interpreted not as representative of the academic community of contemporary design educators in South Africa. However it does reveal trends in the thinking of design educators who are responding to the norms in the industry as well as in academia. This is validated in the data as both universities and colleges often provided similar answers.

Unsurprisingly with a Likert-scale, many respondents choose the middle ground. However a strong bias is shown in the results towards teaching genre-based conventions. Rather than developing their students as artists, the teaching intent largely reflects the views of the course descriptions in training industry-ready professionals. While graphic design is part of the creative industries, the ability to design material which is creative, yet still recognisable as the intended form (according to the original brief) is considered to be important.

The indicated intent behind some topics may be driven by necessity. Type classification for instance requires that students speak a common language. The same is true for issues of basic readability such as leading and hyphenation which are governed by norms seldom deviated from – and may conform to certain 'immutable rules' (Booyens 2016). This also applies to the order of content in a book, though Figure 15 seems to reveal a tension, where some institutions expect their students to apply more artistic freedom in front and end matter. In this way, some students are encouraged to break the expected paradigm of the book.

The application of the theory of printing substrates requires a generalised jargon, but is also essential to the finished product. The nature of the substrate determines the final appearance of a graphic item, and in a creative field where communicating a message is paramount; this is a vital issue which can benefit from artistic insight. Therefore it is

'The x-axis represents the order of preference while the y-axis represents the number of votes for that particular type of example.'

interesting that there appears to be a division between teaching the genre norms, and teaching with equal focus on genre and artistic expression.

Using this method of representation has strong similarities with the representation of genetic information in biological sciences. From a purely visual sense, this table represents the typographic ‘genome’ of the participants. With a wider sample, individual institutions could be compared to the group from a country, or an international group. And thus represent conformance to the norms within the design education community. In this way it becomes possible to use quantitative analysis techniques to interpret qualitative data.

Some specific commentary from Figure 15 is worth drawing. The results are analysed as a whole, however in some cases it is clear where a particular respondent will diverge from the pattern. It is especially important when this is repeated. The general response as indicated from Figure 15 is that the respondents’ intent is primarily balanced between vocational and artistic outcomes, but often more concerned with students’ vocational outcomes.

Where intent is shown to be occupying the middle ground, this should not be interpreted as a default response, but rather a balanced response, in which the intents on either end of the spectrum are seen as inseparable from each other. It is a response which indicates that students should be capable artisans, as well as creative professionals.

Figure 16 reduces the data to provide both the average and mode provided by the participants, and while potentially biased by the small sample it reveals interesting points of interaction. Where both values produce a similar result it reveals areas of consensus, namely in the following categories: Block finishes, Glossary, Index, and Line-length; categories with similar values are: Type classification, Drop caps, Text wrap, Front matter, and End matter.

The averages reported in Figure 16 represent the true characteristic of the sample group, and with a larger sample would allow institutions to compare themselves against a national average for teaching intent in typography and book design. The mode function is indicative of common responses and can be used as a validation tool. In this study the mode cannot function properly as it may be dependent on only

two like responses, however, were this study to be repeated with a larger sample, the average and mode in Figure 16 would come to resemble each other more closely, with the average indicating the general intent, and the mode providing the view of the majority.

In and of itself this table highlights consensus and divergence, and a larger sample is required for this to have broad spread applicability. In its current state, it reveals that the surveyed community shares an intent of pursuing vocational goals over artistic ones with exceptions only in ornamentation, binding, and image placement. In these areas educators seem to be united in pushing their students to experiment. Given the importance of advertising and marketing in the graphic design field, the opportunities for interesting configurations of imposition are much more than they would be in conventional book work.

4.7.1. Typography

Type classification to relative measurements

Much emphasis is placed on the core typographic theory – which coincides with Ellen Lupton’s divisions – as well as on matters of print production, particularly with regards to paper. In this category all respondents were able to describe their intent, with the majority intending to cultivate their students’ vocational ability. The criteria in this category are perhaps the most standardised across teaching material, and therefore able to be taught much more consistently and with reliance on external sources.

The intent indicated for ligatures and serifs is interesting. Ligatures (lines which connect one or more characters together) are generally a default application, however they are only suitable for body-type (generally 12 points and below) and not for display type (for headings, logos, and attention-grabbing). In this way, compliance with the genre is important. Ligatures are also a feature more common to serif typefaces which have tighter kerning between their characters. The respondents seemed to be almost divided on this point as not only are serif typefaces considered to be the ‘old’ norm, but they may also be underused and the division indicated in Profile of Teaching Intent (n=8) is indicative of the need to find creative designs for serif typefaces which can be as applicable as conventional typefaces – such as Garamond, Caslon, Times New Roman, or Palatino.

Variations such as Italic, Bold, Oblique, similarly are norms and written into the font files themselves, however their applications should always be well-suited to their contexts.

A criterion which may have caused confusion is ‘Rag design’, which is controlled through the application of various other typographic features, particularly tracking (word spacing), hyphenation, and font choice. This concept is not one which is often referred to in the literature and can also be handled automatically by design software (using for instance, the Adobe Paragraph Composer). Tracking, kerning, and justification also have an influence on Rag design, and it is interesting to see that responses occupy either the middle ground, or lean towards convention. Convention in these criteria is an interesting concept. The default

tracking and kerning (overall type-spacing, and inter-character spacing respectively) are characteristics which form part of the digital font file. Therefore compliance with the convention may indicate a respect towards the typeface's designer. However, these aspects are intended to be manipulated, and in truth the convention is to adjust these aspects to the context of the type being set. Therefore an intent towards genre-based convention may indicate teaching through the use of examples. An intent towards artistic expression may indicate teaching to encourage creative problem-solving.

It is understandable that hyphenation is agreed to be based on convention as words should not be broken within syllables, and the hyphen is a well-defined type character. Hyphenation is also a characteristic seen only in certain contexts. It is common in prose, but nearly invisible in advertising type. For this reason the genre is very important, however, the use of hyphenation affects the design of the text block as a whole, and so whether or not to make use of hyphenation is also something of an artistic decision.

Specific typographic terms such as drop caps (page initials), ornaments (flowers), figure forms, optical margins (hanging punctuation), and substrates (surfaces suitable for printing) were not answered by all respondents possibly as a result of misunderstanding of the terminology used, as alternative terms do exist (as indicated above). While it seemed worthwhile to test these criteria – as they are part of the typographic canon – they are also features which were most prominent in the pre-photosetting era, and as such may also be regarded as less relevant today. Modern designers are able to create their own ornaments without resorting to Wingdings. Hanging punctuation is a concept practised by Gutenberg, and application to different printing substrates is something which can be handled by the printer (without the designer's involvement).

Relative measurements for printers refers primarily to the use of en and em measurements, the use of which is dependent on the designer's preference. These measurements were popular in the past where designers worked mostly in picas and points (and an em quad would represent the size of the typeface in use in a particular context, or be generalised to

Figure 15. Profile of Teaching Intent (n=8)

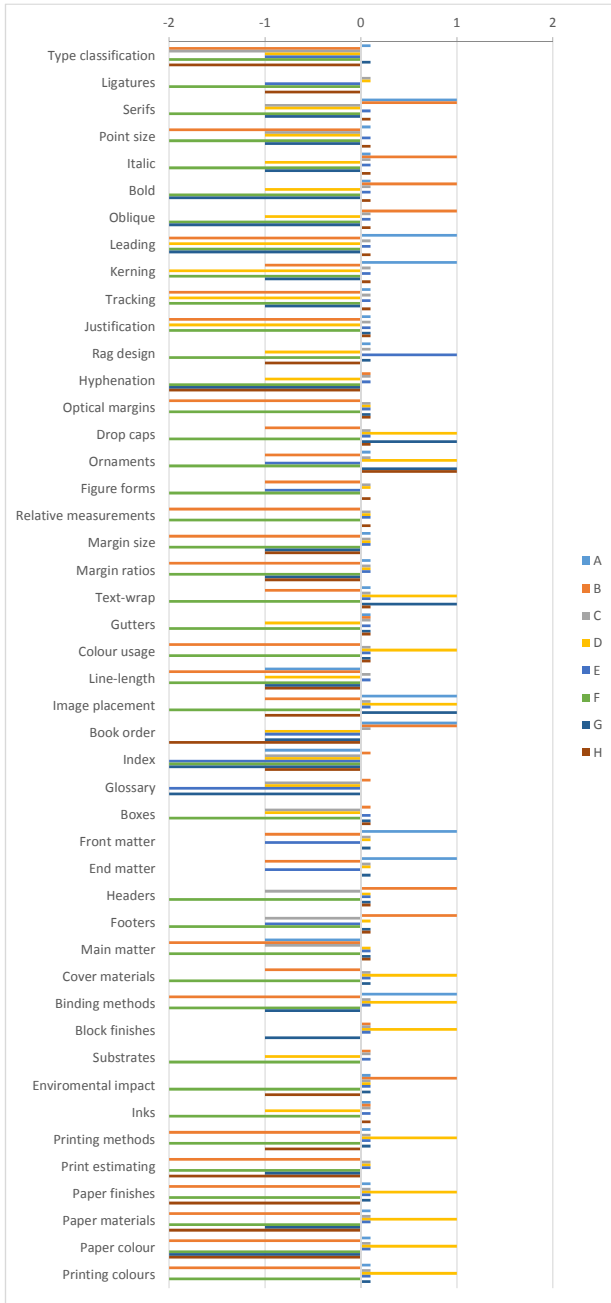
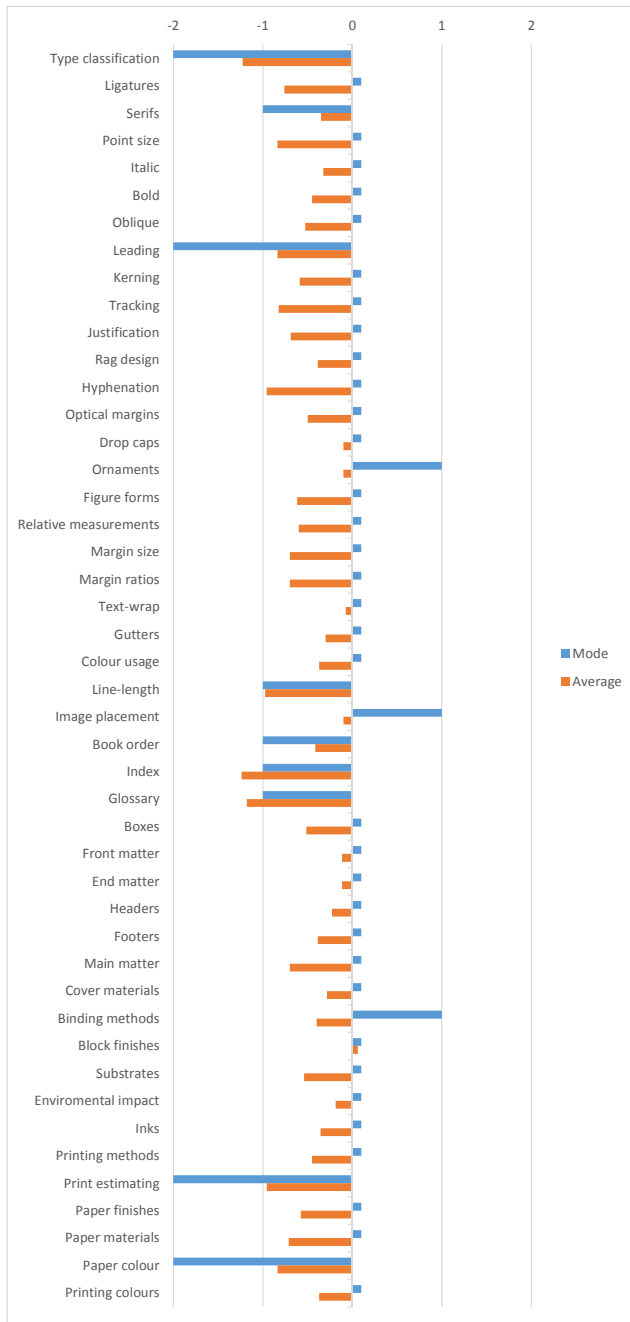


Figure 16 Reduced Representation of Teaching Intent (n=8)



12pts as ‘printers’ ems’). However with the adoption of the metric system, many designers may be more comfortable working in millimetres, and the use of measurements relative to the font being used is something that is best left to the designer’s discretion, based on their preferred means of working. By teaching this criterion with the intention of being balanced, it allows the student the opportunity to determine the best method for their personal approach to typographic design.

4.7.2. Layout

Margin size to boxes

With regard to the teaching of layout, the proportions of content on a page determined by the page margins is something which is given more attention in older (pre-1980s) literature. The design of margins according to the length and breadth ratios of the page, or by an external figure – such as the ‘Golden Ratio’ of 1:1.618, or a series based on a Fibonacci spiral – is a long-held practice that was put to use in the setting of metal type. These principles are still valid, and a preference for genre-based convention may indicate an understanding of these principles, as well as the analysing of books in the same genre. Grid-based design is often used in print layout and communication design, and while that term was avoided here, it may have an impact on all the criteria for book layout. The formation of a page (or double page spread) grid will influence the means by which margins, gutters, and line-length are decided upon. Therefore, a middle-ground response again may indicate the application of designing for the context. However many conventions exist in this spheres which should be adhered to, for example: academic titles often make use of two- or three-column layouts to allow for efficient scanning and highlighting, while a reference book may need to have differing column sizes to differentiate between the primary narrative and supplementary information, as well as providing standardised widths for imagery.

Figure 15 shows that students are encouraged to follow the genre-based conventions in terms of the overall placing of book content, including specific material such as indexes and glossaries, however when it comes to adding imagery the students seem to be encouraged to think more creatively. Not only does the placement of imagery and the application

of text-wraps affect the overall design of textual content, but in books where the imagery is of great importance, or greater than the textual content, it is important that the designer be able to make use of creative visual rhetoric in order to provide the appropriate tone. As the heavy use of imagery (particularly photographs) in books was largely a result of the adoption of phototyping and lithography, there is much less of a canon guiding how one should treat imagery in a publication. Rather imagery in the book, is an opportunity for the artistic capabilities of the designer to be expressed.

In a similar vein, the use of colour in books is largely dependent on the budget available, and the needs of the design – which may be inferred from the content itself, or dictated from a client’s brief. It is interesting to note that while most respondents chose the middle ground in the teaching of colour usage in layout, two respondents saw the need to describe colour usage as being taught with the intention of genre-based convention. These same respondents (B and F) provided the same response for Printer colour later, indicating that they interpreted Colour usage to imply the palette scheme (CMYK + Spot colours vs RGB). In this way, the convention must be followed in order to obtain the expected results.

The application of boxes also provides an interesting answer as while their application is dependent on the designer and the client – for instance, a textbook may have very specific requirements on how to display supplementary information and figures – the main intent seems to be the middle ground.

4.7.3. Book specifics and extra features

Front matter to block finishes

In the teaching of book-specific content, the respondents largely opted for a balanced approach in the teaching of Front, Main, and Back matter, however they showed a preference for genre-convention in Book order. This would suggest that while students are encouraged to experiment with the setting of book content, they must still adhere to the overall paradigm of the printed book. A criterion not provided in the question (or provided under ‘Other’ by the respondents) was the Imprint or Copyright page. Owing to the legal functions that this page performs,

respondents may have expressed the need for compliance on this page under Book order. The convention of Book order also requires that e.g. the index is part of Back matter, and the list of figures part of Front matter. In this way design instructors encourage their students to be creative within the confines of the book schema.

It is interesting to note that this section had largely varied responses. The most common response was for the middle ground, however Binding methods has a diverse range of responses as does Binding materials – possibly from the studying of artist books, which often employ creative binding methods. Cover materials as well should be considered in terms of the intent of the project, and middle ground response reflects that.

Block finishes had only five responses, and this may indicate that it is not commonly taught in the curriculum. The middle ground response given for Block finishes indicates that it should be applied functionally.

4.7.4. Aspects for printing

Substrate types to printing colours

For the general aspects for printing the middle ground is often chosen, seemingly to allow for students' creativity, but also to suit the needs of the client. If a design is requested for a plastic label, then it must be for a plastic label, and the designer would need to follow their project brief. The preference for conventional substrates (again from B and F) suggests a more vocational programme for specific media. In this category respondent D seems to particularly encourage students' artistic capabilities.

The response on Environmental impact is interesting as there may not necessarily be a genre-response. Paperback novels may be more often than not printed on brown recycled paper however, for the general book market, the cost of quality recycled paper may require it to be used sparingly. By showing an intent in the middle ground, again it would imply that the preferred outcome is creative problem-solving.

The inks used in printing may not necessarily be of importance to the designer. The ink is often tied to the method as different inks are needed for lithographic and rotogravure printing (amongst others). Therefore the choice of hot-set inks with rub-resistance versus cold-set soy ink for the project may be something which links more closely to

the environmental aspects of the project, and therefore is also dependent largely on the client.

There seems to be a preference towards following convention in terms of paper. This reflects the needs of the industry. Where printing conventions are followed, materials costs can be more economical. There is a very strong preference towards genre-based convention for paper colour, which likely refers to white. White paper best reflects the output on the screen and so allows for the broadest range of colours, as well as not requiring a special order. There is a tension between the middle ground and strong genre-based convention when it comes to paper materials and finishes. This likely reflects a stronger media-specific vocational focus by those respondents.

One criterion which cannot truly have an artistic response is Print estimating. It is a logical process which must be carried through according to the capabilities of the particular printer. What is required here is the following of standards, or an in-depth understanding of the processes and materials in order to come to both a creative and cost-effective solution.

Criteria which had a lower response rate were ‘printing colours’ and ‘inks’. A programme may group them together under CMYK and spot colour (the printing inks), or treat them differently referring to the CMYK colour mode and the use of spot colours (printing colours), and give special focus to inks in terms of the vehicle base (water or petroleum), colourant (dye or pigment), application (heat-set or cold-set), or novelty features (heat-activated, luminescent, conductive, etc.), owing to the different ways in which this theory could be approached, and its relevance to a curriculum. Ink theory may be considered by some to fall within the territory of a course on commercial printing especially.

No respondents added any additional criteria under ‘Other’.

4.8. Lost findings

Section C of the questionnaire had a second aspect to it which was overlooked by nearly all respondents. As a result no meaningful data can be reported from it.

It was intended to determine the educational approach taken by the respondents by allowing them to indicate whether they taught the listed criteria from the point of view of: Genre, stylistic, and historical aspects; Theory only; and/or as a feature of software.

In spite of being explained in the question's instruction, this section was overlooked. One respondent commented, that he simply did not see it. Therefore it is suggested that a better design strategy be followed for future surveys of this kind.

Had the data been provided it would have allowed for a deeper interpretation of the findings. The teaching of software is particularly linked to employability, and therefore denotes a more vocational intent, while the teaching of historical aspects denotes a more academic intent, and one that may encourage further creativity. The teaching of current theoretical aspects of typography and book design is a blend between the vocational capabilities of software tools, and the academic intent of in-depth study.

It was hoped that by qualifying the education approach of the respondents, it would also be possible to determine what they considered to be of immediate practical value. The teaching of software was taken as an indication of practical training of the specific criteria.

4.9. Rationalising intent

The following section makes reference to a series of interviews with educators involved in book design education specifically, in which commentary was given on the make-up and rationale behind their courses as well as on their personal views as experienced in industry.

These interviews were intended to provide contextual information to assist in the processing of the questionnaires, and after a relatively low response rate on the questionnaires the interview option was offered as an alternative. None took this option.

Personal semi-structured interviews provide rich professional insight into the topics of this dissertation as well as providing explanations for the results obtained in the survey. They have prevented this dissertation from being written in isolation and provided insight into the motiva-

tions behind curriculum development as well as describing assessment activities in depth.

The three individuals interviewed here have all been involved in print design education, as well as working in the graphic industry in a physical capacity and as such serve as key informants. All agreed to their names being used as they are well known in the design and design education fields in South Africa.

Ernst Schlatter (now retired) was the head production manager for Van Schaik Publishers in Pretoria where he was involved in the training of new professionals in the production department, as well as in the layout of books. Before this he was responsible for the workspace design of composing rooms in printing and production houses and has worked with metal type, photo-composition, and computer typography.

Jacques Lange is a practising freelance designer and a co-ordinating lecturer for the book design programme at the University of Pretoria. He is involved in commercial design and book work, and has a strong focus on typography having worked with metal type, photo-composition, and computer typography since 1987. He is currently the creative director at Blueprint Design.

Johan Booyens is a practising freelance designer and lecturer at Concept Interactive, where he teaches on typography and print production. He is currently pursuing a PhD in Print Making and has worked with photo-composition, and computer typography.

The views presented here stem from the interviews conducted based on the questions in Appendix 3. The interviews followed these questions but tended to readily diverge into more in-depth aspects, normally taking place over two hours.

The strong preference towards genre-based convention seen above should not be too surprising, as genre can cue sub-conscious comprehension (Schlatter 2015). Thus it is important to develop a curriculum with a vast amount of exposure to different graphic design products. This approach is even taken by educators who will ‘bombard’ students with examples and push them towards studying prominent designers (Lange 2015). The same can most certainly be applied to the application of new schools of tradition. As the craft of typography and book-design

evolves there must necessarily be new schools of thought, and these have occurred throughout our history. If, for instance, an educator forces a student to use non-roman type (Lange 2015), that is not necessarily encouraging artistic development, but rather conformance to a new tradition, and therefore a new genre of style.

Historical examples play an important role in education, and even if the teaching of theoretical principles is modern, the appreciation of historical styles provides the basis for students to develop artistic statements of their own (Booyens 2016). The application of genre thus can form part of the instructive message, as the conventions aid in the reading process by acting as guides. A novel requires few typographic cues, however an ‘indexed book’ – such as an encyclopaedia – requires a great deal of such cues, and therefore the experienced typographer should also be an experienced reader (Schlatter 2015).

Contemporary book design seems to have two objectives: to fulfil the communicative goals of the content, and to be considered as an art in its own right. With production technology available now the scope for artistic goals is incredibly high and varied. Artists are able to make use of digital tools to make increasingly complex works, prototype designs, and develop new innovative forms. However, once an object’s aesthetics becomes its main feature, the purpose does change. Schlatter (2015) suggests that the digital medium is commanding, in how it directs a reader’s attention, whereas print can allow for more subtlety. This is not a statement on preference of format, but rather on the practical differences. The ‘format must fit the information, not the other way around’ (Booyens 2016).

Schlatter (2015) stresses the importance of a book designer’s ‘trained eye’, and expects students to physically engage with printed material by tracing out type and creating page layouts from physical strips of text. This is not an uncommon practice, as the industrial experience of established book designers often involves their familiarity with metal-type and/or film-stripping. Booyens (2016) comments that this experience influences the way a designer approaches a project. Physically working with material fosters a need for the application of structures, as well as discerning practical readability. It is universally agreed by the study

participants, textbook authors, and practising professionals that print layouts – though they may originate from a digital program – must be assessed in print, in the intended reading environment. The influence of the print medium – in the form of substrate texture, reflectivity, absorptions, colour mixes, and so forth; as well as the physical needs for space for fingers, possible notes, framing of content, and supplementary data – is so strong that it cannot be accurately assessed in a digital medium.

The participants all stated that an understanding of the norms of book design – in terms of margins, front and end matter, headers and footers, and paragraph conventions (including drop caps, hyphenation and so forth) – are there to create a recognisable design as well as to provide a foundation for experimentation.

No participant showed a preference for older methods of book design, but did stress the influence that older methods have on professional practice and style.

4.10. Conclusion

If one point can be agreed on based on all the data provided above, it is that the studied application of applicable theory is essential in order to deliver a focussed message, in which the reader is guided towards the intended understanding. This objective is beneficial to both the practice of efficient print design, as well as to the client.

The interviewees all considered that a basic understanding of the fundamentals of print design was vital, and it is this view that is reflected in Figure 15 by the strong focus on genre-convention. While creativity is encouraged, when designing for a client, the provided restraints provide the impetus for quality innovation in an established genre.

Booyens (2016) encapsulated a general impression that was gained from the interviews. He made a reference to ‘Grounded Theory’, stating that we should use a theory until it is no longer applicable. This describes the change in literature and in typographic media we see now. While many core aspects of the taught theory may remain indefinitely, wide-screen monitors require us to rethink horizontal space, while reflowable digital type requires us to make typography adaptive.

As long as the medium of creating and displaying type evolves, so too must the means in which we teach it. The base forms of the printed book have yet to be supplanted, however, it would seem that the primary function of the typographer has been.

Chapter 5

Conclusions



This dissertation is aimed at comparing the teaching curricula of different educational courses focussed on typography and book design in South Africa. As an educator in the field, yet not a graphic designer by trade, it is necessary for me to ascertain whether or not the approach taken in my own teaching is suitable to allow our students to liaise and co-operate with those in graphic design programmes. Through the use of a literature review, survey, and interviews I have been able to answer the research questions set out in Chapter 1. What follows are the inferred answers to those questions, and the summation of this study.

5.1. Historical conventions

The historical conventions of typography and book design are clearly valued across the surveyed institutions. However, given the focus on developing designers fit for industry, the courses do not approach the field from the perspective of print history, but rather as a source of inspiration for current projects, and to situate the profession of graphic design within the contemporary creative industry.

The core theory as identified in the literature review needed for typographic layouts is taught consistently within the design programmes, however, with a focus on modern production techniques. Modern literature makes reference to recent innovations, and to the influence of design stemming from photolithographic and digital technologies.

Given that the book design field has changed very rapidly within the twentieth century, the analysis of pre-twentieth century literature requires a different perspective. Modernist material (from 1950) may be interpreted from the perspective of visual arts, where the artistic merit and visual rhetoric are highly valued. Material from 1450 to 1600, is analysed as a history of an evolving craft establishing new conventions for itself and forming the basis of an international industry with established norms and trade routes. Between 1600 and 1950 the established industry can be studied as an interaction between various role-players and technologies. The formation of government unions, the development of new typographic styles, and the implementation of industrial technology led to new requirements for a changing industry.

These dates are provided as a guide to indicate that the study of typography and book design can belong to several fields, and its applicability to graphic design is only one part of its relevance as a field of study.

5.2. Historical conventions in contemporary literature

The education literature available for typography and book design reveals both artistic and technological trends. As a visual art, the study of design is possible from an aesthetic view. From the age of illuminated manuscripts to the creation of artistic books, book design is aesthetically

influenced by its surrounding context, and many books and curricula on the history of design reflect this.

The second point of view is one which I believe is inseparable from the above, and that is the development of the technology capable of producing books. Historical bookwork has always required a substrate with a long directional grain. Papyrus, parchment, and paper all accomplish this. The grain affects the directionality of the page, as well as the folding and page proportions (imposition). In Europe the rectangular shape of the text area, and its proportioned margins, was well established from the codex tradition (Janssen 2010, p.4) before the introduction of printing. Yet the processes involved in creating a letterpress reproduction are wholly dependent on maintaining that form, and the type and furniture also serve to maintain ‘traditional’ page layout.

With the mechanisation of typesetting in the 1800s, the process was improved, but still reliant on the physical forms of the cast lead. It is only since the introduction photocomposition and offset lithographic printing that it has been possible to break the mould of the traditional codex.

Ignoring typographic innovations such as changes of hyphenation, font usage, and illustration, book-page layout in printing history until the adoption of photocomposition may be confined by its technological constraints into an ‘era of the metal rectangle’ from 1450 to *circa* 1920.

Historic conventions drawn after this date may then be drawn from the actions and practices of individual designers and firms. Photocomposition and later digital composition allowed for the artist to be separate from the artisan, and allowed for the design of – and with – type for posters, notices, advertisements and public spaces independently from the book.

Trends and movements in design may all be studied in their own right, and it is for this reason that historic typography and book design may refer to the current practice of any given period tied to the technology producing it. More ‘traditional’ design may be drawn from ‘the era of the metal rectangle’ as it represents the departure point for innovation in the design of fonts, margins, punctuation, figure forms, illustrations, layout, proportions, and other factors.

5.3. The creative intent in South African typographic teaching

While the continuum of genre-based convention vs artistic expression may be a biased comparison of an integrated field (as it is made based on my own observations from the literature review), the respondents were still able to identify with the criteria and overall considered the teaching of genre-based convention to be the primary intent. The secondary average response was for an equal weighting between genre-based convention and artistic expression. This is in line with the description of graphic design graduates as ‘agile, highly skilled, and critical thinkers’ (see ‘4.4 Intended outcomes’).

It was common for ornaments, image placement, and binding methods to have a more artistic intent. For the first two, this is sensible as they may both be considered as decorating the textual space. Binding methods are not usually a place for creative expression in historical or contemporary book publishing, however, the rise in the popularity of artist books is the main source for inspiration, where the conventional binding is deliberately challenged by artists.

5.4. Student typographic assessment in South Africa

Student assessments primarily take the form of book projects where students are expected to produce a sample book design usually with a page extent of between 16 and 24 pages, in order to showcase their capabilities as editorial designers.

This book project is only one of many assessments, and students are also required to perform in-depth analyses of typefaces, as well as prepare typographic designs for a range of applications. These assessments are in line with the requirements for international typographic design.

The assessments are given in the form of project briefs where the students have a specific outcome, and are required to achieve that outcome through the use of individual, creative solutions.

5.5. The reflection of historical conventions in academic programmes

It is common for academic graphic design programmes to include a history component. As graphic design is now a multi-media profession, it is the requirement of programmes to teach all aspects of design, from furniture and fashion, to automobiles and appliances, and from books to magazines and films.

This requires that history syllabi cover a broad range of design fields, and focus on overall stylistic trends. With regard to typography and book design specifically, the practical nature of the projects requires that the students create a working publication, which is based on historic genre-defining characteristics.

The projects are an opportunity for the students to demonstrate their skills in the application of a design brief, and therefore while they may conduct their own historic research, given the need for contemporary application, no participants indicated that they required their students to create ‘historic books’, rather they must demonstrate their ability to apply creative skills successfully.

5.6. The influence of other media on typographic education

Somewhat unsurprisingly, the most frequently cited examples used in the classroom are those with high typographic content, and high visibility. Interior book pages, book covers, magazines, posters, advertisements, and signage were frequently cited examples with no other options being given. Websites and info-graphics were also cited as examples and this gives a defining insight into the work expected of graphic designers today.

Typography has expanded to every aspect of the modern world and cannot truly be confined to only book or print work. Surprisingly, no participant listed packaging as an influence – an ‘other’ category was offered for this possibility.

As information products continue to expand across digital platforms, it is essential for modern designers to be able to design for all possible platforms.

Print publications still seem to dominate the examples chosen by the participants, and this reveals an affinity to the print tradition and re-enforces the teaching of genre-based convention, as reflected in the survey.

5.7. Teaching typography and book design in South Africa

South African higher education institutions – likely owing to their close involvement with industry through collaborations – share a similar view of the teaching of typography and book design. This is notably a vocational and craft-based view. While emphasis is placed on a student’s ability to develop creative and artistic projects, it should be done in the context of practical implementation in a graphic product or creative campaign.

Assessments are varied with typography being valued as important, however it is applicable across the graphic landscape and applicable in a variety of media including film and interactive digital media.

Book design is valued as a skill, but is not essential. It is a chance for a designer to demonstrate their skills in manipulating an established paradigm around a highly valued form. However the primary skill is publication design, where the goal is setting long-form content in place in order to facilitate communication of a particular message. This manipulation of visual/verbal material to achieve a creative, cohesive and comprehensible message is the primary function of a graphic designer.

The term ‘graphic design’ has been used in this study particularly because of its acceptance as the general term for the profession. While communication design and information design are used to describe courses, graphic design is the primary term used now. In many ways it is an apt term, as the prized skill is the manipulation of visual information.

5.8. The changing role of typography and book design

Hypothesis: The teaching of book design and production has changed from a product and consumer centred craft to a producer centred means of artistic expression.

This dissertation began with the above statement, and it is my conclusion based on the findings of this study that it is mostly false. While typography and book design have become subsets of graphic design, graphic design itself is not a purely artistic craft. Graphic design has developed out of necessity from the industrial revolution to create mass communication of ideas, products, brands and so forth. It is thus not possible for the field to have purely artistic motives. The commercial design field provides space for creativity to be channelled into commercial ventures, but this requires that genre conventions are studied and applied.

The contemporary consumer, immersed in a world of designed products, should have developed the necessary visual literacy to engage with graphic design products, and especially in our contemporary period of strong branding and individuation of companies and styles, the perceived shift of book design's consumer/client focus changing, is rather a result of increased consumer expectation.

This is what is reflected in modern educational programmes. Owing to the amount of innovation and development occurring within the design field, it is necessary to assist new designers in their creative and individual stylistic development, however this can only occur if said designers are capable of interpreting client briefs appropriately with sensitivity for the tradition they are contributing to.

Typography and book design are exciting areas for a designer to experiment in. Owing to their rich tradition, they provide a firm platform for innovation and experimentation. Artist books have an elevated position in the fine arts, and represent a fine benchmark for artistic development, however, the primary goal of education programmes seems to be – as inferred from their outcomes and projects – to produce not artists, but artisans, capable of being employed and contributing to the creative industry.

In truth, it seems that rather than producing typographers and book designers capable of producing standard books, we are now producing artisans capable of rising to any challenge.

5.9. Limitations of the study

Collection of primary data began in November of 2015 and completed in April of 2016. The surveyed participants were carefully targeted in the period following second semester exams and before the beginning of the following academic year when teaching preparation would be a priority, and therefore the study of potential interest to them.

This chosen time frame unfortunately also coincided with many prospective lecturers taking vacation leave, and was then further disrupted by nation-wide student protest action in the beginning of 2016. For this reason, many respondents who indicated their desire to participate were dealing with the effects of the academic year being disrupted by over four weeks (periods differed between the institutions).

The study therefore cannot provide a comprehensive profile of the teaching intent behind South African tertiary typography and book design teaching, however the base profile provided here is capable of improvement with further participation. What this study does provide is a qualitative analysis which may be used and expanded upon for future study.

The study was also affected by a misunderstanding on how to answer section C of the questionnaire (see appendix). Most respondents did not read the instructions provided and only filled in half the table, and did not respond when asked to complete it. As a result of this, it is not possible to provide commentary on the educational approach taken by the institutions directly.

The literature on the subject matter is also influenced by a heavy British and US bias. The available literature on Typography as a craft has much literature written on it in other European languages, and I am not sufficiently proficient in the languages to provide a full typographical history. What literature is available in the crafts of Arabic, Slavic, Korean, Japanese, and Chinese printing, is also largely inaccessible to me owing to the same limitations. However, while useful for background

information, given the history of South Africa as a European colony, the greatest limitation comes from the non-inclusion of Dutch and German sources.

5.9.1. Limitations of focus

Given my own professional practice in the teaching of book production, my own view of the process is unavoidably biased by my own curriculum. In South Africa, a vibrant visual culture exists and graphic design is a highly prized skill, especially in the fields of marketing and advertising. The current capabilities of printing for non-book purposes are also so widely varied that the design and creation of books is a small contributor to South Africa's economy. As a result the teaching of typography and book design must be minor, and focussed more on typography for advertising and corporate identity. Given the nature of the professional applied design industry I have found it necessary to research the teaching intent as the base theory for book work, as it can be and is applicable to all other fields of print-based design.

A future iteration of this study may wish to address the continuum of genre-based convention vs artistic intent, as this survey seems to validate the intention of producing employable creative artisans. All instructors considered that a firm grasp of the foundational theory was essential.

5.10. Value of the study

The base value of this study is undoubtedly in its analysis of teaching intent. As far as I have been able to tell, this may be considered to be a new field of study, supplying original results. By focussing on the intent and intended outcomes of study programmes this study makes use of both official and personal information and indicates the motivation of the individual educators. By studying educational programmes in this fashion, it is possible to describe programmes in terms of their teaching philosophy and intended outcomes. That is to say a programme with a particularly artistic focus will stand out against one with a stronger vocational focus.

The scope of the creative industries is wide, and when entering the industry, it is important for an educational programme to be clear on its intended hope for the successful student.

What this study shows is that while different programmes may be constructed differently, and may emphasize some theoretical aspects over others, the overall intent behind the theoretical components identified for the study is largely similar.

It is therefore interesting to note that whether by design, coincidence, or industry pressure, the academic response to this survey is largely similar, and, one would like to think, co-operative.

It is hoped that the graphic means by which the shared intent of survey respondents was assessed may also be seen as a useful and valid method for assessing qualitative results and describing shared and divergent opinions.

5.11. Recommendations for further study

This kind of study would greatly benefit from increased participation. While qualitative, the accuracy of the study requires as much participation as is possible. With a more complete profile of teaching intent in Figure 15 and Figure 16 it would be possible for respondents to compare their own 'genetic' profile to that of the group and identify how they compare.

It is also possible to address the theory presented in this study in a more direct fashion, such as by assessing the historical development of typographic teaching syllabi across select institutions. This could also be compared to what teaching material is available from the South African Typographic Union (SATU). By comparing the the development of universities with the development of the SATU it may be possible to trace how typography and book design studies made their way into academia. This type of material would allow for the writing of materials similar to those assessed under '3.5.2.3 Training by official bodies'.

In terms of secondary research, it is possible to further combine and compare theoretical sources from different eras, and practical approaches. Page layout strategies, typeface design, software tools, and programme

histories are all areas of research in their own right, and these may be explored almost indefinitely.

It is also possible to study typographic practice from an industrial perspective, rather than a visual one – as is the main practice for practical teaching programmes. Typography as an industry, in terms of the historic trade and distribution of fonts, as well as modern licensing also form their own field of study. Harry Carter (1969) in *A View of Early Typography up to About 1600*, addresses this early history in Europe, and a similar process could be followed to analyse the development and distribution of typographic tools and expertise in South Africa from about 1800, using records from mission presses, and records from SATU, among others.

5.12. Final thoughts

Graphic design is a valuable skill which has an impact in nearly every facet of our lives. Book design specifically has always been a field unto its own. In its inception in Europe from 1450 the codex form was already a valued format, treated as an object of beauty.

The function of books has only improved and increased with time, and today in the face of digital technologies we find the very definition of a book being questioned.

The field of typography and book design is one that has not only been subject to the advancement of technology, but also to the changing of hands. A task once restricted to an educated elite, is now achievable using ubiquitous and commonplace tools.

We engage with typography in our learning materials, our computers, our medication, and on our appliances. It is thus only logical that the training associated with it must develop and change.

Approaching the field from the perspective of publishing studies can bias one's view to applicable and marketable trends. That is to say, this study comes more from an industrial and practical perspective, than from a design perspective.

In this dissertation, books have been viewed from the historical perspective as a pinnacle of craft work. It is a profession based on diligence, tradition, and ingenuity. However, in the graphically rich world in

which we find ourselves today, it is but another medium, one that can be supplanted, and one that can be re-interpreted, and one that still has value.

It is not necessary for us to focus our artistic efforts solely on the creation of books. The medium of typography developed from the book has provided the backbone for the design industry, as well as the information industry. Book design is a valuable practice, but it is one of many, and the family of media which are influenced by it, are no less important, nor are they any restrained by the same laws of convention.

The shared theoretical backing that forms the basis of all communication design principles can be applied to a variety of media, and even if the book is still held as the pinnacle of typographic craft work, it is not the only champion.

In an academic world of infinite disciplines, it is fully acceptable, and perhaps necessary for the practice of graphic design and typography, and the study of books (and its related visual elements) to be approached from different directions. Graphic design is a tool for contemporary industry, while the study of book design is a pursuit for academia.

From the viewpoint of commercial publishing perhaps it is safe to say that that which sells is correct and consumable. While from a design perspective one might see the changing of styles as reflections of changing public perceptions and expectations.

It seems to me that as long as we have artisans who have appropriate technical, creative, and informed training, which allows them to create informed designs, we will be able to continue the traditions of the book.

This study indicates that this is currently happening at several South African tertiary institutions, and while current students may not be re-creating the work of Ritter, Caslon, or Gutenberg, they are likely capable of doing it using their contemporary technologies.

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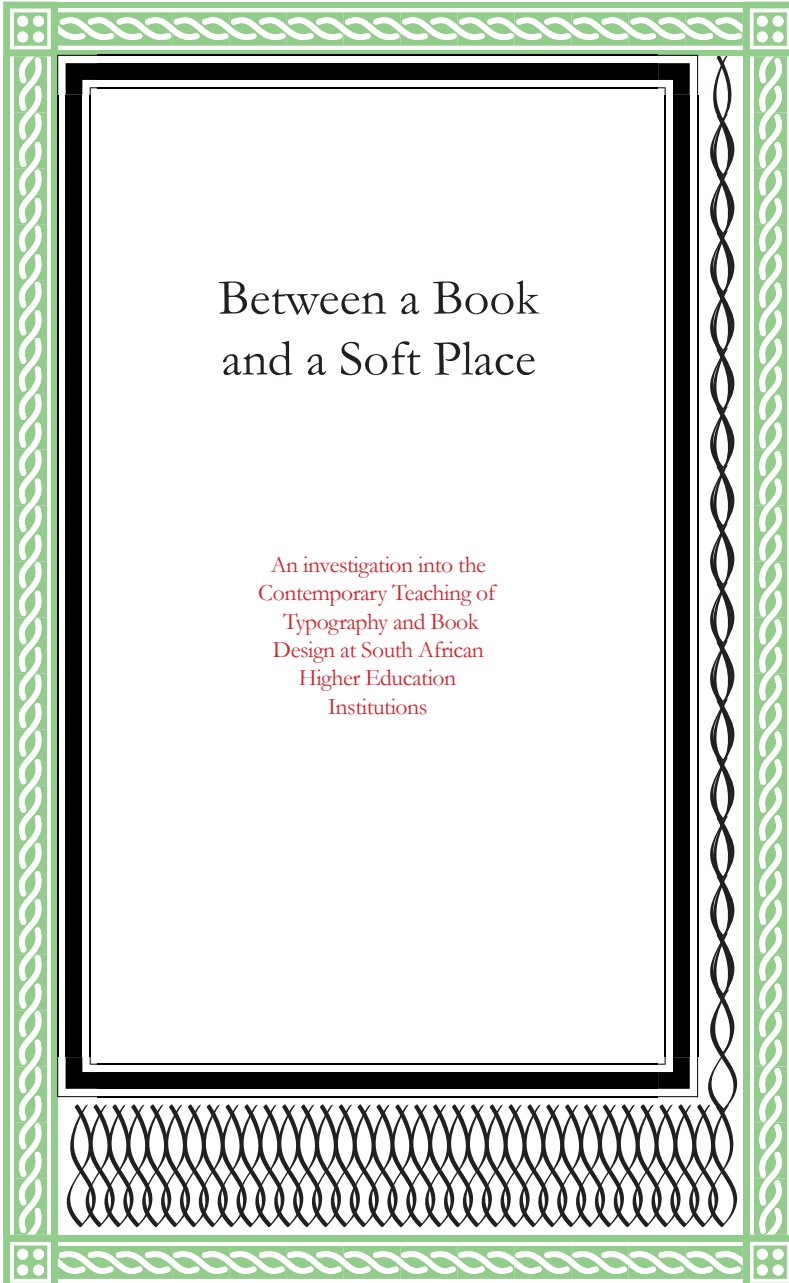
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Appendix 1 – Survey Questionnaire



This is an interactive PDF intended to be answered and submitted digitally. All text fields are active and the form may be submitted clicking either via the ‘submit form’ button in Adobe Reader or with the corresponding button at the end of this form.

This form may also be printed* for your own records or to fill in physically – in which case please scan it and e-mail back to the researcher.

* It is recommended to print at actual size, double-sided, and to trim and bind accordingly.



Good day,

My name is Liam Borgstrom, and I am currently conducting a Master's degree in Publishing in the Department of Information Science at the University of Pretoria, under the supervision of Dr Beth le Roux, on the topic: *Between a Book and a Soft Place: A study of typography and book design, and its relation to technological change and training in South Africa*. My research aims to examine the teaching of book design in South Africa. ¶ This questionnaire is aimed at the course co-ordinator who is responsible for setting and/or deciding upon the curriculum as well as the assessment criteria. ¶ If you know of anyone else who may be able to contribute towards this study, would you please forward me their details, and I will then distribute the questionnaire accordingly. ¶ By pressing 'Submit' or 'Agree to participate' below, you are voluntarily granting permission for me to use the research results generated. You have the right to choose whether to participate in this research project and the right to withdraw if you so wish. All information provided will be regarded as confidential and identifying information will be used only as a means to track submissions. All data collected from this study will be collated and anonymized. You should be aware that the results of the investigation may be used for the purposes of publication. ¶ If you have any queries about the nature, objectives, or possible safety and health implications of the study, please contact me. ¶ I would like to thank you in advance for your co-operation in this study.

Agree to participate

Do not agree to participate

Contact details of researcher and supervisor

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Section A — Screening

1. Does your institution teach type and <i>print</i> design (not print making, specifically production of long pieces of text) in a: (select most appropriate)				
Project (e.g. making a book)		Module (e.g. INO 230 Book Production)		Other:
yes	no	yes	no	
2. Does your course specifically offer a typography and <i>book</i> design:				
Project (e.g. making a book)		Module (e.g. INO 230 Book Production)		Other:
yes	no	yes	no	
3. Your institution			4. Title of programme (or name of qualification)	
5. Division within institution (e.g. Department of Visual studies, Faculty of Humanities)			6. Extent of teaching (e.g. semester module, week project, honours portfolio...)	

If you would like to receive the outcomes of the research, please fill in your contact details:

Name	
E-mail address	





Section B — Programme details

1. Course description

Please provide a link to or brief description of the overall aims of your typography and book design course.

2. Narrative of instruction / methods

Describe in short how the course is presented from your point of view. E.g. Is it primarily a vocational course, or intended to promote academic study?

3. Intended outcomes of course

What are your aims with this programme? For instance, what are your expectations of your students? Does the programme try to create a specific type of material, or instil a certain value system?

4. Syllabus development

Describe in short the development of your book design programme.

5. Assessment

Please provide a link or description for the primary book design (or book design related typography) assessment task.

6. Reference material

Do you prescribe any textbooks, journal articles or developed readers for this course? Yes / No. If yes, please list the relevant title(s).





7. Class material

Do you provide any other reference material (e.g. classnotes, video tutorials) for book design and typography? Yes/No. If yes, please list the relevant title(s).

8. Software tools

Indicate what, if any, software is used for working on book design in your book design and typography programme.

9. Other media influence

Do you teach any other media relating to typography e.g. kinetic typography, website design, environmental type, logo design? Yes/no. If yes, please give a short list of the media.

10. Examples used

Please rank in order of preference what types of content you like to use as examples of typography and book design. (1 = most used, 2 = frequently used, 3 = less frequently used, and so forth... n/a = not used)

<i>Example media</i>	<i>Rank</i>
Posters	
Advertisements	
Informative graphics (e.g. road signs, public notices)	
Book covers	
Interior book pages	
Signage	
Animation	
Games	
Websites (referring to the site itself and original material, this excludes not third-party material as found on e.g. a meme aggregator or video site)	
Magazines	
Other (please specify):	
Other (please specify):	
Other (please specify):	
Other (please specify):	
Other (please specify):	





Section C — Programme components

For each of the possible components of a book design course indicated below, please indicate to what extent your teaching emphasises either genre-based conventions (i.e. this is taught based on recurring uses as seen in the genre e.g. novel, autobiography, mathematical schoolbook, cookery book) or developing individual artistic expression (i.e. this is taught as a manipulable tool for creative function). The scale below indicates a continuum, where:

- 1 is strongly genre-based,
- 2 is somewhat genre-based,
- 3 is a balance between the two elements,
- 4 is somewhat artistic, and
- 5 is strongly artistic.

If you do not teach one of the components at all, please tick “Do not teach.”

The second part of the table reflects the aspects of design theory that you may be teaching: the genre, stylistic and historic usage and development of a component; the theory of its current application; or as a feature of the design software you are using. If you are teaching a component, please select which supporting aspects of the design component you are teaching in your current syllabus (you may select more than one, though it should be an explicit part of the syllabus).

Components	Genre-based convention		Individual artistic expression		Do not teach		Genre, stylistic and historical aspects	Theory only	Feature of software
11. Typography									
Type classification	1	2	3	4	5	n/a			
Ligatures	1	2	3	4	5	n/a			
Serifs	1	2	3	4	5	n/a			
Point size	1	2	3	4	5	n/a			
Italic	1	2	3	4	5	n/a			
Bold	1	2	3	4	5	n/a			
Oblique	1	2	3	4	5	n/a			
Leading	1	2	3	4	5	n/a			
Kerning	1	2	3	4	5	n/a			
Tracking	1	2	3	4	5	n/a			
Justification	1	2	3	4	5	n/a			
Rag design	1	2	3	4	5	n/a			
Hyphenation	1	2	3	4	5	n/a			
Optical margins	1	2	3	4	5	n/a			
Drop caps	1	2	3	4	5	n/a			
Ornaments	1	2	3	4	5	n/a			
Figure forms	1	2	3	4	5	n/a			
Relative measurements	1	2	3	4	5	n/a			

							aspects		
12. Layout									
Margin size	1	2	3	4	5	n/a			
Margin ratios	1	2	3	4	5	n/a			
Text-wrap	1	2	3	4	5	n/a			
Gutters	1	2	3	4	5	n/a			
Colour usage	1	2	3	4	5	n/a			
Line-length	1	2	3	4	5	n/a			
Image placement	1	2	3	4	5	n/a			
Order of book content	1	2	3	4	5	n/a			
Indexes	1	2	3	4	5	n/a			
Glossaries	1	2	3	4	5	n/a			
Boxes	1	2	3	4	5	n/a			

13. Book specifics and extra features

Front matter	1	2	3	4	5	n/a			
End matter	1	2	3	4	5	n/a			
Headers	1	2	3	4	5	n/a			
Footers	1	2	3	4	5	n/a			
Main matter	1	2	3	4	5	n/a			
Cover materials	1	2	3	4	5	n/a			
Binding methods	1	2	3	4	5	n/a			
Block finishes	1	2	3	4	5	n/a			

14. Aspects for printing

Substrate types	1	2	3	4	5	n/a			
Environmental impact factors	1	2	3	4	5	n/a			
Ink types	1	2	3	4	5	n/a			
Printing methods	1	2	3	4	5	n/a			
Print estimating	1	2	3	4	5	n/a			
Paper finishes	1	2	3	4	5	n/a			
Paper materials	1	2	3	4	5	n/a			
Colour usage	1	2	3	4	5	n/a			

15. Other (continued on next page)

	1	2	3	4	5	n/a			
	1	2	3	4	5	n/a			
	1	2	3	4	5	n/a			
	1	2	3	4	5	n/a			
	1	2	3	4	5	n/a			



Components	Genre-based convention			Individual artistic expression			Do not teach	stylistic and historical aspects	Theory only	Feature of software
	1	2	3	4	5					
	1	2	3	4	5	n/a				
	1	2	3	4	5	n/a				
	1	2	3	4	5	n/a				
	1	2	3	4	5	n/a				
	1	2	3	4	5	n/a				



Thank you for your assistance

Appendix 2 – Total References Provided by Respondents

www.behance.net

www.commartts.com

www.commartts.com/CA/interactive

www.computerarts.co.uk

www.core77.com

www.designfloat.com

www.designiskinky.net

www.graphicdesignforum.com

www.ilovenetwork.com

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Foges, C. 1999. *Magazine design*. RotoVision

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- Losowsky, A. 2010. Turning pages; Editorial design for print media. Gestaltiin
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- Rabinowitz, T. 2006. Exploring typography. New York: Thomson Delmar Learning
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- Saltz, I. 2009. Typography essentials. Massachusetts: Rockport Publishers
- Studio 3. 2010. Hyperactive typography from a-z. Gestalten

Appendix 3 – Interview Schedule

SCREENING

1. How long have you worked in the field (book design/typography/typesetting)?
2. Where/how were you trained?
3. Did you have any books or other such material to assist you in your training?
4. What systems (metal type/ photosetting/digital typography) have you worked with?
5. Have you done any bookwork other than composition, such as binding, plate making, or printing?

APPLICATION

Note: These questions are created to apply to both educational and professional circumstance where they may overlap. Changes may be made to focus more towards the subject's area of activity.

6. What do you consider as important for setting book content from a design perspective?
7. Where do you get inspiration for your book work?
8. Do you find that previous technologies have influenced how you produce your work? If so, how? If not, why not?
9. Do you think an understanding (if not appreciation) of older books and their production is important? How [not] so?
10. Do you have any criticisms of modern, digitally designed books? Or of modern designers?
11. Do you have any criticisms of older books, in terms of production?
12. What do you think is important, if anything, about the book as a medium? Is there something special about the medium, or can it not only be replaced by digital, but adopt the visual cues of digital media?

Appendix 4 – Interview Consent Form

(Form for research subject's permission)

1. Title of research project: A study of the training of typography and book design and its relation to technological change in South Africa
2. I hereby voluntarily grant my permission for participation in the project as explained to me by Liam Borgstrom
3. The nature, objective, possible safety and health implications have been explained to me and I understand them.
4. I understand my right to choose whether to participate in the project and that the information furnished will be handled confidentially. I am aware that the results of the investigation may be used for the purposes of publication.
5. If a recording device is used, I grant permission for my participation to be recorded.
6. Upon signature of this form, I will retain a copy.
7. Data in this study is intended to be anonymized through the aggregation of perceived opinions, however it may become useful for the researcher to make use of direct and/or indirect quotations. I understand that I will not be identified in this research except in the following cases where I:

(please select one option, or leave both blank)

- allow the researcher to cite me as a data source in a direct/indirect quotation
- or allow the researcher to cite me as a data source in the bibliography only.

Signed: _____ Date: _____

Witness: _____ Date: _____

Researcher: _____ Date: _____

Thanks for reading