TECHNOLOGY AND DESIGN:
VANCOUVER MAGAZINE BEFORE AND AFTER
DESKTOP PUBLISHING

by

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ABSTRACT

This report examines the nature and dynamics of the relationship between technology and design on a practical level. Prompted by technological innovation, the report investigates the ways in which technological change appears to influence the practice of design.

On a theoretical level, this report draws on the work of Herbert A. Simon who provides insight into the impact of technology on design. On a practical level, the report advances the relationship between technology and design by detailing the major influences of desktop publishing on publication design in the early years of its implementation.

The manifestation of technology in design is explored through an analysis of the design of Vancouver Magazine, as well as an examination of information gathered directly from the past and current art directors of Vancouver Magazine that were present before, during, and after desktop publishing to provide context to the observed changes in production technologies and their influence on the design of Vancouver Magazine.
DEDICATION

I would like to dedicate this work to my parents, Dimitri and Galina Alpatoff, and my husband, Sean MacNeill, who have all inspired me in my intellectual endeavours. I will forever be in debt to their love and support.
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CHAPTER ONE

Introduction

This report examines the nature and dynamics of the relationship between technology and design on a practical level. The research is qualitative in nature, consisting of collected information from journals, articles, books, the Internet, and email and phone responses from art directors.

Prompted by technological innovation, the study investigates the ways in which technological change appears to influence the practice of design. The main argument of the report is that there is a direct relationship between technology and design. Drawing primarily on the work of Herbert A. Simon, it is argued that aesthetic and functional considerations should not be separated in design and that the options for these two elements of design are dictated by the inherent qualities of the technology of production.

The study is divided into four main sections. The first section examines the social, cultural, political, and historical influences on design and their impact on contemporary practice. Thereafter, the section sheds significant light upon approaches and attitudes toward the nature and dynamics of the relationship between production technology and design.

The second section presents a timeline of digital production technologies that appear to have changed the face of publication design and still continue to shape it today. It discusses the influences of changing digital production technologies and methods appropriate to the practice of publication design.

The third section uses Vancouver Magazine as a specific case study to further evaluate the nature and dynamics of the relationship between production technology and design. It
examines the changes in the design of the magazine before and after the widespread adoption of desktop publishing in the mid-1980s. But in spite of this technological premise, the discussion bears in mind that technology might have an influence but is not the cause of such changes.

The third section is divided into two parts. The first part analyzes information gathered directly from the past and current art directors of *Vancouver Magazine* that were present before, during, and after the arrival of desktop publishing. A structured email interview was used to gather data from the art directors, including their attitudes about the nature of the relationship between the introduction of digital production technologies and the design of *Vancouver Magazine*, as well as their opinions of whether changes in digital production technologies altered the way that they approached the design of the magazine.

In order to better understand the implications of digital production technologies on the design of *Vancouver Magazine*, the second part examines the changes in the design of the publication before and after the advent of desktop publishing in relation to changing digital production technologies.

The fourth section summarizes the main argument and key points of the report. Working from the information gathered, conclusions are drawn regarding the nature of the relationship between digital production technologies and the design of *Vancouver Magazine*. The objective of the study is to contribute to a greater understanding of how the technology employed in the production of *Vancouver Magazine* has influenced the changes to its design.
The Influences on Design

Design is everywhere in society. It permeates every object in the material world. As Margolin notes, “Design determines the shape and height of a shoe heel, the access to computer functions through software, the mood of an office interior, special effects in films, and the structure and elegance of bridges” (1989, p.3). Everything in society is designed — magazines, newspapers, books, movies, commercials, billboards, product packaging, clothing, furniture, buildings, and automobiles.

Design can be analyzed at an aesthetic level that concerns itself with the visual appearance of an object. But design extends far beyond simply an aesthetic level to a social, cultural, economic, political, historical, and technological context. While design can be said to be largely about aesthetics, the practice of design is a product of social, cultural, economic, political, historical, and technological influences. It is important to gain a broad perspective on how these factors influence design and vice versa. By understanding the relationship between these factors, it is possible to build a sense of continuity and context in the practice of design.

The Social, Cultural, and Historical Influences on Design

Designers bring their own personal style and individual taste into their creations. They take their inspiration from outside their profession as well. Their study of the world around them carries over to the decisions they make about design. According to Hurlburt, “Today’s graphic designer cannot ignore the forces within and without his field that have influenced the form and function of page-layouts” (1977, p.9). There are many forces that influence design: individuals, art movements, schools of thought, culture (i.e. design in Canada versus South Africa), the marketplace, the goal of the client company, and the palette of the environment (i.e. summer weather versus winter weather), to name a few areas.
Design reflects the prevailing aesthetic of the time, as it conforms to tastes in fashion, art, and architecture. Something as simple as fashion in clothes, for example, can influence graphic design. As Nelson points out, the layered look in fashion relates to the boxes within boxes that some designers use when creating magazine layouts (1987, p.35).

Although a variety of factors contribute to the general aesthetic, the revival of styles from the past is a customary source of inspiration for designers. Since trends are cyclical in nature, design classics from earlier periods re-emerge and influence design decisions today. For example, graphic designers use typefaces that mimic old typewriter typefaces for newspapers and magazines. And industrial designers use materials such as translucent plastic and brushed chrome to mimic the retro look of the 1950s and 1960s.

The Political Influences on Design

The political environment influences design as well. As Pile suggests, “Design exists in the social milieu and is responsive to the social, political, and economic ideologies of the time” (Woodward, 1995). This responsiveness to the social, political, and economic ideologies of the time is displayed by either accepting the status quo or rejecting the current state of affairs. Such a phenomenon is best illustrated in the early twentieth century art movements in Europe.

According to Meggs, the art movements such as Cubism, Futurism, Dadaism, Surrealism, de Stijl, Suprematism, Constructivism, and Bauhaus attempted to liberate design from its traditional restraints (1983, p.274). But such attempts to liberate design were not always looked upon favourably. To illustrate, right-wing German authorities in the early 1920s favoured classic typefaces and disliked the use of sans serif fonts by the Bauhaus, perceiving it as a break from tradition. Attempting to change the typography in a society that strongly valued tradition was not taken well. But it was this type of radical departure that helped define the Bauhaus as the creators
of the modern style in design (Hurlburt, 1977, p.47). Due to the political situation, the Bauhaus was forced to leave Germany in 1925 as well as close its art school in 1933.

Like other prominent art movements of the early twentieth century, the Bauhaus had a significant impact on the development of design in the twentieth century. The Bauhaus directly shaped the graphic language of form and visual communications in the twentieth century, as well as pioneered production techniques and stylistic devices that are still used today. Their avant-garde ideas and techniques played a major role in bringing current design to where it is today. The influences of the Bauhaus are varied and widespread and can still be seen in all forms of printed matter, including books, magazines, advertisements, and brochures. There is little doubt that design still continues to be strongly influenced by many periods, art movements, and individuals from the past.

The Technological Influences on Design

Debates regarding the impact of technology on society have been pursued in a variety of books and articles. For example, Feenberg (1999) investigated the relationship between technology and society through the theoretical perspective of technological determinism. As this report attempts to establish a relationship between technology and design, it is important to discuss the impact of technology on society through the technology-led theory of technological determinism.

The theory of technological determinism relates to the studies of Marshall McLuhan (1911-1980), the founder of modern media studies. Discussions around technology often call forth McLuhan’s conviction that specific technologies help shape certain forms of social change (King, 1999). Technological determinism casts technology in a cause and effect relationship in which technology is the cause of change in society. In other words, social change is the result of innovations in technology.
In the book *Understanding Media* (1964), McLuhan argues that technology is a dominant force that “shapes and controls the scale and form of human association and action” (1964, p.9). It is not the technology that is important, but the way in which people choose to use the technology. From this perspective, the Internet is an agent of social change. The way that people use the Internet to communicate and find information changes the way that they interact with each other.

According to Feenberg, McLuhan’s technological determinism is parallel to traditional Marxist approaches of economic determinism. Marxists argue that the economy is an autonomous force subject to natural laws and therefore resistant to control. Technological determinism follows a similar logic in that technological development follows its own course of action and just appears out of the blue with little, if any, input from its creators or intended users (Feenberg, 1999). From this perspective, human choice is diminished in controlling the direction of technological change. Because technology is disconnected from human influence, it is neutral or value-free to such an extent as it merely fulfils natural needs (Feenberg, 1999).

A number of scholars have criticized technological determinism for failing to acknowledge human action in the creation of technology. The process of creating technology and getting it into the hands of users is largely ignored. Technical improvements do not shape in any simple way the appearance and the function of technical objects, but in fact designers play a central role in the design and use of technology.

A key feature of technological activity is the ability to design. And this means that technological activity would not exist without human activity. In creating technical objects, designers influence society based on their design decisions. Technology is socially constructed, not determined by science and engineering alone but shaped by social forces, along with cultural, economic, and political factors.
Despite the criticism regarding technological determinism, it is difficult to ignore the fact that technological innovations such as the printing press, television, telephone, plane, and automobile have all shaped society in clear and definable ways. For example, the automobile caused a number of changes in society from the creation of suburbia to the paving of farmland and forests to the creation of pollution.

Following this line of thinking, technological innovations have an impact on design in society. The introduction of lithography in the eighteenth century influenced the design of posters. Invented by Alois Senefelder in Bohemia in 1798, lithography was a printing process that generated images and text for reproduction by placing ink on a series of metal or stone carvings (Lupton, 1998). Early lithographs were done in black ink. But within a few years of its invention, the lithographic process was done in colour to create multi-colour printed images.

Before the introduction of lithography, posters were metal engravings or woodblocks with mostly text and few images or colour. According to Lupton, lithography enabled designers to draw images with a crayon or brush for reproduction directly onto printing stones and plates or on transfer paper (1998). For the first time, designers were able to combine type and images with vibrant colours. Where text dominated earlier posters, those produced with lithography had more images and colour. The ability of lithography to combine type, images, and colour greatly impacted the design of posters.

Cyberspace is another example that shows how technology has influenced design. A virtual reality within computers and computer networks, cyberspace has influenced the design of typography and fashion. The Internet has allowed for the creation of innovative forms of typography unique to cyberspace such as Multi User Dimension Object Oriented (MOO), a text-based virtual environment that people can work on together to build into a new kind of community, and Multi User Dungeons (MUD's), a multi-user, interactive fantasy game that simulates a terrain through textual descriptions. With the invention of cyberspace, it was
necessary for designers to create new forms of typography such as animated and dimensional type.

Cyberspace has influenced fashion design as well. The creation of cyberspace has spawned science fiction movies such as The Matrix, a film based in a virtual reality constructed in cyberspace. The characters in these science fiction movies wear fashionable designs that reflect how society sees itself in the future. Fashion designers draw creative inspiration from cyberspace, which in turn influences their design decisions.

The impact of technology on design is further illustrated through the work of Herbert A. Simon (1916-2001), a prominent figure in the area of computer science, organizational development, and artificial science. In the book *The Sciences of the Artificial* (1969), Simon proposes a theory of design based on the science of design, which he calls artificial science to distinguish it from natural science.

In making a distinction between natural science and artificial science, Simon argues that natural science such as physics, biology, and chemistry is concerned with knowledge about natural objects in the world; about their characteristics and properties; about their behaviour and interaction with each other (1969, p.1). Unlike natural science, artificial science such as engineering, medicine, business, and architecture is concerned with knowledge about artifacts or human-made objects in the world; about the way that they adapt to the goals and purposes of the designer. For Simon, artifacts have desired properties to the environment in which they live (1969, p.4). While natural objects such as trees and flowers are given, artificial objects such as computers and automobiles are human-made.

In contrast to the natural scientist who studies natural objects such as birds and fish by the methods of natural science without any particular attention to goals, the engineer, and in particular the designer, is concerned with how artificial objects should be in order to fulfil certain goals. Artificial objects differ from natural objects precisely because they function in relation to a
particular goal. From this perspective, artificial objects would have been different had the goals been different.

Simon has broadened the notion of design by pointing out that “everyone designs who devises courses of action aimed at changing existing situations into preferred ones” (1969, p.111). This clear statement of design as a practice focused on how to do things to accomplish a particular goal is valuable, as it suggests that anyone who formulates programs of action to change existing states to preferred ones is involved in the design process.

From a historical perspective, the design of artifacts is an activity that has been carried out for centuries. It is practiced by disciplines not only related to the production of artifacts such as engineering and architecture, but also those disciplines related to formulating programs of action aimed at changing existing situations into preferred ones such as medicine and business—all of which are centrally concerned with the process of design. Design is central to any discipline that intentionally transforms the world in one way or another.

Simon further frames artificial science in terms of an inner environment, an outer environment, and the meeting place between the two environments to achieve a particular goal. An artifact has an inner environment—how the artifact is organized and how it operates—and it is placed in an outer environment—the external forces and effects that act upon the artifact. For Simon, the inner environment of an artifact and the outer environment in which it performs operate in accordance with natural laws (1969, p.6). This suggests that artificial science must complement natural science in that artifacts must not be in opposition to nature to function properly.

The inner environment of an artifact must realize the goals of the outer environment. The designer must shape the artifact in such a way that it is both purposeful and functional. If the inner environment of the artifact is appropriate to the outer environment in which it operates, the designer will have succeeded in making the artifact into what it should be (Simon, 1969, p.6).
Anything human-made such as a clock is an example of an artifact. The inner environment of a clock is its internal construction and the outer environment is the force that acts upon it to mold it. If a clock is intended to serve as an instrument for measuring time with accuracy on a ship, it will not only require an inner design that records and measures time, but it will also have to operate in an environment in which the motion of the ship is tolerated.

An automobile is another example of an artifact. If an automobile is intended to bring a person from point A to B, it will not only require an inner design that has an engine and seats for passengers, but it will also have to operate in an environment in which it can handle the harsh elements of the environment such as rain and snow. If the automobile is designed in such a way that it can be adapted to its environment (i.e. snow tires, wind shield wipers, etc.), the designer will have succeeded in making it function in relation to a particular goal.

Simon's claim that an artifact has to be adaptable to its environment implies that the design has to take into account the context of human action. Designers play a central role in the design of artifacts, while users make use of them. Where there is an artifact, there is human action in creation and use.

An artifact is characterized in terms of its goals and functions. To so characterize an artifact is to affirm the notion of functionalism in design — a powerful theory in the literature of architecture and design. Functionalism in design has its roots in the social theory of functionalism, which in turn has its roots in the writings of sociologists Herbert Spencer (1820-1903) and Émile Durkheim (1858-1917) (Anderson & Kaspersen, 2000, p.215). Spencer and Herbert compared society to a biological organism: a system of interdependent parts all of which make a contribution to the overall working and sustenance of the system (Anderson & Kaspersen, 2000, p.215). In short, the form of an object is explained in terms of the function it performs or the contribution it makes to an overall system.
Functionalism in design is found in architecture. There it expresses itself as a philosophy of design, holding that an object’s form or dimensional appearance should be adapted to usage and material (Anderson & Kaspersen, 2000, p.214). If the function of a chair is to support a person sitting on it, the form must be a horizontal surface and a vertical surface resting on a frame. The chair is strictly functional in its appearance with no embellishments or decorations added to its form. This suggests that function is the primary consideration at the expense of aesthetic considerations.

The major idea behind functionalism in design is the notion of form and function. In 1896, the American architect Louis Henri Sullivan (1856-1924) coined the phrase “form follows function” in architecture, implying that function precedes form; that it exists independently before form appears (Pile, 1979, p.67).

Outlining the principles for designing a building, Sullivan proposed that design should indicate the functions of a building and that, where the function does not change, the form should not change; thus the famous motto “form follows function” (Janson, 1982, p.7). The main point is that there should be a reason for a building looking the way that it does.

The slogan “form follows function” became a maxim for architects and designers of the modernist movement. For example, the Bauhaus art movement in the early 1920s defined modern design based on a strictly functional paradigm.

As Pile suggests, “The most basic idea of functionalism — the view that a thing must do what it is intended to do — can be seen to be almost universally accepted” (1979, p.68). But accepting this theory does not mean that aesthetic and functional considerations should be separated in the design of things. As Woodward proclaims, “It means that the functional value of an object must be part of the design solution in the same way that the aesthetic value is part of the solution” (1995).
There is little doubt that a design task requires a process of searching for a functional as well as an aesthetic solution that can be reached in a practical and effective way. The shape of an object must not only serve a useful purpose, but it must also be attractive to the user. The way that a person feels about an object influences how successful he or she will be in using it. A person required to use an object that he or she does not like because of its appearance will be unhappy, no matter how well the object works. Because function and aesthetic are both part of the design process, these elements must not be separated in the design of objects.

The view that aesthetic and functional considerations should not be separated in the design of artifacts is consistent with Simon's theory that every production technology carries with it its own functional and aesthetic potentials. The theory establishes a strong relationship between the technology of production and an artifact's functional and aesthetic potentials. The technology of production is the part of the outer environment of the artifact, while the artifact's functional and aesthetic potentials is the inner environment of the artifact represented by the actions of the designer.

Simon's theory further suggests that the options for function and aesthetics are set forth by the inherent qualities of the technology employed in production. To illustrate, a hammer is a production technology with a particular functional potential and aesthetic quality. It must be shaped in a certain way to accomplish its basic function of hitting nails into wood. As such, it is designed to have a handle with a perpendicularly attached head of metal. The shape of the hammer makes it adapted to drive nails into wood efficiently, which means that function is closely linked to shape.

The relationship between the functional and aesthetic potentials of an artifact and the technology of production can be applied to published content. The basic production technology of ink-on-paper, as in a printed and traditionally bound book, can be distributed to a variety of formats. The content of a printed book can be distributed in electronic format, as well as made
available online through CD-ROM or e-book. Although the content will remain the same, a change in the production technology from printed book to digital format will alter the function and appearance of the content.

The printed book is a portable, accessible artifact with a cover, spine, and printed pages. It is usually identified with its physical package and therefore has aesthetic potential. It has inherent properties such as tangibility, legibility, and portability, as well as aesthetic and physical limitations such as size, type and thickness of paper, matte, and gloss. Once the raw materials (i.e. trees) are converted to a finished product, the function and appearance of the printed book is set and cannot be altered without destroying it.

In contrast to a tangible printed book, the e-book is not bound by the physical world, but it exists in the virtual world. The e-book is more flexible than a printed book in so far as it exists as code and can be displayed in a number of different ways. Instead of paging through a printed book to view the content, users can view the content of an e-book on a computer display or monitor. The appearance of the content is different than that of a printed book. If the content is on a server connected to the Internet, it becomes available at any workstation connected to the Internet.

Some advances in technology allow for more functional potential and variety. The e-book has different functional potential than the printed book, as it can encourage readers to click through to other sources of information if such a feature is built in. An e-book has significant advantages for users in terms of searching capabilities and ease of use. With built-in dictionaries, unlimited full text searches, as well as hyperlinked footnotes and bibliographies, an e-book can direct readers to its sources, including in some instances the full text of those sources. The printed book can have footnotes and bibliographies as well, but obviously it cannot let users increase or decrease their font size, have animated illustrations or music, or recognize voice commands and visual cues like the e-book.
Moving the content of a printed book to an e-book alters the appearance and function of the publishing format, although the content remains the same. If the content of a printed book is moved to an e-book, the content will work differently because of the different functionality of the Internet. The claim that the production technology of an e-book is different than the production technology of a printed book goes back to the Simon’s theory that there is an inherent functional and aesthetic potential that arises from the technology of production.

Simon appears to be accurate in his analysis because moving the content of a printed book to e-book does change the functional and aesthetic potential of the artifact. But it can be argued that moving the content of a printed book to e-book does not only alter the functional and aesthetic potential of the artifact, but it also changes the functional and aesthetic potential of the design process. In this sense, it is possible to apply Simon’s theory to the artifact as well as to the process of designing that artifact.

One can build on Simon’s theory and take it to the next level by including the way in which the designer performs the task and not just the way that the artifact looks and functions. In the case of a magazine, a single technological artifact such as a computer is not enough to create a publication. The designer of the magazine must have a computer as well as a suite of digital production technologies such as a scanner, keyboard, DTP software, and offset printing.

When a computer is part of a larger process or suite of digital production technologies to create a magazine, the technology may alter the final product functionally or aesthetically as well as the functional process of producing the magazine. In other words, the technology may change the form or function of the final product and/or the process of production. As such, a change in the technology alters the functional and aesthetic potential of the design and the design process.
CHAPTER TWO

The Arrival of Desktop Publishing and Its Influence on Publication Design

This section examines the timeline of digital production technologies. It builds an argument that these technologies have changed the face and process of design. More specifically, the section discusses the effects and influences of the changing digital production technologies and methods used in the practice of publication design. The research is based on sources cited in the bibliography, as well as online sources such as Wikipedia, Glencoe Norton, and About.com.

What is Desktop Publishing?

The advent of a number of digital production technologies in the mid-1980s changed the world of publishing, typesetting, and publication design. According to Barnard, the introduction of Apple’s Macintosh computer with graphical user interface and “What You See Is What You Get” (WYSIWYG) screen; Apple’s LaserWriter printer capable of printing high-quality output; Adobe’s Postscript page description language with rasterizer and digital fonts to drive laser printers and phototypesetters; and Aldus PageMaker (now Adobe PageMaker) for electronically assembling pages, complete with digital graphics, ushered in the era of desktop publishing (1990, p.79). Coupled with the development of composition languages to drive the whole desktop publishing system as well as scanning devices that could digitize photographs, illustrations, and text, these technical advances constituted a revolution of worldwide scope and importance.

Paul Brainerd, the founder and president of the former Aldus Corporation (now Adobe Systems), is credited for coining the phrase desktop publishing (Meggs, 1998, p.457). In its classic definition, desktop publishing (DTP) refers to a single person using a personal computer
to control the entire publishing process of a single publication from the generation of content to the assembly of pages (Kleper, 2001, p. xxxiii and xxxii). As Brabyn points out, DTP is a “means of producing documents, complete with graphics, ranging from one-page information or advertising leaflets, through brochures and price lists, to newsletters, magazines and even books, on equipment which can be comfortably housed on a reasonably large desk” (1988). DTP software such as PageMaker, QuarkXPress, and InDesign is specifically designed for such tasks.

According to Silver and Silver, the first basic DTP system had a group of elements integrated into a system (1991, p.8). The microcomputer such as the Macintosh computer or IBM personal computer was the major component of the system. As Silver and Silver suggest, the microcomputer was equipped with a monitor, input and output devices such as a keyboard and mouse, storage for floppy and hard disks, as well as a microprocessor chip that could manipulate millions of bits of information in a fraction of a second (1991, p.12). The system often had a scanner and laser printer.

In order to complete the DTP system, a specialized piece of page makeup software such as PageMaker was required. The software program could combine text and graphics files into documents of varying lengths, as well as perform page makeup and editing functions. As Silver and Silver note, “In addition to assembling words and pictures, the software allowed rules, borders, or tint areas to be incorporated into a design in order to create pages that resembled those generated by traditional typesetting means” (1991, p.14).

**Before Desktop Publishing**

Well before the development of DTP as it is known today, graphic designers created magazines manually using a variety of non-computer techniques and equipment. They were involved in manual paste-up, assembling the text and graphical elements on the page as specified on the page dummy prior to reproduction.
Using rulers and drafting instruments, graphic designers marked the position of typeset copy, artwork, page edges, folds, and colour on the pages, as well as cut and trimmed typeset copy and artwork to a specified size. All elements were fastened in place to boards or cameraready mechanicals. Tissue overlays specified colour breaks, notes Stanley Rosen, the team leader of print solutions for Vancouver-based prepress equipment provider Creo, and errors in typography were corrected by waxing re-typeset copy onto the mechanicals (Ferriolo, 2003). The mechanicals, along with spec sheets full of instructions for the printer, were then sent to the printer. The processes and steps used to create a magazine were complex, labour intensive, expensive, and time-consuming.

Before DTP, graphic designers could not see the layout of an actual page of text with colour artwork included. This meant that they had to pre-visualize all components of the design before beginning a layout, as well as commit to specific typefaces, fonts, and sizes for headlines, decks, and body copy and then order these elements from outside suppliers, which was a ponderous, slow, and expensive process. If there was a change in the layout, designers had to reset and paste-up type. For instance, if a heading was too small, it had to be reset larger, cut in, and pasted into the layout, therefore limiting the flexibility and options of the design process.

To realize the printed page of a layout, graphic designers were dependent on a variety of outside professionals such as printers and typesetters who had complex and expensive equipment. According to Silver and Silver, “This was because typesetting and printing equipment was expensive, difficult to operate, and required specialized facilities suitable to operating heavy machinery” (1991, p.4).

Although designers could create typefaces with ink and paper, it was nearly impossible for them to use the typefaces in a layout. This in turn limited designers to what the typesetter produced. The dependence on the typesetter created a symbiotic relationship between graphic designers, typesetters, and printers.
The Arrival of Desktop Publishing

The change to DTP in the mid-1980s is used to advance the argument that the technology, singly and as a whole, affected publication design in a substantial way. The use of computers for publication design began in the mid-1980s with the introduction of Apple's Macintosh computer and DTP software. Although the computer was formally introduced during this time, it was only adopted into widespread industry use in the early 1990s.

The computer had a graphical user interface (GUI) that allowed for direct visual onscreen manipulation of text and images. With its onscreen point and click display, graphic designers could select menu commands with a mouse rather than having to remember keyboard commands.

With the introduction of the computer, graphic designers had immediate and complete control over the design elements on the desktop such as text and images. The elements could be laid out on a computer screen in a format of "What You See Is What You Get" (WYSIWYG). What this meant was that text and images on the screen were the same size and in the same place as on the printed version.

The acronym WYSIWYG was a rather optimistic claim at the time. The resolution of a computer display screen was considerably inferior to that achieved with a high-quality printer or to that of a professional printer and typesetter. As such, WYSIAWYG ("What You See Is Almost What You Get") would have been a more appropriate acronym.

DTP changed the face of publication design with its ability to integrate text and graphics electronically. Graphic designers could create the layout of a magazine instantly before their eyes on the computer screen with page-layout programs such as PageMaker and QuarkXPress. This had a positive impact on the design process, as it was possible to make changes interactively, have instant feedback, and see a design evolve right before the eyes.
With the WYSIWYG operating system, PageMaker and QuarkXPress laid out pages of text and graphics on the computer screen, thus eliminating the need to physically cut and paste text and graphics onto special paper and then send it to the typesetter (Kleper, 2001, p.352). According to Spring, the page-layout programs imitated the manual paste-up process because the design elements were treated as individual entities that could be moved around and placed anywhere on the full screen page-layout much in the same way that designers manually typeset galleys (1991, p.139).

With PageMaker and QuarkXPress, it was possible to combine text and graphics, alter type size and choice of font, arrange text into columns and headlines, move text around the page, control word spacing and letterspacing, and import bit-mapped text and graphics from a variety of word processors (Silver & Silver, 1991, p.15). The ability to interact with a page-layout to combine text with artwork in different ways in a dynamic environment demonstrates how a change in the technology to DTP carried with it a functional change in the design process.

The success of PageMaker and QuarkXPress led to the development of a variety of other tools aimed at supporting the publishing industry, most notably graphics programs such as Photoshop and Illustrator, desktop scanners, laser printers, CD-ROMs, PDF files, and external storage devices. Many publications were quick to adopt these DTP technologies as a means to greater design flexibility and productivity.

The introduction of graphics programs and desktop scanners to manipulate photos and images greatly impacted publication design. Desktop scanners captured photographs, images, or art as digital data that were either incorporated directly into an electronic page-layout or further manipulated with the use of graphics software in ways that were previously impossible to produce without the use of expensive airbrush technology.

The manipulation of images via Photoshop and Illustrator enabled unprecedented image manipulation and creation. After images were manipulated in these graphics programs, they were
placed directly into a page-layout application, making it possible to produce an entire page with type, photographs, illustrations, and line art that was ready for printing (Kepler, 2001, p.217).

Another digital production technology that had a significant impact on the design process was Portable Document Format (PDF), a universal format that preserved the original formatting of a document regardless of what application was used to create it. With a PDF reader, graphic designers could open a PDF document with whatever browser or operating system they were using at the time (Ferriolo, 2003). The document was preserved in its original layout and therefore it appeared exactly as intended. As Kleper suggests, “The format’s most compelling feature, as its name implies, was its portability” (2001, p.311).

Such standards and advances in digital production technology created a faster and more efficient way to move design files around the world. With this transportation piece of software, graphic designers had an easy and ubiquitous medium to share and collaborate on their designs. They could share design files with other people involved with the conceptualization of a printed piece across long distances instantly.

The technology of PDF created a dramatic change in the relationship between graphic designers, clients, and printers. Due to the arrival of PDF documents, designers and clients did not need to meet face-to-face to discuss the design of a layout. Instead, a designer would send a PDF file to a client who would make extensive remarks directly on the PDF file and then send it back to the designer. The designer would make the requested changes to the file and then send it back to the client who would review it. If pleased with the results, the client would send the file to the printer. With this universal file format, designers, clients, and printers could work as a collaborative team more accurately and efficiently. Not only did PDF allow for more effective communication between designers, clients, and printers, but it also reduced the chance of errors in production.
DTP was a far more efficient method of producing the layout of a magazine than manual paste-up methods. Since it was possible to produce a magazine in-house with a camera-ready layout ready for printing, graphic designers were able to bypass the outside proof printer and typesetter (Silver & Silver, 1991, p.7). DTP was used to do much of the typesetting and page-layout work that was formerly completed by outside professionals.

Not only was the time-consuming and expensive step of having a magazine professionally typeset and printed avoided, but also alternative designs could be experimented with quickly and easily. The electronic environment offered many new options in terms of typefaces, layout, and design in an almost instantaneous manner that was not possible by traditional methods. It was possible to create more elaborate layouts and variations in design in seconds as compared to the lengthy process of changing a design in the traditional fashion.

In addition to changing the appearance of publication design, DTP influenced the work created and the means of producing it. The technology changed the physical process and working habits of graphic designers. Before DTP, graphic designers had to interact with a number of people on a daily basis, including typesetters, paste-up artists, and airbrush artists. But with the arrival of DTP, the interaction was no longer necessary, which meant that graphic designers had more time and freedom to work on a design.

In summary, the introduction of the computer and DTP software, along with many other sophisticated DTP technologies such as desktop scanners and PDF files, laid the foundation for major changes in publication design. DTP became an essential tool for the creation of complex page-layout as well as the manipulation of photos and images.

With the arrival of DTP, graphic designers were quick to explore the creative possibilities of this innovative design tool for producing the layout of a magazine. They could explore unprecedented options made possible by the powerful capacities of the technology. The
advantages of DTP over traditional publishing were immense: ease of use, low cost, speed, efficiency, and flexibility in design.

Timeline of Desktop Publishing

The main technological events that changed the face of publication design begin with the digital production technology that led up to the DTP revolution in the mid-1980s, as well as the digital production technology that supported publication design before, during, and after the arrival of DTP. The following is a timeline of the changing digital production technologies from 1945 to the present.

1945
The world's first digital computer is introduced.

1960s
Following the invention of word processing in the 1960s, computers are increasingly used to edit texts, although their widespread use in publishing does not take off until the mid-1980s.

The American computer scientist Douglas Engelbart invents the first computer mouse prototype in 1965.

1975
The first commercially available microcomputer, the MITS Altair 8080, is the first machine to be called a personal computer (PC).

Bill Gates and Paul Allen form the company Microsoft, a manufacturer of a wide range of software products for a number of computing devices, and unveil the BASIC language interpreter for the MITS Altair 8080 computer.
1976

Steve Wozniak and Steve Jobs form the company Apple Computer, whose main business is computer technologies, and build the Apple I computer, which is less powerful but less expensive and less complicated than the MITS Altair 8080 computer.

1977

Apple Computer unveils the Apple II computer, which comes already assembled in a plastic case with a built-in keyboard and power supply. The Apple II is the first computer to generate colour graphics.

Fully assembled microcomputers are released to the general market, with Radio Shack, Commodore, and Apple all selling models.

1978

Apple Computer adds floppy disk drives to the Apple II computer; INTEGRATED ELECTRONICS (Intel), whose main business is the design and manufacturing of microprocessors, releases the 8086 microprocessor, a 16-bit chip that sets a new standard for power, capacity, and speed in microprocessors; and Epson Corporation, currently a manufacturer of computer products such as inkjet printers, scanners, and desktop computers, announces the MX-80 dot-matrix printer, coupling high performance with a relatively low price.

1980

Hewlett-Packard, a global company with products in the fields of computing, printing, and digital imaging, introduces its first PC.

INTERNATIONAL BUSINESS MACHINES CORPORATION (IBM), an information technology company that manufacturers and sells computer hardware, software, and services, chooses Microsoft to provide the operating system for its upcoming PC.
The Xerox Corporation, a supplier of dry paper photocopier machines and associated supplies, unveils the Xerox Star computer with user-friendly icons, buttons, and menus that are operated with a hand-manipulated little box on wheels — the first mouse accessible to the public. The mouse provides easier control than typing codes into a keyboard. According to Meggs, “The mouse made computers accessible through intuitive processes rather than a tedious mathematical coding and empowered thousands of ... designers to use computers” (1998, p.455).

IBM introduces its first DOS-based PC.

Former Xerox PARC scientists John Warnock and Charles Geschke form Adobe Systems Incorporated, a computer software company, which is credited with early inventions such as Adobe PostScript to later offerings such as Adobe Illustrator, Adobe Photoshop, Adobe Acrobat, and Adobe InDesign.

Apple Computer introduces the Lisa computer, the first mainstream commercial computer with a purely graphical operating system and mouse.

Dan Gelbart and Ken Spencer form the digital printing firm Creo Incorporated, a provider of prepress equipment in Vancouver, British Columbia, Canada. Currently, Creo supplies on-press imaging technology, components for digital presses, and colour servers for high-speed digital printers. The product line includes software and hardware for computer-to-plate imaging, systems for digital photography, scanning, proofing, as well as printing plates and proofing media. On January 31, 2005, the Eastman Kodak Company announces that it has entered into an agreement to acquire Creo.
Apple Computer releases a new version of the Lisa computer with all new software and the Macintosh operating system.

Apple Computer introduces the user-friendly Macintosh microcomputer with a black and white screen as a non-compatible competitor to the DOS-based IBM PC. Unlike the DOS-based IBM PC, the Macintosh computer has a graphical user interface (GUI) that allows for direct visual onscreen manipulation of text and images.

In addition to being the first computer to combine text and graphics in its operating system as well as in its application software, the Macintosh computer has the first consumer based WYSIWYG interface for printing. According to Meggs, “Apple Computer’s 1984 introduction of the first generation Macintosh computer, based on technology pioneered in its Lisa computer, foretold a graphic revolution soon to occur” (1998, p.455).

Adobe Systems releases Postscript, the industry standard page description language for professional digital typesetting. As a piece of software that sits in a laser printer, Postscript can produce crisp print in a number of typefaces, create typeset quality fonts and high quality graphics, as well as integrate all aspects of page composition such as type, line graphics, photographs, and other graphic images (Barnard, 1990, p.80). According to Kleper, “Its [Postscript] importance cannot be exaggerated, neither for its significant contribution as a graphic arts imaging tool, nor for its impact on derivative technologies such as the PDF file format” (2001, p.298). With its powerful graphics handling, Postscript first appears in the Apple LaserWriter printer in 1985.

Hewlett-Packard introduces the LaserJet laser printer, the first desktop laser printer with a resolution of 300 dots per inch (DPI). The LaserJet provides high quality output that is competitive with the printing presses of the day. As Barnard suggests, “The introduction of low
cost laser printers has arguably been the single most important factor in the rapid development of DTP" (1990, p.78).

1985

Apple Computer releases the Apple LaserWriter, a laser printer incorporating Adobe Postscript. With its 300 DPI printing, the LaserWriter is able to produce fast, camera-ready quality printing, albeit in black and white. For Kleper, the LaserWriter makes it possible to produce high-resolution characters on the basis of content of the file that was created on the computer screen (2001, p.88).

Although the LaserWriter is able to produce quality printing, it is still no replacement for traditional printing and typesetting. By today's standards, the quality of printing was average because jagged edges appeared in both text and line art at low resolutions. But the LaserWriter was revolutionary at the time, as it created a shift in the perception of what was possible for publishing with a computer.


Aldus releases Aldus Illustrator for the Macintosh computer, a drawing and painting program designed for the creation of original artwork and illustrations. With a wide range of drawing and painting brushes that create circles, rectangles, freehand lines, curves, and fill areas with tint-screen patterns, Illustrator is designed to simulate the most basic designer tools such as the paintbrush, airbrush, or pen and ink. According to Silver and Silver, Illustrator stores artwork and illustrations as files and then transfers them to DTP software (1991, p.15). Once the files are imported to DTP software, it is easy to crop, move, or reduce the artwork or illustrations.
Microsoft announces the Windows 1.0 operating environment, featuring the first GUI for the PC. There are small aesthetic differences between the Microsoft computer and the Macintosh computer, but functionally both computers are nearly equivalent.

1986

IBM delivers the PC laptop, IBM’s first Intel-based laptop computer with a 3.5-inch floppy disk drive.

The compact disc (CD) is introduced.

1987

Apple Computer releases the Macintosh II computer aimed at the DTP market. As the first serious professional computer with a colour monitor as a separate component, the Macintosh II takes up part of a desk and includes a graphics card that displays millions of colours.

Quark Incorporated releases the first version of QuarkXPress, a page-layout application that is in direct competition with Aldus PageMaker. QuarkXPress has highly sophisticated graphical effects and fine typographical controls such as ultra fine kerning increments, type rotation, as well as automatic stretching and condensing (Barnard, 1990, p.87).

IBM releases a new operating system, OS/2, allowing the use of a mouse with IBMs for the first time. According to Silver and Silver, “This computer brought the power of DTP to IBM and compatible users” (1991, p.5).

Aldus releases a PageMaker version for IBMs and IBM-compatible computers, as well as a newer version of Illustrator for the Macintosh computer.

1988

Hewlett-Packard introduces the first popular ink jet printer and the Deskjet, while IBM and Microsoft ship OS/2 1.0, the first multitasking desktop operating system.
1989
Corel Corporation introduces CorelDRAW, a vector-based drawing application. Around the same time, CorelDRAW is marketed as a graphics software suite, featuring additional components such as Corel Trace, Corel Texture, and Corel Photo-Paint.

1990
Adobe releases the photo manipulation tool Photoshop for the Macintosh computer, as well as low-resolution flatbed desktop scanners.

The Eastman Kodak Company introduces the Photo CD, which provides the means for film-based images to be recorded at high resolution onto a Photo CD that can be read on both Macintosh and Windows-based computers (Kleper, 2001, p.217).

The World Wide Web is born when Tim Berners-Lee, a researcher at the high-energy physics laboratory in Geneva called CERN, develops HyperText Markup Language (HTML). With HTML, the Internet can expand into the World Wide Web using specifications such as the Uniform Resource Locator (URL) and HyperText Transfer Protocol (HTTP) to create a new form of information distribution.

1991
The World Wide Web is launched.

1993
Adobe releases Photoshop for Windows (three years later than the Macintosh version); Adobe Portable Document Format (PDF), a file format that represents documents in a manner independent of the original application software, hardware, and operating system used to create those documents; and Adobe Acrobat Reader, the first software to support PDF.

1994
Aldus is taken over by Adobe.
1995

Microsoft releases Windows 95, with true multitasking, networking capability, and less dependence on DOS, as well as the Internet Explorer web-browser.

1999

Adobe releases Adobe InDesign in an effort to compensate for the limitations of PageMaker and to deliver a viable alternative to QuarkXPress. As a new competitor in the publishing field, Adobe InDesign boasts a new approach to page-layout with a more design-oriented workflow.

2003

Adobe simultaneously upgrades InDesign, Illustrator, Photoshop, and GoLive, and packages them as Adobe Creative Suite. The bundle provides tighter integration with InDesign and a new common file system.
CHAPTER THREE

A Case Study of Vancouver Magazine Before and After Desktop Publishing

The nature and dynamics of the relationship between production technology and design can be seen in the progression of Vancouver Magazine from 1975 to 1995. This section examines the changes in the design of the magazine before and after the widespread adoption of DTP in the mid-1980s, as well as identifies the changes in design attributable to changes in aesthetic potential contributed to new digital production technologies being utilized.

Vancouver Magazine spans the time when design moved from typesetters and paste-up methods to computers and digital production technologies. As such, the magazine is an appropriate case study to examine the relationship between changes in digital production technologies and their potential influence on design and the design process.

This section is divided into two parts. The first part analyzes information gathered directly from the past and current art directors of Vancouver Magazine that were present before, during, and after the arrival of DTP to provide context to the observed changes in digital production technologies and their influence on the design of the magazine. The second part examines the changes in the design of Vancouver Magazine before and after the arrival of DTP in relation to changing digital production technologies.

Background of Vancouver Magazine

Vancouver Magazine is the city magazine of Vancouver, British Columbia, Canada. The publication covers a wide variety of topics in Vancouver, including fashion, food, wine, shopping, real estate, local personalities, civic events, politics, and popular culture.
The magazine started out in 1967 as an ad-driven flyer called Dick MacLean's. Dick MacLean's became Vancouver Leisure in 1974, but publication immediately ceased. In that same year, the magazine was purchased and relaunched as Vancouver Magazine, a magazine for the city and the people who lived in it.

The original premise behind Vancouver Magazine was that it would be a politically oriented publication. According to the November 1997 issue of Vancouver Magazine, the magazine was launched as “a lean and aggressive, politics-obsessed civic watchdog.” In the years that followed, the political component of the magazine waned and current components such as dining and shopping were added.

**Interviews with the Art Directors of Vancouver Magazine**

This report gathered information directly from the past and current art directors of Vancouver Magazine, including Rick Staehling, Chris Dahl, Cathy Mullaly, Doris Cheung, and Randy Watson, who provided information on the implications of digital production technology on the design of Vancouver Magazine.

The art directors of Vancouver Magazine were contacted by telephone and email, and asked to participate in a structured email interview. Information was provided on who was administering the interview, what the purpose of the interview was, how the interview would be used, and clear directions for the return of the interview. A copy of the interview is located in the Appendix.

The interview consisted of an extensive set of questions. The information sought included insights into the relationship between digital production technology and the design of Vancouver Magazine, as well as opinions on whether changes in digital production technology altered the way that the magazine was designed.
All five art directors were asked the same questions. As the art directors would be responding to the same set of questions, it was anticipated that the responses would provide reliable information for the group. There was a "Not Applicable" response to all questions for those art directors who did not deem a question applicable to their own experience as art director of *Vancouver Magazine*.

An important consideration in the design of the questions was to ensure that each question was interpreted the same way and that the meaning of the terms was clear. There were no predetermined set of responses and therefore the art directors could formulate their own answers.

The interview was composed of three parts. The first part of the interview contained questions seeking information on the background of the art directors. The information gathered included number of years as a graphic designer in the design industry, number of years as the art director of *Vancouver Magazine*, and current position in the workplace. This information provided an overall picture of the art directors involved in the study.

The second part of the interview asked the art directors to identify the factors that influence graphic design. The information gathered provided insight into the social, cultural, political, and historical influences on graphic design.

The third part of the interview contained questions seeking information on traditional methods of graphic design versus modern techniques of graphic design. This information provided insight into the design techniques and challenges before the arrival of DTP in the design workplace.

In addition, the art directors were asked to provide information on the impact of DTP in the design workplace, their first impressions of DTP technology, and whether they were early advocates of the application of the technology to design. Here the main thrust of the interview...
was to determine whether changes in digital production technologies altered the way that the art directors designed the magazine. Also gathered were details about the impact of electronic page-layout programs, graphics programs, hardware, and software in the design workplace.

The interview was distributed on November 10, 2004 and returned on November 19, 2004 via email. All five art directors Staehling, Dahl, Mullaly, Cheung, and Watson completed the interview. The information from the returned interviews was collected and analyzed, and the findings will be discussed in the remainder of this section.

**Background of the Art Directors of Vancouver Magazine**

The first part of the interview contained questions seeking information on the background of the art directors of *Vancouver Magazine*. All five art directors provided information on their background.

Rick Staehling has been a graphic designer for twenty years. After graduating from the University of Michigan and the Art Center College of Design in Los Angeles, Staehling was the art director of the magazines *Western Living*, *Vancouver Magazine*, and *Equity*, as well as Douglas & McIntyre Educational. He was the art director of *Vancouver Magazine* for two six-year stints — one in the early 1980s and the other in the early 1990s. He has written extensively about movies for *Rolling Stone*, *The Georgia Straight*, and *Vancouver Magazine*. Currently, he is a film critic for CBC Radio British Columbia, as well as the editor of Uniglobe Travel International’s magazine *Travel Etc*. When asked to define his current approach to magazine design, Staehling says, “Work with the editor to create a publication that truly matters to readers, thus increasing circulation and ad sales” (email interview, November 19, 2004).

Chris Dahl has been a graphic designer since 1968. He has been in the design industry for thirty-eight years. He was the art director of *Vancouver Magazine* for three years in the mid-1980s, the art director of *Western Living Magazine* from 1986 to 1989, and the art director of
*Equity Magazine* in 1990. After leaving *Western Living Magazine*, he opened up his own business called Chris Dahl Art & Design. Currently, he is the assistant director at Design Communications, as well as the Public Affairs Officer and Visual identity and Design Strategist at the University of British Columbia. When asked to define his current approach to magazine design, Dahl maintains, “Engage the reader in one second. Be unexpected in the headline or the image. Prepare many points of entry in the piece. The picture is the hero — lay back on the layout acrobatics. Entertain!” (email interview, November 19, 2004).

Cathy Mullaly has been a graphic designer for twenty years. She worked at *Vancouver Magazine* from 1984 to 1989 — first as the assistant art director for two years and then as the associate art director for three years. Currently, she is the art director of *BCBusiness Magazine*, a business publication providing commentary on the major trends and issues shaping British Columbia, and *Appeal Magazine*, a food magazine published two times a year for Save-On-Foods. When asked to define her current approach to magazine design, Mullaly claims, “Simply put, less is always more. I like working with typography as part of the design but not to the point where it overpowers photography” (email interview, November 19, 2004).

Doris Cheung has been a graphic designer for seven years. She was involved in the relaunch and redesign of *Rice Paper*, a magazine showcasing diverse perspectives on Canadian identity and culture through the experiences and expressions of Asian Canadians. She worked at *Vancouver Magazine* as the assistant art director in 1998 and as the art director in 2000 — a position she held until 2002. She is currently the art director of *Western Living Magazine*. Her current approach to magazine design is as follows: “My approach to magazine design incorporates thought-provoking imagery with a strong use of typography that communicates the story to the target audience” (email interview, November 19, 2004).

Randy Watson has been a graphic designer since 1988. A graduate of the graphic arts program at Kwantlen College, he worked at *Western Living Magazine* as the associate art director
for four years and as the art director for three years. He maintained his own illustration and design shop for several years as well. Currently, he is the art director of *Vancouver Magazine* — a position he obtained over a year ago. When asked to define his current approach to magazine design, Watson maintains, "Magazines should always ride on the edge of surprise yet remain true to their brand. On the art side, original thought and visuals are key" (email interview, November 19, 2004).

The Influences on Design

The second part of the interview asked the art directors of *Vancouver Magazine* to identify the factors that influence graphic design in general. All five art directors provided insight into the factors that impact graphic design.

Mullaly and Cheung maintain that design is influenced by popular culture as well as current trends in different categories of design, namely fashion, architecture, industrial design, fine art, colour trends, and conceptual thinking. Dahl says that the media, especially movies, television, advertising, music, photography, painting, and printmaking, influence graphic design.

As far as aesthetic influence, Staehling claims that individuals influence the design of a publication. Staehling refers to the "titans" of the past such as Joseph Muller-Brockman, Alvin Lustig, Alexey Brodovitch, and Willy Fleckhaus who are revisited and reinterpreted every few years, as well as the of-the-moment designers such as Chip Kidd, Bruce Mau, and David Carson who are copied slavishly.

Watson agrees that famous graphic designers such as Alexey Brodovitch, Paul Rand, and Saul Bass influence graphic design. According to Watson, Brodovitch is the father of the modern magazine, while Rand and Bass are the fathers of modern logo and corporate design. As Watson notes, "Rand and Bass had taken abstract concepts such as the personality of modern corporate organizations and synthesized these personalities into boiled down symbols or logos to
communicate to the buying public concepts like trust, stability, a brand you can rely on and want to be a part of" (email interview, November 19, 2004).

Watson goes on to say that Neville Brody, whose artistic contribution challenged the conventions of graphic design, and Fred Woodward, who used type and images effortlessly to express the rock and roll theme of the magazine *Rolling Stone*, continue to inspire him. As Watson suggests, “He [Fred Woodward] has now taken his sensibilities and turned *GQ* into another echelon of magazine design” (email interview, November 19, 2004).

Watson points out that the political environment influences graphic design as well. For example, the propaganda posters of the early twentieth century influenced the design of layouts during that time. For Watson, “On the dark side, look at the success of the Nazi party to rally and inspire a whole population through in part the use of strong symbols with supporting design and philosophies” (email interview, November 19, 2004).

Most importantly, notes Watson, designers reflect their own personality into their creations. He sums this point up nicely: “The successful original modern magazine designer in a major part seems to inject his or her own personalities into the design” (email interview, November 19, 2004).

**Desktop Publishing**

The third part of the interview contained questions seeking information on the differences in the design workplace before and after the arrival of DTP. The aim was to determine whether changes in digital production technologies altered the way that the art directors of *Vancouver Magazine* designed the publication.

*The Differences Between Traditional and Electronic Publishing Techniques in Publication Design*

The art directors of *Vancouver Magazine* were asked to state the main differences between traditional paste-up techniques and electronic methods in publication design, as well as
to identify the design challenges before DTP that changed with the arrival of DTP into the mainstream design industry. The art directors Staehling, Dahl, Mullaly, and Watson provided insight into this question.

According to Staehling, there was a limited amount of time and flexibility to work on a design with manual paste-up. As Staehling suggests, “Paste-up was messy, slow, labour intensive, and limited in what you could do as a designer” (email interview, November 19, 2004). Before DTP, it was a lengthy process to produce a publication from the preparation of the dummy to the shipment of files.

With the arrival of DTP, the paste-up process was performed electronically on the computer screen with page-layout programs such as PageMaker and QuarkXPress and graphics programs such as Photoshop and Illustrator. Due to the electronic process, Staehling says that he could try out different formats and type faces without a lot of additional work. For the first time, he could play around with type better, create rules and drop caps easier, make corrections quicker, use runarounds, and create complex charts, graphs, and sidebars. As Staehling notes, “Retouching photographs was suddenly easy, fast, and cheap compared to pre-computer days” (email interview, November 19, 2004). In addition to having time to develop alternate designs for the same story, Staehling could place more legitimate demands on editors to write display copy to certain lengths.

Like Staehling, Dahl maintains that manual paste-up was time-consuming and labour intensive. Dahl required significant amounts of time and manpower to produce a colour publication before DTP. As Dahl points out, “At Vancouver Magazine in the early 1980s, I required two weeks, a design assistant, a paste-up artist or two, an advertising art director, a film house for scanning and page proofs, and a typesetting house for headlines and galleys” (email interview, November 19, 2004). But with the arrival of DTP, the tasks that previously required personnel were automated. Dahl claims that he could produce a 56 pp full colour publication
plate-ready by himself in just a week. The automation of manual processes brought on by DTP significantly decreased the time to produce *Vancouver Magazine*.

According to Dahl and Mullaly, a major challenge before DTP was not being able to see what was being designed on a page. Prior to DTP, Dahl and Mullaly used the Linotype CRTronic, a terminal similar to a computer with a keyboard and black screen with whitish green type. According to Dahl, “The CRTronic was QUASIWYG (i.e. quasi in what you get) — meaning the monitor did not show you what the page was going to look like, it only displayed the code for the commands” (email interview, November 19, 2004). What this meant was that a layout had to be figured out in advance and then mathematically coded. As Mullaly recalls, “I always liked math so it worked for me but some people found that daunting” (email interview, November 19, 2004).

With the Linotype CRTronic, Dahl and Mullaly had to pre-visualize all components of the design before beginning a layout, which was a ponderous, slow, and expensive process. It was necessary to commit to specific typefaces, fonts, and sizes for headlines, decks, and body copy, and then order these elements from outside suppliers. As Dahl says, “I had to shepherd the illustrations and photographs I commissioned through the frustrating and exacting process of colour separations” (email interview, November 19, 2004). It was then necessary to mark up instructions on tissue overlays taped to paste-ups indicating the colour for type and images, as well as provide detailed comments regarding close crops and layering of images for the film house. As Dahl recalls, “Then I would pray that I had made the right calls and nervously await the arrival of the colour proofs” (email interview, November 19, 2004).

Because there was no way to visualize the layout of an actual page of text with images before DTP, Mullaly says that she had to use her imagination to guess what kind of type and how much leading would be appropriate for a layout. She created thumbnail sketches or rough pencil drawings of small versions of a full-sized image, but in many cases these sketches did not translate to the full size page. She would then work late hours into the evening, cutting the galleys
by hand and preparing the layouts by pasting type and images into the correct position on camerready mechanicals.

But with the introduction of DTP, Mullaly maintains that she could produce many more options of type that could be seen right away on the screen. As Mullaly suggests, “I loved being able to see what was happening as it was designed. I could make art from a word in a headline by playing with the type and I couldn't see what I was doing before DTP” (email interview, November 19, 2004). The ability to interact with a page-layout to combine text with artwork in different ways in a dynamic environment demonstrates how a change in the technology to DTP carried with it a functional change in the design process.

Mullaly goes on to say that it was difficult to order type from outside typesetters for the paste-up process. If the size or the shape of the type were misjudged, Mullaly would have to reorder it. As Mullaly recalls, “I was never really great at ordering type. I often misjudged the size or the shape and would have to cut it up into pieces in order to make it work. I'd often go home with a key word waxed to my elbow” (email interview, November 19, 2004). But with DTP, it was much easier and quicker to complete a task such as ordering type from outside typesetters.

Watson claims that it was difficult to spec type or mark up pages for the typographer before DTP. Since there were no computers to spec type, the mark up of type sizes, typefaces, upper and lower cases, and so on were performed by hand. DTP reduced the amount of time to complete this task. What would take days to perform was completed in minutes with DTP. This had a positive impact on the design process because more creative time could be spent on the design of a layout.

Another design challenge prior to DTP was the inability to print proofs of work. As Watson notes, “Printing out proofs of your work with ease was also another boon to the design
world" (email interview, November 19, 2004). The ability to print out proofs demonstrates how a change in the technology to DTP carried with it a change in the function of the design process.

With the introduction of DTP, Watson and Mullaly could explore different options of type and images much quicker and easier than before DTP. As Mullaly recalls, “You could try more things, take some chances, or create things that previously would be too labour intensive on a monthly production schedule” (email interview, November 19, 2004).

For Staehling, Dahl, Mullaly, and Watson, the electronic process had a number of advantages over manual paste-up, including the ability to see what was being designed on the screen, ease with which changes could be made, as well as flexibility in trying out different formats and typefaces without a lot of additional work or time. The additional capabilities of DTP were some of the most significant functional changes to the design process introduced by digital production technology.

First Impressions of DTP in the Mid-1980s

The art directors of Vancouver Magazine were asked to reveal their first impressions of DTP technology when it arrived in the mid-1980s, as well as to indicate whether they were early advocates of the application of this digital production technology to design. All five art directors answered this question.

Both Dahl and Mullaly were impressed with DTP when it first arrived on the scene. They believed that DTP had a positive impact on the design process because it provided far more options and greater control of type, images, colour, and ideas in less time. As such, the digital production technology was embraced as an innovative tool capable of expanding the scope of design possibilities and the very nature of the design process.

Dahl used DTP for the first time in 1989 when he opened up his own business. The first thing that he did for the business was purchase a complete DTP system — an IBM computer, 20-inch colour monitor, flatbed scanner, and postscript printer. As Dahl recalls, “It cost me $42,000!
But I could now do everything myself” (email interview, November 19, 2004). No longer was it necessary to have design assistants, paste-up artists, advertising art directors, film houses, and typesetting houses. The use of DTP meant substantial savings in production and design costs, as well as far greater access to and control of the entire production and design process.

Considering the benefits of DTP, Mullaly notes that the technology had its own set of problems. Although it was quicker and easier to design a layout with DTP, it didn’t necessarily mean that the design was good. As Mullaly states, “I think that typography and design suffered as anything you could do in Illustrator was okay and it was a bit of a dog’s breakfast” (email interview, November 19, 2004). So much of what emerged from the computer was in the form of design clichés or overused graphic techniques such as drop shadows and shadow boxes, exaggerated typography, excessive textures, and intrusive geometric shapes. Clearly, these design effects reflected the organization and capacity of the technology.

Mullaly says that things have come a long way since the early days of DTP and for the most part clean and simple design is back in vogue. It appears that the more simplistic design of today is a trend not resulting from DTP, but in fact a reaction to the overused clichés of DTP in the previous years. Because these design effects added to the value of a design, they were a popular design trend when they were first introduced, but they quickly became overused.

Watson says that he was “pretty green” as a designer when DTP arrived in the mid-1980s, but he still believed that it was a tool of efficiency and practicality. He claims that DTP significantly reduced the time involved in designing a layout, as well as increased the flexibility in regards to typography, grids, and formats.

Like Mullaly, Watson says that DTP had several disadvantages. The technology turned anyone who had a computer into a “designer” and whether they knew what they were doing aesthetically was beside the point. As a result, there was a flood of “design” in the public place that was awful at best. As Watson notes, “There became a steady decline in the knowledge of
tried and true principles of design, and now with few at the helm who could stand up for the benefits of graphic design, the boss or client who majors in accounting or sales became the author of what was needed in the market place as far as visuals” (email interview, November 19, 2004).

In contrast to Watson and Mullaly, Staehling was not an early advocate of DTP when it first arrived in the mid-1980s. He did not think that the technology worked well and therefore was not interested in using it until it did. As Staehling points out, “When the technology was introduced, it was embraced but with reservations since the machines were hopelessly slow” (email interview, November 19, 2004). For instance, it took a long time for an image to rebuild itself on the computer screen using PageMaker when DTP first arrived into the mainstream design industry.

Although Cheung was not directly involved in the DTP revolution in the mid-1980s, she says that it was necessary to know the technology in order to stay on top of things. As Cheung points out, “It was a necessity to know all aspects of DTP technology including prepress to conform to current workflows and production requirements” (email interview, November 19, 2004). The additional capabilities of prepress (i.e. all those functions in the offset process that take place from the time the file arrives until the plates are burned) such as electronic page-layout and colour management were some of the most significant functional changes introduced by DTP.

The Impact of DTP on the Work Process

The art directors of Vancouver Magazine were asked to specify whether DTP impacted the work process at Vancouver Magazine. The art directors Staehling and Watson provided insight into this question.

Staehling says that the digital production technology “absolutely” altered the way that he worked on the design of Vancouver Magazine in the early 1990s. As Staehling recalls, “I was
able to delegate a lot of the formatted, repetitive work and spend more time on covers, features, and assigning art” (email interview, November 19, 2004).

As mentioned previously, Watson believed that DTP was a tool of efficiency and practicality. Not only did the technology allow him to explore multiple typographic options within a single design much quicker and easier, but it also removed the mundane tasks of the design process such as creating templates, ordering scans, and marking up pages for the typographer.

**The Impact of Hardware and Software on the Design of Vancouver Magazine**

The art directors of *Vancouver Magazine* were asked to identify the technological advances in hardware and software that played a part in influencing changes in the way that *Vancouver Magazine* was designed. The art directors Staehling and Watson answered this question.

Staehling and Watson claim that the desktop scanner was a major breakthrough in the design workplace. The scanner had a number of advantages such as the ability to convert flat art, photographic prints, tear sheets, and three dimensional objects into digital format quickly and easily. For Watson, the scanner allowed for the quick placement of ideas and images without the fear of spending time or money on drum scans.

**The Changes in the Aesthetic of Vancouver Magazine Before, During, and After DTP**

The art directors of *Vancouver Magazine* were asked to indicate the changes in the overall aesthetic of *Vancouver Magazine* before, during, and after DTP. The art directors Staehling, Watson, and Mullaly provided insight into this question.

With the arrival of DTP, Staehling claims that the grid became more varied, stories were broken into smaller units, and asymmetrical design rules were common after the arrival of DTP.
Watson maintains that page-layouts and images became less formal and more fun. As Watson notes, “This creates more of a sense of entertainment tied with information which is what magazines are about” (email interview, November 19, 2004).

According to Mullaly, the introduction of DTP did not make the magazine better aesthetically, but it was the person using whatever tool was available at the time. As Mullaly notes, “You can take a lousy art director and top-notch equipment but you'll have a better magazine designed by a great art director doing paste-up” (email interview, November 19, 2004).

The Impact of Digital Production Technology on Publication Design

The art directors of Vancouver Magazine were asked to indicate whether digital production technology has an influence on publication design. The art directors Dahl, Mullaly, and Watson provided insight into this question.

Dahl claims that digital production technology offers an unlimited array of information and imagery as a design palette. For Dahl, “Today's designer can quickly explore hundreds of options that prior to desktop publishing and the World Wide Web would not be possible” (email interview, November 19, 2004).

Mullaly says that digital production technology has an influence on publication design because it offers a wide range of tools for precise control over text and image placement. But Mullaly is quick to point out the disadvantages of the impact of technology on publication design. She says that technology takes away from the creative process of designing a layout because there is less time to spend on the design. As Mullaly maintains, “I do like simple clean design but often it's due to lack of time rather than being the right choice. I often find I just don't have the time to explore as many solutions to a layout or time to do that little something extra” (email interview, November 19, 2004).

Watson claims that he can explore an original vision quicker with many more options with digital production technology. But, like Mullaly, Watson says that there are negative aspects
of the impact of technology on publication design. As Watson notes, "Unfortunately when you become dependant on that process, you lose the immediacy and the tactile or visceral sense of your creation, therefore the design loses a certain organic quality and becomes more homogenized" (email interview, November 19, 2004).

Summary

This section has examined information gathered directly from the past and current art directors of *Vancouver Magazine* that were present before, during, and after the arrival of DTP to provide context to the observed changes in digital production technologies and their influence on the design of *Vancouver Magazine*. The art directors of Vancouver Magazine, including Staehling, Dahl, Mullaly, Cheung, and Watson, shed significant insight into the differences in designing *Vancouver Magazine* before and after the arrival of DTP.

Before DTP, the art directors of *Vancouver Magazine* could not see the layout of an actual page of text with images. The design process required pre-visualization of all design components before beginning the layout. This meant that it was necessary to commit to specific typefaces, fonts, and sizes for headlines, decks, and body copy, and then order these elements from outside suppliers.

The art directors of *Vancouver Magazine* required significant amounts of time and manpower to produce the magazine before DTP. The paste-up process was ponderous and slow, as it required the art directors to cut the galleys by hand and prepare the layout by pasting type and images into the correct position on camera-ready mechanicals. As such, there was a limited amount of time and flexibility to work on the design of the magazine.

With the arrival of DTP, the paste-up process was performed electronically on the computer screen with page-layout programs such as PageMaker and QuarkXPress and graphics
programs such as Photoshop and Illustrator. The electronic process provided the art directors of *Vancouver Magazine* with the ability to see what was being designed on the computer screen.

Because it was possible to see the design on the computer screen, the art directors of *Vancouver Magazine* could explore different options of type and images much quicker and easier than before DTP. The technology significantly reduced the time involved in designing the magazine, as well as increased the options and flexibility in regards to typography, grids, and formats. What would take days to perform was completed in minutes with DTP.

DTP offered an unlimited array of information and imagery as a design palette. The art directors of *Vancouver Magazine* could experiment with the design of the magazine, take more chances, and create things that previously would have been too time-consuming and labour intensive. For the first time, it was possible to play around with type easily, create rules and drop caps, make corrections, and produce complex charts, graphs, and sidebars. With the arrival of DTP, the grid became more varied, stories were broken into smaller units, and asymmetrical design rules were common in the design of *Vancouver Magazine*.

DTP had a positive impact on the design process at *Vancouver Magazine* because it provided far more options and greater control of type, images, colour, and ideas in less time. The ability to interact with a page-layout to combine text with artwork in different ways in a dynamic environment demonstrates how a change in the technology to DTP carried with it a functional change in the design process.
An Analysis of the Design of *Vancouver Magazine*

In order to record the changes in design before and after the advent of DTP in the mid-1980s, *Vancouver Magazine* is examined from 1975 to 1995 at five-year intervals in relation to changes in digital production technologies. The span of twenty years is a sufficient amount of time for this study because it represents the time immediately before and after the arrival of DTP.

The design elements that indicate the use of DTP are criteria used to evaluate the relationship between digital production technologies and the design of *Vancouver Magazine*. The elements include the use of drop shadows, wraparound text, type sculptures, type over images, inset photos, outline type, and curved text, as well as the disappearance of widows and orphans and loose lines in typography.

The Design of *Vancouver Magazine* in 1975

The 1975 covers of *Vancouver Magazine* were created using manual paste-up techniques. The covers are highly segmented in that the images and type are separated from each other into individual entities. Before DTP, the simplest method for combining images with type was to keep them in separate areas on the covers.

The segmentation of the covers is achieved through the use of boxes: a box contains the image, another contains the logo, and a third contains the coverlines. The logo is the nameplate on the cover that identifies the publication, while the coverlines or sell lines are the short phrases that tell the reader what lies beyond the cover.

As Figure 1 reveals, the June 1975 cover of *Vancouver Magazine* has a large illustration framed inside a box with the logo and coverlines outside the box. There is a red border around the illustration to set it apart from other elements on the cover. The fact that the illustration is framed with an outside border and that the border is placed away from the edge of the illustration is a sign of the way that borders were created with pens or tape before DTP.
The logo above the illustration runs across the top of the page and is set in a simple lowercase serif typeface. Above the logo is a thin rule that was manually created.

There is little space between the letters on the logo of the June 1975 cover of *Vancouver Magazine*. Before DTP, the space between the letters was fixed in metal type. The typesetter could add more space between the letters by positioning each letter by hand and inserting tiny strips of metal in each piece of type. The tightly set type on the logo of the June 1975 cover of the magazine may be due to a typographical trend or to the individual skill of the paste-up artist using Letraset.

The June 1975 cover of *Vancouver Magazine* has coverlines at the top of the page, which are expressed quietly, in modest serif or sans serif type that do not intrude upon the logo or illustration. There are no coverlines placed on top of the illustration, which points to the lack of integration between the illustration and type.

In today’s world of DTP, the illustration on the cover would most likely bleed off the page and the logo would be built into the illustration. The coverlines at the top of the page would be brought down over the illustration in different colours. The June 1975 cover of *Vancouver Magazine* cover does not appear this way because it was difficult to achieve this with manual paste-up methods.
Figure 1: The June 1975 Cover of Vancouver Magazine

Restaurant Guide, Nitelife and Vancouver Today
The Amazing Struggle Of Donald Hamilton
And Richard Hughes, by Sean Rossiter
My Pals The Fantails, by Jo Lazenby

Used by permission of Vancouver Magazine. Note: the magazine pages were scanned from a bound volume of the magazines, which resulted in minor trimming and distortion on the gutter side of this image (left side of the page) and the gutter side of the following images (left or right side of the page).
As Figure 2 reveals, the April 1975 cover of *Vancouver Magazine* is similar to the June 1975 cover of the magazine. Like the June 1975 cover, the April 1975 cover has a large photo framed inside a box with the logo and coverlines each in a separate horizontal zone on the cover. The only structured difference between the two covers is that the April 1975 cover has a single coverline on top of the photo at the bottom of the page.

Before DTP, placing the coverline over the photo on the April 1975 cover was time consuming and expensive. In this case, the art director of *Vancouver Magazine* would have had to put down a Mylar overlay on top of the photo and paste the type on the Mylar in the correct position.

Mylar is a thin plastic polyester film that does not expand and contract with changes in temperature, allowing for accurate registration of the type on the image. This "mechanical art" was then sent to the printer with any additional instructions regarding the colour of the fill on the type or any other special effects. The printer would then make a series of negative and positive pieces of film from the different parts of the mechanical art to end up with a film sandwich used in the plate burning process that would allow for the correct effect. With DTP, the digital file prints all necessary information directly to the CMYK layers of film or directly to the CMYK plates, which is much faster and less expensive.

The coverline on top of the photo on the April 1975 cover of *Vancouver Magazine* is difficult to read because the green colour of the photo and the red colour of the coverline tend to vibrate when placed on top of each other. In order to make the coverline more readable, it would have been beneficial to place a slight drop shadow of white around the type to help raise it from the photo, but this would have been very difficult to accomplish with manual paste-up methods.
Figure 2: The April 1975 Cover of Vancouver Magazine

Used by permission of Vancouver Magazine
The 1975 inside spreads of *Vancouver Magazine* have headings, subheadings, and body text that alternate between a serif and sans serif typestyle. There is an abundance of boxes, rules, and borders around type and images, especially in the service and departmental pages.

As Figure 3 shows, the February 1975 department page in *Vancouver Magazine* has a series of boxes and rules around the type and images. The boxes and rules separate all elements on the page from each other.
WOW — WOW was the word it is not just a good female band, it's a good band. The girl bunch take no shit and their soundmen are as good as their girls. They are the real deal.

They have a huge array of percussion, brass, woodwind and guitar. Their vocal-dominant style is lunky soul à la Stevie Wonder, Roberta Flack, Sly & the Family Stone and Kiki Dee, and their sound is tight. Occasionally they miss a few notes, and sometimes the soundmen overpower their harmonies. But even when the music is slightly off, they look great. Occasionally they do miss a few notes, and sometimes the soundmen overpower their harmonies. But even when the music is slightly off, they look great. Occasionally they do miss a few notes, and sometimes the soundmen overpower their harmonies. But even when the music is slightly off, they look great. Occasionally they do miss a few notes, and sometimes the soundmen overpower their harmonies. But even when the music is slightly off, they look great. Occasionally they do miss a few notes, and sometimes the soundmen overpower their harmonies. But even when the music is slightly off, they look great. 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Occasionally they do miss a few notes, and sometimes the soundmen overweight their harmonies. But even when the music is slightly off, they look great. Occasionally they do miss a few notes, and sometimes the soundmen overweight their harmonies. But even when the music is slightly of...
As Figure 4 shows, the article in the December 1975 issue of *Vancouver Magazine* has three columns with type that is justified or aligned to both the left and right margins. Due to type set in lines of equal length, some of the lines have more space between the words, while others have noticeably less space between the words. There are large spaces between the words on the second line at the top of the second column.

In addition to the loose lines of text, a number of lines have widows and orphans, a single dangling word or short phrase at the end or beginning of a paragraph that appears at the bottom or top of a paragraph or column. The widows and orphans create rivers of white space throughout the type that interfere with eye movement from one line of text to the next, as well as create an unbalanced appearance.

In 1975, *Vancouver Magazine* did not have the in-house technology to deal with such minor problems as widows and orphans and loose lines of text in paragraphs, columns, and pages. To adjust such pagination errors, the magazine had to send the page to a typesetter to manipulate and reset the type, which was expensive and time-consuming.

The introduction of later versions of electronic page-layout programs such as PageMaker 4.0 included automatic controls to help prevent pagination errors such as widows and orphans and loose lines of text. The automatic controls added extra space at the beginning or end of a page or paragraph, forcing the text that might otherwise split to remain together on a page. Other DTP tools to prevent widows and orphans and loose lines of type included tracking, letter spacing, and character spacing.
Figure 4: A December 1975 Inside Spread of Vancouver Magazine

THE MAN STILL STANDING WHEN THE MUSIC STOPPED

By Keith Bradbury

Gordon Gibson is a tall, bright, wealthy member of the B.C. political scene. Some say that he could be the thing to look for in the Liberal cabinet. Gibson is not new to politics. He was a Liberal candidate in the 1960s and a member of the B.C. legislature until 1972. He has been involved in the business world for most of his life and is known for his success in the real estate industry.

Gibson is a strong supporter of the Liberal party and has been involved in several key campaigns. He is known for his ability to work with others and his leadership skills. Gibson is also known for his ability to think outside the box and come up with innovative solutions to problems.

And if McCeller, Gordon and Walter called it right, why might Gordon Gibson get a Liberal nomination? Just to get things moving in the right direction, Gibson has proposed a number of reforms that he believes would benefit the province. He has also proposed a number of regulations that he believes would benefit the province.

The Liberal party is in a situation where they need a strong leader. Gibson is the perfect candidate for this role. He has the experience and the leadership skills to get things done. He is also a strong supporter of the Liberal party and has been involved in several key campaigns. He is known for his ability to work with others and his leadership skills. Gibson is also known for his ability to think outside the box and come up with innovative solutions to problems.
The Design of *Vancouver Magazine* in 1980

Like the 1975 covers of *Vancouver Magazine*, the 1980 covers of the magazine were created using manual paste-up methods. In terms of technological issues, the 1980 covers fall into the same category as the 1975 covers. The 1980 covers have a blocky, squared appearance in which the type does not overlap the images. Because it was difficult to integrate type and images before DTP, the segmentation of elements on the covers was a common way to approach the design of *Vancouver Magazine*.

As Figure 5 reveals, the August 1980 cover of *Vancouver Magazine* has little interaction between the type and photo. The type does not intrude upon the photo, except for the single coverline on top of the photo at the bottom of the page that was placed there with an overlay.

The photo on the August 1980 cover of the magazine bleeds off the page, touching the edge of the page and extending beyond the trim edge leaving no margin. Due to the bleed, the photo takes a larger presence than the bordered images of 1975. But it is important to note that the photo bleed is more of a design trend than a technological change.

The logo on the August 1980 cover of *Vancouver Magazine* is different than the logo in 1975. The logo in 1980 has thicker type; the capital “V” of Vancouver extends through the bar; and the letters are set to touch each other. Once again, these design changes are not technological issues as much as design trends.
Figure 5: The August 1980 Cover of Vancouver Magazine

Used by permission of Vancouver Magazine
Although the type and images are segregated into different areas on the 1980 covers of *Vancouver Magazine*, these elements are not separated on the December 1980 cover of the magazine. As Figure 6 shows, the type and image overlap on the December 1980 cover, therefore providing greater interaction between the elements. The coverlines intrude upon the image, while the image intrudes upon the logo. Since it was a common practice to have an image overlap a logo prior to DTP, this points to how the technique was possible before the arrival of DTP.

The photo of the woman on the December 1980 cover of *Vancouver Magazine* is surrounded by a number of large, vivid coverlines in striking fonts, in multiple colours, in serif and sans serif type, and in different sizes. The coverlines have broken out of the quiet, restrained fonts into more varied and bolder voices.

Compared to the other 1980 covers of *Vancouver Magazine*, the December 1980 cover of the magazine would have been more expensive to produce because of the multiple layers. The December 1980 cover looks like it was created with a DTP system, but obviously it was not because DTP had not yet arrived into the mainstream design industry. The December 1980 cover shows how the paste-up technology of the time was becoming more sophisticated and how the film houses were able to handle many things through sophisticated film techniques.
Figure 6: The December 1980 Cover of Vancouver Magazine

Used by permission of Vancouver Magazine
As Figure 7 reveals, the April 1980 inside spread of *Vancouver Magazine* is set in three columns with rules separating each column. The typesetting house built the whole page of this inside spread with the bars between the text, type, drop cap, and dingbat. These elements were pasted down and then the photo was dropped into place.

There is more variety in the layout with the inclusion of a greater amount of white space in the upper right hand corner and a larger photo that bleeds off the page. The increase in white space makes the layout more visually appealing and easier to read by providing a resting space for the eye and creating a contrast with the text on the page. These design changes are not so much related to technology but to the design trend of the time. However, it was quicker and easier to make such changes with the arrival of DTP.
Figure 7: An April 1980 Inside Spread of Vancouver Magazine

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As Figure 8 shows, the November 1980 inside spread of *Vancouver Magazine* has the same problem as the 1975 inside spreads of the publication with widows and orphans and loose lines in typography.

The November 1980 inside spread of *Vancouver Magazine* has several drop caps, capital letters larger than the standard text size set into a block of text at the beginning of a paragraph with one or more lines indented to accommodate the large letter. The drop caps create graphic interest, attract attention, and enhance the appearance of the page.

The drop caps are basic because they are boxed off from the block of text to the right of the drop caps. The block of text to the right does not fit around the contour of the initial letter, therefore leaving a large white gap between the drop cap and the block of text. This is somewhat problematic because it is unclear whether the large initial letter is itself a word.

With the large capital A, the text does not mimic the slope of the A because it was difficult to achieve this with manual paste-up methods. With paste-up, the drop cap was placed on a piece of paper and pasted up, then the block of text was placed on a separate piece of paper and pasted up, and then the lines of text around the drop cap were sliced apart so that each line could be moved over individually beside the drop cap.

With the November 1980 inside spread of *Vancouver Magazine*, the pull quote in the middle of the page is not centered properly in the box. The spacing around the pull quote is unusual in that there is more spacing at the top of the quote than at the bottom of the quote. Because the page was set on a typesetting machine, it was difficult and time-consuming to cut the lines apart and slide them up as opposed to DTP methods. But with the arrival of DTP, the art director could quickly and easily move the quote up in order to leave more space at the bottom.
Margaret Ford "Earth Watcher". Fig. 8 was shot around 1000m from the heart of Vancouver's finest. The scene shows an evening view of the city from the roof of the Vancouver Art Gallery. The image was captured with a 35mm film camera and developed at home. He had already applied for his "earthwatcher" permit from the federal government. This permit allows him to visit any part of the country where there is a need to monitor the environment. The image was taken on a clear night in Vancouver, and the city lights provided a stunning backdrop for the photograph. The image was published in the Vancouver Magazine in 1980. If you have any questions or need further information, please feel free to ask.
The Design of *Vancouver Magazine* in 1985

Although the arrival of DTP in the mid-1980s transformed publication design, Rick Staehling, the art director of *Vancouver Magazine* in the early 1980s and early 1990s, says that *Vancouver Magazine* did not adopt the application of DTP until the early 1990s. As such, the 1985 issues of the magazine do not show the DTP clichés of the time.

The 1985 covers of *Vancouver Magazine* have a more modern and clean design approach than the 1980 covers of the publication. As Figure 9 reveals, the August 1985 cover of the magazine has varied typestyles and vibrant colours. The yellow colour of the logo sets it off from the background and separates it from other cover typography.

Compared to the 1980 covers of *Vancouver Magazine*, the August 1985 cover of the publication has greater interaction between the type and photo. There is a full-sized, full-face photo of a man wearing the logo on top of his head. The man is carefully positioned so that the single column of coverlines is placed over him. The coverlines flush to the left with no wraparound text. A barcode in the lower left corner appears for the first time.

One can only wonder if the more modern and clean design approach was driven by what the technology of the time was starting to look like it could accomplish in 1985 even if the technology was not being used at *Vancouver Magazine*. Was the design of the magazine being influenced by design changes eased by technology at this time even though the publication did not use the technology? Or was the design approach just responding to the aesthetic of the day? Did the paste-up artists figure out how to achieve a more modern and clean design approach with overlays?
The 1985 inside spreads of *Vancouver Magazine* have more variety than the 1980 inside spreads of the magazine. The body text is set in two, three, four, and five-columns with rules separating each column. As Figure 10 reveals, the March 1985 inside spread of *Vancouver Magazine* is set in four-columns with a large amount of white space at the top of the page around the photo.

The drop cap in the March 1985 inside spread of *Vancouver Magazine* is much larger than the drop caps in the 1980 inside spreads of the publication. Like 1980, the block of text to the right of the drop cap does not follow or fit around the contour of the initial letter, therefore leaving a large white gap between the drop cap and the block of text.

There are a number of rule lines in the March 1985 inside spread of *Vancouver Magazine*. On the heading “Romancing the Bones,” the rule line stops on the descender of the letter “g,” the part of the lowercase letter that extends below the baseline of the letter. In order to make the rule line stop on the descender, the text was manually pasted down and then a pen was used to draw the line.
You do not have to dress up, nor are polite table manners a priority. No wonder ribs at Hy's or at home are so trendy. A survey reported in Restaurant Hospitality magazine says nearly one restaurant in two now offers some variety of pork ribs. Old-fashioned barbecued ribs seem to be the favorite, particularly in Southern style, involving hours of slow cooking over special woods in enormous pits or smokehouses. Ribs can be dressed up with apple, peach, or tomato sauce, but served with beans and rice. South Carolina ribs are a favorite in Chinese-style, with sweet and sour sauce. My mother added mashed potatoes and red beans, and served them with the ribs. Ribs can be served with white-cabbage slaw, or coleslaw, as in the following recipe. The ribs, scored with parallel slits for the barbecue sauce, are basted, grilled, and served with the coleslaw and red beans.

Shape and size include country-style pork spareribs, thick pieces best attacked with a knife and fork. Both side and back ribs are sold in long strips, the back ribs meatier and more expensive. Baby back ribs from specialty butcher shops are best for casual parties.

Three Vancouver shops for top-grade ribs are Quality Meats in Kerrisdale, Hycrest Meats at 17th and South Granville, and Jackson's Meats on 4th Avenue. Most cookbooks suggest one rib per serving, but I recommend including a few extras.

Glorious Foods

BY JACKIE BYRNE

Photographs by DERIK MURRAY

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As Figure 11 shows, the November 1985 inside spread of *Vancouver Magazine* has a larger drop cap, heading, subheading, and pull quote. These elements are in bolder colours, in more striking fonts, in serif and sans serif type, and in different sizes.

For the first time, the drop cap in the November 1985 inside spread of *Vancouver Magazine* is above the block of text to the right, as well as lined up with the byline, the short phrase that indicates the name of the author of the article.

The byline and pull quote, a small selection of text pulled out and quoted in larger typeface, cross over the photo on the right to attract attention. Letraset was not used to set the byline and pull quote, but instead these elements was pasted down on a piece of overlay and then placed over the photo.
he is declining. Every man remembers what
ty she was wearing when she first saw her.
Pink shorts, high heels and bare legs,
says an energy-resource company presi-
dent, who first spotted her with her son in
a campuh barbershop. "That barber

ever got those clippers any-
where near her son's hair. He was saiaoine
. . ...
air for a good five minutes before anyone noticed."
"She swished by in a full-length fur—at a basketball game!" says a fan. "She
was late.
"Gold-lam~ed dress cut down to
there." says an opening-night Film Festival goer.
"All suede and leather and boots." says Jack
Webster. "like a jungle animal.
"I could have been anybody." says Marlene Cohen. "I'm just lucky. that's all.
Despite two oul of three children dying young and violcntly: a husband with
multiple sclerosis?
"The negatives," she says resolutely. "are yesterday's news. It's today that
counts.
Things Started Out So Well, Considering

Marlene Bernsteiii Cohen, born 53 years ago a traveling-salesman's daughter, sits in
her West End penthouse door. She wears a pink-£roned Chinese robe. its peach sash tied
so the bow is at the back. The silin high-heeled mules on her size-seven feet pick up the
robe's multihued shades.
The walls that act as her setting are for the most part a satiny chocolate brown,
but the furniture, the ceiling, the roll-up Roman shades and the walls of the den are
a small-print beige fabric.
She sits amid striped velvet cushions in chocolate and peaching up her favorite
seating area everywhere. Crystal pieces dot tables covered in silk. The serving
tables are made from antique silver trays.
"I hitchhiked to school every morning.", she says. "It was safe.
Generally two or three girls together in the Montreal traffic, and it was "almost
always" somebody who knew her. usually Jewish men going down to join the
other manufacturers at the Hermes Building.
"I remember one standing there in
my uniform and my long black
stockings and my roll hat..." she
contemplates. her high-school uni-
iform, so white by now, given to
her by her brother.
"I loved clothes, because during
the dating years no one else was
giving you to see you look pretty
other than what they say."
"I remember always a [dress]
gown on the front —half of her face
and so I opened my eyes. I looked
into the living-room windows and
I could see the curtain parted and my

Everythmg was coming up roses for
Marlene Cohen. Hawaii honeymoon, film
star palms, money flowing like champagne.
"Negatives," she says, "are yesterday's
news," and there was plenty of news.

By Valerie Gibson

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The Design of *Vancouver Magazine* in 1990

The year 1990 marks a dramatic change in the design of *Vancouver Magazine*. Staehling, the art director at the time, oversaw the introduction of the Macintosh computer and DTP software. The change from typesetters and paste-up techniques to computers and digital production technology was a transition period for *Vancouver Magazine*. Although the magazine had access to a full range of DTP tools, it still used paste-up methods occasionally throughout the early 1990s to supplement the capabilities of early DTP.

As Figure 12 and Figure 13 reveal, the January and February 1990 covers of *Vancouver Magazine* are more varied than the 1985 covers of the magazine. There is an increase in the use of fonts, typestyles, and colours, as well as a broad range of typographical treatments such as bolder and italicized type. The new type choices are contemporary and more appropriate than the generic fonts of previous years. The change in type choices is consistent with the increased potential of DTP to manipulate type.

Before DTP, the typesetter was responsible for setting type on lead casting machines. If the art director wanted to change the type on a page of *Vancouver Magazine*, the art director had to send the page to the typesetter to have the type reset, which was expensive and time-consuming. With the arrival of DTP, computers and page-layout software made it possible to manipulate digital fonts and do in minutes what once took typesetters hours, even days, to accomplish. For the first time, typographic experimentation was easy and immediate.

The type on the January and February 1990 covers of *Vancouver Magazine* is placed prominently on top of the photos. As such, there is significant interaction between the design elements. The covers have a number of coverlines over the photos that are either flushed right, flushed left, or centred. The largest coverlines are set off graphically from the other coverlines with a distinctive size, colour, and font treatment, while the secondary coverlines step down in importance to avoid competing with other elements on the cover.
The logo on the February 1990 cover of *Vancouver Magazine* is placed underneath the photo, while the logo on the January 1990 cover of the magazine is placed over the photo. The people on the January 1990 cover are wearing the logo on their foreheads.

In addition to a major font change on the logo of the January and February 1990 covers of *Vancouver Magazine* that may or may not have been available before DTP, there is a drop shadow around the logo for the first time. The drop shadow creates the 3D illusion that the type is standing out from the background and casting a shadow. Because it was very difficult to create a drop shadow before DTP, the fact that a drop shadow appears on the logo of the January and February 1990 covers of *Vancouver Magazine* is significant. The presence of a drop shadow indicates the use of DTP.

It is possible to see through the images to the underlying background on the January and February 1990 covers of *Vancouver Magazine*. The February 1990 cover has a photo of a woman with her head over the logo and it is possible to see through her hair so that the background shows through. Before DTP, it would not have been possible to see through the image to the underlying background. The image would have been opaque, crossed over the top of the logo, and covered the underlying background. The paste-up artist would have had to cut all the fuzzy part of the hair off to create a clean edge around the hairline.

With the arrival of DTP, the art director of *Vancouver Magazine* was not limited to having a clean cut along the hairline of the woman. With Photoshop, it was quick and easy to delete the area surrounding the image and then save the image as a transparent GIF format. This not only allowed for the underlying background to show through, but it also opened up numerous possibilities for artistically combining images, backgrounds, and text. The fact that it is possible to see through the images on the January and February 1990 covers of *Vancouver Magazine* is a function of DTP.
"I couldn't stop acting for anything, I'll just have to try and balance school."

How Kids Survive As Movie Stars

Valerie Goodhew, John Turner: The night the Griswold & co-trolled the chief.
Dining Guide: Vote for the town's best restaurants and win fine dinners page 57.
Our best mayor never: Why Carole Taylor decided to pull the plug on city hall.

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Figure 13: The February 1990 Cover of Vancouver Magazine

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With the 1990 inside spreads of *Vancouver Magazine*, the signs of DTP technology are found in the body text when text wraps around images and text blocks for effects such as pull quotes. As Figure 14 reveals, the May 1990 inside spread of *Vancouver Magazine* has text wrapped around the circular illustration of the beaver with justified type on the right side of the illustration. Before DTP, wraparound text was a difficult and laborious task of cutting and repasting type by hand. But the arrival of DTP made it easy to include wraparound text into the layout.

There is a situation in the May 1990 inside spread of *Vancouver Magazine* where tracking is used to adjust the space for groups of letters and entire blocks of text. For instance, the subheading “Behind Bars” is tracked out so that it is justified to the width of the headline “Beaver” above it, while the byline “By Peter Tower” is tracked out so that it is justified to the width of the block of text above it. Before DTP, it was difficult to track out lines of type, but this task was quick and simple with the arrival of DTP.

There is an increase in the use of white space between the headline, subheading, and body text on the May 1990 inside spread of *Vancouver Magazine*. The white space structures the page and emphasizes different elements on the page. But it is important to note that the increase in white space is not as much a technological issue as a design trend.

The May 1990 inside spread of *Vancouver Magazine* has no orphans and widows, as well as less loose lines of text. Software programs such as PageMaker and QuarkXPress have automatic controls that help prevent these problems. The automatic controls add extra space at the beginning or end of a page or paragraph, forcing the text that might otherwise split to remain together on a page.
YANKEE PARK IS AN OASIS of relative change—
lessen is a car that is constantly expanding and astounding.
Having wandered most of its trails with one pocket full of
peanuts, foxnuts and the occasional carrot stick, my lady and I
usually feel ourselves on the path we call the "mainline"
trailway. Fresh and chittering squirrels scurry about at
the great varcity, red, black and brown of snakes
turn the earth (yes, from my lady's hand).

One recent morning, the entire valley was
hearing calmly, though lamenting, the
mouthfuls of sugar-kist shovels. They
had stopped their frisking, chirping, stunt
squirrels, for the ones like ghosts whom we
passed them and the predators looking lower
our way in the broken path. We had checked
the good dozen of times, before单元 seeing a
trace of the elusive animals. Not so today. To our
delight, a chubby fellow with a hat stuck up
and eyes with a look of trusting benevolence. We
felt an immediate rapport with him.

My lady offering a carrot stick. The beaver took it in his
hand, placed it carefully in his mouth, chewing
briefly and reaching for another. A beaver does
cannot think, last, he punched back to the water, plunged in and swam away
in the direction of his lodge. Believing
that we had seen the last of
him, we were preparing to leave when he emerged again
from the water, the same accompanied by his mate. The female
beaver, a smaller animal with a bushy tail,
came directly in the over-grown, rown, gave him a
for,
came directly in the over-grown, rown, gave him a
for,
came directly in the over-grown, rown, gave him a
for,
came directly in the over-grown, rown, gave him a
for,
came directly in the over-grown, rown, gave him a
for,
came directly in the over-grown, rown, gave him a
for,
came directly in the over-grown, rown, gave him a
for,
The Design of *Vancouver Magazine* in 1995

The 1995 covers of *Vancouver Magazine* take full advantage of the full range of DTP tools. There is a significant increase in the number of design elements on the covers, making the covers appear cluttered and disorderly. The increase in design elements points to the overuse of DTP techniques.

Due to integrating intense images with large, bold, and flashy coverlines, the 1995 covers of *Vancouver Magazine* are denser, more varied, and less orderly than the 1990 covers of the magazine. Three or even four columns of coverlines containing eight or more blocks of type surround the logo and images.

As Figure 15 shows, the coverlines on the Winter 1995/96 cover of *Vancouver Magazine* invade the cover and take on a life of their own. The coverlines attain a prominence that compete with the logo and image. The image of the swan is not in the foreground, but in the background behind the coverlines. Even the coverline “Secrets” is larger than the logo.

The logo and coverlines on the Winter 1995/96 cover of *Vancouver Magazine* have fine edge drop shadows around them to make them stand out from the background. The presence of fine edge drop shadows on the logo and coverlines points to the use of DTP.

In addition to appearing in a variety of sizes, colours, and type treatments, the coverline typography on the Winter 1995/96 cover of the publication has variations of uppercase and lowercase as well as different fonts and font families. Although variations in typography were possible before DTP, it was expensive and time-consuming because typesetters had to set the type. With the arrival of DTP, the magazine was produced on a computer and typeset in a page-layout program. This made it much easier and less expensive to experiment with typographical treatments.
The logo on the Winter 1995/96 cover of *Vancouver Magazine* is different than the 1990 logo of the magazine in that it is smaller and set in capital letters. These design changes are purely aesthetic not technological, but technology may have played a role to make the changes possible.

For the first time, type sculptures appear on the Winter 1995/96 cover of the magazine in which different elements of type are laid on top of each other to build a sculpture. For example, the coverline “Best bets” crosses over the coverline “Secrets,” while the “t” in the coverline “Secrets” crosses over the logo.

With manual paste-up methods, it was nearly impossible to create type sculptures because there was no way to visualize the layout with type placed over type. But with the arrival of DTP, computers and page-layout software made it possible to manipulate type and do in minutes what once took typesetters hours, even days, to accomplish. As it was very difficult to create type sculptures before DTP, the fact that type sculptures appear on the Winter 1995/96 cover of *Vancouver Magazine* is significant. The presence of type sculptures in the design of the magazine indicates the use of DTP.
Figure 15: The Winter 1995/96 Cover of Vancouver Magazine

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As Figure 16 reveals, the November 1995 cover of Vancouver Magazine is similar to the Winter 1995/96 cover of the magazine. The November 1995 cover has a jumble of coverlines crowded closely together on the right side of the page. The cluttered coverlines are set in bold and vivid typography, as well as in various sizes.

What is interesting about the November 1995 cover of Vancouver Magazine is the curved text on the logo. The text on the logo flows along a curved line and communicates the height of the cover model. The absence of curved text in issues of the publication before DTP points to how it was difficult to create text on a curved line.

With the introduction of graphics programs such as Illustrator and Photoshop, the art director of Vancouver Magazine could easily create text on a path using vector-drawing tools. Once the path was created in the desired shape, the text was applied to the path, following the shape of the path. The path was removed, leaving the curved text. The presence of curved text on the logo of the November 1995 cover of Vancouver Magazine points to the use of DTP.
Figure 16: The November 1995 Cover of Vancouver Magazine

Blam! Inside the animation industry.

Those big, bad Grizzlies. Who they are.

Why they're here. And why they have hope. Plus Swinging in Langley and fashion in the park.
As Figure 17 shows, the images on the September 1995 inside spread of Vancouver Magazine are digitally manipulated to produce a contrived image. The manipulation of the images is possible through the use of Photoshop, with its impressive array of filters and effects, as well as Illustrator, with its wide variety of drawing and painting brushes that allow for the electronic generation of almost anything imaginable.

In addition to text wrapping around the images of people inside the televisions, there is a sense of layering throughout the September 1995 inside spread of Vancouver Magazine that creates the illusion that the images and blocks of text exist at different distances from the reader. For example, the images of people inside the blue and green televisions on the left side of the page break through the border around the text, making the images appear to float above the background.

The masking tool in Illustrator or Photoshop was used to perform image-editing functions to selective areas of the images, as well as apply varying levels of transparency to the images. For instance, the illustrations of the televisions were drawn in Illustrator or Photoshop and then a mask was created over them. The photos of the people were cropped so that they were not larger than the illustrations. The photos were then placed over the illustrations so that the photos were masked, except for the part of the photos that showed through the underlying background. This process created the uneven crop of the photos that fitted perfectly into the illustrations.

The layering, masking, and cropping of images are key functions of DTP. Although these photo manipulation techniques were possible before DTP using mechanical and chemical photo processes, the process was challenging, time consuming, and limited by the physical tools available. But the arrival of DTP not only rendered the physical tools obsolete, but the technology also greatly expanded the possibilities of image manipulation. With the introduction of DTP, images could be digitally modified and manipulated in an infinite number of ways that were
previously impossible to produce physically. The level of sophistication of image manipulation vastly increased with the arrival of DTP.
Delightful blend of culture and commerce—she's the one you'd expect to see walking the streets of Old Town, and she's the one you'd expect to see walking the streets of Vancouver Magazine. She's the one you'd expect to see walking the streets of the world, and she's the one you'd expect to see walking the streets of Old Town.

The September 1995 Inside Spread of Vancouver Magazine

Cover story: "The Rise of the City's Best Shopping Destinations," by Brian Henschel

Other stories include:
- "Vancouver's Best Shopping Destinations," by Brian Henschel
- "The Rise of the City's Best Shopping Destinations," by Brian Henschel
- "Vancouver's Best Shopping Destinations," by Brian Henschel

Used by permission of Vancouver Magazine
As Figure 18 reveals, the March 1995 inside spread of *Vancouver Magazine* has a large, splashy, and dramatic image that has been altered using computer program tools and software. A number of photos have been combined into a single image to create a photomontage.

Before DTP, the art director of *Vancouver Magazine* would have had to use a sharp instrument such as a pair of scissors or a scalpel to cut the edges of the photos and then paste them down on top of each other. But the joining and compositing of photos to create a photomontage became much quicker and easier digitally.
Figure 18: A March 1995 Inside Spread of *Vancouver Magazine*

Used by permission of *Vancouver Magazine*
Summary

This section has examined the design of *Vancouver Magazine* from 1975 to 1995 at five-year intervals in relation to changes in digital production technologies. Using DTP as a technological benchmark to evaluate the impact of technology on the design of the magazine highlights the differences before and after the arrival of DTP in the mid-1980s. The design elements that indicate the use of DTP such as drop shadows and wraparound text were criteria used to evaluate the relationship between digital production technologies and the design of *Vancouver Magazine*.

This section has cited numerous examples of design effects that were easily done on a DTP system that changed the visual appearance of *Vancouver Magazine*. These examples are strong evidence for the notion that DTP encouraged a difference in the visual appearance of the publication.

With the advent of DTP, the design of *Vancouver Magazine* had a more interesting approach to art. For instance, there was an increase in the use of type sculptures, drop shadows, wraparound text, type over images, inset photos, outline type, and curved text — all of which represented the new functionality and aesthetic potential of the technology.

There was a decrease in the presence of orphans and widows and loose lines in typography in the design of *Vancouver Magazine* with the introduction of software programs that allowed for the manipulation of type. There were more orphans and widows and loose lines in typography before DTP than after the arrival of the sophisticated technology.

With the adoption of DTP, there was an almost limitless flexibility and variety to the design of *Vancouver Magazine*. There was an increase in distinct typography in which a number of different typefaces were used in various combinations. The different typefaces served as a contrast to the traditional typefaces of the past and modernized the appearance of the design.
Although different typefaces were used before DTP, they involved photomechanical processes that were slow and expensive. The introduction of DTP created a market for digital type that provided easier access to it.

It is possible that the increase in different typefaces was representative of a design trend, but technology certainly accounted in part for the increase in different typefaces. Because type no longer needed to be set and reset at the typesetters with DTP, it was possible to experiment with type using graphics software such as Photoshop and Illustrator.

With the arrival of DTP, *Vancouver Magazine* was more expressive in its use of images and colour. There were large and vibrant images throughout the publication, much of them dropped out against white in an attempt to break away from the blockier, more squared appearance before DTP and to give the pages more white space. In addition, images were digitally modified and manipulated in an infinite number of ways that was previously impossible to produce physically. The graphics programs greatly expanded the possibilities of image manipulation.

The changes in the design of *Vancouver Magazine* have been influenced by technological factors. The impact of technology on the design of the magazine is evident in the increase in design elements that were difficult to achieve before the arrival of DTP such as drop shadows, type sculptures, wraparound text, type over photos, inset photos, drop shadows, outline type, and curved text. These elements were not present in the design of *Vancouver Magazine* before DTP.
PART FOUR

Conclusion

This report has examined the impact of technology on design using Vancouver Magazine as a case study within the context of a variety of influences such as social and political factors to technological factors such as DTP and its impact on contemporary design. The aim of the report was to provide a greater understanding of the relationship between technology and design on a practical level.

On a theoretical level, this report has drawn on the work of Herbert A. Simon who defined design as the process of creating courses of action aimed at changing existing situations into preferred ones. This broad view of design includes the creation of all varieties of artifacts for human use and a science of design that Simon characterizes as a science of the artificial or a broadly conceived practice of design.

Simon has described nature as the ground of meaning against which a science of the artificial can be defined. According to Simon, natural science is knowledge about natural objects and phenomena in the world, whereas artificial science is knowledge about objects and phenomena invented by humans. His proposal reveals the distinction between describing or explaining what is already found to be in existence versus creating what does not exist.

Simon argues that design is concerned with the construction of artifacts and artifacts are objects that are created by individuals to help them achieve certain goals or perform practical purposes. Designers create artifacts that are governed by simple laws, the apparent complexity resulting from that of the environment in which they are trying to adapt to.
The essence of Simon’s theory is that aesthetic and functional considerations should not be separated in the design of artifacts and that every production technology carries with it its own functional and aesthetic potentials. The theory establishes a strong relationship between the technology of production and an artifact’s functional and aesthetic potentials. The technology of production is the part of the outer environment of the artifact, while the artifact’s functional and aesthetic potentials is the inner environment of the artifact represented by the actions of the designer.

Simon’s theory further suggests that the options for function and aesthetics are set forth by the inherent qualities of the technology employed in production. As mentioned earlier in this report, the relationship between the functional and aesthetic potentials of an artifact and the technology of production can be applied to such artifacts as a hammer and published content. These examples reveal the relationship between the design of artifacts and the technology specific to their production. As such, Simon makes a strong case for a relationship between technology and design.

On a practical level, this report has advanced the relationship between technology and design by detailing the major influences of digital production technologies on publication design in the early years of its implementation. The arrival of the computer and DTP software in the mid-1980s, along with the introduction of many other sophisticated digital production technologies such as desktop scanners and PDF files in the 1990s, had an enormous impact on all aspects of publication design in a relatively short period of time.

The impact of DTP on design practice was substantial. With the arrival of DTP, “Procedures including layout, typesetting, making position photostats, and pasting elements into position were all combined into a seamless electronic process” (Meggs, 1998, p.457). The advantage of the electronic process was the ease with which changes could be made to the design
of a layout, as well as the ability to materially shorten the time to produce a finished product. This advantage was heightened if last minute changes were required to the design of a layout.

With the introduction of DTP, magazines immediately began converting to digital design. Graphic designers were quick to explore the creative possibilities of this innovative design tool for producing the layout of a magazine. They could explore unprecedented options made possible by the powerful capacities of the technology. The advantages of DTP over traditional publishing were immense: ease of use, low cost, speed, efficiency, and flexibility in design.

Despite the advantages of the arrival of DTP in the mid-1980s, the technology had disadvantages as well. For instance, the computers were hopelessly slow when the technology first arrived on the scene. Also, the technology turned anyone who had a computer into a designer and whether they knew what they were doing aesthetically was beside the point. Desktop users untrained in DTP tended to overdesign a publication by using too many typefaces and design elements. So much of what emerged from the computer was in the form of design clichés such as drop shadows and shadow boxes, exaggerated typography, excessive textures, and intrusive geometric shapes. But the benefits of utilising DTP for publication design outweighed the negative aspects.

The manifestation of technology in design was illustrated through an analysis of the design of Vancouver Magazine from 1975 to 1995 at five-year intervals, as well as an examination of information gathered directly from the past and current art directors of Vancouver Magazine that were present before, during, and after the arrival of DTP. The information gathered provided context to the observed changes in digital production technologies and their influence on the design of Vancouver Magazine.

The past and current art directors of Vancouver Magazine, including Rick Staehling, Chris Dahl, Cathy Mullaly, Doris Cheung, and Randy Watson, shed significant insight into the
differences in designing *Vancouver Magazine* before and after the arrival of DTP. The change to DTP, singly and as a whole, affected the design of *Vancouver Magazine* in a substantial way.

Before DTP, the art directors of *Vancouver Magazine* created the magazine manually using a variety of non-computer techniques and equipment. Under the traditional publishing system, the art directors required significant amounts of time and manpower to produce the magazine. They were involved in manual paste-up, assembling the text and graphical elements on the page as specified on the page dummy prior to reproduction.

The manual paste-up process was ponderous and slow, as it required the art directors of *Vancouver Magazine* to cut the galleys by hand and prepare the layout by pasting type and images into the correct position on camera-ready mechanicals. This in turn left a limited amount of time and flexibility to work on the design of the magazine.

Because the art directors of *Vancouver Magazine* could not see the layout of an actual page of text with colour artwork included before DTP, they had to pre-visualize all components of the design before beginning a layout. This meant that they had to commit to specific typefaces, fonts, and sizes for headlines, decks, and body copy and then order these elements from outside suppliers, which was a ponderous, slow, and expensive process. If the art directors wanted to change the type on a page before DTP, they had to send the page to the typesetter so that the type could be reset, making the process costly and time-consuming.

With the arrival of DTP, the art directors of *Vancouver Magazine* moved away from manual methods of production and design to computer-based systems that altered both the design process and the design itself. Because it was possible to produce the magazine in-house with a camera-ready layout for printing, the art directors could bypass the outside proof printer and typesetter. DTP was used to do much of the typesetting and page-layout work that was formerly completed by outside professionals, which meant that the magazine was able to save significant amounts of time and money in preparing the pages for printing.
With the introduction of DTP, the art directors of Vancouver Magazine performed the paste-up process electronically on the computer screen with electronic page-layout programs such as PageMaker and QuarkXPress and graphics programs such as Photoshop and Illustrator. The electronic process provided the art directors with the ability to see what was being designed on the screen, which meant that they could explore different options of type and images much quicker and easier than before DTP.

Because DTP provided the art directors of Vancouver Magazine with immediate and complete control over all elements on the desktop, they gained greater control over the design process. They could interact with a page by combining text and graphics, moving text around on the page, altering type size and choice of font, controlling word spacing and letterspacing, and importing text and graphics from a variety of word processors. Their ability to interact with a page-layout to combine text with artwork in different ways in a dynamic environment demonstrates how a change in the technology to DTP carried with it a functional change in the design process.

DTP offered many alternatives by simplifying the most tedious processes in design and page-layout. By providing new processes and capabilities, DTP expanded the creative potential of the design process by making possible an enhanced ability to manipulate images, colour, and form. It was possible to manipulate images in ways that were previously impossible to produce without the use of expensive airbrush technology.

With the arrival of DTP, the art directors of Vancouver Magazine could quickly and easily explore multiple approaches to the design of the magazine with capabilities for multiple typefaces and fonts per page, automatic wraparound text and graphics, kerning, colour control, elaborate rules and borders, built in scaling and cropping of images and graphics, and complex charts and graphs. These additional capabilities were some of the most significant functional and visual changes introduced by DTP.
DTP allowed the art directors of *Vancouver Magazine* to manipulate digital fonts and do in minutes what once took typesetters hours, even days, to accomplish. They could create more elaborate layouts and variations in design in seconds as compared to the lengthy process of changing a design in the traditional fashion. DTP provided the art directors with the opportunity to achieve certain things that were almost impossible before DTP without spending large amounts of time and money. What would take days to perform was completed in minutes with DTP.

In addition to significantly reducing the time and money involved in designing *Vancouver Magazine*, DTP increased the options and flexibility of the design in regards to typography, grids, and formats. With the advent of DTP, the art directors of *Vancouver Magazine* could take more chances with the design, experiment without getting locked into something on a permanent basis, and create things that previously would have been too time-consuming and labour intensive. The art directors could quickly and easily play around with type, create rules and drop caps, make corrections, as well as produce complex charts, graphs, and sidebars. For the first time, typographic experimentation was easy and immediate.

The change to DTP altered the general aesthetic of the covers and inside spreads of *Vancouver Magazine*. The arrival of DTP created a significant increase in distinct typography in which a number of different typefaces were used in various combinations, as well as more interesting approaches to art. For instance, there was an increase in the use of type sculptures, drop shadows, wraparound text, type over images, inset photos, outline type, and curved text—all of which represented the new functionality and aesthetic potential of the technology.

With the advent of DTP, the grid became more varied, stories were broken into smaller units, and asymmetrical design rules were common in the design of *Vancouver Magazine*. The presence of orphans and widows and loose lines in typography disappeared with the introduction of software programs that allowed for the manipulation of type. There were more orphans and
widows and loose lines in typography before DTP than after the arrival of the sophisticated technology.

The digital production technologies used to produce Vancouver Magazine, along with personal, economic, and social factors, have been a driving force behind the visual changes in the magazine. The impact of technology on the design of the magazine is evident in the increase in design elements that were difficult to achieve before the arrival of DTP such as drop shadows, type sculptures, wraparound text, type over photos, inset photos, drop shadows, outline type, and curved text. Their increase after the introduction of DTP supports the argument that there is a direct relationship between technology and design.
APPENDIX

Email Interview

This interview was emailed to the past and current art directors of Vancouver Magazine on Wednesday November 10, 2004.

The following is a set of questions regarding your experience with digital production technologies and the design of Vancouver Magazine. The reason for these questions is to determine the nature of the relationship between digital production technologies and design.

Thank you for taking the time to answer this questionnaire. Your input is very much appreciated and will be invaluable to the study. Please answer all of the questions on the Word document. If a question does not apply to your own experience as the art director of Vancouver Magazine, please put N/A in the space.

When you have finished answering the questionnaire, please email it to me as soon as possible or at the latest by Friday November 19, 2004.

Once again, thank you for your time and participation.

Background

1. How long have you been a graphic designer?

2. How long were you the art director at Vancouver Magazine?

3. What is your current position?

The Influences on Graphic Design

Please refer to your own experience as a graphic designer in general.

1. What are the major influences on graphic design?

2. How would you define your approach to magazine design in twenty-five words or less?

Before Desktop Publishing (DTP)

Please refer to your own experience as the art director of Vancouver Magazine. When you see the reference to before and after DTP, it is referring to the time when DTP had arrived into the mainstream design workplace.

1. What are the main differences between using paste-up techniques and electronic page-layout technologies in magazine design?
2. What design challenges did you face before the arrival of DTP that changed after DTP found its way into the mainstream design industry?

The Arrival of DTP

*Please refer to your own experience as the art director of Vancouver Magazine.*

1. What was your first impression of DTP technology when it arrived in the mid-1980s? Were you an early advocate of the application of this technology to design?

2. Did the arrival of DTP alter the way that you worked? If so, please explain.

3. What design challenges changed after the arrival of DTP in the design workplace?

4. How did electronic page-layout programs (i.e. PageMaker and QuarkXPress) alter what you were doing with the design of *Vancouver Magazine*? What did these programs allow you to do that you could not previously do?

5. How did the arrival of graphics programs (i.e. Photoshop and Illustrator) impact the design of *Vancouver Magazine*? What did these programs enable you to do with photographs, type, and illustrations that you could not previously do or could not afford to do?

6. What other technological advances in both hardware and software other than those mentioned in this interview played a part in influencing changes in the design of *Vancouver Magazine*. Please be specific.

7. Can you identify changes in the overall aesthetic of *Vancouver Magazine* before and after DTP?

8. From your experience, were there any other changes to the design of *Vancouver Magazine* that were brought on by changes in digital production technology that have not been addressed in this interview?

9. Are there any new digital production technologies soon to arrive that you see making inroads in the future of graphic design?

10. Do you think that technology has an impact on graphic design? If so, please explain.
REFERENCES


