

Open Book

Understanding the Role of the
Book in a Digital Age.

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Introduction

In today's society and culture we are in a state of transition, a transition from print to digital media. As technology rapidly impacts and changes our lives we are forced to ask the question of what will be the impact of a Digital Age upon our culture, our society and our history? As the basic shift is away from print and towards digital I aim to challenge this question and investigate the role of the printed book in a digital age.

The book is held with high regard in today's culture. It professes knowledge and we give accolade as a society to those who utilise the book. However the digital media now challenges it and I want to investigate what role the book should or shouldn't play within future societies and cultures.

To become a better judge of the question I shall discuss and evaluate the printed book within our history looking at how it has developed as a technology over its relatively short life. I aim to show that the book embodies and symbolises our convictions on ranging subjects and questions – it assists people in the reinforcement of their opinions; it offers the author the chance to create a finite statement to strengthen their idea – and for many reasons more it has played a critical part in the development of our culture and society and become a force for change in its own right. I will also explore the digital age and explore how a possible shift from the printed page to the screen could both benefit and hinder us looking at electronic alternatives. The displacement of the printed page by the screen is not yet total, and may never be but there is an obvious direction that this may soon be the way. Will digital technology replace the book or will they co-exist? Is digital even a threat or is the failing ours that we can never predict what technology will be used for? I will above all try to determine within the current state of our society and culture the outcome and role of the printed book in a Digital Age.

I believe that this is an ideal time to investigate what I have put forward given the current feeling in society. Previous generations were people who grew and lived with books and they learned how to appreciate them and continue to do so. Others, myself included, were born in a transitional age where we can combine this knowledge with the use of new technology and try to enjoy the best of both worlds. A critique of new technology could not be more relevant as we approach a new generation – who grow with i-Pods and palm PC's; who seem not to be acquiring how to use and enjoy books; – how could the absence of the book impact their development?

Chapter One: The 'Printing Revolution' – the Book in History

Printing with moveable type is undoubtedly one of the most influential inventions to impact the Western world. From its conception and experimental stages, like all technologies, it has grown and developed and gone through all stages of rejection and acceptance within social and cultural circles. The printed book is now at a point within today's culture where its future is debatable, however it has never been more respected. An aged love surrounds the book like a comforting blanket, books are looked upon in today's culture as an object and source professing knowledge and ideas and a certain unwritten accolade is given to its readers as they take in the book's wisdom and travel its journeys. We place a substantial amount of faith in the book and its contents, a faith that places it in a position of almost unquestioned authority. The reliability we place within this printed and bound object is one that has been shaped and formed with hard work exercised over generations and across the world's nations. This hard work is the identity of print itself, it is the press that has allowed all these changes and projected this influence over the different epochs to the present day. It is the press that created this product of high regard and I think that, in the case of this essay, it is important to see how the book was formed and what part the book played in the 'printing revolution' going on to further discuss the consequences and impact of this development in Chapter two.

There are many advantages to the book that made it the product of choice for communication. The format of the book is durable; a robust form that can be transferred and held at ease, an area in which the fragile roll of the manuscript couldn't compete. You can flick forward and backward, search for content quickly and not only can books be decorative and desired aesthetically, but they also hold the opportunity for the spread of information in a more ordered way, allowing space for indexing and referencing information. The book before printing was still the primary source for knowledge but they were rare, expensive and elitist. However around the year 1450 some unusually produced books began to appear around the northern regions of Western Europe. Although they looked very much alike in comparison with traditional books they had a distinct difference, they were 'impressed' on paper using a mechanical printing process that used metal moveable type. These prints generated an aura of fascination and curiosity instantly and in fact they would be the beginning of more profound changes in the aspects of thought, education, religion, individualism and social and cultural change. The printed book became a hybrid of technologies that accelerated its growth and spread and gave it new life and vigour. Numerous works could now be assembled in one space, an invaluable resource for any academic, endowing ideas with unparalleled strength, and then speedily transferring these to another reader without laborious cost forcing the manuscript into retirement.

The introduction of the printed book was an impact in itself, however the real explosion was the technology that created it – print. It is widely accepted that Johann Gutenberg is the 'father' of the printing press and as early as 1439 it was learnt that Gutenberg, in partnership with three others was working on developing three secret processes, one of which was a new art involving a press, some pieces, either separate or cast en bloc, made from lead. The early printing presses were of the hand-operated platen variety in which the type stands on a horizontal surface and the paper is pressed onto it from above.¹

Initially printing appeared to be much more like an extension of handwriting than the

total change that we, with the benefit of hindsight, can see that it was. The printer's main purpose in the infancy of the press was to set himself up as a rival to the scribe and to offer alternatives of production than a mass organization of a group copying from dictation, such as was adopted in monasteries, and to succeed in producing high class works and volumes who's luxury rivalled the calligraphers work. A consequence of this aspect is that the first printed book had to be just as fine, in both concept and execution, as the handwritten books as to which it would be compared. This meant that the introduction of printing did not immediately take the place of writing or revolutionize the way documents and written matter were produced, the process and change was a long and laborious process over time out of which came extraordinary developments and changes one of them being the vast increase of books production allowing a gradual spread of knowledge and the use of written languages.

The impact of printing had different benefits in different centuries. The initial benefit of printing in Europe in the 16th century was the wide availability of relatively accurate texts in large quantities of identical copies, again mirroring that of the scribes production, but they were not marred by their errors in copying. One benefit of printing that had a profound effect was the stimulus it offered in the form of books to literacy and learning. Printing allowed the book to become a tool that would lead to greater personal studying, in the place of total oral tuition as in Universities, and this facilitated dissemination of radical ideas that could be used against or for authority such as Luther's challenge to the pope (Further discussed in Chapter two) that established the power of the press. It is also to the 16th century, where Italy, France and Germany were the foremost centres of the new art, that book production was tailored to a high standard. Artists such as Cranach and Holbien – who developed the ornamentation and decoration of books that became a characteristic of the period – fuelled the interest in type design and publication standards set by Aldus Manutius – as shown in the work of the *Hypnerotomachia Poliphilli* printed at the beginning of the epoch – gave this period of the press the name rightly called the golden age of printing.

This standard was continued through into the 17th century where further artistic involvement in printing led to the development of the use of copper plate illustrations that further advanced the quality and the vogue of books. However, in other respects the main feature of printing in the 17th century is its heaviness and pomposity, while the numerous copperplate illustrations and large-size format are unable to gloss over the, often mediocre, typography. In the 18th century printing and the book as an art was generally led by France. Illustration and decoration took first place when it came to book production and several styles were used in vogue such as firstly baroque and later rococo to give elegance to the form. In the middle of the century there was a focus on the pure typographical side of the book which began with the work of John Baskerville, who's work is still recognised and acclaimed today, that was almost devoid of decoration and purely concentrating on type, balanced composition and details down to the quality of paper used. However, no matter how revolutionary the work the presses used by the likes of Baskerville and Bodoni were still very similar to those used by Gutenberg over three centuries earlier. Although improvements made in these years made

1. However it is to Asia that we attribute the first attempts to print in moveable type. Between 1041AD and 1048AD a blacksmith, Pi Sheng, used clay and liquid paste to make the letters, which he hardened by fire. He composed the text on an iron plate coated in a mixture of paper ash, wax and resin, and the letters were held into place by an iron frame. He heated the mixture and then, allowing it to cool, he adhered the characters to the plate where they could then be recovered by reheating them once the desired document had been printed. Technically, it can be said, that the printing press was less an invention and more of a fusion of existing technologies and skills.

the presses more efficient and reduced their size it wasn't until the next stage of development came that printing reached an ever-widening audience.

It wasn't until the 19th century that the real technical inventions took print forward into new territory, so much so that they characterized the century. Above all the many technical advances it is that of the cylinder press which converted printing to a high-speed factory operation and was also key in the boom of the Industrial Revolution. This next stage was again attributed to a German printer, one Friedrich Koenig, who presented his ideas for a steam powered press to major London printers around 1804. This hybrid of technology was designed much like a hand press connected to a steam engine, a key invention in the Industrial Revolution, which almost doubled the production of sheets per hour. Other innovations included a method of inking the type by rollers instead of the hand-inking balls and the automated use of the type forms, typeman and frisket. In 1814 John Walter II commissioned the press, although modified, to print *the Times* and the Journal was declared to the reader's to be "... one of the many thousand impressions of the Times newspaper, which were taken off last night by a mechanical apparatus." (Quoted in Meggs, 1983 pp.132.) From the revolutionary combination and invention of the cylinder press many more presses were spawned and threw printing into mass production. Although the hand press was still being used in smaller print houses, machines such as Cowper's curved stereotyped plates press of 1827 pushed for the retirement of hand presses all across Europe and North America and their swift replacement with the new powered steam press. The Industrial Revolution had finally reached the printer. The cost of printing plummeted as the number of publications and editions soared – books, newspapers and general print began a massive expansion breaking the boundaries that previously restrained it. This new producer of mass literacy served all areas of society, not just the limited readers of the Church and scholars. The mass production that was achieved by the powered presses was only hindered by the costly and time consuming process of type setting. As the new printing machines produced 25,000 copies per hour there was still the task of setting every letter in every word in every book, newsprint and magazine. As the age of inventions expanded numerous inventors strived to invent flying machines and motorcars, a substantial number also turned their attention to creating the perfect machine to compose and set type. There were countless patents filled and apparatus around trying to accomplish this goal, however it fell to another German who would perfect the process in 1886. The linotype was a keyboard-operated typesetter that could cast type in continuous lines (hence the name line 'o' type) known as slugs. The machine required one operator and consisted of three main parts, the *composing machine*, where the keyboard is and where the matrices are assembled in lines, the *casting machine*, where these lines are justified and cast as slugs, and the *distributing mechanism* which returns the matrices after casting to the matrix magazine. The Linotype was a breakthrough, no longer would newspapers be limited to eight or less pages produced at a slow process at high cost, no longer would books remain highly precious as they could be produced rapidly. The Linotype machine impacted newspapers profoundly with its line of cast type being more suited to the speedy daily runs and was more labour-efficient, but it was also used for cheap book production and small runs of books. However there was a general feeling among many printers and typographers that due to the introduction of the machine, typesetting would lose the high typographic quality that, at the time, the hand press offered with its individual character casting. However Tolbert Lanston would mechanize the aspect of typographic quality, which impacted the printed book more relevantly, with the development of the Monotype machine in 1887. The Monotype system uses two separate

units – a keyboard and a type-caster. The keyboard has the same layout as a standard typewriter, except that instead of using only one set of keys, it has a double key-bank with five sets of alphabets, or a total of 276 keys. The extra keys are for small caps, italic, bold face, ligatures, extra characters and to control the space-sizing mechanism. As the Monotype could cast single characters in justified lines that were equal or superior to handset type, the highest standards of typography could be attained and with ease. Should an error occur in production it would demand the resetting and recasting of an entire line and sometimes adjacent lines, if the spacing was affected by the change. This problem could be easily solved using the monotype. With its allowance of attention to detail and cost effective change it was no surprise that the Monotype became the workhorse for fine book production. With these inventions publishing expanded rapidly, with biographies, fiction and histories joining the texts that were being issued, further spreading the use of the product and significantly altering the books social role. Hand-set metal type was now faced a downward spiral, the consumption of time and money were opposing this kind of production as fast and cheaper competition went head to head the previous hand presses just could not compete. The technological advances that occurred throughout the 19th century permitted typography that was machine set to be printed on mechanically produced paper by a high-speed steam powered press. This chain of technological advances gave birth to a new era of knowledge, education and expanding literacy, words and pictures spread throughout the world at great pace communicating thoughts and ideas like never before. The age of mass communication had arrived. It wouldn't be until the mid 20th century where a new printing method would appear to further push the boundaries of the press, one that has been – and will continue to be – considerable, the computer (further discussed in Chapter Three). These inventions allowed the book to become a mass produced consumer product, and consumed they were. These new presses allowed the cheap re-print of popular fiction and non-fiction books and the number of titles rose annually over the 18th and 19th century. The spread of universal education in the 19th century gave printing a major boost. Books for schools have been the printer's most lucrative source since the 24 editions of the Latin Grammar by Gutenberg and the increase in literacy also increased the demand for other books and for newspapers: the process fed on itself, and so was self-perpetuating. As these technical innovations came in the 19th and 20th centuries they drove down the cost of books. They became more widely available as more could afford them making publishing a lucrative business.

The mechanization of printing impacted the production of books profoundly and sprung publishing into a lively existence. From its introduction publishing grew with the steadily broadening mass of readers and publishing houses appeared in almost every major city. During the 19th century it grew to the point that specialization became increasingly evident. Areas such as Music production became almost a separate business along with map publishing. Specialization also grew within the houses themselves in the 20th century. Editorial departments became distinct from production departments, and both were quite different from sales and distribution. These expansions indicate the growth and impact that printing had on the book. Printing was no longer merely a craft but also a trade, dependant on capital and functioning on a free enterprise basis. The changes over its growth have made printing a major part in the beginnings of the capitalist economy. Printing was further becoming a factor of change on economic, social and cultural levels as it grew but like many technologies printing needed hard work exercised over time to create the efficiency and the robustness that it has now come to be. Print is a founding member of our culture and

society. We document and narrate our world using the medium of print and it is through the press that we have arrived at our current society where printing, grown out of its youth, is and established and dignified member of our society. Printing is a hugely democratic medium allowing us to exercise our individuality, socialise, communicate our ideas and opinions, and govern our world. It is without a doubt one of the most important inventions and great achievements of our civilization.

Chapter Two: A Social and Cultural Medium

The books use as a product of technology has inevitably been explored over the different ages and it has been present at a whole range of changes that have taken place over these epochs, some social changes such as those of the Reformation and Renaissance, some political changes in the form of the French or the American Revolutions, and it has been a prominent figure in many changes of cultural climate. What I would like to do within this chapter is answer questions that all technologies go through in the process of development. What needs did it satisfy? What role did it assume? What causes did it serve or fail? I believe that it would be appropriate to use another's words before I embark upon this task with the statement that Lucien Febvre puts so rightly:

"It is perhaps the case that the book on its own has never been sufficient to change anybody's mind. But if it does not succeed in convincing, the printed book is at least tangible evidence of convictions held because it embodies and symbolises them; it furnishes arguments to those who are already converts, lets them develop and refine their faith, offers them points which will help them triumph in debate, and encourages the hesitant. For all these reasons books played a critical part in development..."
(Febvre, 1976, pp.288.)

In the early ages many a person would have looked upon printing as a means for reproducing mechanically texts that were in demand such as it was before with the production lines of scribes. However it soon became apparent that the potential of this new process, as well as its force for change, far exceeded the potentials of the manuscript. The book now reached areas that inhibited the manuscript, texts were accessible on a large scale with a production output of around 20 million books printed before 1500, an impressive total especially when you consider that Europe had a population of fewer than 100 million and of which the smallest minority could actually read. There was obviously a change then, and a swift one. However there are a number of factors that need to be considered and questions asked before you can directly attribute change to the book. What were the results of this change? Considerations need to be taken of the content of the books, what kinds of books were reaching the public from the press? What effect did these different topics have on the readers?

It should now be said that above all the printer or bookseller, first and foremost, worked from the beginning for profit. The books that were financed in the 15th century to be printed were ones that were sure enough to sell enough copies to make a reasonable profit and this point is evident in what is considered to be the first printed book. Gutenberg's 42-Line Bible was printed at a time where the 'reading public' was a minority but mainly consisted of clerics and religious scholars and it was this factor of *supply and demand* that founded the long-standing relationship between the press and religion. This relationship kept the presses busy throughout the 15th and 16th centuries as printers reeled out devotional work such as Books of Hours, which were in demand before the printed book, and material for the private prayers of clergy. It was this majority of production of literature that encouraged popular piety to grow up around the same time, works on the lives of saints and the mother of Christ were printed and reprinted showing that one of the first effects of the book was to develop the depth of religious feeling among society and spread the influence of the Church. The Bible streamed off the presses with an aim to reach a wider audience of readers than ever before, but not only in Latin but in the vernacular, so extending the number of books and so extending the reading public. The books acceleration also influenced the general spread of knowledge creating further demand for books on numerous subjects and starting a change in society. The Churches monopoly of scholarship and learning began to decline. The

book market increased, catering for the needs of students and scholars and the new wealthy merchant class; simultaneously there was a demand for a wider range of books, including vernacular literature and those dealing with such subjects as philosophy, mathematics, music, astronomy, food and health. This could be seen in Italy where the humanists had taken interest in the study of Classic literature that was used in the middle ages and used the book, not so much to correct the medieval errors found within rediscovered texts, but to multiply the number of books available that had been most commonly used in the middle ages to spread their classical literature. This impact of classical literature by the humanists brought about several changes. The book was the perfect medium as to spread their knowledge and influence and to counteract the Church as the *source of knowledge*; they introduced paganism into universities; and they emphasised the individual as the man of universal genius, best embodied by Leonardo Da Vinci. Humanist authors had a developing impact on the book as stated before they used the book, possibly more than any other medium, to transfer their ideas and knowledge and for social change.

As the book was born out of a period of change it seems fitting that it be used as a force for change, and this force is apparent in a movement in one arguably above all others. The book and the power of the printed page were used to great affect and with great skill in the social and cultural movement known as the Reformation.

Traditional moral and religious works were of course still being published, while the book-buying public grew, while the presses published classics in the original and translated texts, and while new literary forms developed. However large in numbers they represented a small percentage as the output of books grew, and in general the religious works were scarcely circulated outside restricted circles of educated clerics and humanists until about 1520. However this state of affairs would change abruptly in Germany in 1517 and gradually more elsewhere. Religious issues and editions became the subject of high importance and unleashed the strongest passions. For the first time in history there developed a propaganda campaign conducted through the press, the capacity of the press to serve the interests of whoever desired to impact thought and belief, mould public opinion and change attitudes was revealed. Although it would be wrong to attribute propaganda, or the book, as the main cause for the Reformation but it is clear that they played a critical role in the development of Protestantism. The Reformation utilised the press in all its outputs such as posters and placards but I am interested in the book and its usage throughout the Reformation and I would like to concentrate on how Martin Luther, among others, used the book as a vehicle in bringing about their changes.²

Luthers printed works were counteracted by Emperor Charles V who's Edict commanded his books to be burned, but it could be debated that through such posters ordinary people learnt of the existence of condemned books and it is often seems human nature to acquire what is forbidden which directly became almost a commercial necessity for printers. Naturally the public read these with interest and followed the course of the argument, the blows and counter-blows. All the while behind this street literature stood the growing mass of books seen and denounced as 'ill-favoured', 'heretical' or 'scandalous' but their importance never left the spotlight.

2. The poster and the placard are probably older than the printed book and their use in the Reformation aided the spread of books. It could be narrowed generally that the use of the printed poster began the Reformation when Martin Luther affixed his 95 theses on the church door at Wittenberg on 31st October 1517 and this also stands as a model for the way print was dispersed, when printed as flysheets and within 15 days they had been seen in every part of the country.

The demand for Luther's books was ever increasing, thousands of his sermons, of his edifying tracts, of his vigorous polemics, all in the common tongue streamed from the presses in Germany. They were printed and re-printed throughout the country and they established Luther as a figure and almost a brand with the application of similar use of format to the work and often with his portrait on the front to familiarise the readers with him.³ As a result the proportion of books rose sharply in Germany and Luther's works represented one in every three books sold between 1518 and 1525 and as a whole, the number of books produced defending the Catholic faith were few in number when compared to the gushing of titles hostile to Rome. One such book of Luther was in especially high demand and was printed in enormous numbers was his translation of the Bible however, as previously stated, these books were only parts of Luther's work, and in addition he wrote sermons and polemics which were cheaper and easier to read, were produced in greater numbers and it is now that we can see the first truly mass readership and a development of popular literature within everybody's reach that was directly influenced by the press and the book. In the 18th century it was the book that set about another movement. The huge intellectual and scientific advancements made in the 17th century promoted a more scientific approach to political and social issues, and gave rise to a sense of human progress and belief in the state as its rational instrument. These beliefs were brought together under the period of the Enlightenment. This movement set about to replace orthodox authoritarian beliefs with rational scientific enquiry and the book was made instrumental in the spread and promotion of the idea and belief. Rousseau, Voltaire and d'Alembert were leading figures in the Enlightenment and their work, a combination of scientific facts and radical philosophical thinking, were exercised in various printed forms as articles in printed Journals and Documents but more importantly in the *Encyclopedie*. Diderot's monumental *Encyclopedie* was published in 28 volumes between 1751 and 1772, five more volumes were published between 1776 – 77. It included over 200 scholarly experts who appealed to reason rather than faith and so the Encyclopedists threatened the authority of the Church and state. This work spread the ideas of the rationalist, liberal, humanitarian and scientific thoughts to a wider audience and in the form of the printed book it gained a vigour that directly led to the French Revolution. The book's role in the Enlightenment was also apparent in Scotland with the printed works of theorists Adam Smith's classic 'economics' text *The Wealth of Nations* (1776) as well as David Hume's *Essays* (1777) both of which shared the commitment to scientific explanation and sought to establish social institutions to which this played a key role. As you can see, the book was the vehicle of choice in which to carry these social and political ideas – attacking whatever seemed to them to be outmoded, irrational or empirically unjustified – on their way to academics and mass readers creating a forum for debate and making the book into a force for change.

The book's content also takes on various forms. The book is a holder of information and reference, of statistics and numbers, of music and arts, of ideas and philosophies, and of escapism and adventure. The rise in works of fiction is also worth noting as it gave the book huge cultural impact. Authors such as Defoe, Fielding and Jane Austen are cultural forms who again used the book as a tool for output of their experiences, imagination and ideas of

3. Pamphlets and printed documents filled with violent prose were released, on both sides, and every device and creative discipline not just that of the printers art was brought into service. Illustration, even caricature, prints and typography were all exercised to ridicule and discredit the Church. A good example of this propaganda can be seen in the work of artist Cranach who produced *the Passional Christi und Antichristi* – inspired by Luther – in 1521 (See FIG.01 and FIG.02.) depicting a contrast between the clergy and the life of the Christ.

the society in which they lived. The work of these authors and how they used their writing in the book made the book a cultural form.

As I have skated over a few areas on which the book has impacted I now feel that to tie this message together I should move to talk of a factor that developed from a merger of the topics considered. The basis of the individual that stands today can be traced back to the immense change known as the Renaissance, the Reformation and the beginning of the capitalist economy. We have learned to think of the individual *within his or her own right* however this concept was previously seen as the individual *as part of a group* or a description of the *social group and the relationships within it*. In regard to the Reformation, the basis of the individual is explored by the idea of the individual soul and the idea of the individual soul's destiny. This change was a different way of seeing the soul's destiny within the ordered structure of God and the Church, to seeing a more personal destiny as man's destiny and individual relationship with God, in a nutshell from man-church-god to man-god further establishing one's individuality. The book's role in this change of thought towards the individual is complex but you can take from history a set of points. The Church before the Reformation, to many, was the only access to knowledge. The Church 'fed' the society with what it deemed important and obviously the teachings of God and the introduction of the printed book brought about a threat to this. Indeed it did support the Church with editions of piety but it gave people a chance to take away this matter and learn alone. Within the Renaissance, the initial start of capitalism, along with the growth of humanism – that placed great focus on the individual, encouraged men to see *the individual* as a role played within the economy a view that is relatively still present today. The person or individual's role was changing. They were no longer seen as a part of a group within society such as a peasant or cleric, but now an individual who happened to have this or that occupation. The book was a key within this change as it increased the mobility as to which the humanists, for example, could spread this idea. People now defined themselves as what job I undertake and what I want to be and what by my own efforts I have achieved. These changes form the basis of how we today form our individuality we now obviously have numerous ways of describing our individuality, a change that the book has had a substantial influence over.⁴

All of these events and movements throughout the 400 years or so of the book have established certain aspects. The printed book is more than just a triumph of technology but also one of the most potent agents at our disposal in bringing together the ideas of thinkers and academics. Its service to research was vital allowing the transmittance of results from one to another immediately and conveniently without great effort of unsupportable cost and it permanently assembled the ideas of people from a huge creative spectrum. By doing so it gave their ideas a new lease of life and endowed them with a strength that was unrivalled, they came to attain a new clarity and, by the same stem, became an important resource

4. A more recent impact of the book and individuality is in the form of the paperback. The Paperback as we understand it in Britain began in 1935 when the first ten Penguin titles appeared. To create a new and wider reading audience they were sold in Woolworth's stores, not bookshops, at 6d each. In two years seven million had been sold, this led to an expansion in the paperback market and the ready acceptance of the cheap format. The paperback allowed the book to become almost a companion to the reader, easily stored in a pocket or bag it became a common object with people no longer having to dedicate time to read, they could now read when time allowed and in their own individual space. This furthered our understanding of our individuality but also furthered social change creating a new audience for the book and again as a result allowing for greater education and literacy as well as supporting the economic side to the production of books.

full of power for both propagation and transformation. New and exciting concepts crossed nations in relatively short times and language became less and less of a barrier, a problem that the book self-solved. The book created and incubated new habits of thought, ones that spread beyond the circle of the learned and into the lives of all who used their minds and further acted as a service that promoted self-learning and ignited individualism. Arguably one of the books greatest attributes is its ability to make an extended and coherent statement. The contents of the book are finite. There is a beginning and an end. Its maker creating a field of choice controls the lengths, the content, and the amount of text or visuals. Such choice permits the construction of an extended statement where expression is permitted to unfold in a logical and even poetic space and permitting the author to explore their field in greater depth. It offers a permanent and thoughtful sanctuary for work that can be accessed at any time. These are qualities of the printed book that have made it a powerful tool for everyone, allowing complex even conflicting ideas to be expressed in their own space and to make their own argument in their own way, making it a major influence and impactful object upon societies, movements, politics and cultures world-wide.

It has to be said that the book has been a major player within western civilization and we must now question the books future within our civilization as it is threatened by new inventions based on different principles.



FIG.01. Lucas Cranach, The Passional Christ and the AntiChrist, 1521.

Chapter Three: The Competition – Electronic Books and Devices

The world in which we live now is one of constant change, a culture where electronic communications and information processing technologies is key. The Digital Age that we now approach is one that carries burdens as it carries virtues, as it is with any epoch. Questions are asked of the effects this age will have on the most fundamental aspects of our society and culture. Our society is based on stable employment, large companies and corporations, regular wages, and the production and distribution of goods for mass consumption. Our society is an Industrial society. A society who's structure is still rooted in the principles of the old material society but we are entering a post-industrial society, a digital and immaterial society, one of electronic communication and mass media. However we are at the point where the transition is in progress and one of the major factors in this time of change is the fact that change is hard to accept and people don't like change. The book and the printed word are a founding member of today's culture and society, a member that has been present for hundreds of years. The book is embedded within our world that it begs the question will something that has been around for so long be displaced at the introduction of a new technology?

To start this investigation I think that I should start by clarifying the fact that the two mediums, although are here compared, are indeed two different technologies. The book is not and will never be a book trying to do the job of the digital media just as the Internet is not masquerading as a book. Each has their own positives and negatives and what I aim to show is these aspects of the digital alternatives to the printed book.

It is likely to most of you that you have heard of e-books and how they are going to be instrumental in changing not only the way we read but also the world. A little reading appliance that is the size of the printed book but can hold thousands of books electronically stored in a digital memory that will wave goodbye to the heavy book bag. I will most certainly email my friends and network using the Internet, I will more than likely book my next train with an e-ticket or check my finance with e-banking but I must ask myself the question would I e-read my next novel?

Electronic Readers – e-books if you will (see FIG 03) – have been dreamed about for decades, the idea was floated as early as the 1940's when Vannevar Bush anticipated the benefits of hyperlinked interactive texts in his "As We May Think" article, and again in 1971 with the concept of the Dynabook – a portable e-reading device not too different from the ones available today. The e-book has been dreamed over in science fiction pages for years but attempts to realize these dreams have been relative failures. However the ideas behind the e-book are ones that hold strong and have indirectly influenced consumer and technological trends that are present today. The idea of compressing information into one source making it readily accessible has, without a doubt, been modified to suit a possibly better application. What I refer to is the consumer trend that has been tapped into with the boom in music downloading onto portable devices such as iPod's and other appliances is an idea that indirectly stemmed from the e-book and the explosion of possibilities in a digital age. The coming of the e-book is also stemmed from the initial idea of technology making our lives easier, for years companies have been trying to make originally bulky and large aspects of our life smaller and portable take the Sony Walkman and the Sony Discman creating portable music or the Floppy Disc and now USB/Flash keys allowing data storage to be bigger yet easier.

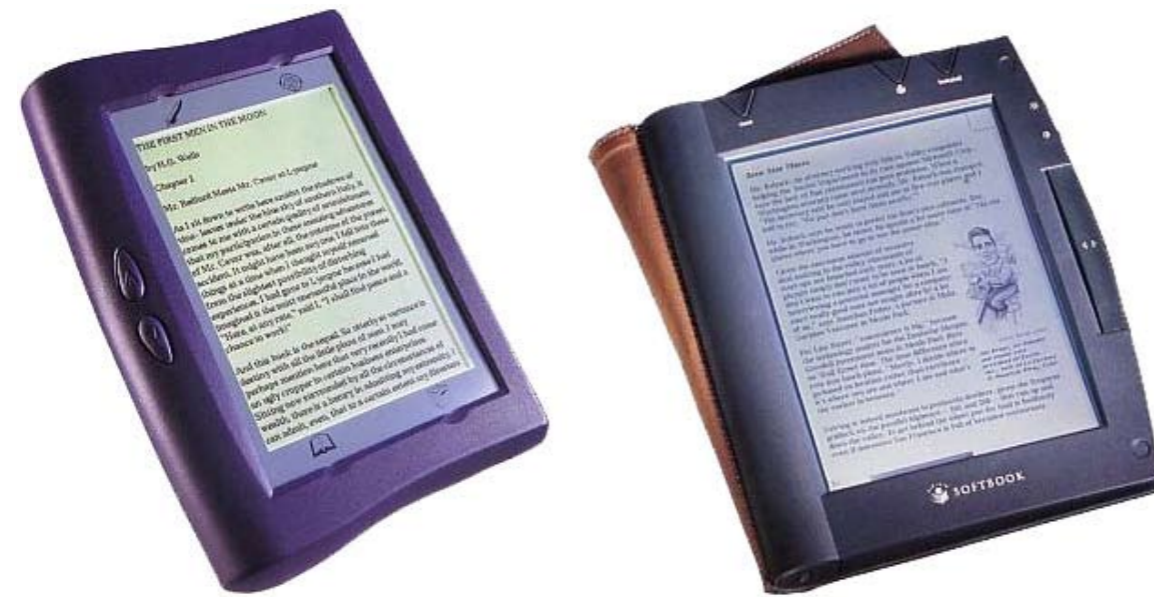


FIG.02: E-BOOKS AVAILABLE AT PRESENT.

Left: The Rocket eBook from Nuvo Media. A pocket sized appliance at 5'' x 7 1/2'' and 1.25 pounds in weight. Right: The SoftBook Reader from SoftBook Press. Another E-book unit at 8 1/2'' x 11'' and weighs in at 3 pound with added character with leather cover.

The very mention of an e-book will be met with a hesitant, unsure sigh where your original feelings are elicited and then immediately checked as it has become almost impossible to respond to e-books within their own respect. Your emotions are coloured by old associations with the dominance of the printed codex that you find it so hard to separate from, but cast away these thoughts if you can for just a moment and think of the possibilities of the e-book. The selling points of the e-book are seen as almost common knowledge by many, people will not argue that having a lot of useful information stored in one small, lightweight place that is readily accessible can only be a good idea but the idea and strength of the e-book goes deeper and further than just the profession of storage. The e-book, even though it is not as tactile and emotionally charged as its printed counterpart, can still evoke a sense of "bookness." What I mean by this is that there are aspects of the e-book that are often overlooked and separate it from the idea that reading from this device is to read from the computer screen:

Silence. Different from the computer's humming and whirring of a cooling fan, the e-book is quiet creating the virtual bubble that you attain when immersed in the pages of a book.

Navigation. The devices that are available today, although different in their takes of the physical format, all have one attribute in common there is no scrolling. The "turning" of the page is done by a finger tap in the corner of the screen or by the touch of a button.

The Golden Rectangle format. The two main devices that take up the market for e-books the SoftBook Reader and the Rocket Book (see Fig.03) are almost book metaphors. They can be held and feel like the codex format allowing for the same lean-back experience.

However there are also attributes and opportunities of the e-book that can have added value to the reading experience that set themselves apart from traditional problems with the book:

Backlit pages. The screen aspect of the e-book has overcome the annoyance of keeping your partner awake at night with the beam of the reading lamp or having to adjust your seating to get light. You can now read your text in the dark.

Searchability and annotation capabilities. The electronic book could use existing technology to overcome the need for skim reading as you can use searching tools to search through the text for your subject. Colour coding annotations and highlighting text without ruining the pages or the read for the next viewer is a great tool for organisation to the student of the text.

Choice of type sizes. The printed book is typeset, meaning that the type once set is not altered, or updated unless re-printed. When compared to the opportunities of the electronic device where you can alter the size of the type tailoring to your specific needs and accommodating for the weary or aging eyesight. There could also be the factor that the reader can set the book or text they want to read to a specific style sheet, choosing their own typeface, type size and other attributes.

Tailored and curved spines. Using the SoftBook reader and Rocket eBook mentioned earlier, as examples, the design of their spines are curved creating a comfortable handle that is arguably easier to hold than the sometimes self-closing page bulky traditional book.

The fusion of reading and technology is not limited to ideas of replacing the book format alone. The Philips/E Ink electronic paper (see Fig.03) is another technological gimmick trying to wean us away from our stability and comfort with paper. What the device offers could be summed up as digital paper, simply put it is flexible electronic paper that can be rolled up and bent but still perform at a resolution similar to your desktop PC. You can connect it to the Internet and it automatically updates and it is reasonable in size so that you don't have to worry about hauling War and Peace with you on your travels. It compromises of a screen made from super-thin steel topped with a thin layer of circuits and then a film of digital ink. The ink consists of microscopic capsules each containing black and white particles. Apply a negative electrical charge and the white parts will separate to the top; apply a positive one and the black parts move creating readable text. This new technology has the pro of being just one sheet but has problems with navigation and although it is an independent object it needs to be close to an electrical source for the process to occur, so eliminating a total freedom that the printed book offers. It may have more mileage were it to be implemented daily such as to deliver the workload of the newspaper, however I feel that the paper has failings more than success regarding the switch between physical and digital.

All of these opportunities and uses of today or tomorrow's e-books are still far from the ideal vehicle for reading. There are problems to be seen for many of the positives such as the screen resolution today is still not ideal and suffers from reflectivity and a low resolution to name a couple. However I feel that the e-book, being a new technology and seeing that our failure to predict the uses and potential of a technology are inhibiting its growth, still has potential and has a specific audience that is growing today. Today's society is almost a 24hour society; people consume, act, desire and live at a considerably fast pace. They want

information to be easily accessible, constantly updated and to be stored in one small place. The audience for the moment is a niche market, the positive aspects as listed previously are appealing to a select audience, an audience of people who need information to be updated quickly and are constantly transporting that information such as business men who's time is extremely valuable. An audience of students who are technologically minded and active in their relationship with technology where it is of better convenience to download numerous reference texts for a cheaper price and without the burden of a bad back carrying about the two stone book bag. There is also the most concerning factor that in a world where technology is ever changing and where its influence is ever expanding and impacting the youth of today and tomorrow will grow to be, as referred to by journalist Kevin Kelly (quoted in Greenfield, 2003, pp.165) as 'people of the screen.' They will grow using mobile phones with email, Internet, video and photography uses, they will learn as much from printed books as they will using computers and so it is probable that they would grow to learn and use and adapt a lot easier to an electronic reading device.

People of the Book, according to Kelly, fear that logic will give place to code and that intelligence in the form of reading and writing will die. These people work within a culture of newspapers, laws, offices of regulation and rules of finance but most significantly the foundation of this culture is captured in texts. By contrast the 'People of the Screen' are based on working with TV, the computer, telephone and film and what will be their impact on the society? This is an argument that is discussed in Birkerts Gutenberg Elegies where he argues;

"...our entire collective subjective history- the soul of our societal body-is encoded in print. Is encoded, and has been for countless generations been passed along by the way of the word, mainly through books... If a person turns from print-finding it too slow, too hard, too irrelevant to the excitements of the present-then what happens to that person's sense of culture and continuity?" (Birkerts, 1994, pp.20.)

This argument is one that has been raging and brewing for countless years and will be debated for years to come. What will be the impact of a world without print where all reading is undertaken from an electronic device? Would the use of electronic devices from which our children would learn about their world help or hinder them? It can be said that the only certain things in life are death and taxes, however if I were asked my opinion I would say that no one really likes change, we get comfortable with our surroundings and our daily objects but we know that technology is progress and change is inevitable. I believe that the opportunity that the e-book brings to this argument is one that should not be immediately dismissed in the fear that the new and change will make a comfortable and reliable alternative obsolete. I do fear that the archetypal book could be replaced by an electronic version due to trends and the way in which society and culture are changing however I do feel that it is many years away. I don't feel that the book will ever be rendered useless, I think that the e-book and other electronic readers are an alternative that at present could serve a specific niche but as to impact the general public and to alter the perceptions of the e-book, not to mention to overcome the dominance held by the printed traditional book, is still far away and may never totally be. There are obvious positive aspects to the e-book and these should be developed in their own right, as discussed before we as a society are traditionally bad at judging technology and its uses and potential. I think that the e-book as a technology should have this right to realise its potential, only then can you truly judge its effect on print and whether or not you would prefer to read many texts from one source or to stick to the bookshelf full of friendliness and character.



FIG.03:
The Philips/E Ink Electronic Paper

Conclusion: The Digital Age – Threat or Opportunity to the Book?

The printed book now faces a temperature change in its climate with increased importance of technology within our lives and the rapid spread of electronic communication systems throughout the world. We now live in a society and culture that is in dissolution. People, myself included, could now increase the length of this essay with problems such as crime, eroded values, and educational decline among others as there are many causes for a change, and many explanations and depending on whom you ask. Debates have raged about literacy in a digital age, it is a common fear that the use of digital devices and technology will and in fact are ‘signalling the death of literacy.’ They argue about how people are fast paced and that the model of the book, although not as fast as the television or the Internet, is a pillar of society and without time taken to stress its importance then the structure that is society will crumble.

From my study I have come to a conclusion on what I believe should be the role of the book in a digital age. The book I believe still has a lot to offer us. I feel that the tactile experience offered by the printed book, although just one of its many attributes is its strongest. I don’t think that there will ever be a filler for the void left in the place where we romantically took our book and touched its pages, smelled its aged aroma, creased its spine and characterised its cover with the bumps, bashes, scuffs and scrapes that make the book a loyal friend. The basic tactility of the book forms a strong relationship between the reader and itself – we personally bond with it. We allow access to the intimacy of ourselves, it knows which words we struggle with and how we prefer to hold it, but what more personally appeals to me is that fact that we immerse ourselves between its covers as it wraps an imaginary bubble around us, blocking out the chug of the train to work or the bumps and shrugs of the bus home. It gives you the feeling of intimacy and solitary when surrounded in a crowd a feeling that, in my opinion, cannot happen in a digital age where the beep of a recharge signal or the need for an electronic update breaks the silence. I feel this experience is unrivalled and so still offers much. However through my investigation I have also encountered large aspects of digital forms that, given the opportunity to flourish, would have great benefits such as the ease to which people can cater for their different learning skills, and the ease and speed of access to many sources of information with the ability to interlink them. The possibilities for the digital media on affecting the book are still at the point where anything can be idealised, imagine art books where we can move images around or zoom in to view detail, novels and books of information where we can increase or decrease type size and contrast to better the read – the real factor is the choice it offers.

I believe that one major factor in the argument between the two mediums is our definition of the impact and use of a technology and our ability to adapt to and accept change. I feel that it is in our nature to be scared of change, as it is to fear what we do not understand. The digital technology is still in its infancy and we cannot judge its use or its potential but as for the role of the book in a digitally predominant age we need to see that the two can coexist. Place a frog into boiling water and it will immediately jump out to save its life but place a frog in cold water and heat it up, the frog will stay in the water and will cease to live, as it doesn’t ‘feel’ the change in temperature, and I see this in our present state of society. Throw in the notion that digital and electronic technology will take over everything that we know and hold dear and we will reject it and over endless debate and questioning we will never realise the potential and benefits of the technology, but in this state of transition keep hold of

our culture and take charge of what could actually be beneficial to you and gradually we will come out with a solution that will better us culturally and socially. We cannot be detached from the cultural and social significance that are held within the printed book but we can learn to accept the potential and benefits of another technology. I would like to conclude with the words of another that best describe what my words cannot.

“I am surrounded by books. I own thousands of them. I read them all the time. I write them. If I had to choose just one media, I would stick with print. But I prefer a world – the world we have now – in which there are both printed and digital media. A world where we choose.”

(Poynor, 2005. Interview.18/10/05.)

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Open Book

Understanding the Role of the Book in a Digital Age.

'A good book is the precious life-blood of a master spirit, embalmed and treasured up on a purpose to a life beyond life'

John Milton *Areopagitica*

'There is no friend as loyal as a book'

Ernest Hemingway

'A room without books is a body without soul'

John Lubbock

It may hardly come as a surprise to many people to hear the phrase print is dead and that we will all soon be slaves to technology as everything gets smaller (yet bigger), better and easier. It is a message that has been visible since the early days of computers and it remains so today, but with all the convenience's that technology offers us what is the fate of the old, reliable friend known as the book? Will the digital revolution be so successful that the book you were read as a child is read now from a palm held device, stored along with the hundreds of other favourite novels, stories and facts? Will the romantic affair of your fingertips turning the thin paper page's and the smell of them as they wisp over be replaced by an eager tapping of keys on a pad, or the scrolling of a mouse? I find the reading of the book to be a visual adventure which catches me and pulls me in with every turn of a page, the smell of a new or old book, the crease that grows on a paperback spine as you travel the journey through and the escapism and wisdom that they give has made the book, to me, a friend unseen for months who now in sight, has alot to tell me.

I want to better understand the reasoning behind the technological success of the book and why it has remained a figure in our civilisation. As the digital age grows and advances by the day it is hard to see what specific role the book will play in our future, if any.

I aim to investigate whether our aged and developed companion is threatened by the option of e-books or on screen reading or is the digital media just an opportunity for the book to be discovered and loved by a whole new generation. I hope to structure my argument with background knoledge on the origins and uses of the book in its early Western life and how it influenced us culturally, socially and politically. How it was used for by the Christians as a tool to spread their teachings on faith and equally how it was used to rebel by the Humanists, and also to track how the technology has evolved to its present form and how it is regarded today.

Reading and taking opinions from publishers of books and of publishers of digital material and views of academics in related fields to give me a better perspective on its current status in present society. I also hope to, ironically exercise both mediums in my research using both web forums from The Institute for Cyber Information: The Future of the Print Media and on-line writings and investigations and also investigate the question using books to collect a number of materials on its history and importance and critical writings from the people that design for books so that I can better judge the question that is the book's future.
