

Further Reading

*An analysis of the public library and the implications
of technological innovation on architecture*

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Abstract

The past two decades has seen an explosion of electronic media that has changed the way society is structured, and the way in which people interact with one-another. This technological change is forcing the library to question its functional role in society. Books are currently the predominant form of information and entertainment media represented. If this continues the library will struggle to assert its relevance in the future.

This thesis analyses the public library, establishing an appropriate distinction between the formalities of the traditional library space and that suitable for a library in the information age. It acknowledges historical influence, and the library user's role in establishing a truly public enterprise. It builds upon these influences through architectural analysis and experimentation to find one architectural design solution that re-establishes the public library typology.

The outcome of this research identifies a strong future for the public library, but states that its physical and organisational form needs to be re-established. It finds that technology and architecture offer new opportunities useful for reinterpreting the typology. The thesis concludes that the implications of digital representation do not limit the public library to virtual space, but rather it can become a space that mediates the new emerging boundaries between digital and analogue by acknowledging the interaction between people.

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Introduction

This research focuses on the implications of technological innovation in architecture and how it will create new opportunities for assessing and interpreting the public library.

‘Public’ libraries differentiate themselves from other types of libraries in that they are rate-supported and that their main purpose is to serve the public’s education and entertainment needs generally. They also offer leisure facilities and are usually symbolic of an educated society. It is widely acknowledged that the public library in its current form began with the *Public Library Movement* of 1850 (in England and Wales).¹ This movement sought to educate society in order to offer equal opportunity to all citizens.² Similarly, the public library of today is an institution that has been founded upon the greater education of mass society. Throughout its history the library has had a number of intentions; however, it has always existed to serve the public by making its material freely available to all. Currently the library is facing issues that have called its relevance into question. Many of these issues are due to society’s changing needs; needs that are altering how people access and interact with the material they require.

1. Harrison, (1977), Murison (1988), and Hammond (2002) state this.

2. The public library does, however, have a much longer history. It dates back to about 300 B.C. in Egypt, when the Ptolemies (a Greek Empire of the Hellenistic Age) founded the first library for the public in Alexandria. Greek culture nurtured a high level of literacy and held an abiding interest in intellectual endeavour (Casson, 2001, p. 17). Knowledge was power. It was significant. In response they created storage libraries accessible to the public. In the 2nd and 1st Centuries B.C the Romans built upon Greek ideals, but established libraries that were relatively similar to the libraries we know today. Library Scholar Ernest Cushing Richardson (1914) noted that the Greek term *bibkiotheke* emphasises the physical built place, distinctly different to the Latin word *libraria* which emphasises the books - or the reader. Roman libraries adjoined knowledge with a social and cultural entity, they were not simply a space to provide the means for one to be educated, they were a space that encouraged learning. This is particularly evident in library development that took place at the public baths, a place already accustomed to social activity.

Books, Information and Entertainment

The past two decades have seen a global information boom - an explosion of electronic media that has brought about terms such as the ‘information age’ or ‘mass media culture’. This technological change is forcing the library to question its role in society and what material it needs to present to meet this role. As far back as 1990, O.B. Hardison stated:

We are coming to the end of the culture of the book ... Books are still produced and read in prodigious numbers, and they will continue to be as far into the future as one can imagine. However, they do not command the [centre] of the cultural stage. (p. 276).

If the public library continues to assume that books remain its primal form of media representation it will struggle to re-evaluate itself for the future. This risks instant obsolescence. Information and entertainment offer infiltration of the traditional library typology, as they are not restricted by physicality or storage. The Benton Foundation (1996) states that with the onset of the digital age “libraries must expand beyond the confines of the traditional library building”. Many believe that it is time for the traditional library to evolve. This evolution will bring about new organisational systems and architectural solutions that acknowledge the library’s shift into a system that does not necessarily require walls or storage; a system that allows gathering and distribution of material without the need for boundaries of space and time.

Space and Time

In the digital age space and time intersect outside of grounded reality. Michel Foucault's (1986) description of libraries as heterotopias³ in his work *Of Other Spaces* expands on this intersection. Libraries, he said in his *fourth principle* of heterotopias, indefinitely accumulate time:

the idea of accumulating everything, of establishing a sort of general archive, the will to enclose in one place all times, all epochs, all forms, all tastes, the idea of constituting a place of all times that is itself outside of time and inaccessible to its ravages, the project of organizing in this way a sort of perpetual and indefinite accumulation of time in an immobile place (p.26).

3. Foucault distinguishes heterotopias from utopias by expressing their existence as a real place (rather than unreal). Heterotopias are "counter-sites" that sit outside all places even though they may be possible to locate in reality; they are free to contest with other real sites in which we live.

The library is an interface. It exists beyond the measurable boundaries of space and time. The current situation of mass culture in a media society implies that the library's institutional responsibility moves beyond that of an independent establishment serving individual purpose; it now attends to the infinite scope of resources made available by digital technology. Throughout history the library has prevailed via two hostile programmes within one architectural territory: archiving knowledge and providing access to it (Klingmann, 2001). The initial introduction of new media into public libraries changed very little between these dualistic programmes, however, it seems that the time has come to acknowledge the library's potential as an unlimited source for accessing media with no distinct boundaries or divisions. Interface architecture, as Shannon Mattern (2007) describes it, "is more than a boundary between two states, such as the real and the virtual; or two spheres, such as the local and the global; or two conditions, such as the public and the private." Interface architecture is also the "mediation, the translation, the interaction between" these (p.144).

Decentralisation and Dematerialisation

Society is becoming increasingly decentralised - living in suburbs with branch libraries, communicating through the internet, and no longer preserving material that is physical. Technology is forcing an alternative matrix upon us in which all forms of media co-exist digitally. It dissolves the walls between literature, science, mathematics, film, theatre, sculpture, painting, music, photography and architecture - finding a *timeless* matrix in which they occur simultaneously. It is increasingly apparent that there is a new language for the arts - "an unblushing and unfiltered attempt to plot all the ranges of formal expressivity now possible" (Lanham, 1989, p.276). It could be argued, that the library's role as a distributor of material must not ignore the drastic desertion of these previously uncompromised boundaries. The library must in itself exist as an interface, outside the limited and fixed reality (to which it has long belonged) to fully accommodate this new digitized media.

The internet and devices such as Kindle and the recently released iPad contribute to the “holistic environment that has merged information and entertainment” (Klingmann, 2001, p.409); an environment in which interaction with other real people is lost entirely. Furthermore, the internet is controlled by commercialism. It has its own agenda: “Google’s self-described aim is to “build a comprehensive index of all the books in the world,” one that would enable readers to search the list of books it contains and to see full texts of those not covered by copyright” (Grafton, 2007). These shifts create a virtual entity in which commercialism, information, and entertainment exist simultaneously. Although, this is expected, it is of grave concern that the three exist without the need to interact with real people. Interaction not only implies knowledge, it builds it. Without interaction knowledge will be dissolved in a sea of commercial data, unable to resurface.

The solution to such problems for the library may be architectural. Jean Roudaut notes that the tendency for “towns and cities is to densify, whereas libraries should be tending towards vaporization; we should not be making mono-functional spaces as in the past, but multi-functional ones, for in doing so we will prevent these places from becoming too rigid or brutally selective” (Roudaut, 2001, p.295).

The aim of this research is to establish an appropriate distinction between the formalities of the traditional public library space, and those suitable for a library system of the information age. The research is divided into five chapters.

The first chapter is a review of literature. It uses and builds upon current and historical literature to establish a brief history of the public library, its intentions and how these intentions have shifted creating the library that we are familiar with today. This chapter also uses literature to establish how the public library responds to its users, both spatially and psychologically.

The second chapter is a review of three case studies: Peter Cook and Christine Hawley’s *Trondheim Library*, Bolles-Wilson’s *Münster Library*, and OMA’s *Seattle Library*. The three case studies represent different issues and solutions that libraries have faced and are currently facing. They include: the importance and relationship to site, commercialism, interaction, and the changing face of information and information access.

The third chapter is the case study of two New Zealand libraries and their users. It includes mapping studies undertaken at the Wellington City Library and a survey undertaken in and around the Christchurch City Library. This chapter offers an understanding of how people currently occupy these two public libraries and what is deemed important in the future. It is a prerequisite to the fourth chapter.

The fourth chapter is a design study that tests the findings of previous chapters in a detailed design solution. This chapter questions what a library might be like without books; using mobility and interaction as the primary means to represent this.

The final chapter draws on the previous to discuss why this research is necessary and whether there is relevance for libraries in the future or not. It also addresses what opportunities digital technology can provide for re-interpreting the public library typology.

Chapter 1

The Public Library and its People

This chapter has been compiled after reviewing literature regarding public libraries and the important role that they play in establishing the identity of a community. It aims to assemble and build upon what has been written with regard to the library's institutional responsibility to society, how society has responded to this responsibility and what the future might entail for such an institution.

The chapter has been structured to provide a historical background of public libraries beginning in the eighteenth century. It documents a brief historical account of important events that affected the library's social responsibility and establishes how libraries spatially met the needs of the society for which they belonged. Particular mention is made to the induction of the library as a public institution (with special mention to the *Public Library Act* of 1850 in England and Wales) and how this impacts on the role public libraries play in today's society. Following is a response to how the public library responds to its users. This entails establishing how the library has spatially and psychologically met the needs of its users and how it might do so in the future.

1.1: The library as an institution - a brief history

The appropriate place to begin a compact history might have been to establish a setting for the foundation of knowledge, or even to define the origin of the history of writing itself. This section, however, begins its historical account of public libraries in the eighteenth century. This is not to say that the establishment of societies built on knowledge before this time is unimportant; it is, however, not of dramatic significance to the implications that the increasingly commercial and technological library faces today. Simply stated, the two oldest known literature cultures are from Mesopotamia and Egypt (Assmann, 2001, p.51). Sometime later, with the invention of the printing press (in 1440) by Gutenberg, there was a slow but vast increase in the common reader throughout Europe. No longer was reading, as it was in the Middle Ages, limited to those who dedicated their life to the church (Altick, 1957, p.16). The availability of printed material allowed reading to spread. It spread so much that those of the working class, who previously could not afford hand copied books, were able to learn to read and write. Reading established its place in society, and in the time of the Tudors and the Stewarts, it was "more democratically distributed among the English people than it would again be until at least the end of the eighteenth century" (Altick, 1957, p.18).

Eighteenth Century: Circulating Libraries - Commercialism

The eighteenth century saw reading turn into a commercial venture with the establishment of numerous circulating libraries throughout Europe. K.A Manley (2000) notes that circulating libraries “were the “public libraries” of their day” (p. 29). The difference, however, is that they were commercial. They made a profit (as paying membership was compulsory). This established conflict between culture and commerce. Manley (2000) notes, that buying books is an expected commercial activity, “lending at a price, [however,] adds new levels of social and economic dynamics, especially since many of the largest circulating libraries became social centres in their own right” (p.30).

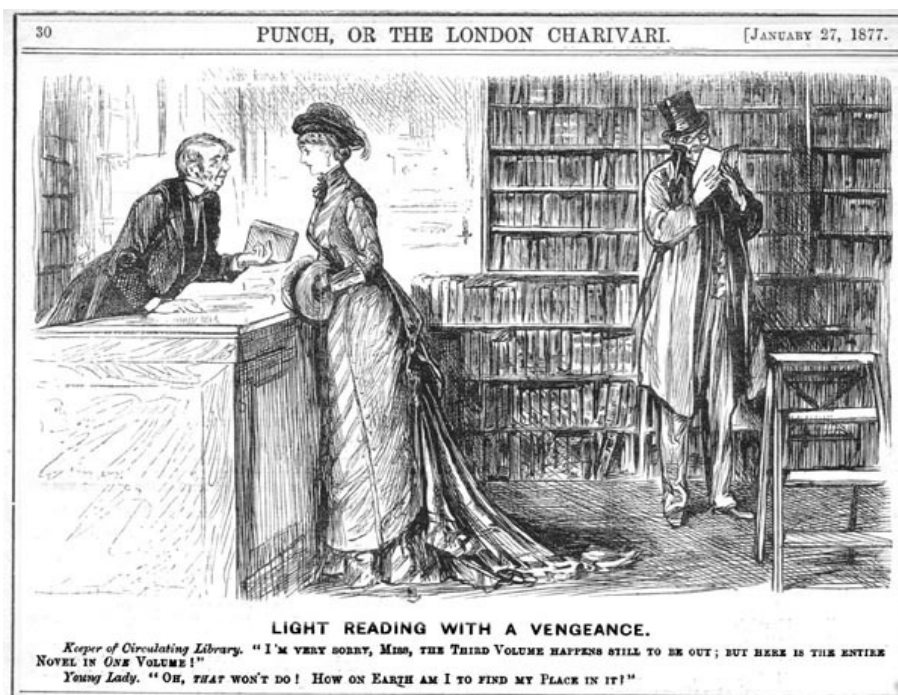


Figure 1 : The Circulating Library. Circulating libraries were social centres that offered a book lending service to fulfil human desire.

From: “Light Reading with a Vengeance,” Landow, 1877, *Punch, or the London Charivari*, 72, p.30.

The society, for which these libraries belonged, lacked culture in a literary sense. Reading was not considered advantageous to society generally. It had immense implications for a society with an underlying capitalist class system - knowledge implied a higher, ‘upper-class’, status. Reading was expensive, and circulating libraries held a monopoly on the book trade. They could charge fees that they deemed suitable (which most of the lower and middle class could not afford) largely because they controlled the majority of the publishing industry as well (Hammond, 2002, p.89). Richard D. Altick (1957) notes that: “To encourage the poor man to read and think, and thus to become more conscious of his misery, would be to fly in the face of divine intention” (p.32). Circulating libraries instigated segregation of the economic class structure of the time. They were either, large and fashionable - “essentially assembly rooms, which flourished in the seas side and spa towns” - or they were quite ordinary - exclusively stocking novels or perhaps minimal popular non-fiction (Manley, 2000, p. 32). The former were exclusive to the wealthy and educated, whilst the latter contributed to the reading of ‘trash’ by the lower classes.

The library building of this period was not a central, civic building of high taste and culture that projected itself onto society with such architecture. It was, however, a building that nurtured human desire.

Nineteenth Century: Public Libraries - Culture

In the latter half of the nineteenth century libraries became free. The pioneers of the free libraries were philanthropists. They were men of a scholarly background who desired to repair the cultural structure of a damaged European society - doing so by making books freely available to all. In 1850 the first *Public Libraries Act* (England and Wales) was passed. In the same year, William J. Fox, MP, speaking on the Bill for compulsory education in England made comment that “nearly one-third of all men and nearly half of the women married were unable to sign their names in the register” (as cited in: Murison, 1988, p.54). The *Public Library Act* set out to change this. It permitted towns and parishes to set up public libraries in which books were available to all (for a small fee from the taxpayer).⁴ If one desired to use the libraries then they would need to learn the necessities required to read (Murison, 1988, p.54). It was not anticipated, however, that the movement would be disregarded by much of the public. The problem was that the movement had not been initiated by public pressure, but rather the act had been passed at the time by a Parliament whose election was not democratic. Only one person in forty was eligible to vote and it was, therefore, received by many as an act of charity (Murison, 1988, p.25). Mary Hammond (2002) notes:

4. Harrison (1977) notes that the act did not originally permit money to be spent on books - it was thought that wealthy citizens with public spirit would donate these. He also notes that the rate limitation in 1850 was “one half penny in the pound” which in 1855 was raised to “one penny”. This rate remained until 1919 (p.59).

the public library became, more often than not, an architecturally repressive and logistically prohibitive symbol of civic pride patronized overwhelmingly by the lower middle classes (p.84).

Arguably, it was not until Samuel Smiles book, *Self-Help: With Illustrations of Conduct and Perseverance* of 1859 was released that the working class truly understood the benefits of being educated. Smiles book was a breakthrough and it became very popular reading with the lower and middle classes. It expressed that the key to leading a successful life lay in book-learning (Altick, 1957 p.242). Smiles (1879) stated that:

the healthy spirit of self-help created amongst working people would more than any other measure serve to raise them as a class, and this, not by pulling down others, but by levelling them up to a higher and still advancing state of religion, intelligence and virtue (p.294).

Simultaneously in Europe, the United States, Scandinavia, and much of the Commonwealth there was an emphasis on making educational facilities universally available to all (Harrison, 1977) - a direct result from the “much felt need” to destroy conflicts of class (Murison, 1988, p.50). In England the first successful induction of the library becoming a truly public institution had to wait until 1881 when Andrew Carnegie founded the Dunfermline Library. Carnegie’s philosophy was to create a library in a community willing to maintain and develop it (Carnegie, 1906). In other words, the Dunfermline library was not a charity. It

was a gift only to be offered to a town willing to receive it and expend the public's money and effort to sustain it - a prospect that, as might be expected, aroused a great deal of public interest. W. Odell (as cited in: Murison, 1988) commented in 1880:

It is a mistake for the well-to-do classes to think that a free library should be treated like a charitable institution, and left for the use of the poor only. It is paid for by owners of property, and by using it freely they get, to say the least of it, a fair return for their money, besides securing to the public generally many advantages which no charity could confer (p.60).

The libraries of the latter quarter of the nineteenth and throughout the twentieth century were buildings designed for the public; they required public involvement. They were not buildings exclusively for education, recreation or the improvement of public morale; but for all three. As a true reflection of culture the public library became a social signifier, a civic building of the utmost importance. Carnegie offered a standardized planning system. Although the design was not conditional on libraries adopting particular design criteria, recommendations were made. James Bertram - the assistant to Andrew Carnegie - recommended numerous ideas in his *Notes on the Erection of Library Buildings*. Abigail van Slyck (1995) notes that according to Bertram the ideal library was:

a one-story rectangular building with a small vestibule leading directly to a single large room; where necessary, this room was subdivided by low bookshelves that supplemented the bookshelves placed around its perimeter to hold the library's collection. In addition to book storage, this room provided reading areas for adults and children and facilitates for the distribution of books. The basement had a lecture room, a heating plant, and "conveniences" for staff and patrons (p.37).

Carnegie's libraries spread throughout the Western World rapidly. They succeeded because they were truly public and they had the ability to serve multiple roles. Shannon Mattern (2007) notes:

The modern library of the early twentieth century sought not to protect books from readers, but to bring patrons and library materials together to facilitate their interaction (p.3).

Throughout the twentieth century numerous examples are seen in Africa, the Caribbean, throughout Europe, the United States of America, Canada, Australia, New Zealand and Fiji. The most famous example is the New York Public Library which was based on Carnegie's principles.

Figure 2 : Carnegie Library, Fairlie, New Zealand.

From: Radcliffe, 1916. Sourced from the National Library of New Zealand (12.5.2010).



Twentieth Century: Contemporary (traditional) Libraries - Commercialism, Technology, Function

Harrison (1977), notes that the decade belonging to the 1930s witnessed the largest growth in library development (p.15). He attributes this to the education of librarians and administrators within the industry. During this period there was a large focus on the library's responsibility to its public and the opportunities it could provide in the form of enhancing education and community well being. In 1939, at the out-break of the Second World War, the public library was a very promising enterprise. During the war very little progress was made, and in the years following the library did its best to maintain the same status that it had prior. In 1955, Scotland passed a new *Library Act*. Four years later Sir Sydney Roberts produced the *Roberts Report* for the purpose of competing with the success of the public libraries in England and Wales. In his report he states:

the essential function of a public library is to supply any reader, or group of readers, the books and related material for which they may ask. It is the function of a public library not only to satisfy, but to promote the desire for books. The public library is also an obviously suitable centre for exhibitions, lectures, adult education classes and discussion groups (as cited in: Harrison, 1977, p.18).

This report is an early example of the library industry acknowledging the potential in propaganda and advertisement - the use of it promoted education and enticed individuals in society to embrace book learning. It does, however, draw on notions of commercialism that were frowned upon during the establishment of free libraries a hundred years before. In addition to advertisement, libraries of the post war era also embraced other functions in the library and for the first time

they introduced technology as an automated idea. This allowed them to update library functions and make them more efficient. Michael Gorman (2002) notes of libraries in the 1940s and 1950s: “Punched card systems and microcard systems of various kinds were used for a variety of technical processing and retrieval purposes” (p.456).

During the 1970s and 1980s the role of technology in the library shifted. Libraries began to embrace digitized media as a valid means for representing stored matter - usually stored or accessed via computer systems. Literature of the time also began to acknowledge the need for other forms of media in the library as a means for promoting public and community gathering. Harrison (1977) notes:

The services of the public library can, and should, be projected to a wider public through lectures, talks, displays, exhibitions, printed publicity, concerts, recitals and similar means (p.66).⁵

5. Note that Harrison also embraces the idea of “publicity” (advertising) as a means for bringing people into the library.

The buildings of this era were quite different to Carnegie’s libraries. They were modernistic. The design principles were based on function rather than user needs and the result were buildings that worked incredibly well (for a time) as storage facilities, but lacked the tranquillity sought after by their users. Although, these buildings sought to be “inviting, and often architecturally distinguished” (Molz & Dain, 1999), as with many other buildings of the period, they defined their programme by being modular. Van Slyck (2000) notes:

In theory, mid-century modular planning enlivened libraries by uniting books and readers. In practice, however, large rectangular footprints, uniform eight-foot-high ceilings, and harsh fluorescent lighting rarely made these buildings exciting or even pleasant places to be (p.152).

OMA believes that the problem with the organisation of the this type of library is “flatness” (*Seattle Public Library, OMA/LMN, 2005 p.34*). By flatness they mean that libraries of this era and for the majority of the remaining twentieth century organised their departments as separate entities in their floor plan - designating separate floor space to specific topics. As it is difficult to predict the growth of specific collections, libraries with a predefined layout struggle to keep materials from swelling uncontrollably. Therefore, excess material is often moved into storage - off-site or in the basement - or squats in other departments of little or no relevance (*Seattle Public Library, OMA/LMN, 2005 p.34*).

The last three centuries have seen the library institution change and adapt to the society for which it belonged. The circulating libraries of the eighteenth century established notions of commercialism that were further explored throughout the twentieth century. Chapter 2 explores commercialism further through two case studies: Peter Cook and Christine Hawley’s *Trondheim Library*, and OMA’s *Seattle library*. The nineteenth century established the public library as a state supported enterprise and in doing so it advanced education and literature so significantly that today it is often taken for granted. During this period the library also estab-

lished itself as a community centre that brought people together for the purpose of building knowledge and providing interaction. The twentieth century saw new forms of media, advertisement and technology embraced in the library. It saw the library's intentions shift somewhat to provide the most functional and simple means for accessing information. This has been somewhat successful; however, currently libraries are facing issues such as uncontrollable collection growth and changing user needs that make it very difficult to update this type of system.

This section of the chapter has established some of the founding intentions and aspirations of the public library. It is intended to provide a solid grounding so that when questioning what the future public library might entail, it will be possible to critique which historical aspects it must maintain, remove or build upon in order to remain a recognisable and successful public institution.

1.2: The library as science - the user

The previous section of this chapter identified the development of the library institution from a commercial venture, bound by conditions of economic class, eventually establishing itself as a truly public enterprise - free to all, improving the education of a mass society. The events that take place within the public library's walls throughout its history have, however, been controlled by numerous characteristics, both physical and psychological. These characteristics are indicative of the way in which patrons desire to reside inside the library building. The next section of this chapter deals with the public library and how it responds to its users. It begins by making special mention of *The Five Laws of Library Science* and then builds upon these laws, using the library user to explain how society inhabits and uses library services and what changes might be required in the future.

The Five Laws of Library Science

In 1931, Indian philosopher and library scientist Dr. S.R Ranganathan (1892-1972) published his book: *The Five Laws of Library Science*. The "five laws" that Ranganathan proposed have influenced many concepts of library science, and are of particular relevance to user groups and values within the library institution. It must be noted that the laws were created some eighty years ago, but that their relevance still stands. For all intents and purposes it is, however, suggested that the term "book" act as a surrogate for the library's multiple forms of media, as the library's responsibility is no-longer limited to books. The five laws are:

1. Books are for use
2. Every reader his [or her] book
3. Every book its reader
4. Save the time of the reader
5. The library is a growing organism

(Ranganathan, 1963)

1. The first law, *Books are for use*, is the elemental principle to library science. Ranganathan (1963) suggests that the library had overlooked and even neglected the value of books as material for use (p.26). Ranganathan's first law emphasises use, but does not neglect preservation. It advocates that the attention of the library industry shift toward improving information access for its patrons.⁶

2. The second law, *Every reader his [or her] book*, demonstrates Ranganathan's democratic belief that every *person* should have access to the library and its materials. "Books give education; they educate" (Ranganathan, 1963, p.81) According to Ranganathan, potential users should have their needs met by the collection. This can only happen if:

- The library meets its obligation - to promote their services expansively so as to draw in a range of users.
- The librarian meets their obligation - to know the material and the reader for whom it is suited.
- The reader meets their obligation - to acknowledge that the library serves many other readers and to be considerate to their needs and requirements.⁷

3. The third law, *Every book its reader*, suggests that a suitable reader exists for every book. The law addresses the open access system as the predominant way in which an item in the library might find its appropriate reader.⁸

4. The fourth law, *Save the time of the reader*, recognises that the service the library provides should be efficient and comprehensive. Ranganathan devises strategies for both time saving before the reader enters the library and after they do. Library location should be devised in such a way as to provide easy access to all patrons.⁹

5. The fifth law, *The library is a growing organism*, identifies the library's crucial and endless potential. It invites the library to accommodate internalised evolution "in order to be good stewards for the indefinite future" (Gorman, 2000, p.19). Ranganathan (1963) notes that a "growing organism takes in new matter, casts off old matter, changes in size and takes new shapes and forms" (p.326).

The *Five Laws*, that Ranganathan proposed, are of important note when considering the role that people play in using library services. The laws identify that library values must complement their user and that they serve a function - to provide access to media in the most suitable and efficient way possible. The laws, however, are somewhat limited in their scope when considering the future of library users; largely due to them being written eighty years ago. They do, however, provide a very strong foundation for understanding the library's responsibility to its user. This foundation is built on with regard to contemporary and future library users in more detail below.

6. Ranganathan suggests that areas of focus should include: library location, library hours, library furniture and the value of library staff. He notes that a modern librarian with faith in the "first law" should only be happy when readers make the shelves empty.

7. This is achieved by following library rules and returning media on time.

8. Suggestions include: shelf arrangement, catalogue entries, reference service, the opening of particular departments, publicity methods, and extension work. (Ranganathan, 1963, p.258)

9. At an urban scale this is difficult to implement without the employment of various branch libraries, which, as Ranganathan (1963) notes, should be "within ten minutes walk of his [or her] residence" (p. 321).

Current library users are given the opportunity to participate in library activity well beyond Ranganathan's first law. This is achieved through careful consideration during library design: providing both book spaces and non-book spaces. In Rachel Begg's (2009) essay *Death or Diversification? The use of space in public library buildings* she finds that the use of "non-book space" in libraries is not new. She cites A. Campbell's argument from 1965:

the ideas of the library as a cultural centre or source of all recorded information was well-known before the end of the nineteenth century, and has been merely adapted to take in more recent inventions. (as cited by: Begg, 2009, p. 624)

In addition Murison (1988) also notes that the library has for some time had a social intention. He cites the *Roberts Report* of 1927: "The public library is also an obviously suitable centre for exhibitions, lectures, adult education classes and discussion groups" (p.98). Begg identifies that the rationale for the inclusion of such spaces is to provide the community with spaces they "will use and ultimately encourage more use of books" (p.619-620). These spaces are spaces for interaction. Interaction is of the utmost importance to the library user - and has been since the founding of Andrew Carnegie's libraries in the late nineteenth century. Interaction, however, is often neglected and misinterpreted as *access* to book (or in contemporary society new) media. Access to knowledge implies that users must dig it out of an archive, interaction with knowledge suggests that it is experienced. In changing society, the library user it would seem, seeks more than access - they seek interaction; interaction between books and media, and interaction with other people. Anne Goulding (as cited in: Begg, 2009) highlights that "public libraries [need] more than just books" (p.622). She also states that:

the public library is being positioned not just as a place to borrow or read books or even to access digital material, but as a key community resource and facility which can act as a venue for community events and as an access point connecting individuals to one another (Goulding, 2009, p. 47).

Her statements are reinforced by the 2006 *Public Library statistics* produced by the CIPFA which show that despite a steady increase in the number of library visitors in the United Kingdom, there is also a rapid decline in the number of those that access book material - 21.5% less people in 2006 than 2000 (CIPFA, 2006, p.6)

	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	Change Since 2000-01 %
Active Borrowers ('000)	17,211	16,506	15,843	14,812	13,808	13,510	(21.5)
Housebound Readers ('000)	127	123	115	110	113	111	(12.8)
Visits to the Library Premises ('000)	323,835	318,155	323,042	336,951	339,708	342,168	5.7
Visits per 1,000 Population	5,420	5,411	5,454	5,656	5,675	5,683	4.9
Requests for Specific Items ('000)	7,689	7,816	7,860	8,934	9,043	9,939	29.3
Requests per 1,000 Population	129	133	133	150	151	165	28.0
Enquiries ('000)	58,234	58,506	57,326	58,183	56,860	55,517	(4.7)
Enquiries per 1000 Population	975	995	968	977	950	922	(5.4)

Figure 3 : CIPFA Statistics. The statistics from the Chartered Institute of Public Finance and Accountancy document visitors to UK libraries between 2000-2006.

From: CIPFA, 2006, *Public Library Statistics 2006-07 Estimates and 2005-06 Actuals*, p.6

Similarly a survey conducted in the United States of America by the Benton Foundation makes specific mention of the library's responsibility to its user beyond that of books.

Libraries are civic integrators. They are community nerve [centres]. They constitute, along with other vital local institutions, the basis of civic life. They provide a forum through which community members interact with each other, both through the use of meeting space and through the collection, dissemination, and implementation of information (The Benton Foundation, 1996).

Librarians have a different responsibility to library users as they begin to interact differently with the library and its material. Historically there has existed a conflict of interest between the librarian and the reader. Jean Roudaut (2001) states that the librarian and the reader clash because "the latter makes havoc and stirs up the dust. Librarians dream of locking up all the books in a stronghold, burying them away from sun and water" (p.295).

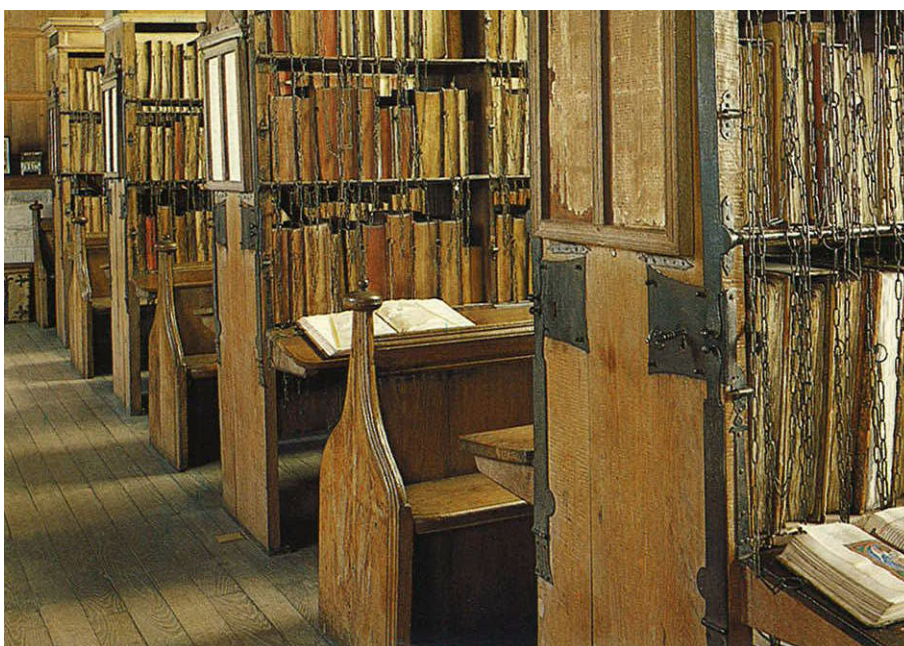


Figure 4 : Chained Library, Hereford Cathedral, England. Historically chaining books to shelves was a widely spread and effective security measure. Today it is encouraged that books leave the library and are used.

From: "Hereford's Mappa Mundi," 2010, *Thats How the Light Gets In*: <http://gerryco23.wordpress.com/2010/09/21/herefords-mappa-mundi/> (accessed 30.10.2010).

10. In addition librarians have access to inter-loan systems. If a book or other form of media is not immediately available the librarian will attempt to get it from another library as soon as possible.

Fortunately library restrictions are no-longer as strictly enforced as they once were. Contemporary librarians tend to respond to Ranganathan's first and second laws for the purpose of meeting his fourth. They acknowledge that users need fast efficient service (fourth law) and respond by keeping material at close reach (first law)¹⁰ and by undertaking sufficient education so that they are able to find material quickly (second law). In recent years much redefinition has been established with regard to the librarian's role - something that will continue to be addressed as physical material continues to be questioned. In contrast to historical librarians - who were essentially caretakers or guards of library stock - the contemporary librarian facilitates the library users navigation; allowing them to access the entire library catalogue. Many library leaders see this role being translated and shifted in the future. The librarian will become a navigator of digitized library material (The Benton Foundation, 1996). It is likely that the future library user may be able to take on this role themselves with the aid of a digitized librarian.

Ranganathan's fourth law makes aware that it is essential to have all library material within close reach of the user. Unfortunately contemporary users do not use the library to its full potential in this regard, as they find it difficult. Dan Clancy (Oosterman & Clancy, 2008) notes:

People tend to search online and if they don't find it one click away, they think it doesn't exist or they don't care to go a little further to find the information. They would rather use a secondary source that is easy to get than look for a primary source that's a little harder to get (p.36).

The library user often fits into Clancy's description and it is, therefore, essential that the library continue to update its resources to allow for the simplest means of accessing information. A problem with this is that the sea of ever-expanding electronic information changes the way in which we preserve and present information. There is no-longer a strategic hierarchy to information collection and storage (Lovink, 2008); this makes it very difficult to find the most relevant information first. The Benton Foundation findings acknowledge the success of the 'open access system' and its abilities to provide a window into culture, values and traditions. They state: "any citizen can acquire the knowledge he or she needs to function effectively in a democratic society" (The Benton Foundation, 1996). This would suggest that the library's institutional responsibility to its user must allow for a library system that provides unlimited free access to their catalogue - even in a digitized future. And, that the best way to achieve this is to maintain a community driven access system, whereby reliable and controlled sources of media can be made available without causing the user to be lost in secondary sources.

Ranganathan's analysis also identifies convenience for the user. Convenience is of utmost importance when assessing the implications of technological innovation and its responsibility in reinterpreting how the library meets the needs of its patrons. The CIPFA (2006) attribute the increase in library visitors throughout the

UK in their statistical analysis to new library services being positioned in “more convenient locations” with “modern surroundings, amenities and increased availability of digital media facilities” (p.6). The drastic change that is evident in society’s structure since the information age began - decentralisation, socialising through the internet and our desire to interact with media electronically - is undoubtedly due to our desire for convenience. Many libraries currently position themselves in the city and rely on branch libraries to fulfil this convenience aspect. It is likely that society will become even more detached from the realities of physical space due to increased apathy; it will therefore be the library’s foremost responsibility to ensure that it is as convenient as is physically possible. This can be achieved through proximity, operating hours and addressing the material that specific patrons will and will not be needing.

Ranganatham’s five laws of library science create a foundation on which the library’s responsibilities to its user stand. They are not closed, and should not limit the potential that the future library offers to its user. They are indicative, however, of how current and future libraries can meet the user’s needs. This section of the chapter has identified that the user requires more than just book space, and that these spaces need to be easily accessible to facilitate human interaction with other users and differing forms of media. In order to achieve this, it is also essential that the material is freely available and that it consists of controlled, reliable, primary sources. Finally, this section identifies convenience. Convenient library proximity and hours allow users to access material when and wherever they want - thus supporting their more frequent use.

Chapter 2

The Public Library and its Building

In the last three decades there have been a number of library projects around the world that have attempted to distance themselves from a standardized module. The following case studies are examples of individual buildings with individual character; buildings that embody specifics such as site, urban needs and the local users throughout their design. They are buildings that explore different economic climates, societal conditions and technological implications. As a result they respond differently to the library typology - each presenting media and information uniquely.

2.1: Peter Cook and Christine Hawley, Trondheim Library, 1977: The library as a shopping mall - a commercial venture

It may seem odd for a public library to close a neighbourhood branch and move it to a shopping mall, but that may be both an acceptance of reality and a view of the mall as the 21st century town square. (Gorman, 2002, p.454)

11. The project was originally submitted in a competition in 1977 and then further drawing was completed to follow up in 1979.

The following case study considers the library as the equivalent to a shopping Mall. It is a 1977 un-realised architectural project by Peter Cook and Christine Hawley - the *Trondheim Library*.¹¹ It has been selected as a suitable case study because at the time it was designed it offered a new stance on the role of the public library. It was undertaken in a period when the future of the library was uncertain and changing (in much the same way the current library is). Libraries of this period faced conditions such as economic collapse, heavily reduced funding and new technology questioning their existence. They responded by attempting to individualise and promote themselves as cultural centres that included aspects of commercialism and embraced the importance of space for activities other than learning. This project is for the town of Trondheim, Norway. It investigates the notion of the library as an individual building and responds to both site and users. It attempts to draw the city inside the building, an ambition that was very common throughout the latter half of the twentieth century and in many twenty first century library projects also.¹² Although the project was never realised, much can be learnt from the ideas it presented.

12. Rem Koolhaas' Seattle library treats the city/library relationship similarly. This will be explored further in the Seattle Library case study.

Site as a determining factor

In a 1979 article in *Architectural Design*, Cook and Hawley describe their project. Among the description, they also describe "The City":

There is a tradition of tough buildings. The cathedral is gaunt, large and chunkily Gothic, certainly uncompromising. The castle is four square white, slightly isolated from the surrounding houses, as if on a plate. It is very minimal in detail. The U-Boat pens, dating from the German occupation in the last war, proved impossible to blow up and remain a nervous reminder of the frailty of a small and exposed nation - however erotic is the site of impeccable brutalist architecture made 15 years before its time (Cook & Hawley, 1979, p.334).

Trondheim is a city of ancient tradition, it is positioned on a prosperous port, and is the “cultural capital of central and northern Norway” (“Peter Cook and Christine Hawley 1972-79,” 1980, p.100). Cook and Hawley drew upon the site’s significance when developing their scheme for this project. The library was located in the “old town” but is adjoined to the business district. Its function was to act as the command centre for the library organisation of the large district whilst treating the role of the public library as “a place of recreation as well as information” (“Peter Cook and Christine Hawley 1972-79,” 1980). Within their analysis of the city, Cook and Hawley identified that the Norwegians are not poor, that they are literate, and that the weather in Trondheim is not favourable - “dark and damp” from October to May. Their response to such conditions of site was to provide the city with a building where people could productively loiter - escaping the weather inside Hawley’s “landscape” and Cooks “theatre”. This response led to a scheme, which drew elements of site and internalised them into a built form, essentially bringing the city into the library.

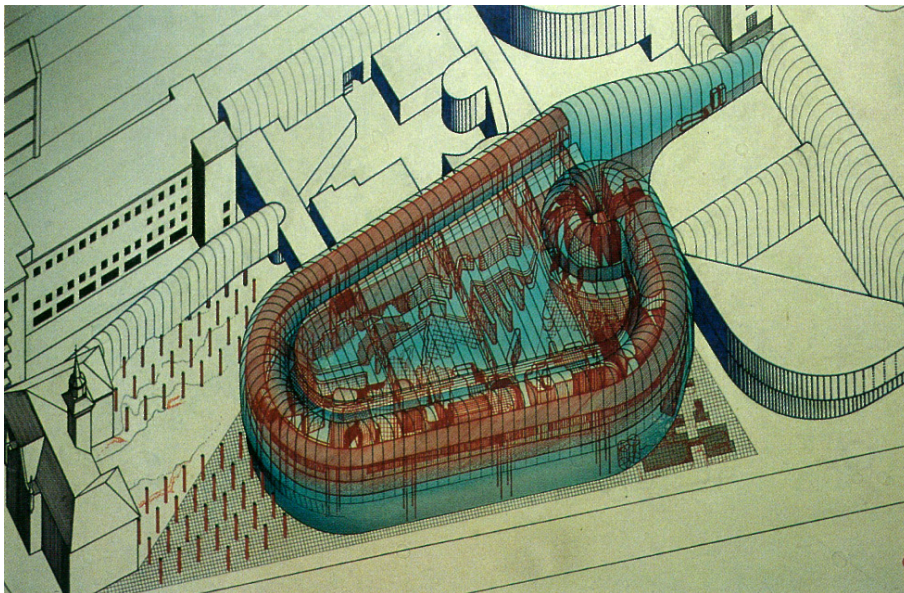


Figure 5 : The Trondheim Library Site Overview. Cook and Hawley drew upon the sites significance when developing the scheme for this project. Their response brought the city inside the library.

From: “Peter Cook and Christine Hawley,” 1980, *Architecture and Urbanism : A + U, Special Issue, 2*, p.88.

Much has been written regarding the importance of site when considering library design. Shannon Mattern (2007) speaks of the importance of site consideration when architecturally considering new library buildings:

The great diversity among recently constructed library buildings speaks to their rejection of a universal form, while their sensitivity to particularities such as site, urban needs, geography, lighting conditions, and local

users and their specific needs all speak to the designers' intentions to express and embody a particular character (p.58).

This noted, the library is also a changing entity. In the case of *Trondheim* the relationship to an individual site is arguably quite different to the relationship one must consider when addressing future library projects. It was a project undertaken in the 1970s. At the time digital forces did not inflict the same impact on the architectural language with which libraries were expressed and understood. Although technology was influencing library projects at this time, it did not offer the same degree of availability and metamorphosis that contemporary library projects are facing. The current digital situation introduces - to a much greater extent - notions of temporality, instability and infinite accessibility to all material available. Henceforth, it could be argued that the library not only has a responsibility to simply one stable, static site - but a responsibility to site on a more global scale as well; perhaps a responsibility to work with all sites.

Entertainment, Information and Commercialism

The building itself investigates the library as an equivalent to the shopping mall. Mattern (2007) notes of libraries built during the 1970s:

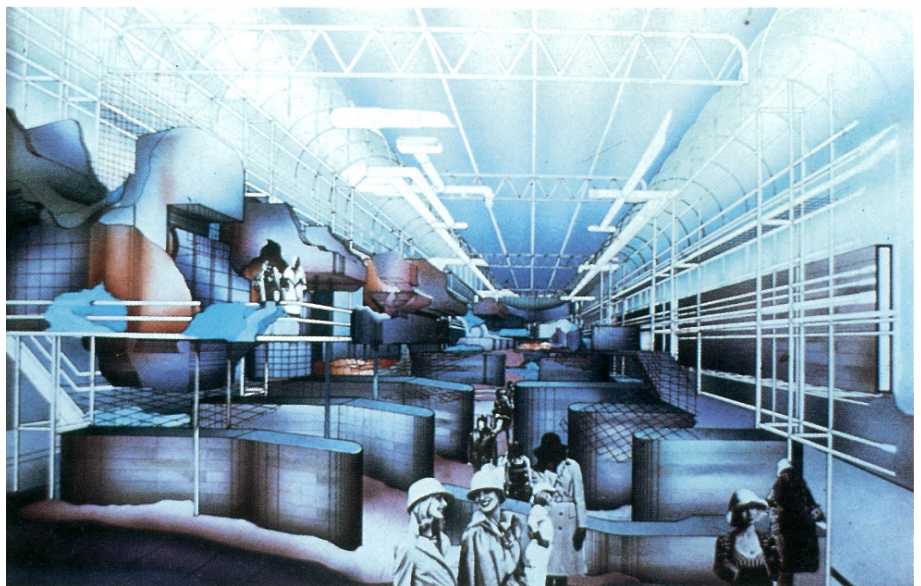
public libraries were believed to be diversifying to the point of confusion, corrupting themselves with commerce, making what were perceived as desperate attempts to reassert their relevance (p.2).

The troubles in the economic climate during the 1970s meant that most public institutions saw funding heavily reduced even to the point of discontinuance.¹³ Cook and Hawley's project proudly exposed itself to economic gain and therefore eradicated much of the need for a large proportion of this funding. The competition images for the library at Trondheim pursue a commercial venture.

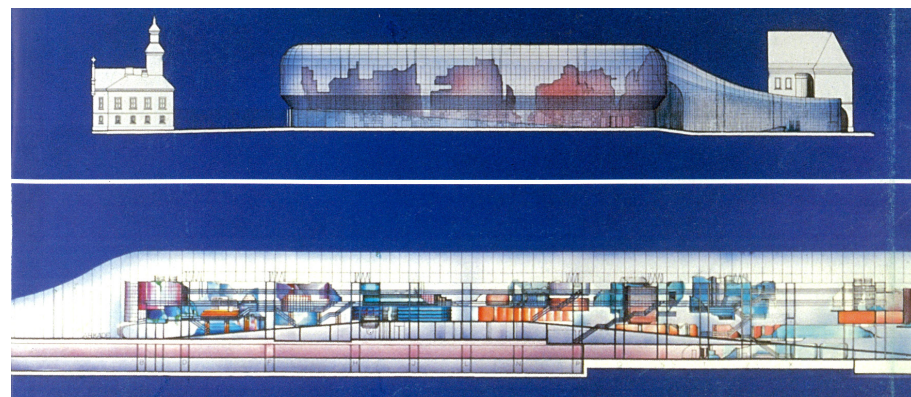
13. In the United States of America, federal support for libraries was discontinued in 1974.

Figure 6 : The Trondheim Library Arcade. The competition images pursue a commercial venture. The library was presented as a series of commercialised incidents that hung off an arcade.

From: "Peter Cook and Christine Hawley," 1980, *Architecture and Urbanism : A + U, Special Issue, 2*, p.88.



The building demonstrates an opportunistic approach towards a society that was, by all manner of speaking, wealthy. The drawings show an “arcade” - a major thoroughfare that climbs its way through the building, levelling out and descending to the level where books are lent. The city of Trondheim “has a strong history of knotty thoroughfares” so Cook and Hawley devised a thoroughfare that would lead through separate internalised buildings, working in a similar fashion to a shopping mall. This thoroughfare was the basis of the umbrella form, “presenting each building as part of a series of surprises” (Cook & Hawley, 1979) in which money could be spent. The main structure - a translucent glass umbrella - follows the arcade and becomes less opaque as the user moves up the building. It carries the book storage, while internalised spaces become independent buildings containing a variety of public, commercial organisations that have some form of relationship to information. Each space hangs from the arcade in a similar fashion. Elevations from the exterior show silhouetted glimpses of the commercial internalised spaces through the translucent glass envelope. These individual entities are experienced, however, only by entering the building¹⁴ - inhabitants encounter them as commercial incidents along the walkway - very similar to how one might encounter shops in the shopping mall.



The Trondheim Library is one example of a project that begins to question how the library institution can respond to the variable and changing conditions it faces. It does this by presenting its commercial intentions transparently and by responding to its site and users. In truth, the idea of the commercialised library is not a new concept. It dates back to the circulating libraries of the eighteenth century. Commercialism has been at the forefront of the library’s intentions for the last two hundred years; and nothing has changed. Rem Koolhaas (as cited in: Basar, 2004) notes of his recently completed library in Seattle:

‘The Regime of ¥€\$’; ‘Fuck Context’; ‘Shopping is arguably the last remaining form of public activity’ (p.60).

Similarly the way in which *Trondheim* responds to the less favourable weather conditions of its site is not new - dating back to the nineteenth century when the public library housed “vagrants taking shelter from rain and cold” (Altick, 1957, p.238). What is new about their concept for *Trondheim* is that Hawley and Cook envisioned a place to loiter and shop for the benefit of actually learning. In doing so they brought information access into the sphere of the already popular public

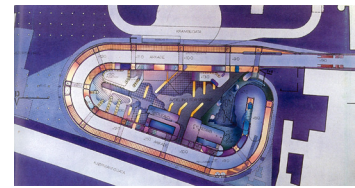


Figure 7 : The Trondheim Library Thoroughfare. The thoroughfare leads through separate internalised spaces that relate to commercial and information activity; working in a similar fashion to a shopping mall.

From: “Peter Cook and Christine Hawley,” 1980, *Architecture and Urbanism : A + U, Special Issue, 2*, p.89.

14. The entrance is at a localised scale of the wooden houses of the old town (“Peter Cook and Christine Hawley 1972-79,” 1980).

Figure 8 : The Trondheim Library Elevations. External elevations show silhouetted glimpses of the internal spaces.

From: “Peter Cook and Christine Hawley,” 1980, *Architecture and Urbanism : A + U Special Issue, 2*, p.89.

activity of shopping. Their concept prioritised reading and information storage together; the commercial prospect was simply an addition to attract wealthy patrons in a time of economic hardship. Despite this, their project failed to be realised. It is likely that at the time, the library institution was not ready for a scheme that presented its intentions so transparently - notions of commercialism had for the past century been somewhat concealed.

2.2: Bolles-Wilson, Münster City Library, 1993: The library as interaction

The following case study explores the library as a mechanism for interacting with both city and users. It is a building designed by the architectural firm Bolles-Wilson, at the time directed by Julia Bolles, Peter Wilson and their partner Eberhard Kleffner for the city of Münster in Germany. The project is the result of a competition launched in 1985 (Sanin, 1994, p. 5). After Bolles-Wilson won the competition, building began in 1991 and was completed in 1993, just in time to commemorate the 1200th anniversary of the city. The project explores interaction at two different dimensions: interaction with the city, its surrounding buildings and pedestrian routes, and interaction with the users inside and outside the building.

Interaction with the city

Münster is a city with medieval and religious roots. It suffered great architectural loss during the Second World War - bombings caused ninety-five percent of the city to be destroyed. The city required extensive rebuilding after the war - the aim was to re-establish its significant buildings in their original form. The cathedral and town-hall were rebuilt, however, much of Münster has spread beyond the boundaries of the original city, leaving the “historic centre” preserved as a monument (Sanin, 1994, p.5). The specific site for the building is located east of the centre of the old city, “a southern part of an irregular urban block cleared after wartime bombing and left for decades as a car park” (Jones, 1994, p.42). Jones notes:

Opposite to the south-west are a couple of buildings from the 1920s and ‘30s which complete the face of the Alter Steinweg in a traditional way. To the south-east across the Asche is a free-standing glazed pavilion built in the 1950s as a car show room. The buildings to the east across busy Mauritzstrasse are shops and houses (p.42).

Amongst these new additions to the city is the only historical building to have completely survived the war intact - Krameramthaus (a sixteenth-century Flemish-style brick building, originally a guild house) (Sanin, 1994, p.9). It is here that the library was situated before moving to its current site next-door. The other building of notable mention is that of the nearby Lamberti-Church built in the fifteenth century. It is a monastic building. The tower survived the war, but the nave required extensive repair (Jones, 1994, p.42).

The project began by dividing the kite shaped site into two, creating a 70m pedestrian route (the new Bücherigasse) that visually connected the pedestrian with the Church along the axis of the new building (Jackson, 1995, p.34). The site is bound by four streets and this pedestrian route offers those without vehicles safe access through the site - engaging them with both the historical building in the distance and the new library in their immediate proximity. Bolles-Wilson suggest the exposed centre serves as “advertisement, an appetizer” (as cited in: Van Schaik, 1987, p.74). As a result the library has been split in half. Paul Vermeulen (1994) notes:

The library has attached itself on either side to the reconstructed building block by means of two copper ‘insertions’ pressed into the profile of the surroundings: they are three floors tall with a saddle roof (p.36).

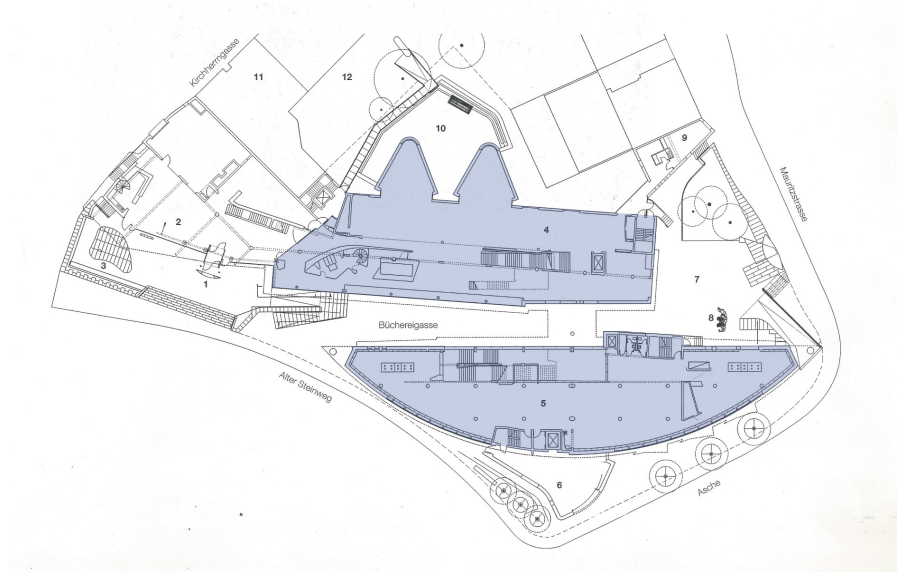


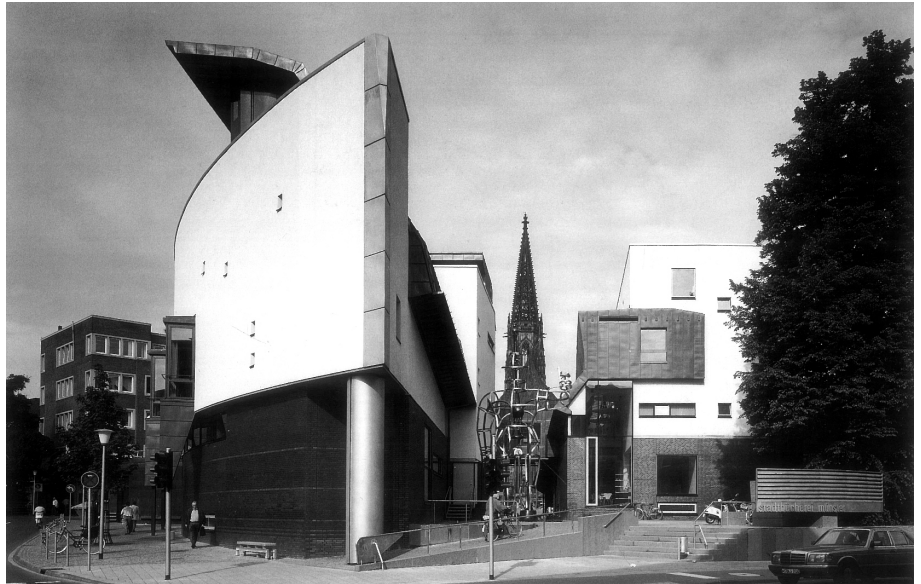
Figure 9 : The Münster Library Site Plan. The kite shaped site is divided into two by a pedestrian route (the new Bücherigasse); creating a building for books and a building for information.

Adapted From: *Münster City Library: Architekturbüro Bolles-Wilson + Partner; Sanin, 1994, London: Phaidon, p.49.*

One side is a building for books, the other a building for information. The books building interacts its facade with the street - curved “to the shallow angle of intersection of the streets” (Jackson, 1995, p.34). The information building has a straight wall that runs along the new Bücherigasse and then “kinks and splays to the north” adjoining to the side of an independent house - a Parish house for library staff rooms also designed by Bolles-Wilson (Jackson, 1995, p.34). This connection is significant as it mediates the scale of the building with the existing urban surroundings - the house is conjoined with existing houses on the west. Bolles-Wilson express this mediation through materiality of the facades - both the new house and the new library are copper and will gradually oxidise to express a cohesion between domestic and public scale; signifying the city’s recognition of the library. In addition terraces at either end of the information slab project north and south acting as mediation between the monumentality of the new building and the existing urban fabric (Sanin, 1994, p.10). The café at the western end of these terraces is placed next to the main entrance and symbolises hospitality for those entering (Jones, 1994, p.45).

Figure 10 : The Münster Library City Context. The new Bücherigasse visually connects the pedestrian with the Lamberti Church along its axis.

From: *Münster City Library: Architekturburo Bolles-Wilson + Partner, Sanin, 1994, London: Phaidon, p.41.*



Interaction between users

The division created by the Bücherigasse allows for the separation of the two wings, and the interesting interaction between library users. The two buildings contain different library functions. The book building is a traditional lending library system - in which books are of primal importance. The information building is pure information - “a supermarket of information” (Wilson, 1994, p.85). Interaction between users occurs at zones where the buildings reconnect and in each building separately.

The two separated buildings are reconnected by a foot-bridge at first floor level running perpendicular to the Bücherigasse. This bridge is glazed, allowing for visual connection between passersby and library users. Jones (1994), notes that “this both animates the Bücherigasse and makes the building more inviting, reminding everyone that it is a public building” (p.42). At the moment one crosses the bridge they are provided with the only axial internal view of the Lamberti Church and the Bücherigasse (Sanin, 1994, p.19). This view occurs at a crucial moment of transition symbolising the disconnection between the two spaces, and that at this moment the user is located in the centre of the library. This is further reinforced by the placement of the main information desk on this bridge creating a significant interaction point between library users and library staff. In addition issue desks are provided in each library space to maximise the interaction between staff and patrons.

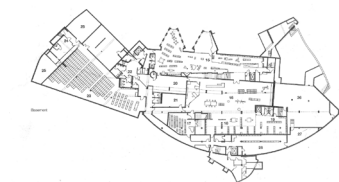


Figure 11 : The Münster Library Basement Plan. At basement level the two buildings unite.

From: *Münster City Library : Architekturburo Bolles-Wilson + Partner, Sanin, 1994, London: Phaidon, p.50.*

At the basement level the two buildings unite. Users of both buildings are allowed further interaction in the children, media and art libraries. These, and the other main library spaces are not spaces of the book or spaces of information, they are the spaces of movement. Within these areas multiple access routes are provided that each connect users to other spaces through varying horizontal and vertical relationships. On the book side movement is not restricted to the ground plane and occurs parallel to the vertical facades. In contrast on the information side, movement between interior spaces is typically horizontal, parallel to the Bücheri-

gasse (Sanin, 1994, p.15). User/user connections differ throughout the building allowing them to determine their own path and movement.



Figure 12 : The Münster Library Book Building Stair. On the book side movement is not restricted to the ground plane.

From: *Münster City Library : Architekturbüro Bolles-Wilson + Partner*; Sanin, 1994, London: Phaidon, p.41.

Other distinctive points of interaction include the café, window placement in reading spaces and the use of double height spaces and mezzanine floors. The café acts as mediator between users of the outside and the inside. It is outward focused and explores a voyeuristic relationship to the Bücherigasse - remaining detached from the crowd, café users can observe pedestrians as they pass by (Sanin, 1994). Large windows are positioned in the facade of the building at areas where users read - maximising natural light whilst facilitating interaction with users and the outside context. Smaller windows are book sized, hiding the bookshelves from the exterior, but providing interior users with small glimpses of the exterior (Jones, 1994, p.49). Throughout the building floors are cut back and the roof is

supported by sloping flanks and skeletal timber portals. Jones (1994) notes that this creates “exciting diagonal views from floor to floor” (p.49).

Figure 13 : The Münster Library Book Building First Floor. Floors are cut back and the roof is supported by sloping flanks and skeletal timber portals creating diagonal interaction between floors.

From: *Münster City Library : Architekturbüro Bolles-Wilson + Partner, Sanin, 1994, London: Phaidon, p.45.*



In the *Münster library* interaction occurs in two dimensions. The city dimension is represented through tactical connections between the existing city and the new building. It is an architectural statement that connects the city to the knowledge experience - enticing the city to engage with knowledge even from outside of the library. Internal interaction is an experience that connects users to both the internal collection, and to other users. It promotes knowledge by creating an experience that excites the user - providing different visual and physical connections, allowing their experience to be uncontrolled and original. Bolles-Willson use these two dimensions of interaction to create a building in which people experience knowledge rather than access it.

2.3: OMA, Seattle Public Library, 2004: The library as information - reinventing the public library

The following case study is a recent American public library for the city of Seattle, Washington. It was completed in 2004 and designed by Rem Koolhaas' firm: OMA. The project has been selected because it is a recently completed project that attempts to question the validity of the library in an era when digitization risks rendering the book obsolete. Koolhaas' project reevaluates the notion of the library institution as exclusively a book repository by introducing all other forms of media and presenting them in an equal and legible fashion - as *information* (*Seattle Public Library, OMA/LMN, 2005, p. 11*). The project began as a three month exploration into the future of the book and eventuated into a building that “sought to balance the explosion of information with the library’s increasing

role as a social centre” (Olson, 2004, p.89). It sought to remove the hierarchal relationship between departments whilst introducing interdisciplinary librarianship. It is essentially a project that has readdressed how we interpret information and access to this information.

Building Planning Overview

Whilst to many the external appearance of the building might seem somewhat confused, its planning is logical and very practical. The first step was, as OMA put it: “to ‘comb’ and consolidate the library’s apparently ungovernable proliferation of programme and media” (*Seattle Public Library, OMA/LMN, 2005, p.19*). They identified what activities and functions the library would be expected to house - grouping similar functions together into five “platforms”. These were titled: administration and staff, collections, information, public space and parking.



Figure 14 : The Seattle Library External Appearance.

From: “The nice and the Good,” Lamprecht, 2004, *Architectural Review*, 216(1290), p.52.

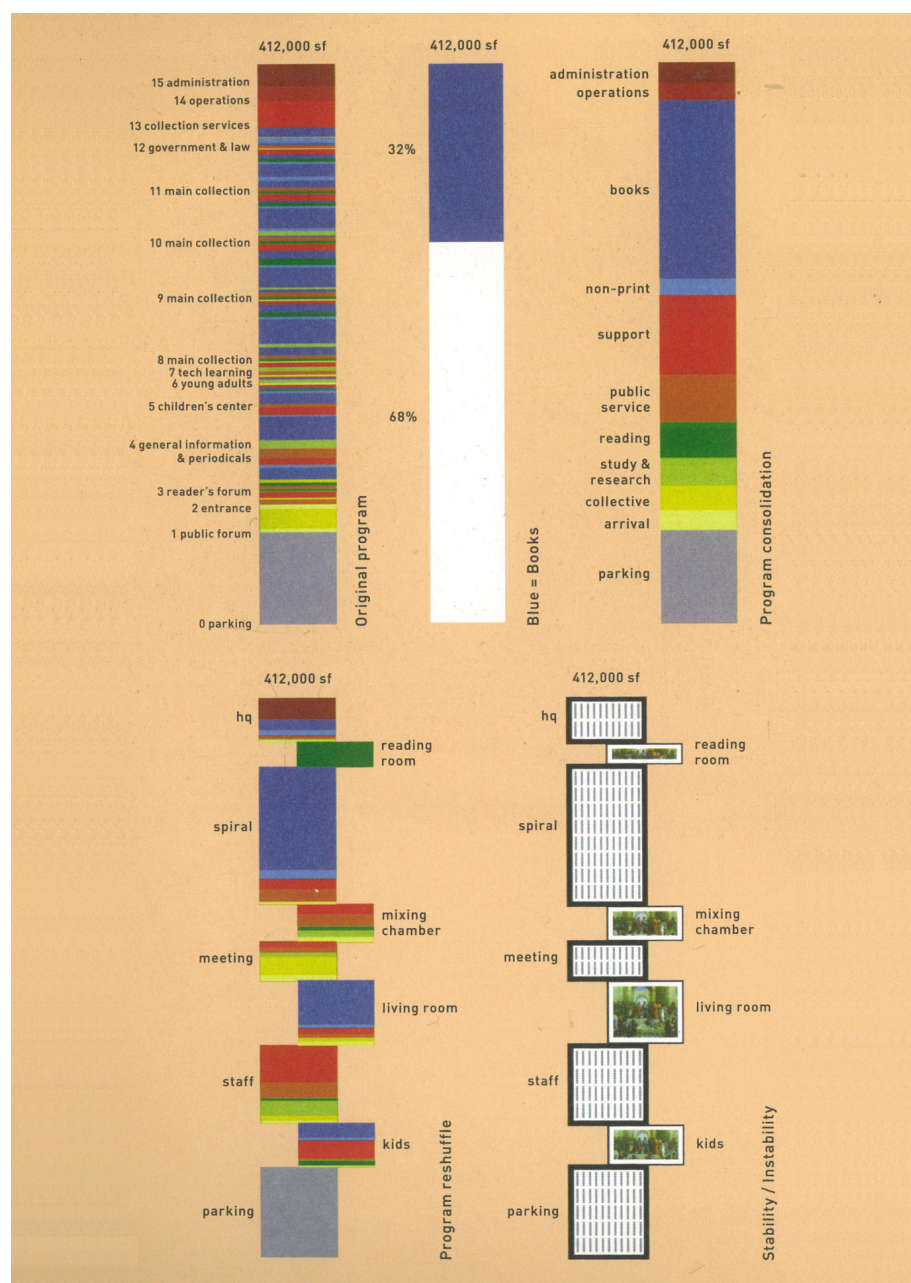


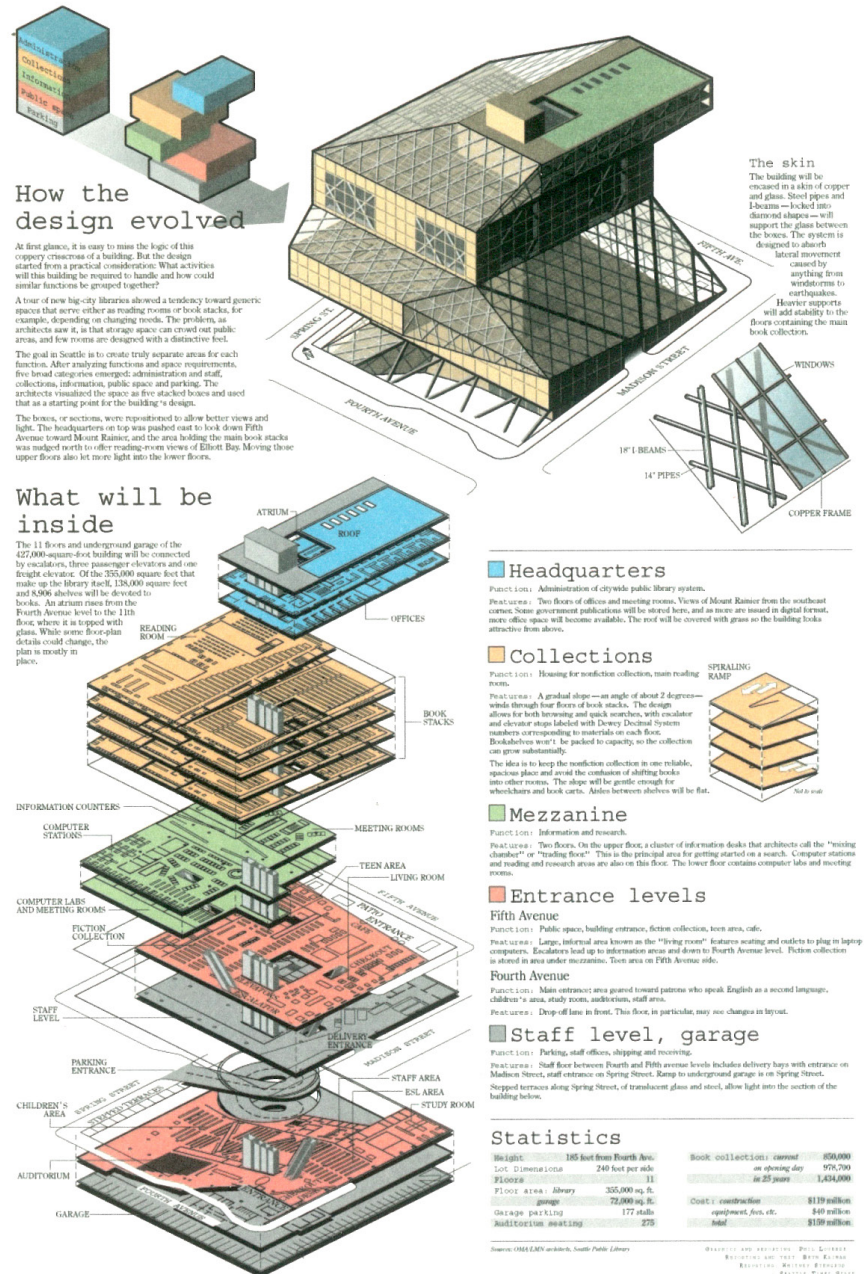
Figure 15 : The Seattle Library Planning Overview. The first step was to identify what activities and functions the library was expected to house; grouping similar functions together in five platforms.

From: *Seattle Public Library, OMA/LMN, 2005, Barcelona: bActar, p.18.*

Within each platform is a number of levels (contributing to the eleven floors above ground and the underground garage), however, each platform is stacked vertically and staggered horizontally so as to maximise daylight to each floor and to enhance views of the city. In-between spaces - entitled the “unstable spaces”: the reading room, the mixing chamber, the living room and the ‘kids’ area - act as trading floors, “where librarians inform and stimulate, where the interface between the different platforms is organised - spaces for work, interaction, and play” and of course reading (*Seattle Public Library, OMA/LMN, 2005, p.26*).

Figure 16 : The Seattle Library Platforms. Each platform is stacked vertically and staggered horizontally to enhance daylight and views. Within each platform is a number of levels.

From: *Seattle Public Library, OMA/LMN, 2005, Barcelona: bActar, p.66.*



Interestingly reading is no longer conceived as the definitive activity to partake in the library. A glass and copper diamond shaped lattice forms the skin. Steel pipes and I-beams aid the structure of this skin - providing lateral support required for earthquakes or windstorms, both frequent in Seattle. Perhaps the most interesting feature to the design is, however, the “book spiral”. Shumon Basar (2004) notes:

libraries customarily suffer two recurring problems: firstly, book collections inevitably grow, and at some point exceed the capabilities of the host building. Secondly, as this happens, public spaces shrink proportionally, absorbing the physical increase of book matter (p.56).

Rather than arranging the non-fiction books into departments, in the Seattle Library they follow a consistent gradual slope through the four floors of book stacks. Arranged in the Dewey Decimal System, they start at 000 and finish at 999; “the Spiral’s 6,233 bookcases [were] guaranteed to house 780,000 books upon opening, with flexibility to grow to 1,450,000 books in the future - without adding a single new bookcase” (*Seattle Public Library, OMA/LMN, 2005, p.34*). This allows the non-fiction collection to grow and be maintained within one space - avoiding the confusion of moving books to other departments, spaces or buildings.

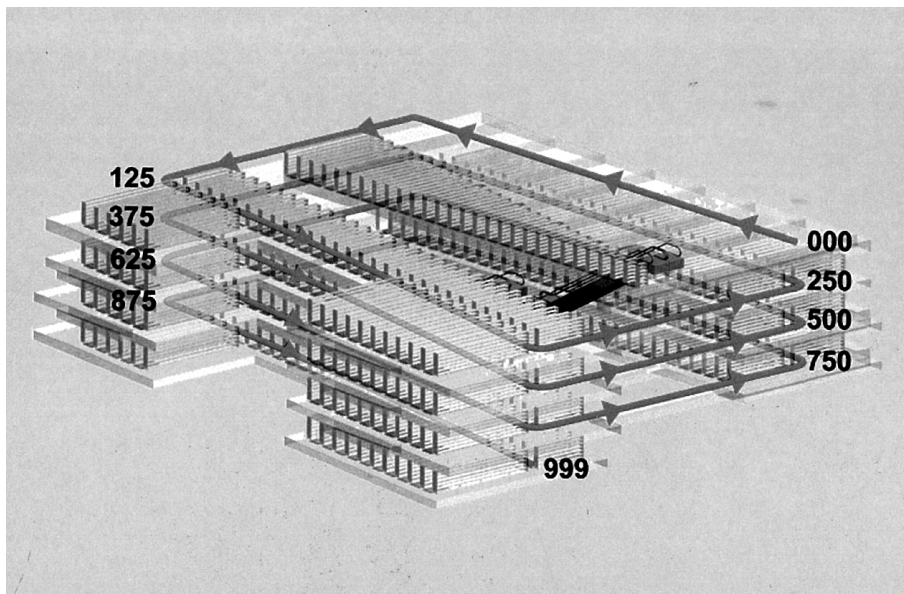


Figure 17 : The Seattle Library Book Spiral.

From: *Seattle Public Library, OMA/LMN, 2005, Barcelona: bActar, p.35.*

Reinterpretation / Reinvention of the Library

Koolhaas' library symbolises reinterpretation of the library type and its role in society. Koolhaas entitles this “desemanticization” (as cited in: Mattern, 2007, p.55-56). He believes that the library's well established architectural position in society's cultural context needs to be re-addressed for a society in which the access to media and information has become so readily available to all. The Seattle Library is a clear statement that the library intends to stay; and, it intends to stay in its recognisable form. He notes that the institution is certain of the “goodness of its intentions” (Koolhaas cited in: Mattern, 2007, p.56), however, in this current “overstimulated commercialized, privatized and multiculturalized” state of society the standardised Carnegie and modernistic designs are no longer relevant (Mattern, 2007). His philosophy is relatively sensitive to a building so exposed to being rendered instantly obsolete. In a society where shopping is the predominant form of public activity, Koolhaas believes that the library needs to portray an individuality in its character. It must embody specifics that respond to its site, urban needs and to its users; and, if this means developing into a commercialised

hub, then this is how it may be. It must after all, be able to compete with the large chain bookstores that have made it easier for upper and middle class library users to purchase their stock, whilst emerging as community centres themselves (The Benton Foundation, 1996).

The Public Enterprise

Fortunately this project pushes beyond commercialisation. It introduces a new dimension to how one might expect to access information: Sheri Olson states “[it’s] the architectural equivalent of the prim librarian ripping off her glasses and letting her hair down” (Olson, 2004 p.91). A survey conducted in the U.S.A in the spring of 1996 by the Benton Foundation tested public support for libraries in the digital age. It found that “the public strongly supports public libraries and wants them to take a leadership role in providing access to computers and digital information” (The Benton Foundation, 1996).

Figure 18 : The Seattle Library Computers. Koolhaas believes that computers do not render the book obsolete; they have changed how we use and interact with them.

From: *Seattle Public Library, OMA/LMN*. 2005, Barcelona: bActar, p.40-41.



In the same survey, there was a substantial amount of support for maintaining library services such as book collections and children programmes. The libraries future being strictly electronic is for many ill-conceived. Most likely, this is due to one of two reasons. Firstly, the material nature of the book; it is a tangible quality that cannot be transferred into numerical code - a quality that makes reading so personal. Mattern (2007) notes:

There is a materiality to particular artefacts and experiences that cannot be reproduced in a digital environment. There must be a place for this “material knowledge” - a place where people can feel the heft of a book, smell the ink of a newly printed magazine, turn gingerly the brittle pages of a worn manuscript, or dig through collections of yellowed historical photographs (p.ix).

Secondly, the experience of physical interaction in the library. This would be severely impeded by a strictly electronic interface. The loss of physical experience

of the library building would possibly see the removal of the last successful public institution that can provide access to this level of interaction. Hence, Koolhaas' architectural decision to continue designing the library as physical space rather than as digitized space is probably the correct one. The building responds to both the tangible and the intangible. It is both a library with books and a library without them. The architects view is that internet and other new media has not rendered books obsolete, but it has changed how we use and access them. As Olson (2004) notes, librarians are not replaced, they are more valuable (p.92). To use Lawrence W. Cheek's (2004) words, the Seattle Library is "a big, loud generator of urban life" (p.39).

A Library for the Future?

The Seattle Library is truly an exceptional piece of library architecture. In today's society it is both relevant and sensitive. It is, however, simply an improvement on what came before - albeit, a large improvement. Koolhaas prioritises media and access to information and in doing so has created an exciting piece of public space for the twenty-first century. He has done so, however, using the traditional library model. It is based upon old paradigms and is simply a restyling of the library as a further attempt to sell its validity. His attempt to create a library for the *future* fails in this respect - it is, instead, a library for *today*. As we have seen, the commercialisation of the library institution is nothing new, it dates as far back as the circulating libraries of the eighteenth century and has been explored throughout the twentieth century in projects such as the *Trondheim Library* by Peter Cook and Christine Hawley. The major success of Seattle lies in its ability to draw the city inside the building. Again, however, this is nothing new (the *Public Library Movement* sought a similar goal in 1850). Although Koolhaas succeeds where many others failed, the notion that the city be dragged inside the library, implies that media access is static - we have to take time out to access it - and his suggestion that this is the future suggests that it will in fact remain this way. If Toyo Ito's *Sendai Mediatheque* is anything to go by, the major concern for Seattle is that this type of access will be outdated very rapidly.¹⁵

The internet and the information boom have brought about new technologies that readdress how people will live their lives in the future. Koolhaas has made this connection. The primary example he uses is shopping. He states:

What if the shopping experience were not one of impoverishment, but of enrichment? What if the typologies were reversed, so that the store functioned as a gallery, street, stage, library? (Koolhaas, 2001).

In Seattle, however, he fails to address that *mobility* is in fact part of this future. Shopping is a mobile activity. He approaches the library as if it was a mall of information and places this in the centre of a data infused city. Nowhere in the design does it acknowledge that the mall already exists. It exists outside the walls of the library. Geoff Manaugh and Nicola Twilley state that the library "is no longer a place but an activity" (Manaugh & Twilley, 2008, p. 9). They state this because

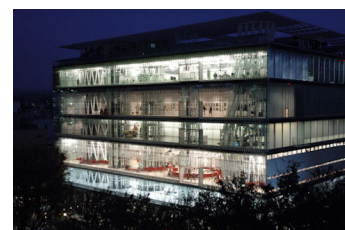


Figure 19 : The Sendai Mediatheque.

From: "smt 2.0", Suzuki, 2008, Volume, 15(1), p.67.

15. The Sendai Mediatheque is a pioneering example that explores notions of new media and internet as the primary function for the library building. Similar to the Seattle library, it constrains these functions within a fixed building and as a result has undergone problems that require it to be updated. These are largely due to new media (and internet) having "diffused throughout the business world and as the infrastructure of daily life it has penetrated the infrastructure of everyday interior spaces" (Suzuki, 2008, p. 66).

the world is steadily becoming a never-ending landscape, it operates twenty-four hours a day and people will continue to find themselves accessing information whilst on the move, rather than in a static, stationary environment. Akira Sizuki (2008) notes that “information technology” as the “infrastructure of daily life has penetrated everyday interior spaces” (p. 66). Societies, decentralised in nature, live in a world where the boundaries that previously saw media act as separate entities has been morphed to create a never ending matrix (Klingmann, 2001). In such a society information access will no-longer be limited to a building that has a fixed, grounded site, nor one that is large, iconic or stationary (ASED, 2008). It will be undertaken in transient mobile spaces merged with all forms of public activity. It will be convenient. It will be an access point, not a storage facility. Koolhaas’ project does not fail to address the disappearance of book media. Nor by any means does it fail to reinterpret information access - in both respects it is immensely successful. The failure is simple. It is one of precedent. Koolhaas successfully reinterprets the library as an interface for media related activity, but uses the traditional library model as the medium for representing this. For this reason his approach is simply the next stepping stone. The city must not enter the library, the library must enter the city.

Chapter 3

The Public Library and User Interaction

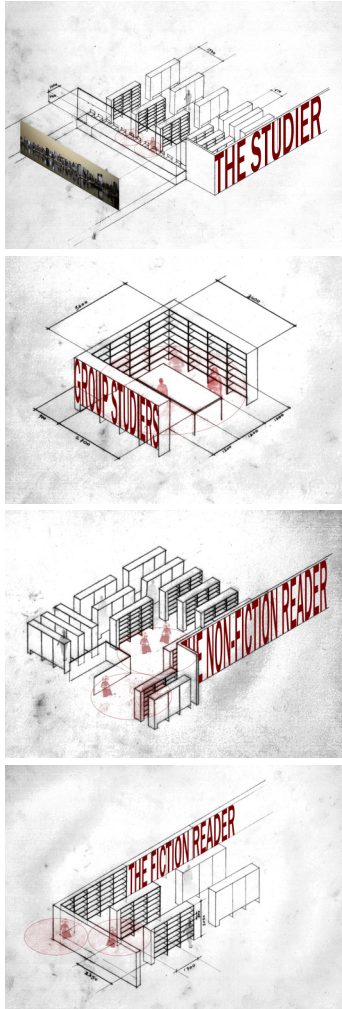


Figure 20 : A selection of drawings showing typical inhabitation of user types.

16. Some users fall into both information and entertainment user types. For example, the non-fiction reader may be seeking information for the purpose of advancing their knowledge, but, they may also seek entertainment if reading a biography.

17. These observational studies were undertaken outside of New Zealand school holiday times: between the dates of July 19 and August 14 2010.

18. The times of day were: 10-11am, 1-2pm, 4-5pm, 7-8pm (excluding Saturday when the library was not open at this time).

This chapter has been compiled as a response to numerous studies undertaken before the main design study. It is intended to determine what current library users do in their library, how they foresee the library's future (what they wish to see maintained in the library) and to provide a strong foundation before carrying out the major design study. The chapter is divided into three main components, firstly general mapping and observational analysis undertaken at the Wellington City Library, secondly diagrams based on these studies (with descriptive analysis of the types of user), and thirdly the results of a survey conducted at the Christchurch City Library.

3.1 Observational and mapping studies

In the process of producing this report a series of observational and mapping studies were undertaken at the Wellington City Library that determined that the library is not only used differently, but it is used by different people at different times of the day. Whilst undertaking these studies, diagrams were also produced that stereotyped typical library inhabitants and how they currently reside in the library. These were categorized into two contrasting user types:

Information:










the non-fiction reader
the researcher
the child reader
the journal reader
the individual studier
the group studier

Entertainment:

the fiction reader
the music listener/browser
the film watcher/browser
the magazine reader
the child reader
the non-fiction reader¹⁶

The observational and mapping studies were undertaken over a period of three weeks.¹⁷ Three weekdays (Monday, Wednesday and Friday) and one weekend day (Saturday) were selected during this period on which to observe the types of material people were accessing, reading and browsing. In addition four times during these days were selected to allow for a consistent average of people use. The four diagrams are representations of people use at these four times and each include all four days of the week.¹⁸ Within the diagrams the users were broken down to include the two main types of library user (information and entertainment users). The fiction and the non-fiction readers, however, were kept separate as the Wellington City Library still prioritises books in these departments. It is important to note that some users rely more on library resources than others, and that for the

purpose of this mapping study they were kept separate from the two main types also.¹⁹ The users used were:

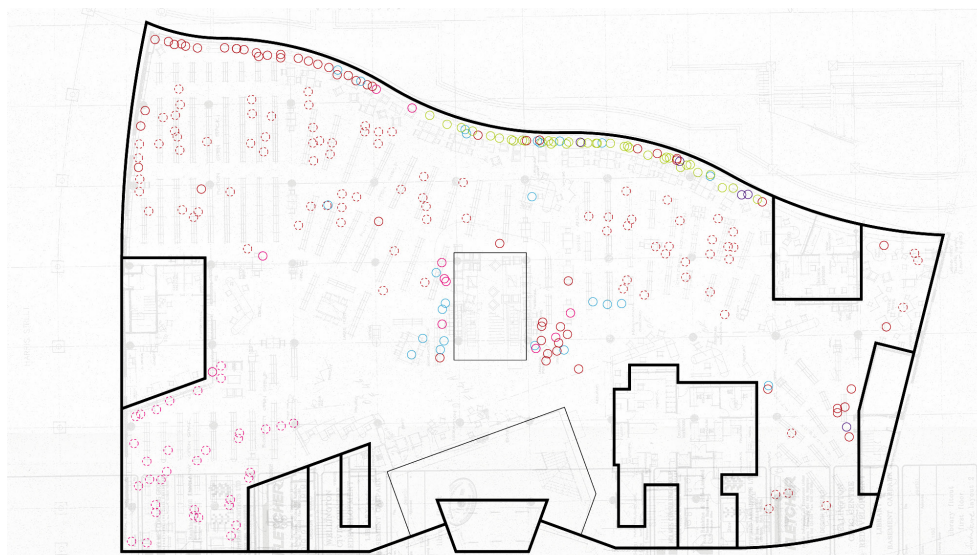
- the fiction reader 
- the fiction browser 
- the non-fiction reader 
- the non-fiction browser 
- the entertainment user 
- the entertainment browser 
- the information user 
- the information browser 
- the user who does not rely on library resources 

19. For example, the studier or the group studier.

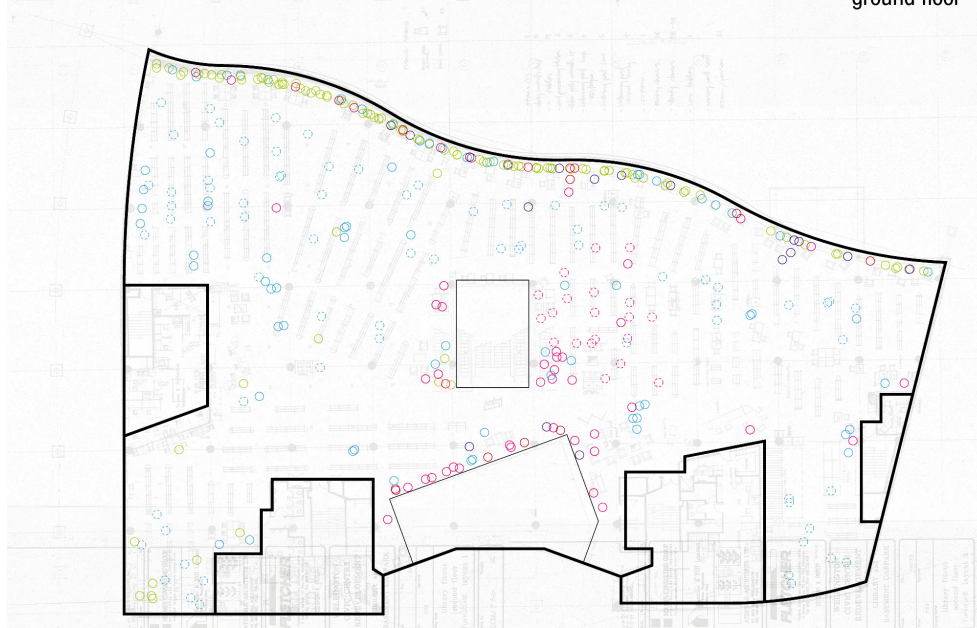
Figure 21 : (opposite page) Observational Study - Wellington City Library 10-11am.

Figure 22 : (p.36) Observational Study - Wellington City Library 1-2pm.

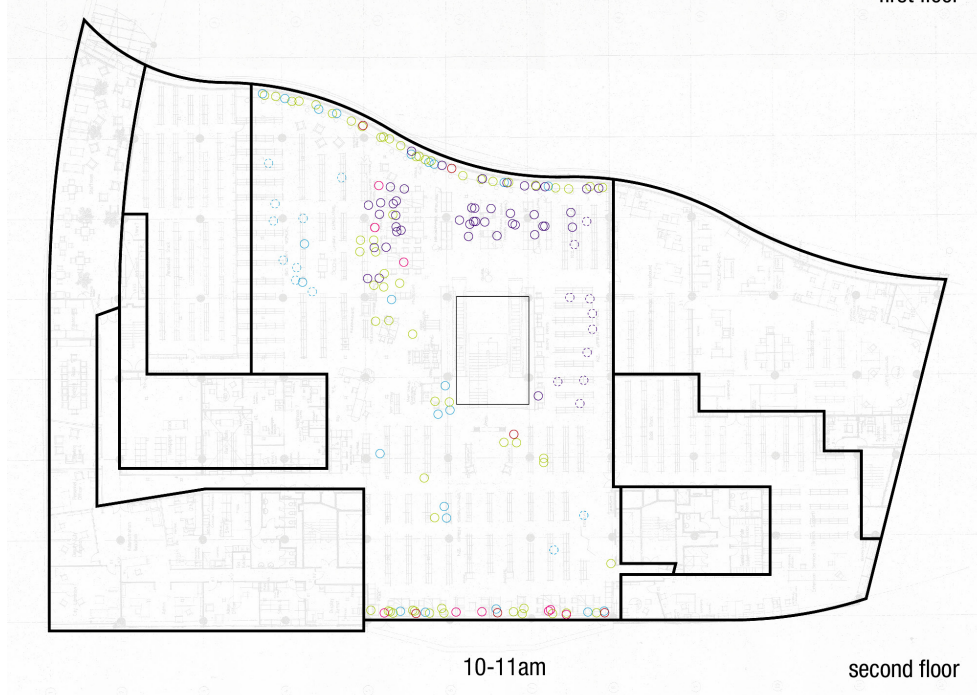
Figure 23 : (p.37) Observational Study - Wellington City Library 4-5pm.



ground floor

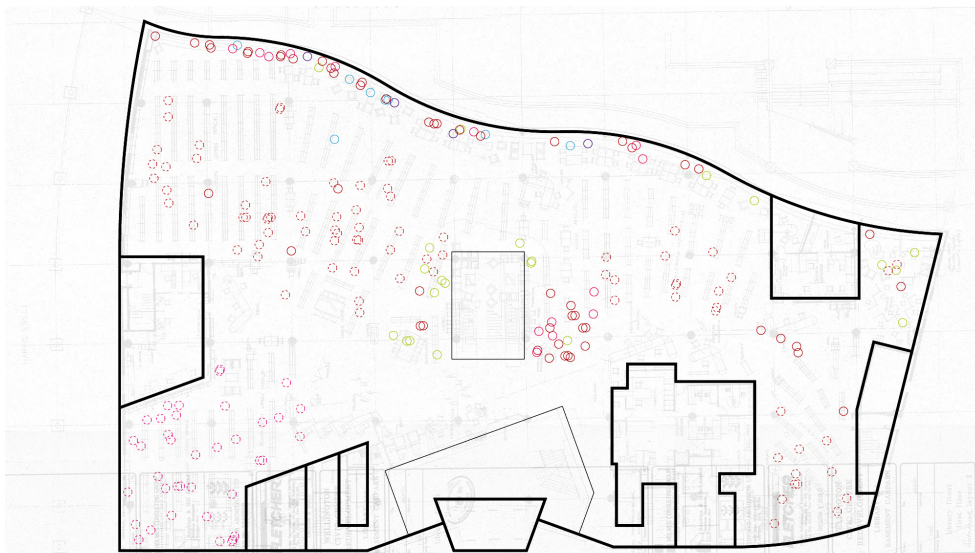


first floor

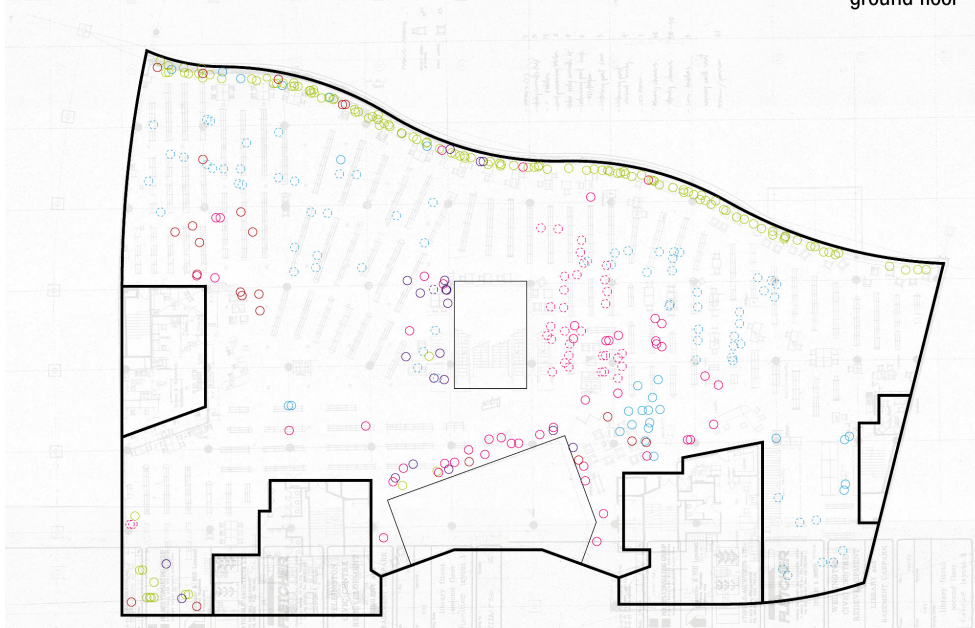


10-11am

second floor



ground floor

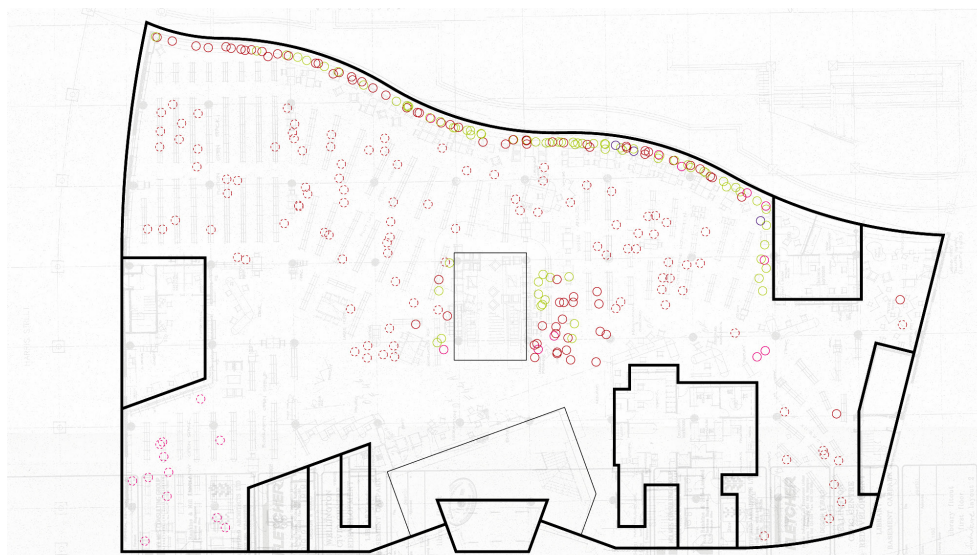


first floor



1-2pm

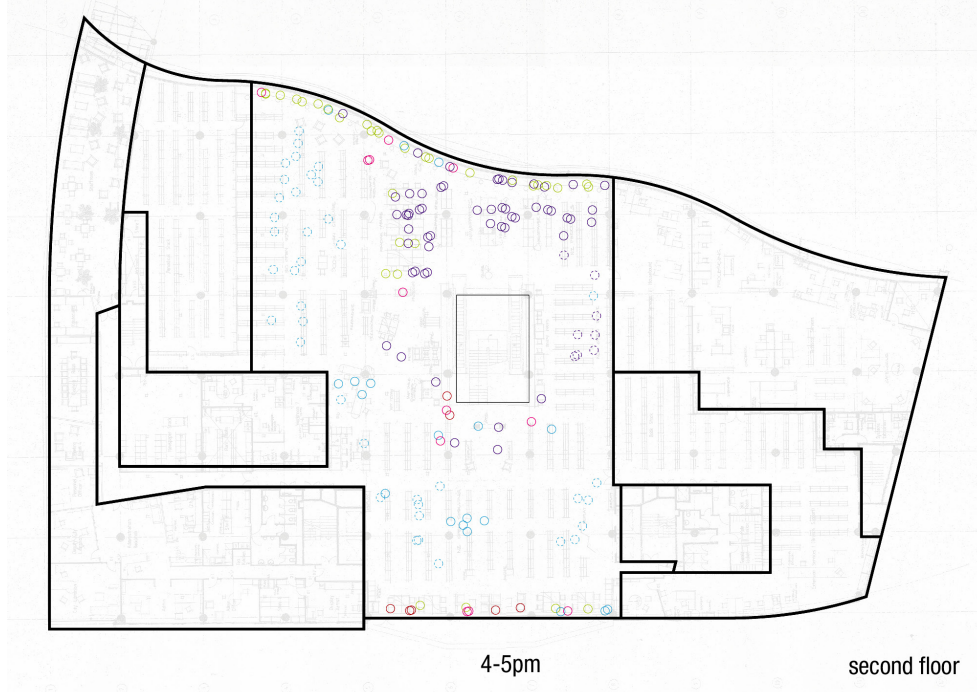
second floor



ground floor

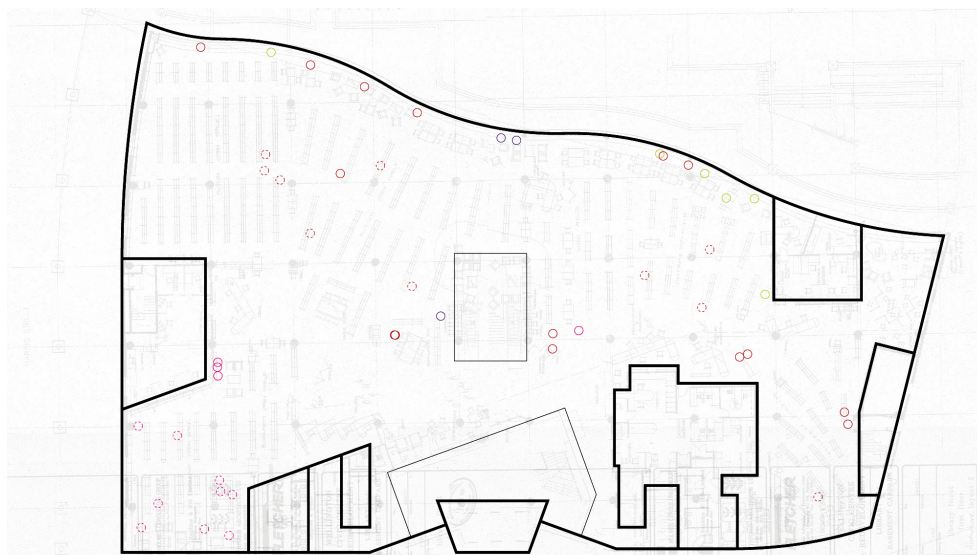


first floor



4-5pm

second floor



ground floor



first floor



7-8pm

second floor

Figure 24 : (opposite page) Observational Study - Wellington City Library. 7-8pm.

The findings show that typical of traditional library models of the late twentieth century (as identified in Chapter 2) there is minimal overlap between users of different departments. People tend to stay close to the material which they desire. There exist three main types of inhabitation by those who are no longer 'browsing':

- The first is by those who project themselves on the library building and its shelves - spreading out their work at their desk and continuously moving between it and the shelves. These people are typically information gatherers; namely the researcher.
- The second type of inhabitation is by those who seek recluse and security - binding themselves in suitable niches, nooks or crannies in which they can bury themselves into the material they are reading. This type of inhabitation is used by varying users; it is very typical of the fiction and non-fiction readers.
- The final type of inhabitation is by those who project themselves on the outside world sitting close to the windows, disassociating themselves from the captivity of the library shelves. This type of inhabitation is particularly evident in the entertainment user and users that do not rely on library resources. The information user engages with this type of inhabitation also, but they generally do not disconnect themselves from the book shelves to the same extent.

3.2 Analysis of user types

The overlap between different users could be titled interaction. In this type of library, whereby departments are segregated, there is minimal overlap between different user types. There are advantages and disadvantages to this. The main advantage is that users are able to quickly access the material that they need, and are more likely to interact with other users of this type of material. The major disadvantage is that the scope of interaction provided is very limited. It acknowledges interaction between people and their media, but does not intertwine different user types successfully. As is typical of this type of study users were stereotyped. This highlighted that the library in its current form still separates and prioritises book media in its two most common forms: fiction and non-fiction. In doing so, the library struggles to shift from its historical precedent. If, for example, fiction and non-fiction were merged and treated equally with all other forms of media,²⁰ there would be just two types of library user remaining: the information user and the entertainment user. This would allow for a much simpler means of interaction between departments. The entire focus of the library system could explore how these two types of library user interact successfully. Figure 25 describes each of the current library users and how a typical library session (of the same time period) differs for each:

20. Historically the merging of such departments would be difficult to implement due to the heavy reliance on physical material.



Figure 25 : Typical library session of current users.



In contrast, Figure 26 shows what a typical library session (of the same time period) might be like if the users were no longer confined by the physical separation of departments:



Figure 26 : Typical library session of users no longer physically separated by departments.

The result would be a library system that no-longer relied on departmental gathering of media. Instead its material could be interacted with whilst interacting with users using the library for different purposes. This would create a library system that worked with its users and allowed them to benefit in many different areas. It could build a universal system of knowledge, rather than individual departments, hence allowing users to interact with the library rather than just the book type they choose to read.

3.3 Survey

In addition to observational and mapping studies a written survey was conducted (Appendix 2). It was undertaken inside the Christchurch City Library, and in its immediate proximity, over the period of two days: July 13 and July 14 2010. A total of 74 people of varying ages were asked to anonymously complete the survey. The intention was to develop an understanding of how the public currently perceive the library in Christchurch and what they foresee to be important in the future. The results were a guide that helped aid the design study (Chapter 4). They did not limit the outcome during this stage of the research.

Results

73% of those questioned visit the library more than twice a year. Of those that don't 70% answered that they did not feel the need to because they could access all the information they needed at home. When those that visit more than twice a year were asked why they visit the public library the most common response (69%) "was to gather information of interest." 56% responded that they visit the library to "read in their spare time", whilst 43% visit for the purpose of meeting people.

When asked what people find to be of value in the current public library: Books were deemed to be most valuable, followed by entertainment magazines and then the internet. Periodicals, DVDs and music all shared similar value, whilst CD-ROMs were considered of least value to the library catalogue. The results also show, however, that most people want to see more "wireless internet" in the public library's future. This was closely followed by "meeting gathering spaces", "longer operating hours" and space for "exhibitions".

Peoples' perception of the public library varied. Most perceived it as "a place to access a variety of media/information." Other common perceptions were: "a place to access books" and "a place to find up to date information". 67% of those questioned saw relevance for the public library in its current state in the future; 33% did not. Most important to the public library's future, as perceived by those questioned was its need to be accessible. This was closely followed by "mobility (being able to access on the move)". "New forms of media" and the "internet" were considered to be of more importance in the future than actual physical "books".

Conclusions Drawn

Although the survey was somewhat rudimentary,²¹ the responses are useful for providing a general indication of how the current and future library systems are perceived. In its current state the value of books still significantly control how people perceive the library. However, it is clear by these results that people do consider other forms of media (namely wireless internet) to be of considerable

21. Unfortunately, as with many surveys, there are a number of limitations in these results. 66% of those questioned were over the age of 30. This provides a slightly skewed perspective. During the observational studies it was noted that the younger generation (20 years old and under) prefer to use the library for 'meeting and collaborating' rather than books and research. As a result it is likely that this survey favours the use of 'books and research' over 'meeting and collaborating.' In addition the total number of participants (74) does not provide enough evidence for these results to be definitive; they are merely an indication.

importance to the future library catalogue. In addition the public recognises that media access is increasingly done on the move and that the library system of the future must cater for this - it needs to be easily accessible and convenient.

Chapter 4

A New Type of Public Library

This chapter centres on the major design study undertaken during this thesis. It is an architectural study that tests and challenges many of the issues and opportunities brought up in the last three chapters. It exists as further research to help conclude what solutions might be available in the design and implementation of public libraries in the future.

4.1 Design intention

The design study was undertaken as a response to issues that were missing from the case studies explained in Chapter 2, and as a response to the survey and mapping findings of Chapter 3. It attempts to present new thinking and address future issues whilst still responding to the libraries historical responsibility (as a distributor of knowledge, a social enterprise, and a commercial institution) and its responsibility to the differing user needs identified in Chapter 1.

Physical or electronic?

The twenty-first century public library will exist in one of two forms: as a strictly electronic enterprise or as a physical project. It has been identified that the public library is as a facilitator of books and varieties of other media, and that its real potential lies in its ability to enrich human and intellectual interaction. An electronic system forces the library to remove this interaction in its physical form. The recent *Seattle Public Library* addressed this successfully by maintaining its physicality. The design study acknowledges this success but attempts to explore physical space that is not influenced solely by changing media and information, but instead is influenced by the changing needs of the library user.

Books or no Books?

Much debate exists over the future of physical book matter. Many believe that books have a material nature that is not experienced or appreciated digitally. Others believe that books are readily outdated and that they are less convenient than digital representations - you have to physically obtain copies of them. Both are valid arguments. Currently, however printed books remain the ubiquitous form of media represented in the public library. As a distributor of this media, the library in its current form is fairly successful. Where it is unsuccessful, other libraries succeed through re-interpretation.²² It cannot be denied, however, that digital media applies continual pressure on physical material contained within the library. This pressure will considerably affect how people interact with the building and with each other. What is missing from the research at this point

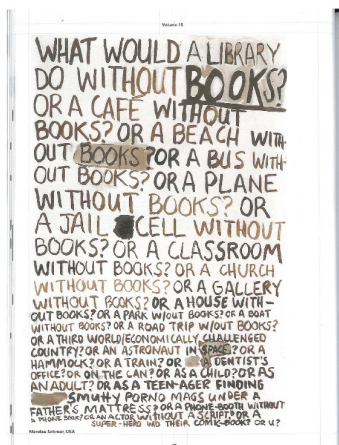


Figure 27 : What would a Library Do Without Books?

Image by Mandee Schroer From: "The Last Book," Luis Camnitzer, 2008, Volume, 15(1), p.26.

22. This is particularly evident in the Seattle Library's 'book spiral'.

is a study that attempts to address what a physical library might be like without books. Libraries have not attempted to do this because it risks the notion that people will stop going to them. The design study does not intend to advocate for book genocide. Rather, it intends to explore physical space and how technology can create new opportunities for interaction between library users and between users and their media without the need for physical material.

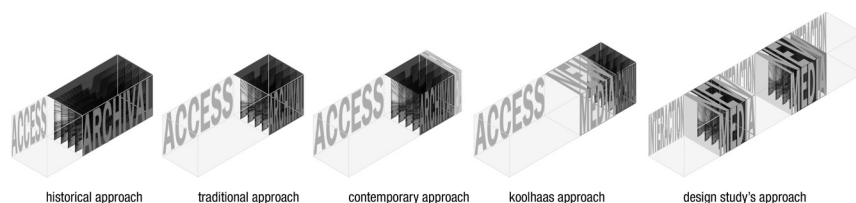
4.2 Initial design response

In a future public library system that lacks the physicality of books, the library will need to change its physical and its organisational form – distancing itself from the traditional library model. It can now exist as an instantaneous interaction point to information and entertainment. As a system it can be smaller (it no longer requires physical storage) and it can be more convenient (the catalogue can be accessed anywhere). Its change in form needs to address the need for physical interaction.

It was identified in previous chapters that there are three main types of physical interaction occurring within current library buildings. These are:

- interaction with information functions (information media)
- interaction with entertainment functions (entertainment media)
- interaction with other people

Historically the library's first and foremost intention was to preserve knowledge and to provide access to this knowledge. This design study attempts to shift this tension introducing the term "interaction" rather than "access" as its first and foremost intention and then alter its functional responsibility from preserving "knowledge" to simply providing information and entertainment. In doing this, knowledge occurs and is built upon when users interact with other users. Knowledge is no longer preserved it is experienced.



Chapter 3 suggested that it would be simpler to interact library users of different departments if they only existed in their two primal forms: entertainment and interaction. Without the need for physical storage this can be achieved simply. The internet merges these two functions, and in doing so disallows physical interaction. The design study, instead, keeps these functions separate contrasting them to allow for psychological distinction. The two are then fused together through interaction.

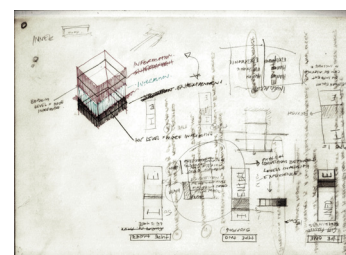


Figure 28 : Relationship between information, entertainment and interaction. Early response.

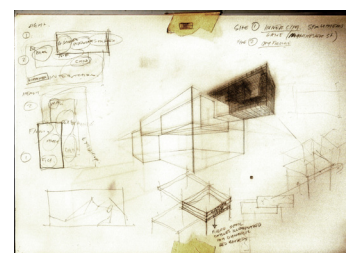


Figure 29 : Relationship between information, entertainment and interaction. Early architectural sketch.

Figure 30 : Oppositional Tension Diagrams. Historically the library has suffered from the tension between archiving knowledge and providing access to this knowledge. New approaches attempt to restyle this typology. The design study instead introduces the term interaction rather than access and uses it to facilitate an experience of knowledge.

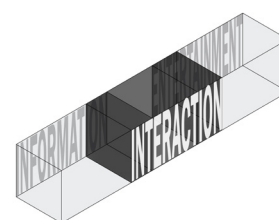


Figure 31 : Design strategy. Information and entertainment functions are kept separate. A central space fuses them together through interaction.

4.3 Global site

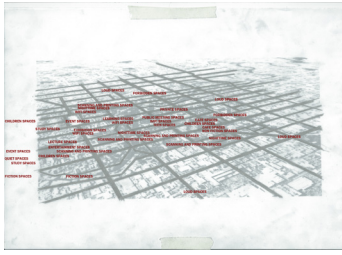


Figure 32 : Initial Response to Global Site. Originally the numerous library functions were to be scattered around the city, including their physical material (books, CDs, Magazines etc). They were to be episodes based on function. This was not successful as the episodes were not convenient, and it was difficult to interact users of different media.

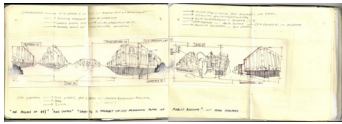


Figure 33 : Drawing Study of Christchurch Shopping District.



Figure 34 : Gloucester Street, Current City Library.



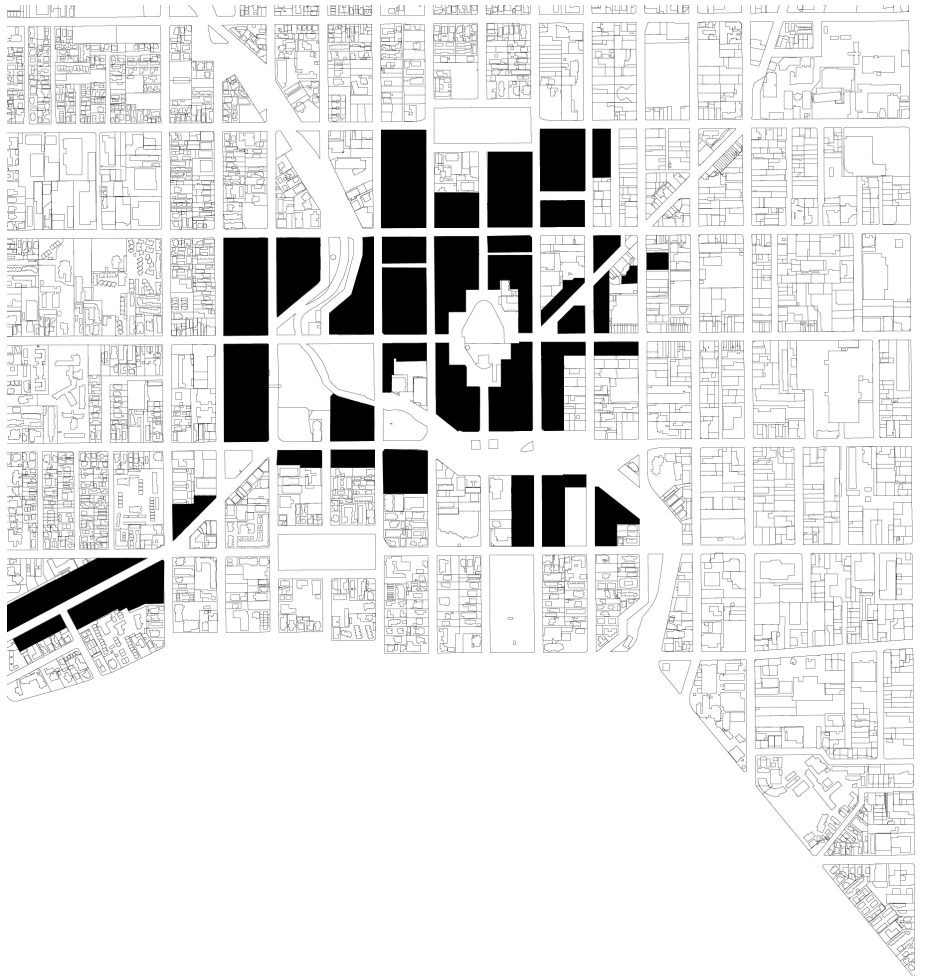
Figure 35 : Worcester Street / Manchester Street.

Figure 36 : Business Entity. It is a densely populated area during the work-day, but quiet at night-time. Human interaction occurs at high speed and there is reliance on the automobile.

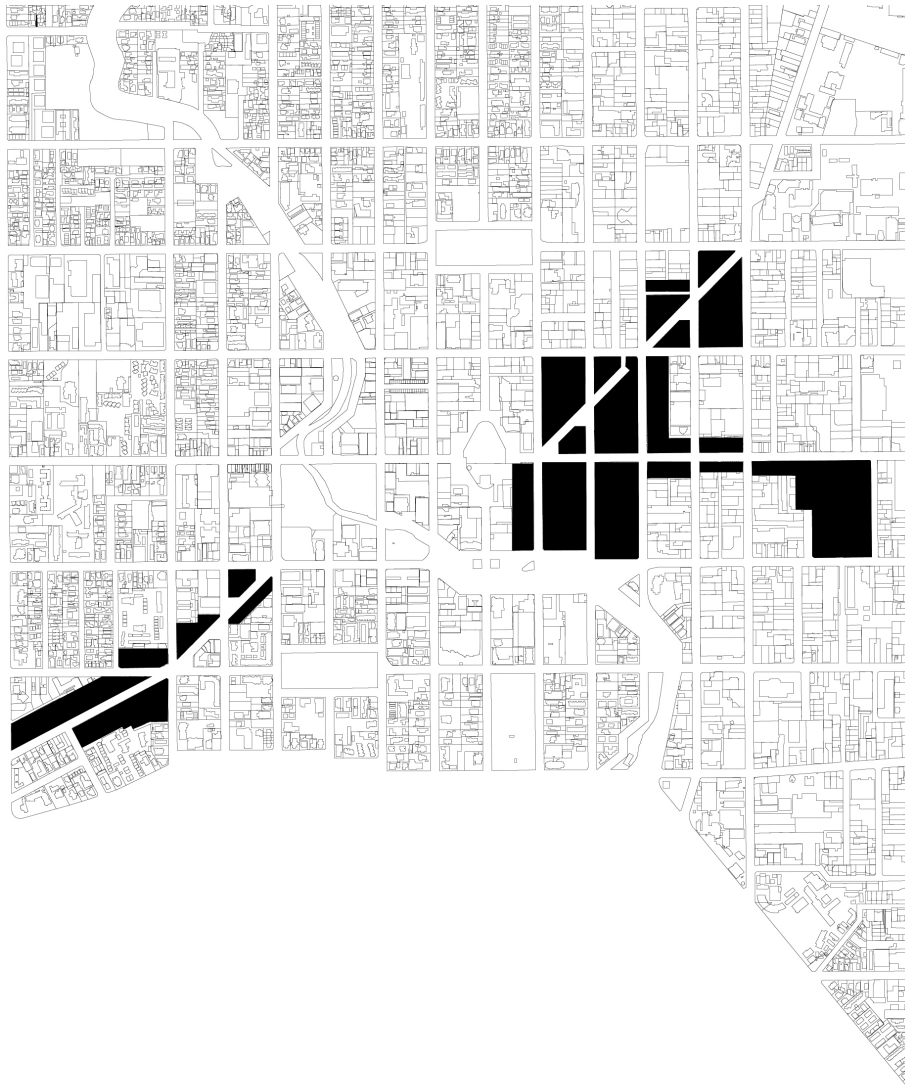
Original CAD model obtained from the Christchurch City Council.

The method for achieving this was to treat the library more as an activity on a global scale - a series of smaller library spaces rather than one physical building limited to one static site. For the purposes of the design study the city of Christchurch was selected to locate this public library system. The current City Library exists in the traditional form - separating media into specific departments, allowing for minimal expansion and interaction between them.

Christchurch is a clearly laid out city. It has a strong grid but lacks a defined central core to bring people into the city. This is partly due to its increasing decentralisation and its reliance on surrounding suburbs. When considering the future of the public library, it is important to address the city's global context. A convenient, mobile library will infiltrate successful zones of activity whilst responding to its immediate proximity. The central city offers some successful zones of activity and culture. The zones exist independent of one-another and each require different evaluation. They include arts, gardens, historical areas, shopping, business and night-life. Most of these can be classified as quite separate entities. The following figure-ground studies show these entities:



business



pedestrian scale shopping / commercial



Figure 37 : Colombo Street.



Figure 38 : Cashel Street / High Street.



Figure 39 : Colombo Street, South City Shopping Centre.

Figure 40 : Shopping / Commercial Entity. This entity is similarly populated; however, human interaction occurs with the pedestrian especially during the weekend.

Original CAD model obtained from the Christchurch City Council.



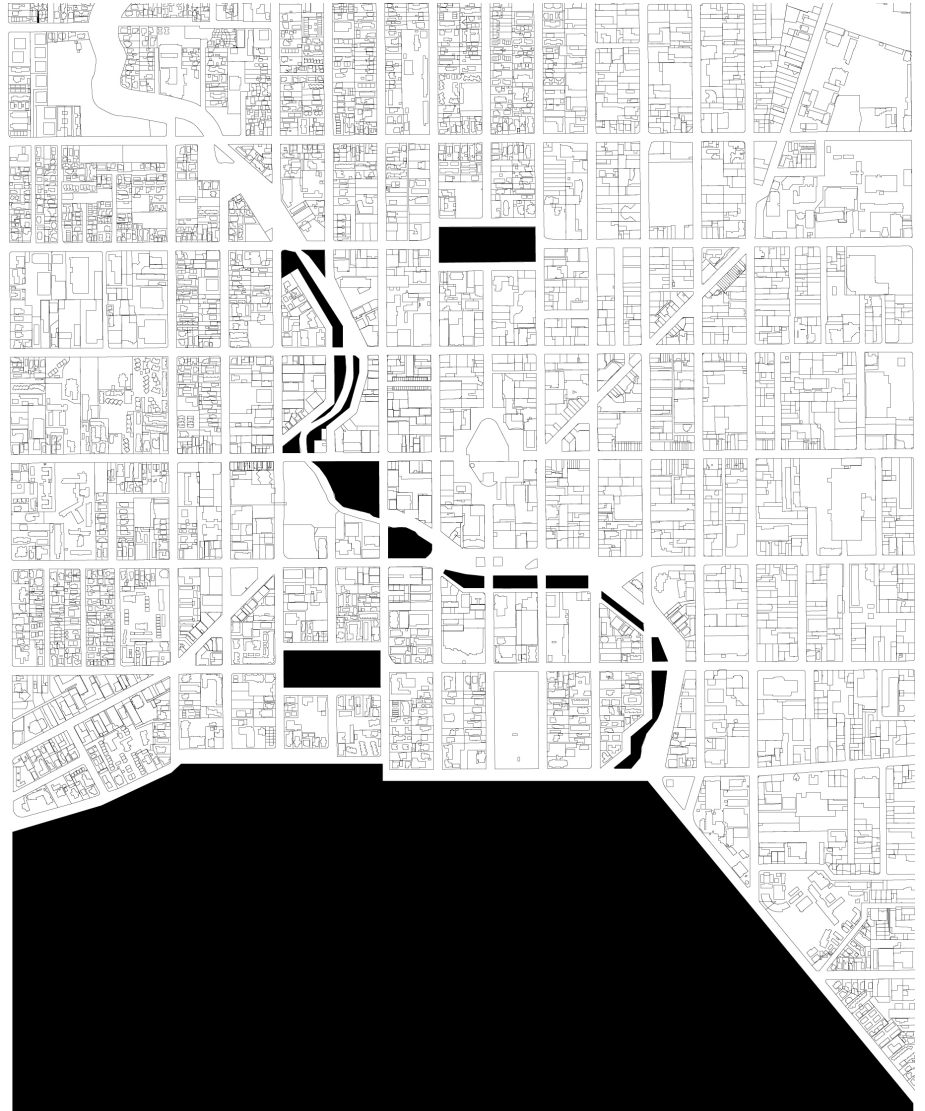
Figure 41 : Oxford Terrace, Avon River.



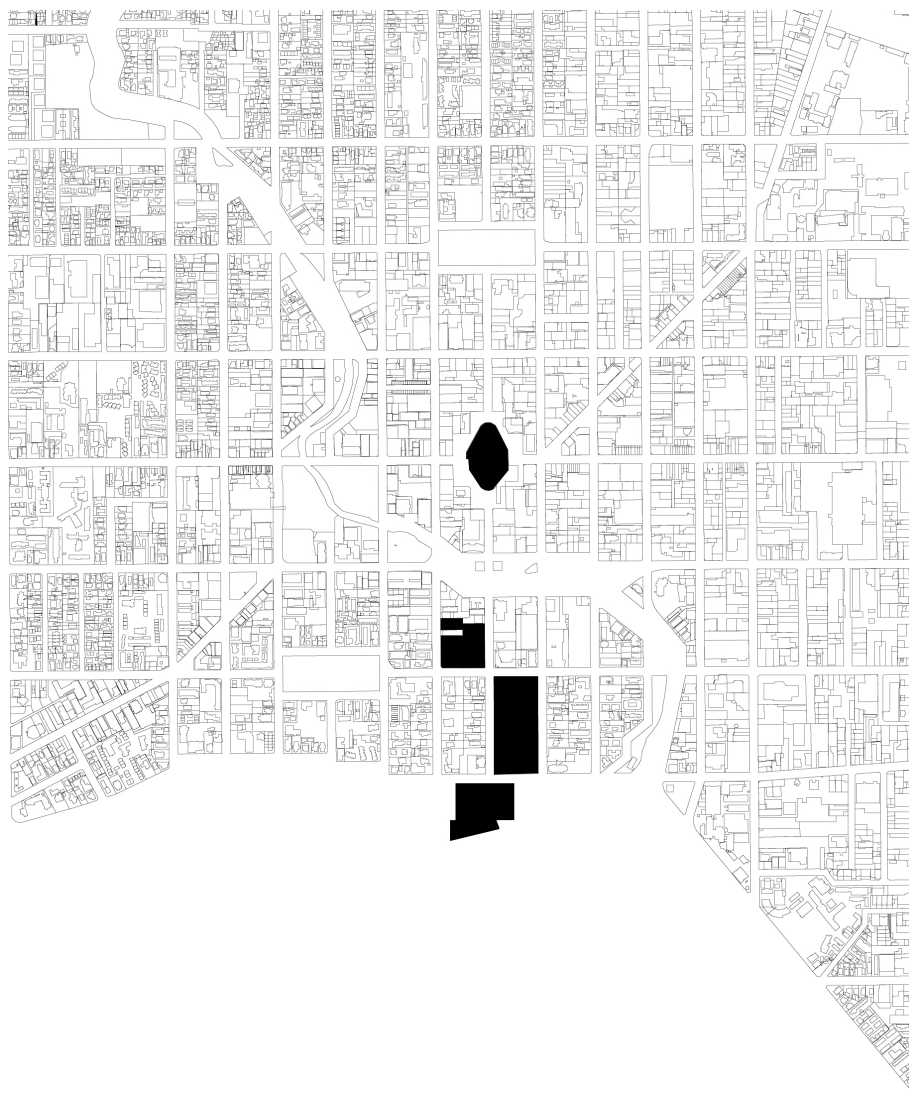
Figure 42 : Botanical Gardens.

Figure 43 : Green Space Entity. Green Spaces (Hagley Park and the Botanical Gardens) separate the city from its neighbouring suburbs, whilst the Avon River runs through the city. Green space is popular and encourages interaction between local pedestrians and tourists.

Original CAD model obtained from the Christchurch City Council.



green space



art/civic



Figure 44 : Arts Centre.



Figure 45 : Cathedral Square.



Figure 46 : Botanical Gardens, Robert McDougall Art Gallery.

Figure 47 : Art / Civic Entity. Christchurch's art culture is expressed by the historic Arts-Centre located in its centre. In addition it has an architecturally iconic public art-gallery, numerous smaller galleries, museum, and Cathedral located in close proximity. The annual Arts Festival is very popular and facilitates a large amount of interaction between the general public.

Original CAD model obtained from the Christchurch City Council.



Figure 48 : His Lordships Lane.



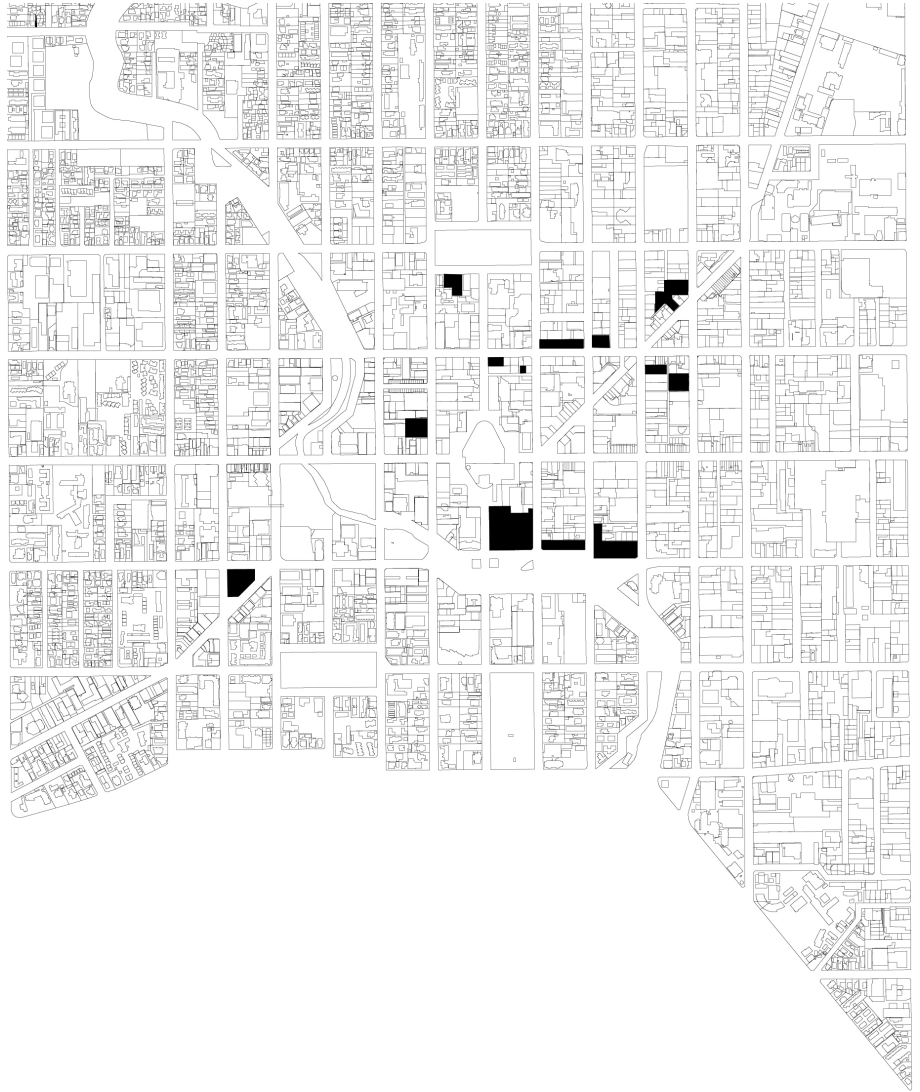
Figure 49 : Poplar Street, Bars.



Figure 50 : His Lordships Lane, Bars.

Figure 51 : Night-Time Entity. Night-life occurs in separate areas of the city. They are connected by single-way traffic.

Original CAD model obtained from the Christchurch City Council.



night

The design study attempts to interact the public library and the city in a way that has not been attempted before - treating the library experience as an activity within the city of Christchurch. It distances itself from the traditional library model, a stationary, iconic building, and instead exists as a series of smaller buildings - episodes - based on convenience. These episodes are interventions scattered around the city in high profile public sites, experienced through interaction, information and entertainment. They independently act as an interface to the library system as a whole. The intention is to avoid dragging the city inside the library's walls - creating a static building for accessing mobile media - but, rather to force the library out into the city. This shift in library planning and arrangement allows for an inner city that merges the library with other forms of successful public activity and culture. Different sites have different responsibilities to both their surrounding conditions and to their user - some require longer operating hours, for example. They would, however, all be cohesive within their design strategy and the collection that they provide. Figure 53 expresses how this type of system might be implemented and shows the site that was used and developed further in this design study - a site located in the Green Space entity.

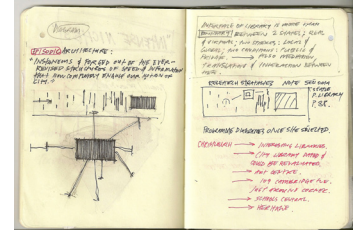


Figure 52 : Early exploration into episodic architecture.

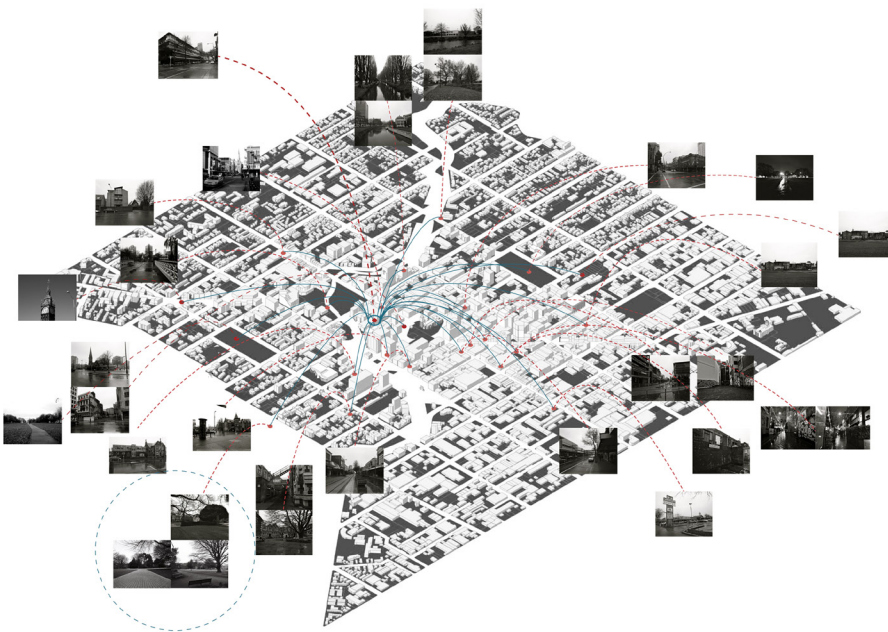


Figure 53 : Implementation of Global Site.

Original CAD model obtained from the Christchurch City Council.

4.4 Detailed design solution: The building

Individual Site

The study develops one episode in further detail. The site chosen for this episode is located in the Green Space entity. It is a highly used public site situated in the botanical gardens - next to the Robert Mc'Dougall art gallery and the secondary school: Christ's College. The site contains a number of heavily used pedestrian routes that encourage interaction between people and their surroundings

Figure 54 : Pedestrian Flow. The study develops one episode in further detail. The site is located in the botanical gardens amongst a number of heavily used pedestrian routes. Arrows indicate site photo location (figures 55-59)

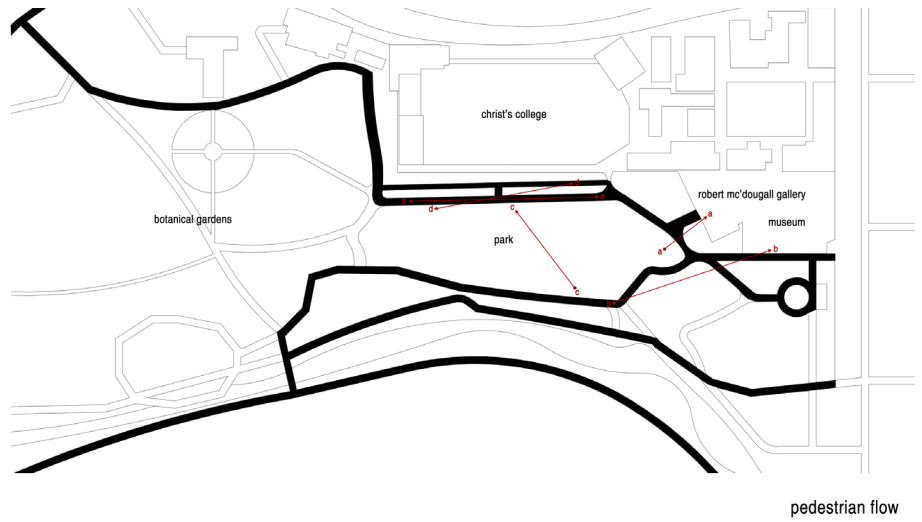


Figure 55 : a. View towards Robert McDougall Art Gallery.



Figure 56 : b. View towards Museum.



Figure 57 : c. View across lawn towards site.



Figure 58 : d. View from secondary footpath towards site.

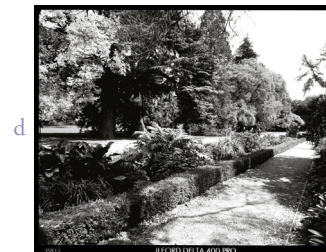
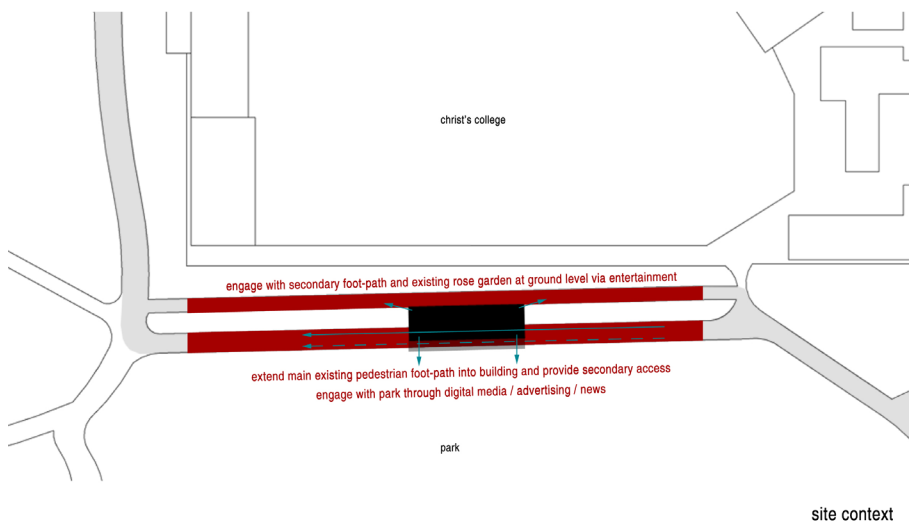


Figure 59 : e. View from primary footpath towards site.



Response to Individual Site

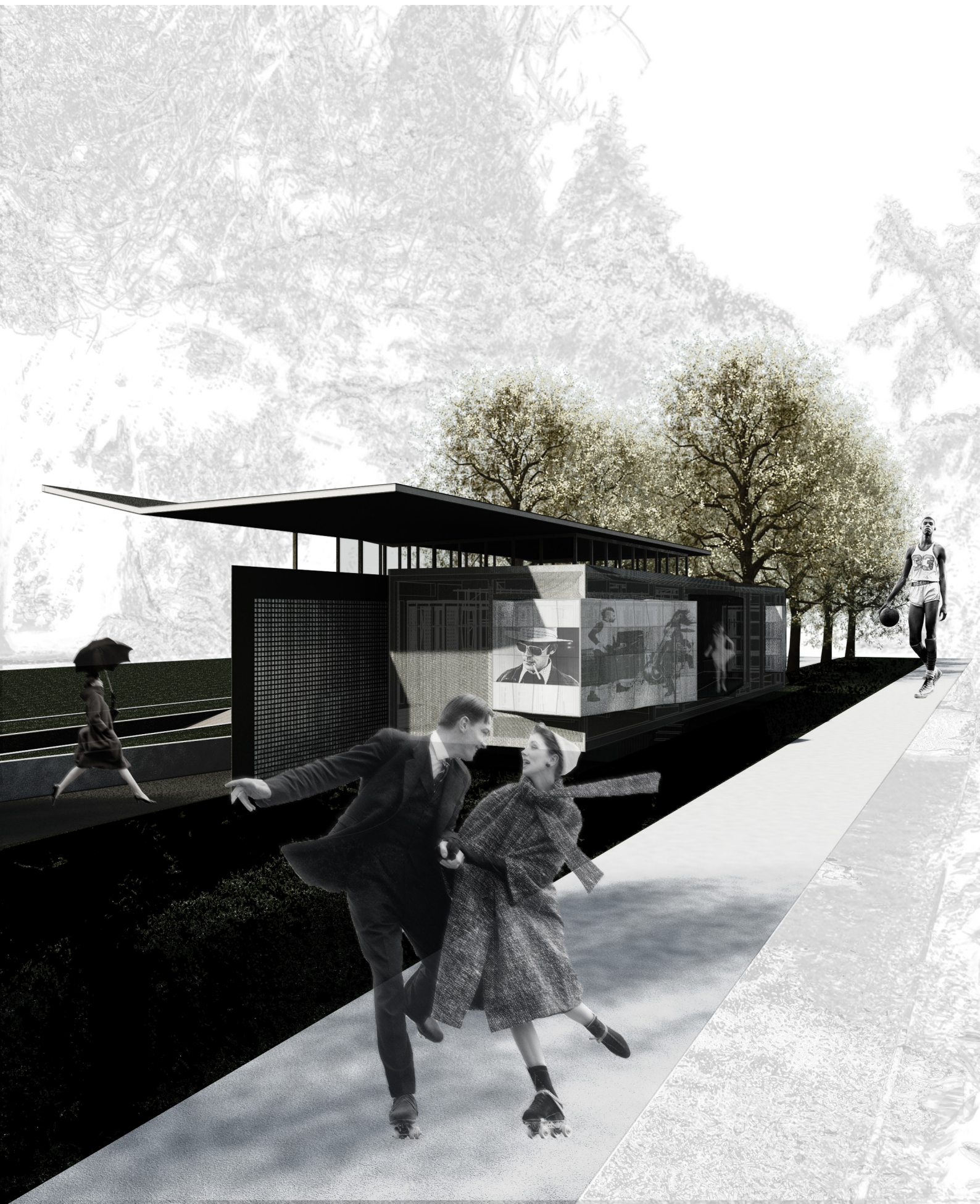
The building is positioned as an extension to one the busiest pedestrian routes. It extends the footpath inside, and interacts with neighbouring secondary routes and existing open green space. Interaction occurs at a pedestrian scale. The building is situated between the two main thoroughfares, allowing for interaction with both pedestrians who intend to enter the building, and with those that do not. Similar to Harrison's (1977) observation that "window displays and displays inside the library are invaluable" (p.66) and Cook and Hawley's commercial venture, the library presents users with advertisement and digital displays that can be interacted with, without entering the building. Projections on these displays show current affairs and advertise changing digital exhibitions and cultural activities that occur within.²³ A new access route is provided that is specifically designed to engage users with this exterior mode of interaction. In addition the existing secondary footpath in the gardens (separated from the primary route by the rose garden) engages pedestrians with entertainment media, projecting a continuously changing form (Figure 61).



23. The activities selected to be experienced in the library are based on the prominent arts culture experienced throughout Christchurch's inner city. Art is of great importance to the culture of the city. It contains an immensely successful public art gallery, art centre and numerous travelling exhibitions and performances. The Arts Festival is highly anticipated and facilitates the interaction of a vast amount of the general public. The functions to be incorporated in the library system include: exhibitions, arts performances, theatre, children's functions and meeting authors.

Figure 60 : Site Context. The building is positioned between two main pedestrian thoroughfares in the Botanical Gardens.

Figure 61 : (opposite page). Exterior view of building. The primary foot-path is extended into the building, the secondary footpath is engaged with via entertainment functions.



Floor Plans

The building is separated into three entities in the floor plan. On the lower level a 'culture space' (interaction) is provided to house flexible functions and interact users with one-another. Horizontally separated from this space is an information space - a space that houses information functions.²⁴ Visual and physical connection with the rest of the building is maintained through the central space.

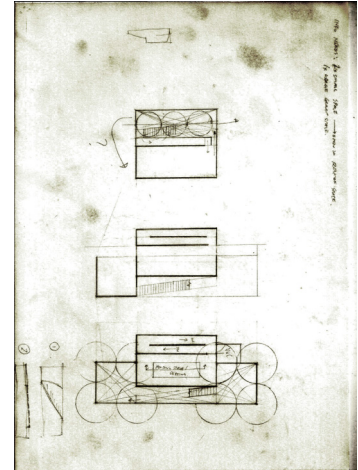
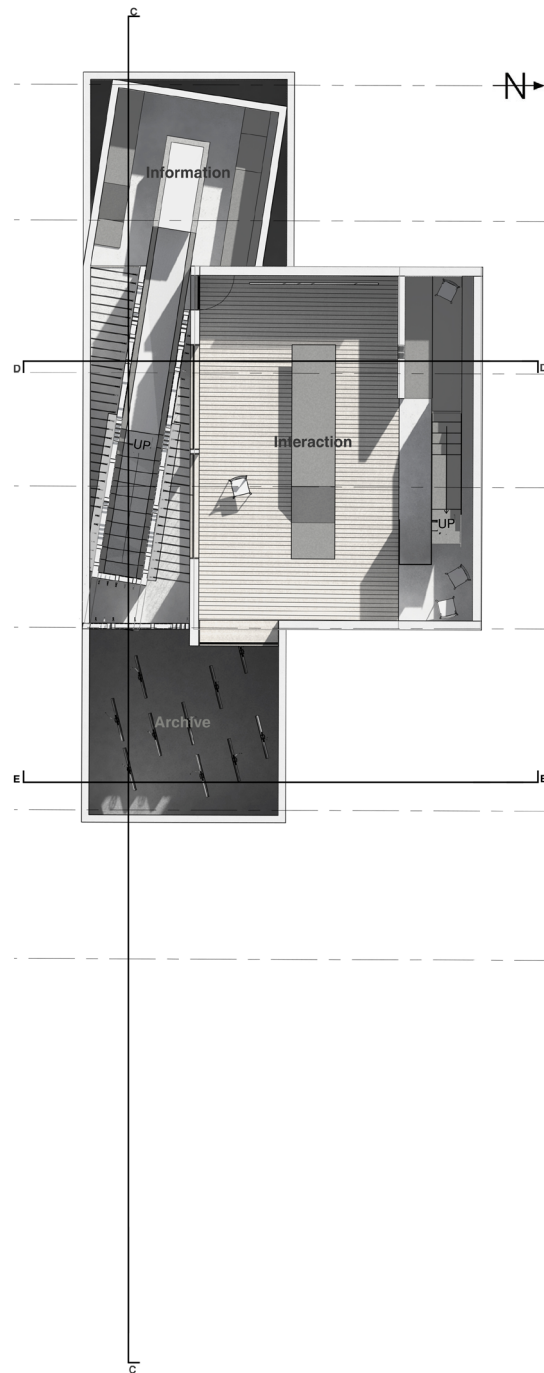


Figure 62 : Early sketch of floor plan layout.

24. The information functions include a digitized archive and an information reading space.

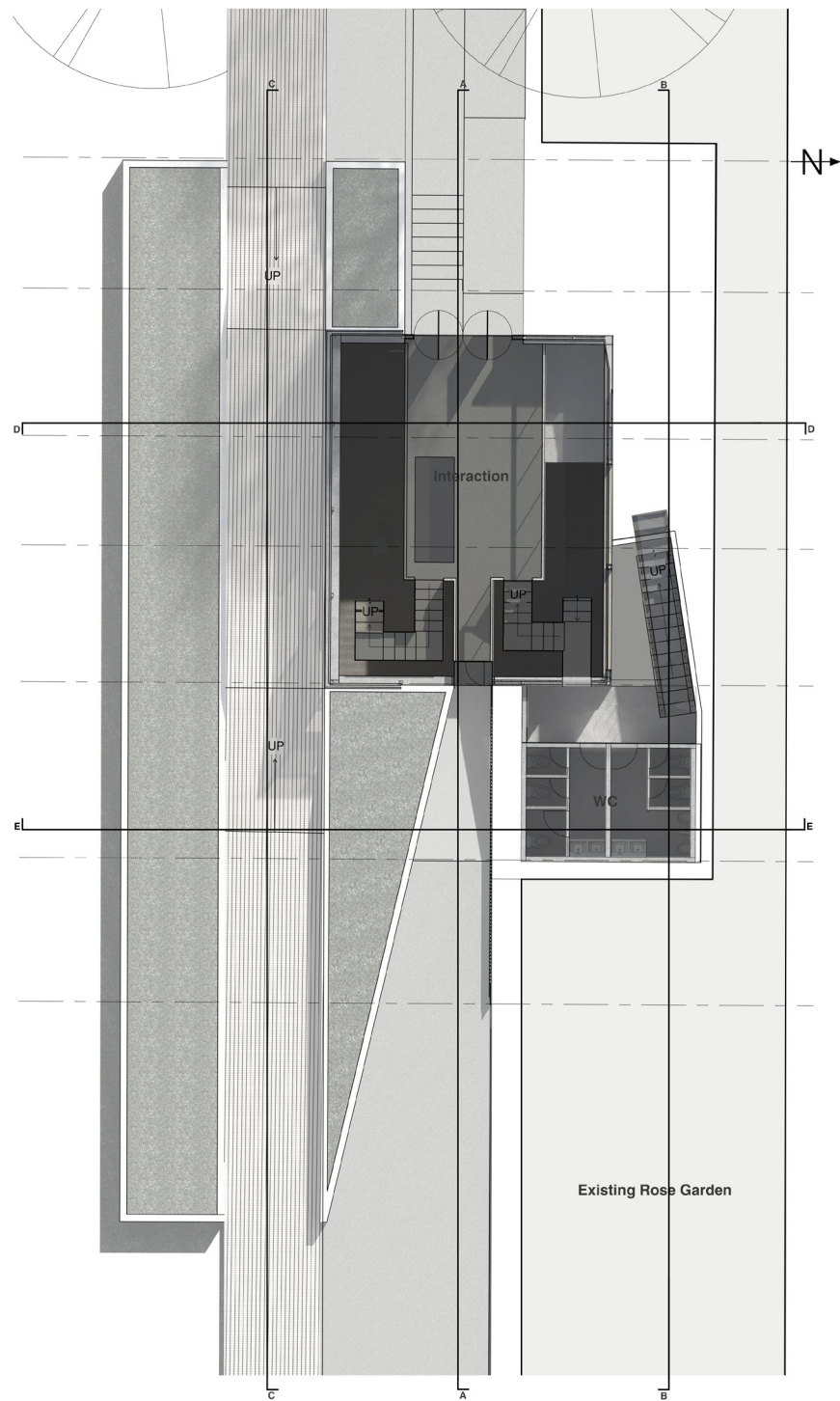
Figure 63 : (opposite page). Plan - Interaction -1 / Information.



Plan - Interaction -1. Information

At entrance level the primary footpath is extended into the building creating a footbridge that is cut back to allow for diagonal visual connection between spaces. Users are able to place themselves within the context of the building before deciding whether to move up or down. Physical connection between spaces occurs off this footbridge by way of two suspended folded black steel staircases. At ground level a secondary walkway is provided outside the building, allowing users to engage with advertisement and displays without entering the space. Planting mediates the connection of the building with the neighbouring park to the South.

Figure 64 : (opposite page). Plan - Interaction.

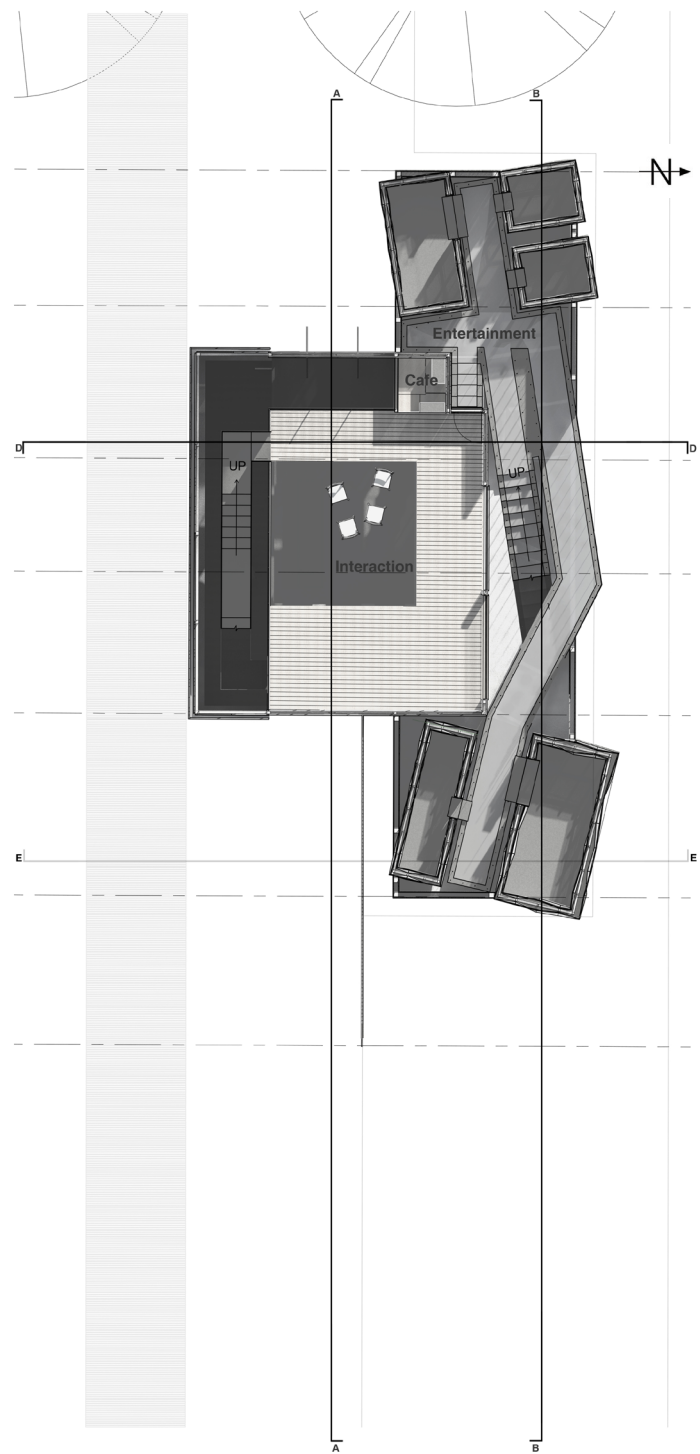


Plan - Interaction

On the uppermost level a general meeting and gathering space (interaction) is provided. A small café encourages users to interact with each other. Horizontally separated from this space is a space for entertainment functions.²⁵ Visual and physical connections with the rest of the building are maintained through the central space. At ground level entertainment is engaged with from the outside via the existing secondary footpath.

25. The entertainment functions include fiction, popular non-fiction, film, music.

Figure 65 : (opposite page). Plan - Interaction+1 / Entertainment.



Plan - Interaction +1. Entertainment

Interaction

The central space provided is for general interaction and the sharing of knowledge. It also exists to house flexible functions that change regularly to draw users into the building. These functions are different from episode to episode within the city. They include cultural activities such as performances, meeting authors, gallery spaces, and children's functions; all presented through digital technology. In addition the space offers a café and the lending of digital reading technology (Kindle). It consists of three levels of interaction. At the entrance level, interaction is achieved by extending the footpath inside the building - creating a footbridge that allows for both visual and physical connection between the three levels of space. The bridge allows users to place themselves within the context of the building. A mezzanine exists above this bridge. It is cut back to allow for diagonal views between levels (similar to the success in the Münster Library) and contains a glass floor to maximise this connection. This floor houses a general gathering space with a small 'in the wall' style café. Below the bridge is a flexible 'culture space' - typically an exhibition and performance space that can be adapted to suit the needs of the specific function. Entertainment and information spaces are located off the interaction space vertically and horizontally separated from one another to allow for distinction between them.

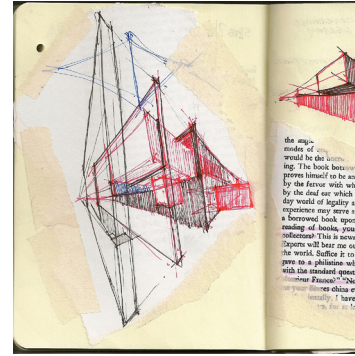


Figure 66 : Exploring the relationship between information and entertainment. The two spaces are vertically and horizontally separated; an interactive space fuses them together.

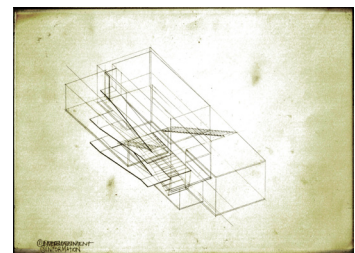
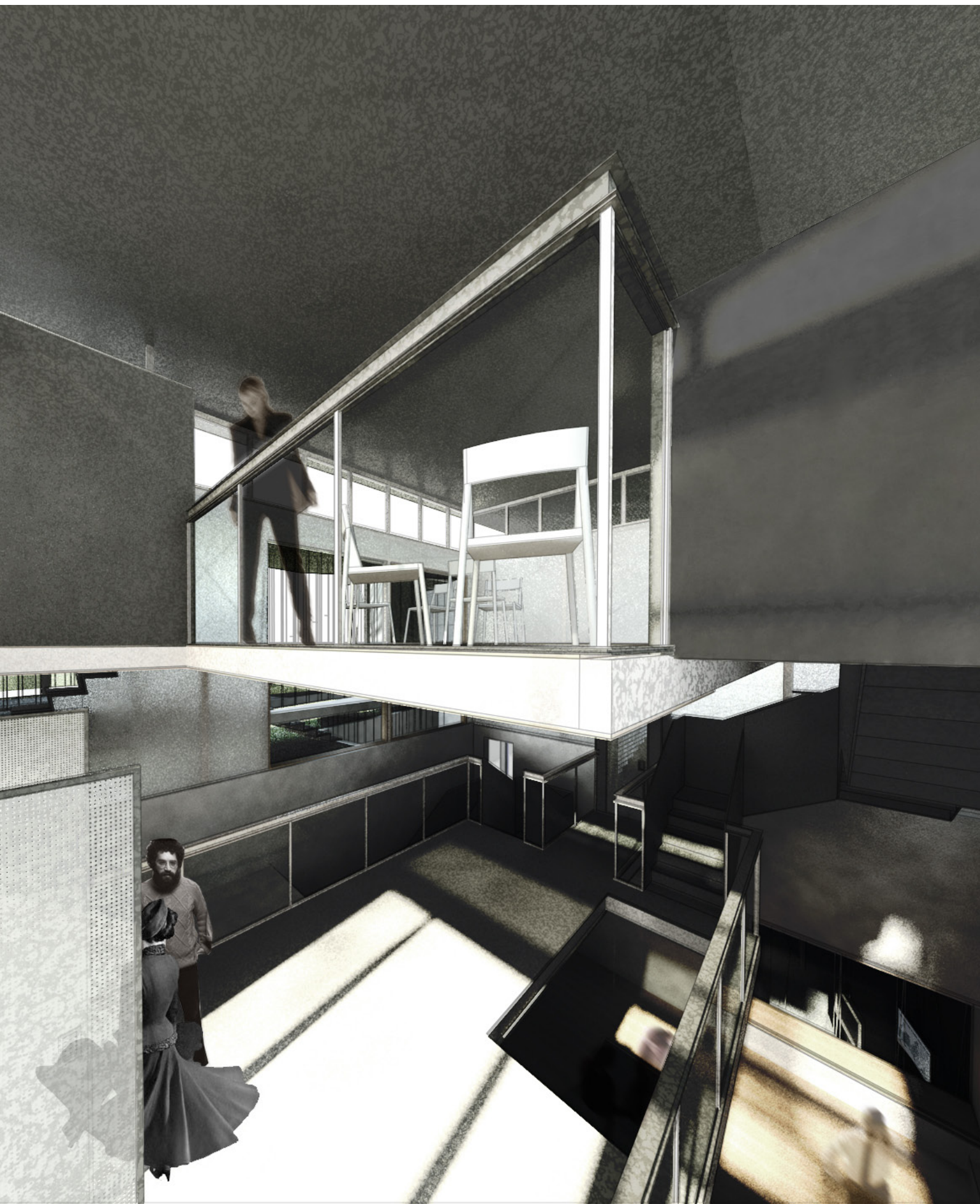


Figure 67 : Developing the interaction between information and entertainment.

Figure 68 : (opposite page). Interaction. The primary pedestrian route is extended into the building creating a footbridge that allows users to place themselves within the context of the space.

Figure 69 : (p.64). Interaction -1. A 'culture space' houses flexible functions to facilitate interaction on the lower level. Visual connection with the information space occurs by way of two large windows. Interaction between levels is enhanced diagonally by cutting back the floors above, and through glass inserted in the floors.

Figure 70 : (p.65). Interaction +1. The upper floor of the central space is a general meeting and gathering space that contains a small café. Physical connection between spaces occurs via suspended folded black steel stairs.







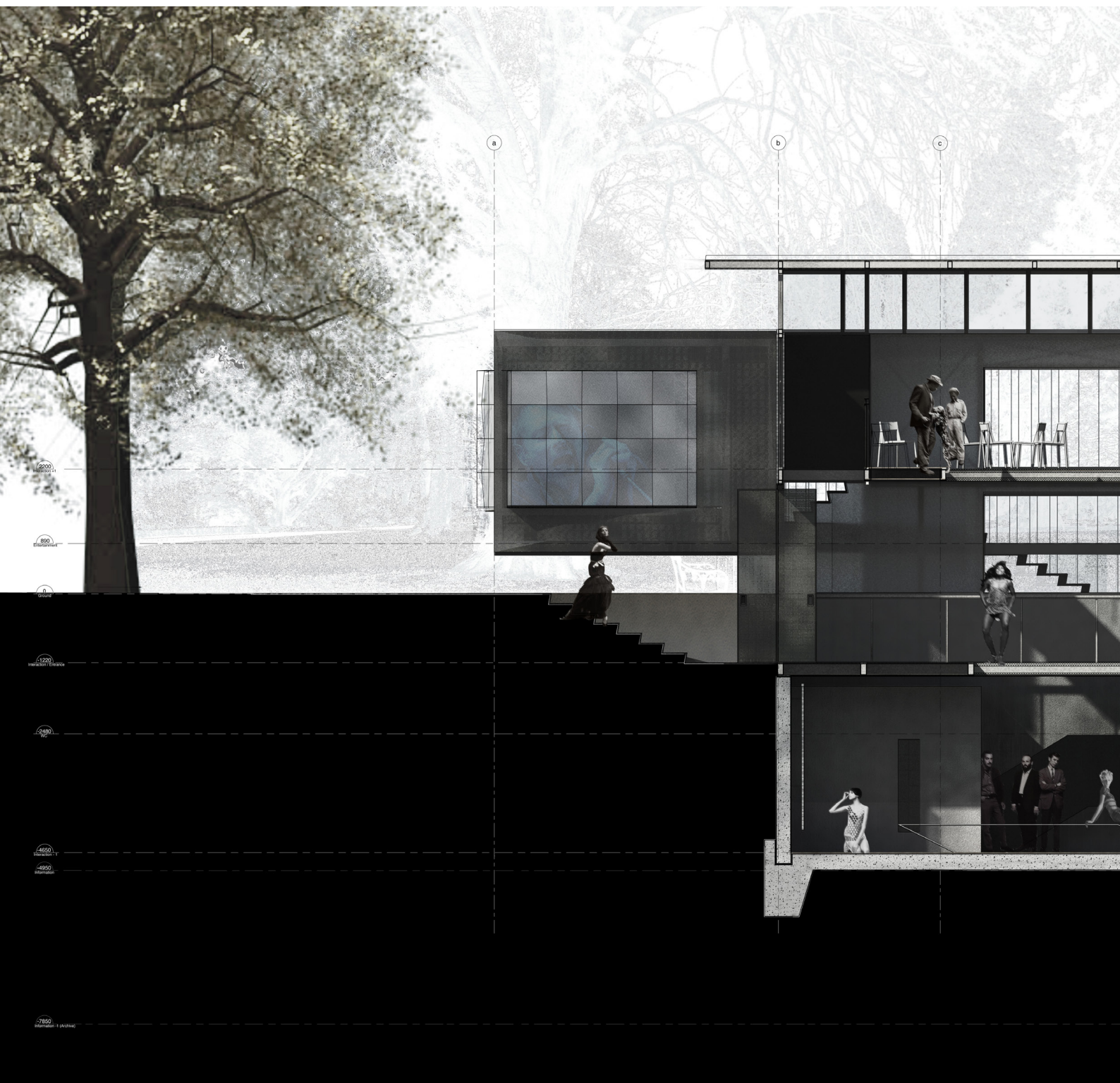
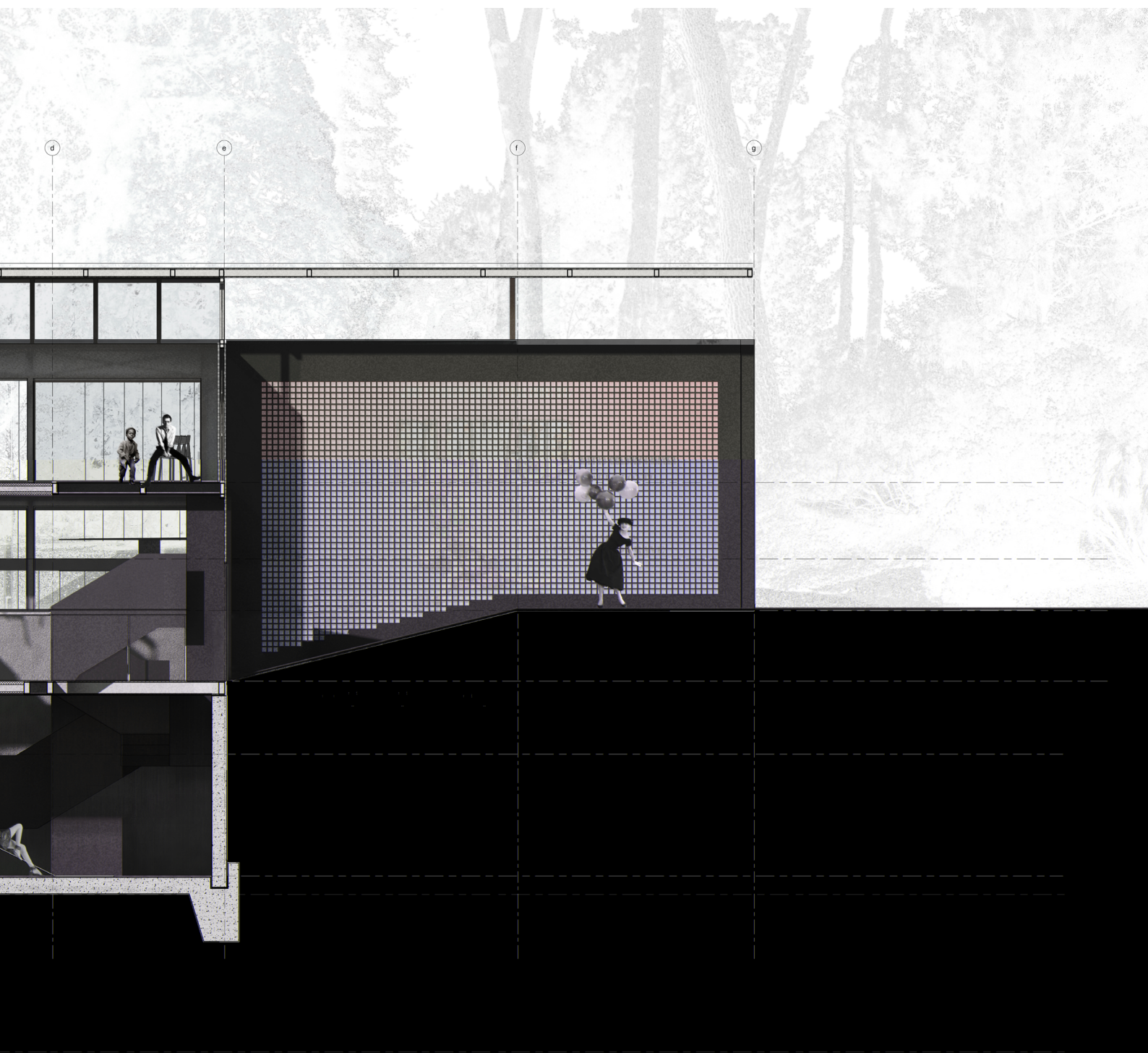


Figure 71 : Section AA - Interaction.
The central space consists of 3 levels
of space intended for interaction.
Floors are cut back to enhance diago-
nal views between levels.



SECTION AA - Interaction

As mentioned, the two main functions, information and entertainment are treated separately. They are, however, both represented within a recognisable form.²⁶ This is their interface - and it presents itself as a rigid box.²⁷ The rigidity is consistent with other recognisable interfaces in both the physical realm and the digital realm: the book and the computer screen, for example. Each function breaks up this rigidity in its own manner - freeing itself from the 'hard-cover'.

Entertainment

Entertainment engages with the outside. It is temporal. The rigid interface is a perforated steel box, visually connected with the park outside. Small niches that vary in size break up the rigidity and impose themselves on the public. These niches are entertainment pockets that contain digitized representations of library functions related to entertainment - fiction, music, and film, for example. They hang off a suspended walkway to create an experience similar to nursing oneself between the bookshelves when reading. Some are private, others are public. The niches have a steel structure and translucent polycarbonate is used for cladding. LED inserts in the polycarbonate create display screens that automatically turn on and off as users enter and interact with the space. Users are able to connect their own portable devices: iPods, iPads, laptops, kindles to the library catalogue in these spaces via wifi and bluetooth - allowing for digital loans that expire after a short period of time. The entertainment pockets are contained inside the rigid interface but also break out of it. They do not allow themselves to become confined by the rigidity - appearing as suspended hanging instances. The result is temporal and ever-changing space.

26. By maintaining a recognisable form each episode can respond to their site on a global scale: the Christchurch city library.

27. Technology is no longer confined by a rigid interface. It exists outside measurable boundaries of space and time.

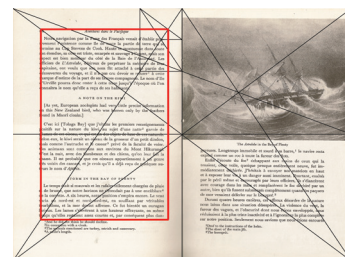


Figure 72 : Book study. The book presents a recognisable rigid interface based on the golden section.

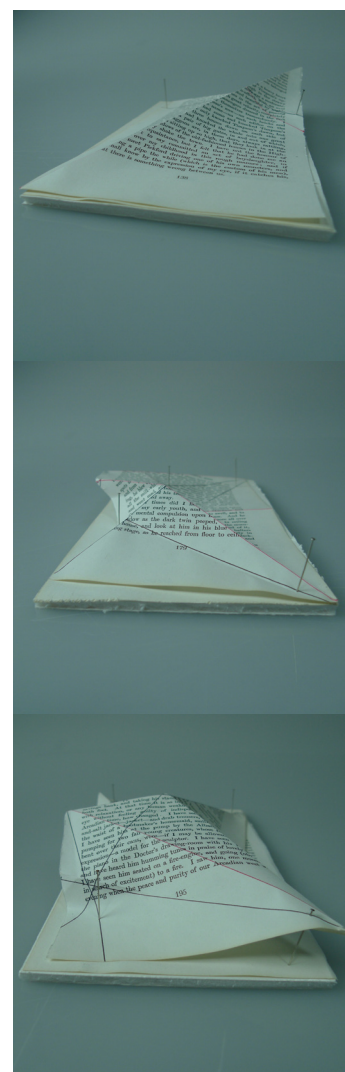


Figure 73 : Marquettes. A selection of marquettes that attempt to break up the rigidity of the book interface using the golden section to determine folds and pinning position.

Figure 74 : (opposite page). Entertainment. Small niches hang off a suspended hanging steel walkway with LED screens inserted.

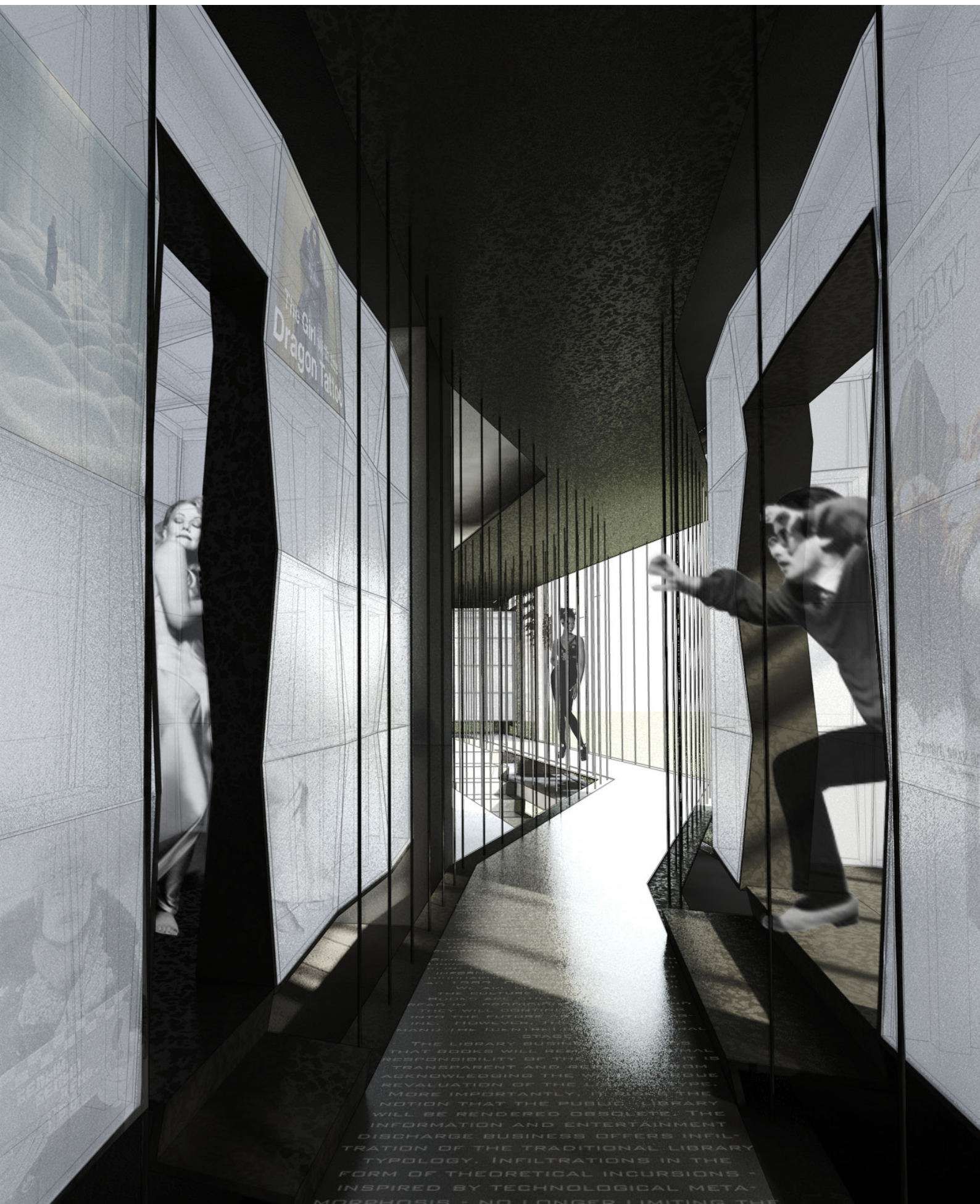
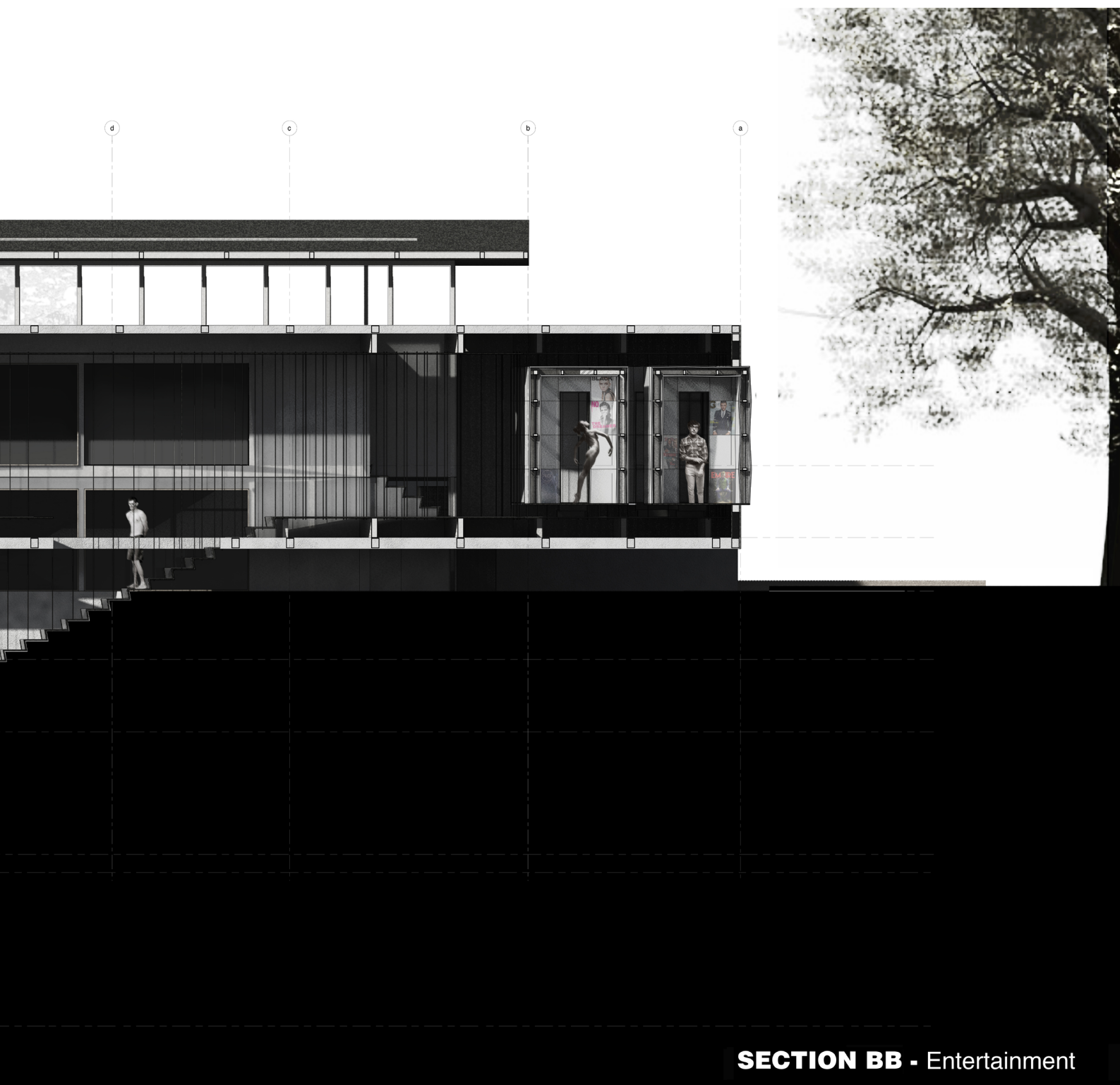




Figure 75 : Section BB - Entertainment. Private and public niches contain entertainment functions. Visual connection with the rest of the building is maintained through large windows that link to the central interactive space.

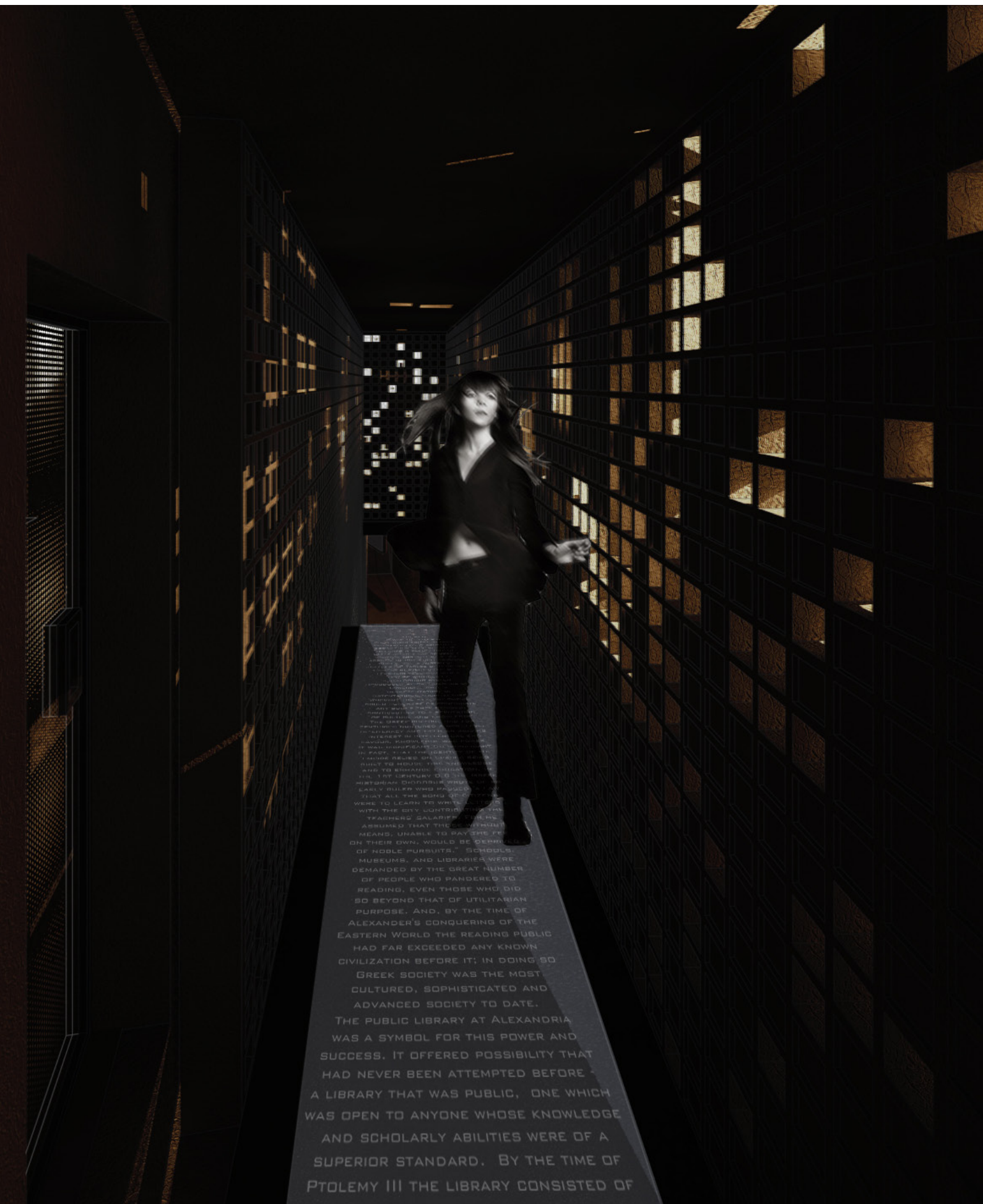


Information

Information, in contrast, is located below ground and its only physical connection to the entertainment space is via the centrally located interactive space. It is contained below ground to create a psychological point of difference between the two opposing functions. It also represents a strong connection with the ground - indicating that the information space is less temporal than the entertainment (the material it contains is real and factual). Information consists of two spaces physically connected by a walkway. This is reminiscent of the information library user's desire for two types of space. Space to find their information and space to process that information; constantly going to and from as their research becomes more and more focused. The lower space is a gallery of information - an archive in which the user has the freedom to physically alter the height and orientation of the screens that they use. Users can connect their portable devices to these screens and then use the above space to process this information. The information interface is similarly rigid. Materiality, however, contrasts it to entertainment. Information is contained within a concrete shell. Perforations in the concrete and suspended artificial halogen lighting behind them aid in the users disconnection from the rigidity, acknowledging digital technology's freedom from its interface.²⁸

28. Typically digital technology's rigid interface would be the computer screen.

Figure 76 : (opposite page). Information. Information consists of two spaces connected by a walkway. Perforations in the concrete disconnect the user from the rigidity of their interface.



THE PUBLIC LIBRARY AT ALEXANDRIA WAS A SYMBOL FOR THIS POWER AND SUCCESS. IT OFFERED POSSIBILITY THAT HAD NEVER BEEN ATTEMPTED BEFORE - A LIBRARY THAT WAS PUBLIC, ONE WHICH WAS OPEN TO ANYONE WHOSE KNOWLEDGE AND SCHOLARLY ABILITIES WERE OF A SUPERIOR STANDARD. BY THE TIME OF PTOLEMY III THE LIBRARY CONSISTED OF

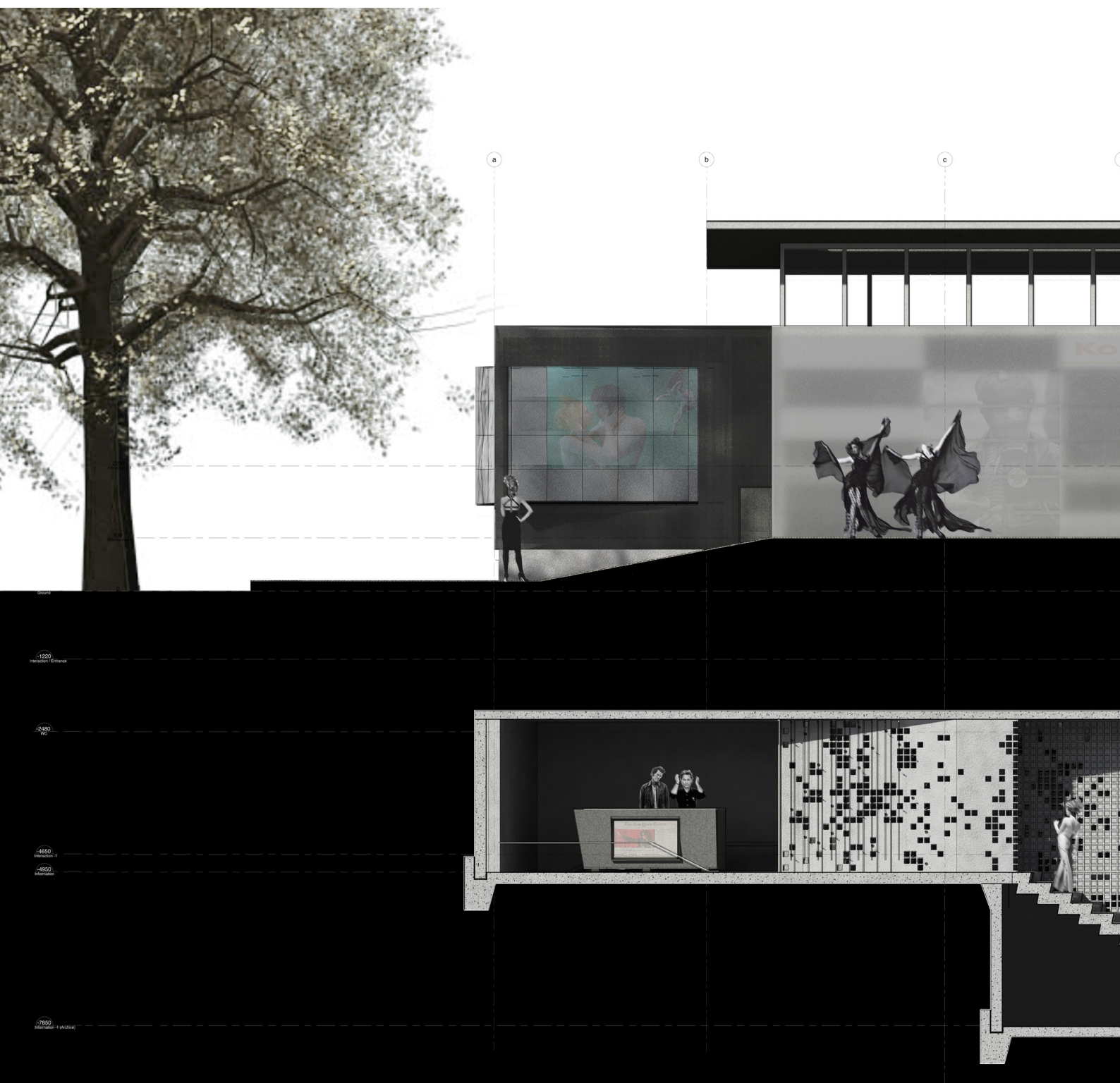


Figure 77 : Section CC - Information. The archive space consists of adjustable hanging screens. The information reading space provides users space to process information found. At ground level a secondary route is provided allowing users to engage with media on the exterior.



SECTION CC - Information



SECTION DD - Entertainment. Interaction. Information



SECTION EE - Information. Interaction. Entertainment

The design study explores the boundary between the physical and the virtual in a future library system. It attempts to maintain the underlying historical intentions of the library, but uses a new form to represent it - allowing for digitized media to be engaged with physically. It is not a library in its traditional form; it is a new type of library - a series of interaction points within the city - that respond to the new type of library user; a transient user of information or entertainment. The study uses one site in the Christchurch Botanical Gardens as an opportunity to explore this system in further detail. The development of other sites using the same strategies (information, interaction, entertainment) is recommended to reveal a consistent library network that would globally connect all the episodes into an interactive Christchurch library system.

Figure 78 : (p.76). Section DD - Entertainment / Interaction / Information. Interaction spaces are located in the centre of the building. Entertainment (left) and information (right) spaces are vertically and horizontally separated from one another.

Figure 79 : (p.77). Section EE - Information / Interaction / Entertainment. The primary pedestrian route is extended into the building. A secondary route is provided to engage users with the exterior of the building, and to mediate the transition between the building and the neighbouring park.

Chapter 5

Discussion and Conclusions

The following discussion is a response to the research undertaken. It focuses on why it was necessary. The discussion begins by addressing how the issues identified in previous chapters influence people, information and entertainment, the urban context and the public library building. Following, the design study's response to such issues is discussed in detail. This identifies the success of the project, but also reflects on where the design research could have been taken further; providing insight into where new research can build on the findings.

5.1 Discussion

People

People are experiencing social changes that alter how they use and interact with physical space. The library is an industry in which this is particularly evident; however, it is not the only, or the first, place to experience the effect of such changes. Social networking websites (such as Facebook) have shifted the way in which people relate to one-another; creating an anti-social digital representation of interaction. Quoting the film *the social network*: “we lived on farms, then we lived in cities and now we’re gonna live on the internet” (as cited in: Smith, 2010). Living on the internet has immense implications for the way in which we experience knowledge and the way in which we interact with other people. Zadie Smith (2010) suggests that Generation 1.0 (the generation of social networking via the internet) has become a set of data which is reduced to a digital profile – a set of friendships, likes and status updates.²⁹ The risk of this type of living is that people are no longer able to engage in human interaction.

29. “Friendships” “likes” and “status updates” are terms used by Facebook that allow users to digitally represent real-life.

Information and Entertainment

Information and entertainment are also expressed differently on the internet. Rob Bruijnzeels (2008) identifies that the internet is an autonomous source of media that no longer reserves knowledge to experts. It increasingly controls the production of information and entertainment, “no longer solely the preserve of publishers and broadcasting networks” (Bruijnzeels, 2008, p.10). This identifies that the user of this type of media is often also the producer, meaning that knowledge in this format is not always reliable. In saying this, the benefit for information and entertainment is that the internet provides a high level of freedom from the restrictions of the bookshelf.

The Urban Context

Cities are increasingly suburbanized - creating numerous subdivisions that are self sufficient.³⁰ City centres often lack definition. Without a centre, the city and its people do not have a strong identity or a recognisable culture. The public are blinded by convenience and as a result distance themselves from the central city. Technology enables this transition; providing decentralised living with access to resources traditionally associated with the inner-city.

30. Christchurch is a good example. Suburban sprawl has lead to numerous self-reliant suburbs.

The Public Library Building

Public library buildings are continuing to be designed based on a traditional concept that is no longer relevant to its context. This creates users that are forced to submissively consume library media that is defined by an expired catalogue. Instead, the library institution can offer users media that they can contextualise themselves through digital means. Roudaut (2001) notes that the library should: “envisage the design from a perceptual angle, namely how to infuse it with sensations of delight and rapture, replacing those of devotion and servitude” (p.295). The library has to cater to its users and their experience.

The Design Study's Response

The design study is a response to the changes of digital representation, facilitating a suitable transition, whilst blurring the boundaries between the virtual and the real. The library system proposed is driven by user demands. It focuses on the benefits that digital technology applies to its users, but rejects aspects such as a virtualised reality. This is where it asserts its relevance. The solution is a statement that there is a future for public libraries and that there is purpose in reinterpreting the library typology. For it is in this reinterpretation that the library can mediate the reconnection of virtual people and the realities of everyday life. The solution is hence a library, but not a library in its traditional form. It is reduced to its essentials. It removes ‘check in’ and ‘checkout’. It has no books, and the librarians are represented digitally. It requires minimal maintenance and service. Instead it is a facilitator of interaction. It acknowledges the historical importance of community and gathering; treating classes equally. It embraces ideas already well established; primarily the suitability of new media and efficiency of technology. It even uses aspects such as commercialism and advertising to aid in its presentation of these ideals. But, it becomes a library in the city, an interactive space that is familiar and unfamiliar. A space in which people can go to network and communicate; a space to experience and gain knowledge. The city centre becomes an interface (the internet, the library) that connects real profiles and physical space. Social activity, information gathering, entertainment and knowledge are all presented in a building that mediates the transition from a digital world through physical interaction.

Further Research

This design study attempts to reinterpret the public library typology; it is not a final solution. Given the nature of research, further continuation is expected. This study offers an architectural contribution but does not suggest that architecture is the only solution.

At an urban scale, the project simply begins to address the implications of site - as only one episode was developed in detail. The research needs to significantly develop other sites, and consider in more detail their relationship to one-another in order for it to be a truly successful and viable scheme. Unfortunately, the scheme lacks evidence of a cohesive resolution for additional sites. This resolution sat outside the scope and duration of this thesis. Continued development might consider further sites, and their existing urban context; particularly their relationship to pedestrian flow, public transport, public activity and neighbouring buildings. It might also address how independent sites respond to other sites, making them recognisable within the context of the library system. This has been addressed briefly by establishing a set of general criteria (three interfaces: information, entertainment and interaction), however, it requires continued evidence that was not possible during this research.

It has been noted, in this thesis, that the librarian plays an important role in navigating users to reliable sources of information. Further research is required as to how a digitized representation of the librarian can facilitate this role; knowledge needs to be trustworthy. Providing access to this kind of service is something that currently cannot be found at home or on the internet; it provides another benefit of going to the library.

Digitally representing library media shifts how the physical book is perceived. People begin to obsess over it with certain nostalgia. This is seen already, with books and libraries being 'fetishised' in bars, restaurants and cafés. 'First-edition' books are collected and kept captive by their collector. Digital libraries will, therefore, find it difficult to obtain original 'first edition' copies of written material; which may be of concern to people who require them for academic purposes. The research does not address this completely. The validity of books as an academic source is not conditional on their existence within public libraries. Without them, however, the book is not freely available in its physical form to the general public.

Architecturally the design makes strong statements that suggest the building will operate in certain ways. It does this by dividing the building into three main interfaces: information, entertainment and interaction. The vertical polarity of information and entertainment functions is not intended as a hierarchal relationship - entertainment is not more important than information in the public library. The intention is, rather, to physically separate the two functions. This makes them notably different, and allows interaction to occur between them. The

spaces are also heavily reliant on their functions, rather than the built architecture, to facilitate their purpose. This is particularly evident in the central space.³¹ Additional design exploration could push the spaces architecturally, so that the functions housed within did not determine how or why it was occupied; rather, the architecture achieved this on its own.

31. The central space contains functions (exhibitions, arts performances, theatre, children's functions and meeting authors) with the expectation that they will draw people into the building, therefore, facilitating their interaction.

The design study offers a response that reinterprets the typology of the public library. It is a solution based on the issues and opportunities that were brought up through research; however, other solutions are probable. Its success lies in that it offers new thinking as to how opportunities provided by technology allow the public library to be re-evaluated. It achieves this by suggesting that the library act as mediation between the boundaries of virtual media and physical space.

5.2 Conclusions

This research has established that there is a strong future and necessity for public library buildings. Digitization, dematerialization and decentralisation all contribute to the current debate over what their relevance might be. It has, however, been established that despite the pressure new technology places on physical reading material and on physical space, it also provides new opportunities and solutions that will see the future library exist in a different physical and organisational form. In this current age it is no-longer sufficient to restyle and adapt existing library typologies; instead the library must be reviewed and then re-established. This text finds that architecture offers an opportunity to redefine the definition of library space, creating a new typology that responds to changing user needs.

As discussed, the public library has a long tradition. Its history founded many of its intentions; namely its social responsibility as a public institution, and its ability to improve general public education. It is a commercial institution that thrives on the interaction between users. Throughout this research it is established that the future library must acknowledge its original intentions but also re-address them; taking into consideration current and future conditions. This can be achieved by acknowledging that digital technology offers convenience and by creating broader departments in the library; limiting it to two main user types: information users and entertainment users.

The solution arrived at through research, notes that future libraries should exist as a series of episodes fusing together numerous places and objects related to everyday life. It suggests that the episodes should be convenient; allowing people in the city to use them whilst on the move - constantly updating their intellectual, entertainment and social needs. It is argued that the library be recognisable yet varied - responding to both its individual and global site. The research addresses this further by undertaking a detailed design study using Christchurch's inner city as its example. The study unites connections between sites by establishing general criteria for internal spatial relationships - information, interaction and entertainment - and uses common digital technology and materiality to aid in further

connection. It is a new type of library that attempts to allow users to experience knowledge through interaction with both media and with other users.

This thesis concludes that the future will not see the public library rendered obsolete, but instead it will take a new form. The implications of digital representation do not limit this new form to virtualised space, but rather a space that can mediate the boundaries between virtual media and physical interaction. Technology offers the opportunity to redefine the library typology; whilst still maintaining the physical experience of 'visiting the library'. The result is a library system not as we know it. It is one that exists outside of general library conventions. It will be a new type of space driven by user demands, not by physical storage requirements. It will be a social activity rather than a fixed iconic building. Its social function will reconnect the city centre as a space for public activity; allowing the distribution of knowledge to be experienced rather than accessed. The future library will be a series of encounters, personal and united that reconnect it and its users with the city.

Reference List

- Altick, R. D. (1957). *The English Common Reader: A Social History of the Mass Reading Public 1800-1900*. Chicago, Illinois: The University of Chicago Press.
- ASED. (2008). The Virtual Graveyard. *Volume*, 15(1), 38-41.
- Assmann, J. (2001). Libraries in the Ancient World - with Special Reference to Ancient Egypt. In S. Bieri & W. Fuchs (Eds.), *Building for books : traditions and visions* (pp. 50 - 67). Boston: Birkhauser.
- Basar, S. (2004). Reads Like Teen Spirit. *Blueprint*(221), 54 - 61.
- Begg, R. (2009). Death or diversification? The use of space in public library buildings. *Aslib Proceedings: New Information Perspectives*, 61(6), 619-635.
- Bruijnzeels, R. (2008). Design Criteria for the Library of Tomorrow. *Volume*, 15(1), 10-12.
- The Benton Foundation. *Buildings, Books, and Bytes*. (1996). Retrieved 28.4.10, 2010, from:
<http://www.benton.org/archive/publibrary/kellogg/buildings.html>
- Camnitzer, L. (2008). The Last Book. *Volume*, 15(1), 22 - 31
- Carnegie, A. (1906). The Gospel of Wealth. *The North American Review*, 183(599), 526-537.
- Casson, L. (2001). *Libraries in the ancient world*. New Haven: Yale University Press.
- Cheek, L. W. (2004). Reading Rem. *Architecture*, 93(7), 39 - 47.
- Christchurch City Council. (2008). 3D CAD Model of Christchurch Central City. Retrieved 28.6.2010.
- CIPFA. (2006). *Public Library Statistics 2006-07 Estimates and 2005-06 Actuals*. Retrieved 2.11.2010, from:
http://cipfa.org.uk/press/press_show.cfm?print=yes&news_ID=26181
- Cook, P., & Hawley, C. (1979). Trondheim Library. *Architectural Design*, 49(12), 332-337.
- Foucault, M. (1986). Of Other Spaces. *Diacritics*, 16(1), 22-27.
- Gorman, M. (2000). *Our enduring values : librarianship in the 21st century*. Chicago [Ill.]: American Library Association.
- Gorman, M. (2002). The value and values of libraries: A talk given at the "Celebration of Libraries" Seldion Theatre. *Bodleian Library record*, XII(6), 449-463.

- Goulding, A. (2009). Engaging with community engagement: public libraries and citizen involvement. *New Library World*, 110(1), 37-51.
- Grafton, A. (2007). Future Reading : Digitization and its discontents. *The New Yorker*, 83(34), 50. Retrieved 4.3.2010, from: http://www.newyorker.com/reporting/2007/11/05/071105fa_fact_grafton#ixzz0gao18ebw
- Hammond, M. (2002). "The Great Fiction Bore". Free Libraries and the Construction of a Reading Public in England, 1880-1914. [Journal]. *Libraries and Culture*, 37(2), 83-108.
- Hardison, O. (1990). *Disappearing through the skylight: culture and technology in the twentieth century*. London: Penguin Books.
- Harrison, K. C. (1977). *The library and the community* London : A. Deutsch.
- Jackson, D. (1995). Vessels of Knowledge. *Architecture Australia*, 84(2), 32-39.
- Jones, P. B. (1994). Brought to Book. *Architectural Review*, 194(1164), 41-51.
- Klingmann, A. (2001). Libraries as Information Landscapes. In S. Bieri & W. Fuchs (Eds.), *Building for books : traditions and visions* (pp. 50 - 67). Boston: Birkhauser.
- Koolhaas, R. (2001). *Prada*. Milan: Fondazione Prada Edizioni.
- Lamprecht, Barbara. (2004). The nice and the good. *Architectural Review*, 216(1290), 52-57
- Lanham, R. A. (1989). The Electronic Word: Literary Study and the Digital Revolution. *New Literary History*, 20(2), 266-290.
- Landow, G. P. (1877). Light Reading with a Vengeance. *Punch, or the London Charivari*, 72, 30.
- Lovink, G. (2008). Knowledge Struggle: The People vs. the Internet. *Volume*, 15(1), 32-33.
- Manauth, G., & Twilley, N. (2008). Useless Libraries. *Volume*, 15(1), 8-9.
- Manley, K. A. (2000). Booksellers, peruke-makers, and rabbit-merchants: the growth of circulating libraries in the eighteenth century. In R. Myers, M. Harris & G. Mandelbrote (Eds.), *Libraries and the book trade : /the formation of collections from the sixteenth to the twentieth century* (pp. 29-50). New Castle, Del.: Oak Knoll Press.
- Mattern, S. C. (2007). *The new downtown library : designing with communities*. Minneapolis: University of Minnesota Press.
- Molz, R. K., & Dain, P. (1999). *Civic space/cyberspace : the American public library in the information age*. Cambridge, Mass.: MIT Press,c.
- Murison, W. J. (1988). *The public library : its origins, purpose and significance*. London: Bingley.
- Olson, S. (2004). Thanks to OMA's blending of cool information technology and warm public spaces, SEATTLE'S CENTRAL LIBRARY kindles book lust. *Architectural Record*, 192(7), 88 - 101.

- Oosterman, A., & Clancy, D. (2008). Search and Access Google Books: Interview with Dan Clancy. *Volume, 15*(1), 34-36.
- Peter Cook and Christine Hawley 1972-79. (1980). *Architecture and Urbanism : A + U, Special Issue, 2*(113), 15-116.
- Radcliffe, F. G. (1916). *Fairlie Public Library*. Image retrieved 12.5.2010, from: National Library of New Zealand
- Ranganathan, S. R. (1963). *The five laws of library science*. Bombay: Asia Publishing House.
- Richardson, E. C. (1914). *Biblical Libraries: A Sketch of Library History from 3400 B.C to A.D 150*. Princeton, NJ: Princeton University Press.
- Roudaut, J. (2001). Libraries and Their People. In S. Bieri & W. Fuchs (Eds.), *Building for books : traditions and visions* (pp. 286-301). Boston: Birkhauser.
- Sanin, F. (1994). *Münster City Library : Architekturbüro Bolles-Wilson + Partner*. London: Phaidon.
- Seattle Public Library, OMA/LMN*. (2005). Barcelona: bActar.
- Smiles, S. (1879). *Self Help: With Illustrations of Conduct and Perseverance*. London: John Murray.
- Smith, Z. (2010). Generation Why? *The New York Review of Books*. Retrieved 12.11.2010, from: <http://www.nybooks.com/articles/archives/2010/nov/25/generation-why/?pagination=false>
- Suzuki, A. (2008). smt 2.0. *Volume, 15*(1), 66 - 68.
- Thats How the Light Gets In. (2010). *Hereford's Mappa Mundi*. Retrieved 30.10.2010, from: <http://gerryco23.wordpress.com/2010/09/21/heres-mappa-mundi/>
- Van der Werf, H. H. (2010). *The architecture of knowledge. The library of the future*. Rotterdam : NAI.
- Van Schaik, L. (1987). Architekturbüro Bolles and Wilson. *Transition Discourse on Architecture*(22-23), 74-79.
- Van Slyck, A. A. (1995). *Free to all : Carnegie libraries & American culture, 1890-1920*. Chicago: University of Chicago Press.
- Van Slyck, A. A. (2000). Libraries: A New Chapter. *Architectural Record*, 188(10), 151 - 153.
- Vermeulen, P. (1994). A dragon and three little elephants: Recent work in Münster by Julia Bolles and Peter Wilson. *Archis*(12), 36-45.
- Wilson, P. (1994). Architekturbüro Bolles-Wilson: New City Library, Münster, Germany, design: 1987-90; construction: 1991-93. *GA Document*(40), 84-103.

Appendix 1

Human Ethics Approval



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MEMORANDUM

TO	Jimmy Gray
COPY TO	Tobias Danielmeier
FROM	Dr Allison Kirkman, Convener, Human Ethics Committee
DATE	13 July 2010
PAGES	1
SUBJECT	Ethics Approval: No 17819 Further Reading

Thank you for your applications for ethical approval, which have now been considered by the Standing Committee of the Human Ethics Committee.

Your applications have been approved from the above date and this approval continues until 2 December 2010. If your data collection is not completed by this date you should apply to the Human Ethics Committee for an extension to this approval.

Best wishes with the research.

Allison Kirkman
Convener

Appendix 2

Survey Results

The purpose of this questionnaire is to establish how the public relate to their public library, what they deem to be of most importance and what is of concern. This information will be helpful in establishing how people perceive the library institution, what its role might be in the future, and what types of media it might present - books or other. The questionnaire is strictly for use in the Architectural Masters (Professional) Thesis : *Further Reading* and will not be used in any other documentation. It has gained Ethics Approval as per the Human Ethics Committee policy at Victoria University of Wellington. All participants will remain anonymous and the answer forms will be disposed of once calculations have been completed. Thank you for taking the time to complete this form, your time is greatly appreciated.

1. What is your age bracket?

(please circle)

(74)

younger than 15

(5)

15 - 19

(7)

20 - 24

(7)

25 - 29

(6)

30 - 39

(10)

40 - 49

(12)

50 - 59

(10)

60 and older

(17)

2. Do you visit the public library more than twice a year?

(please circle)

(74)

YES (*go to question 3.0*)

(54)

NO (*go to question 4.0*)

(20)

3. How often do you visit the public library?

(please circle)

(74)

once every six months

(4)

once every three months

(12)

once a month

(19)

weekly

(19)

daily

(4)

(go to question 5.0)

4. Why don't you visit the public library more often?

(please tick all relevant answers)

too difficult to get to (please expand)

can access all the information I need at home

(14)

doesn't meet my needs and/or requirements

(6)

other (please expand)

(3)

5. Why do you visit the public library?

(please tick all relevant answers)

to study

(16)

to gather information of interest

(37)

to read in spare time

(30)

to meet people

(23)

to rest and relax

(7)

to accompany children

(18)

other interests (please expand)

6. What do you find of most value to you in the public library?

(please number in order of preference: 1 = most value 8 = least value)

(2011)

books	(129)
periodicals (journals)	(240)
e journals	(305)
entertainment magazines	(224)
CD-ROMs	(330)
DVDs	(277)
Music	(274)
internet	(232)
other (please expand)	

7. What would you like to see more of in the public library?

(please tick all relevant answers)

arts programmes	(25)
lectures	(12)
performances	(19)
exhibitions	(33)
restaurants	(22)
longer operating hours	(34)
wireless internet access	(36)
children programmes	(26)
meeting/gathering spaces	(34)
shopping	(20)
meeting authors	(18)
interactive library tutorials	(11)
other (please expand)	

8. What is your perception of the public library?

(please number in order of preference: 1 = most important 7 = least important)

(1864)

a place that stores books	(299)
a place to access books	(212)
a place that stores a variety of media/information	(272)
a place to access a variety of media/information	(201)
a place to find up to date information	(246)
a place to study	(324)
a place to meet and collaborate	(310)
other (please define)	

9. Do you see relevance for the public library in its current state in the future?

(Please circle)

(74)

YES	(48)
NO	(26)

10. What do you see to be most important in the public library's future?

(please number in order of preference: 1 = most important 9 = least important)

(2948)

accessible	(197)
mobility (being able to access whilst on the move)	(267)
books	(321)
internet	(307)
new forms of media/information	(281)
public meeting space	(409)
public activity	(382)
cultural institution	(397)
entertainment	(387)
other (please expand)	

