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mPlace: a Place for the Consumption of Digital Media
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By

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A steady stream of “1”’s and “0”’s can represent nearly anything the human imagination can conjure. All the limitless of our creation can be translated into a medium that can be replicated with uncanny ease, while at the same time preserved for an indefinite period of time. It is possible for bits to never die, being refreshed by replication in the corpus of a technological infrastructure like the cells of our own body. This is the essence of digital media, and its inherent lack of spatial quantity is a troublesome problem for the discipline of architecture. To answer this challenge is to justify the need for space and the need for human interaction in a world where the digital transfer of ideas can nearly negate the need for these things. Experience of media, particularly the social experience of media, is the only context for digital media to exist while still living up to its potential. It is the intention of this thesis to evolve our current understanding of the media retail environment into a model that more closely approximates this need for experience instead of shelving to sell digital media.
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Introduction

The inexorable growth of digital technology as a vehicle of social and cultural interaction, particularly in regards to media and information consumption, carries with it a series of implications for the basic structure of socialization we as humans relate to each other and to the world at large. More specifically, the implication for media (books, music, video, etc)—by way of their easily replicable nature—is infinite availability and variety. This results in an inundation of variety and possibility that supersedes our current structure of media production and consumption.

The implications and theoretical postulations of living in a world driven by the flow of digital information have been thoroughly discussed by such authors as Negroponte, Mitchell, and others. Their writings will form the basis of the discussion on media in the first chapter, and highlight the problem in our current model of media retail. In addition, the chapter on media will introduce the types of spaces required for the consumption of the individual media types.

The chapter on consumption will concern itself primarily with social consumption and its utilization in defining the need for space in a technologically driven model of media retail. This chapter will introduce rules for the arrangement of spaces to best serve the needs of social consumption.
The chapter on place will underscore the need for unique place in the broader technologically driven world, as well as define architectural objectives for the materiality and articulation of the spaces and arrangements introduced in the first two chapters.

In addition, there are several precedents for entities (both physical and virtual) centered on the consumption of media, with the ZKM (Zentrum für Kunst und Medientechnologie) in Karlsruhe, Germany, and the Sony Center Potsdamer Platz in Berlin, Germany being of particular relevance to this discussion. These physical precedents will be evaluated along with the website Amazon.com and digital media player iTunes. They will be evaluated along the lines of the criteria outlined summarized at the end of the chapter on place.

The conjecture is that the mere possibility of obtaining the media one chooses without person to person interaction is superseded by an innate desire to be a part of a community, with an identity focused around the form and nature of the media consumed. The consumption and experience of the media can become a social function with technology as its engine. Further, this community will need a physical infrastructure as well as a digital one, to reinforce the idea of actual human interaction as being the principal generator of human civilization.

The research will produce a theoretical basis for the design of a series of prototypes existing at three scales, which will be discussed in the last chapter. The
program of the building will be derived via the needs of the individual types, so arranged to comply with the rules needed to make media consumption social, and articulated architecturally in a manner suited to a technologically driven building. The prototypes are intended to manifest themselves in existing public spaces, replace spaces within existing media outlets centered on media storage, and stand alone as media retail outlets, respectively.

As a result of this exploration, this thesis will further the understanding of the nature and potential of the digital technology and its impact on the leisurely consumption of digital media in our daily lives.
As the collection of above definitions demonstrates, the word “media”, in the etymological sense, carries with it a duality of meaning. “Media” can be seen as both the non physical, abstract notion of the artistic method—the film, song, or novel—as well as the physical manifestation of the artistic work—the DVD, MP3, or the book. When a user views a movie, listens to music, or reads a book, that user is consuming a creative, if not artistic, expression via a personal interaction with the physical manifestation of the work. At its heart, the creative work is an expression of an idea, so it is therefore sensible to conclude that the film is not the DVD, the novel or essay is not necessarily the book, and that the music is not the CD. These physical manifestations are merely vessels for the convenient distribution of the information.

The physical, or digital, capture and manifestation of an event or an idea is the moment that event or idea becomes media. However, the advent of digital

http://dictionary.reference.com/search?q=media
technology has resulted in scrolls of papyrus, celluloid film strips, and phonograph records evolving into a series of 1’s and 0’s. These 1’s and 0’s, or ‘bits’, are stored, retrieved and translated by digital technology and presented to the user via a screen and/or a speaker. While this evolution itself does not change much in the way media is experienced, it does provide for the potential liberation of most forms of media from their respective physical vessels in two ways—miniaturization and reproducibility.

In the case of miniaturization, the computer allows the physical reality and physical representation of the media to be rendered into such a small format (miniature electromagnetic encodings on a hard disk or memory module small enough to be taken anywhere) that its spatial implications are effectively negligible (see Figure 2). The second result of the digitization of a particular piece is the infinite replicability of the digital file. The digital transcription of information results in a copy with exact fidelity to the original, unlike the analog methods used to copy media previously. For example, a cassette tape cannot be copied without a slight loss in quality, whereas the information on a CD can be transferred exactly as read to another CD. As long as the object on which the data is stored is kept intact, the nth generation copy of a copy of an original will suffer no loss in quality. The combination of these two characteristics of digital media provides a framework for the widespread dissemination of any work without the difficulties of shipping,
warehousing, or maintaining of inventory. By replacing the logistical dilemma of distributing physical artifacts with digital network connectivity, the result is the ultimate consumer’s paradise, the ability to obtain any media from anywhere.

These concepts of media unbound by the physical material on which they reside have been widely discussed by authors William J. Mitchell and Nicholas Negroponte. Both men have spent time as directors of the MIT Media Lab and have written about the impact of digital information in the mid 1990’s.

In an attempt to convey just how much digitization can impact the form of the environment in which media is consumed, Mitchell draws an analogy between the bookstore and the “bitstore”. In his book, *City of Bits*, he states, “The most obvious epicenter of this shakeup is the information business. And it is particularly instructive to consider the fate of one of its most familiar architectural manifestations, the book shop. Where will we find twenty-first-century Pickwicks?” He elaborates this point by asserting that the problem with physical media is that of distribution. The infrastructure required to reproduce a physical artifact, warehouse at one location, transport to another location, and stock at the point of sale is enormous. He offers instead the attempt of IBM and Blockbuster in 1993 to store recordings in digital format for distribution via computer network to kiosks in record stores. The idea was

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that the consumer would copy the data to CD format at the point of sale, thus eliminating the cost of inventory, warehousing and transportation, and theoretically providing the customer with a much wider selection.

Negroponte echoes this sentiment in the introduction to his book *Being Digital*, and offers the statistic that, in the case of textbooks, 45% of the cost is inventory, shipping, and returns\(^3\). He relates the story of a conference he attended in Vancouver which was intended to expose the participants to various works the company hosting the conference had under production, including video games, music videos, and movies. All of the content intended to be distributed at the conference was archived onto a CDs and video cassettes for distribution and shipped via FedEx. Due to a problem with customs, the physical manifestation of the information, the CDs, never arrived\(^4\). This exemplifies a distinct difference that Negroponte describes between physical artifacts, or atoms, and pieces of information rendered digitally, or bits. Atoms fall victim to being confined in space and needing time and energy to move, whereas bits can move at the speed of light and with relatively inconsequential effort. This ease of transmission is the ultimate advantage of digital media over any other sort.

\(^4\) Ibid, pg 12
From the perspective of the media, it is clear that the physical manifestation of information is a limiting factor in the media’s distribution. Since in digital form the media may be transmitted to any piece of infrastructure on the same network as a central storage facility, the product is in a very real way liberated. This is not to say that the media is ‘free’ in the most egalitarian sense of the word, as there are still economic concerns in the production of the media that still need to be addressed. The point is that there is no longer any reason for any movie, book, album, or even video game to be bound to a physical artifact, at least from the technological point of view.

The question Mitchell proposed about 21st century bookstores still remains. Given that a physical artifact is no longer necessary, does this mean that nearly all media transactions can take place in an abstract world of ‘1’s and ‘0’s? Possibly. What is the impact on the purchase of any piece of media when a physical place devoted to the sale of such media is no longer necessary?

When it comes to relating media to space (that is, digital media to physical space) the only way of conveying the presence of a media is to display, or play that media. Stacks of books and racks of CDs will no longer be necessary, but a way of experiencing the media will be. Experience of media, as will be elaborated upon in the next chapter, is one form of the consumption of the media. It is the relationship
between the experience of consuming the media and the social dynamics of media consumption that will inform the nature of the place.

Before the aspects of consumption and of place and eventually program and form of the facility can be defined, it is necessary to briefly examine the types of media that could be consumed within such a facility. In order to properly exploit the digital potential of the media, some aspects of preexisting media types prove more difficult while others are made simpler. To ensure that a space is actually required to consume the media, it will have to be demonstrably a social form of consumption. It will be important for the facility to provide for both the economic and experiential consumption of each of the media types.

Text

The creation of a system of writing is a fundamental step in the creation of a civilization. Writing, or text in the most objective of terms, is indicative of a society’s need to communicate an idea to future generations more precisely than the oral tradition. The evolution of text and writing has been so critical to the development of a civilization, that it pre-dates other media types by thousands of years (see Appendix B). Its longevity as a media type even in today’s multimedia environments is indicative of its significance in the conveyance of information.

As either a physical artifact or digital representation, text places the user most in control of the experience. Text lacks the strict temporal quality of audio and video
works. This means that a work can be read sentence by sentence at a pace and order that the user defines, contemplated in whole or in part, and finished at the user’s leisure. The technical infrastructure required to read text is relatively small even in digital format when compared to audio and visual media. This relationship can be seen in the bandwidth capacity of internet connections, where the lowest bandwidths are still adequate to transmit text data, but painfully slow to transmit audio and video.

Since the infrastructure required to communicate text is so low, there is a corresponding versatility of space that audio and video can only replicate with increasing technological sophistication. The ideal context for a person to read is alone, preferably quiet, and invariably well lit. Beyond the above criteria, there is little in the way of spatial requirements for the reading of text. In the case of a book, there is an inherent duality between book and reader that is rarely overcome, and makes the minimum spatial qualification fairly small. This is not the case when the reader is reading a book to an audience, as in a parent reading to a child or an author reading to a constituency of fans. In this case the book is a reason to establish a bond between the reader and the listener. This bond is, in a sense, the same as the connection between the book and the reader when there is no audience. The more people who share in this bond, the larger and more organized the space becomes (for reasons of acoustics, visual connection, etc). This is one

Figure 3: Being read to one form of social consumption of a book.
instance of the social consumption of books, whether they are novels, poetry, or nonfiction.

A second instance of social consumption occurs when a group of readers meet to discuss a work they have read. The ‘reading group’ is another case where the book becomes the reason for establishing a bond between the participants, where the result of the bond is not the experience of the authors work but the interpretation of the work. Exposure to an interpretation of the work can be just as significant an experience as the actual reading itself.

Audio

Though oral communication, i.e. speech, predates writing and text, civilization was behind on generating a method of actually recording sound. The first attempt at preserving sound for future playback comes with the development of musical notation, a method very similar to text and writing. It was not until the latter portions of the 19th century that analog recording was capable of providing an experience of the music without the music being performed again, and, even then, the experience was poor. Yet this method of analog recording, first accomplished by Thomas Edison with a cylinder of tin, marks one of the first captures of an actual event and its translation in to something resembling media as we would know it today (see fig. 5).

Audio—most often but not exclusively represented by music—is unique among the potential digital media types in that the experience of the media does not
require the participant’s full attention, as would a film or book. Music is often corollary to some other function, be it relaxation, work, socializing, or even functions as part of the experience of another media type, as in the case with a cinema score. Music can function in this same way whether the context is private or within a group.

Music can, of course, be listened to actively as a primary function of the experience, as in the case of a concert. It is interesting to note that in the case of a concert the accessory forms of stimulation such as lighting, video display, or simply the actions of the players as they articulate the notes on their instruments serve as a secondary means of experiencing the music. It is, however, possible to convey only part of a concert experience in the acoustic media alone. To go further would require the incorporation of video.

Video

Video, typically, is a medium which attempts to convey a narrative through visual means. It shares with audio the temporal qualities and active role it plays in its own consumption. It is in the nature of a film to be controlling. The frame controls what the viewer sees, leaving little to the imagination. This makes video different from audio and text from the sole perspective of the viewer’s imagination. Because of this controlling nature of video, a movie or other visual multimedia can be the most immersive media experience.
As opposed to the reading of books, the watching of video—or to be more specific, film—does not really change between individual consumption to consumption as part of a group. The only requisite criteria are that the screen be large enough so that all who gather to watch can see or that there are enough screens for every participant to accomplish the same. It is arguable that the experience of a film from within a group is heightened relative to experiencing the same film alone, but the model is still the same, the display and the viewer watching the display.

It is important to make note of the fact that audio and video share a set fundamental differences relative to text. These differences are the temporal quality of the media, and the active role the media plays in the experience of its consumption. Music, even if it is paused in playback, still has only one value for its duration; as opposed to text, where the user is in control of the pace of reading. In addition, music is listened to because it is sound, while a book is read because it cannot read itself (without becoming audio or video). The roles of active and passive involvement for the consumption of audio and video are reversed from the consumption of static text.

**Gaming**

In terms of active and passive roles and temporal quality, the play of a video or computer game actually has more in common with a book. Similar to the nature
of text, a video game has to be played by the user, and the user is in control of the pace at which he or she plays, although the objectives of the game do have an impact.

The multimedia computer game contains within itself some of the most developed strategies of experiential immersion and technology. When coupled with the social aspects of playing over a local area network, the game itself opens the door to new realms of interaction between individuals that other media cannot. A computer game is nearly the perfect manifestation of the idea of cyberspace. It has been programmed on a computer, the textures have been ‘painted’ on a computer, the volumes and shapes of the game’s environments have been modeled on a computer, its music is typically generated via a computer, and ultimately it is played on a computer of some kind. One of the only times the game can have any impact on the physical world is when it is packaged on a disk and distributed to the end users (if it is indeed packaged at all as opposed to downloaded). The only other instance is if a collection of players gather together to play, then place becomes important.

Summary: Spatial Context of Media Types

The media types of text, audio, video, and video game have several attributes in common. The first is that when they become fully digitized, they become proliferated along with the digital technology networks that carry them. In terms of
this thesis, this means that any space intended for their consumption must depend on the aspects of social consumption in order to provide the basis for an architectural response. Second, in order for any media to be consumed socially, it will require some kind of spatial context. Third, given the variety in scale at which any of the above media types can be socially consumed, a corresponding variety or versatility of space would need to be provided.

There are two ways in which all media can be consumed socially. The first is where all participants are consuming the same media, as in a theater (see fig. 9). The second is where any number of people are consuming any number of different media, casually, dynamically, or via browsing. What this amounts to is a media forum, and is conceived as a dynamic, constantly changing atmosphere dependent on the media being consumed by the people within (fig. 10). The theater is a preexisting typology, immediately recognizable, and already thoroughly engrained in our media society. Therefore, the mode of media consumption more appropriate for this architectural investigation is the Media Forum, since it represents a paradigm shift in our current model of media retail.

Each of the aforementioned media types lends something to the spatial dimension and relationship of the proposed media forum, and thus serves to influence the program of the proposed facility. While they may in some instances be
discreet contributions, and thus reflective of an exclusive use within a given space, there is enough overlap to provide for multiuse/multimedia spaces.

Text is the most solitary of the media types, since the user is in ultimate control of what is read. This does not mean that there cannot be spaces for the group consumption of text related topics, such as the reading group. As a result, there are three types of text consumption spaces: the individual browsing space at the smallest, with the reading group spaces in the middle, and the space where an individual reader can read to an assemblage of people as the largest.

Audio media can be exploited in a wide variety of spatial arrangements, from the individual to the very large group. The consumption can range from an individual with headphones connected to a portable media device, to an enormous gathering of people attending a concert, with a nightclub dance atmosphere in between. The individual with a pair of headphones is a highly mobile method of media consumption, while a group listening to the same audio feed is a potentially static configuration. This static/dynamic dichotomy can be the basis of consumption within the Audio Forum.

Video is the one of the most stringently arranged media types, since there always has to be a viewer looking at a screen. This constant can be carried throughout a series of scales in spaces taking their primary formal cues from the idea of the theater. The theater of one person looking at a portable screen is not much different...
from a large auditorium of people looking at one large screen. The spatial result is a series of “theaters” for the individual, and a series of “theaters” for groups.

Videogames are the result of a hybridization of the three above mentioned media types with a heightened level of user activity. The essential consumption configuration is a player, a screen, and an interface. The implication for a Videogame Forum is a place for the user—with the interface, and a place for the screen.

These spaces will be given more distinction in the chapter on program, after the respective discussions of social consumption, experiential place, and precedents have been concluded.
Chapter 2: Consumption

Given the last chapters exploration into the nature of digital media, it is worth while to consider what the nature of the consumption of that media is. This consideration of consumption is important since the unique way that media is consumed within this place is the justification for it to be a place at all. The definitions above have a clear relationship with economics, or the simple need for commerce to occur as part of the consumption. Commerce means revenue for the facility and revenue for the creative players who produce the media consumed, thus ensuring that the supply of media keeps coming. In addition to the simple economic need within consumption, there are also aspects of social interaction and experiential qualities that come more into play when consumption is used as the driving force behind the design of a facility.

Mitchell again surfaces with a theory of economic functionality for a business based on bits. The model of exchange of intellectual property changes when it meets the digital realm, since the physical artifact is no longer incorporated to

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5 http://dictionary.reference.com/search?q=consume
6 http://dictionary.reference.com/search?q=consumption
transmit the information. Instead the information exists independently and in a manner where it can be infinitely replicated. A book in a library is owned by a library and is controlled by the library. Only one person can check a particular book out at a time. But in a digital library the setup has to be different. The only strategy for commerce in the business of bits is controlling access to the information. Since the access to information over a technological network—especially a wireless one—negates the need for specific space, a place for the consumption of digital media must exhibit different characteristics of consumption.

It is Torstein Velben who introduces us to the idea of ‘conspicuous consumption’ in his seminal work *Theory of the Leisure Class*. Within the model of conspicuous consumption, the class of the individual is made legible by the nature of that person’s leisure. The higher the class of the individual, the more conspicuous (and quite possibly ostentatious) his leisure activities become.

This can be related to digital media in one particular fashion: the quality and quantity of media that an individual has in his or her ‘library’ tells us of the cultural class in which that person belongs. In a materialistic, information driven society, the person who is abreast of the current trends (or, even better, beyond the latest trends

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8 http://xroads.virginia.edu/~HYPER/VEBLEN/chap04.html
or above them) enjoys a certain advantage and respect. Within a given subculture they are the ones who know the best bands, have seen the best films, read their Chomsky, etc. They are the cognoscenti, and they are to be envied, emulated, and respected. This concept is equally true whether or not the media consumed is digital or physical.

A second dimension to the idea of conspicuous consumption as it relates to digital media is its applicability to technology as well. To be techno-savvy enough, or at least computer literate enough, to download music (legally or illegally), possessing the sleek new computer or media player, or being versed in the specific terminology becomes a status in and of itself.

Being ‘in the know’ about media, and correspondingly being ‘in the know’ about technology, are the two primary social signifiers of the class of people who would use a facility designed as a place for the consumption of media. Part of the function of such a facility would be to provide a forum for the expression of this social status. This means that the visitors will need to interact and explore the available media to find what suits them, and need to interact with other visitors on a regular basis, in order to establish their place within the group. Beyond all this, they need to be entertained and have a good time.

In addition to the social aspects, the consumption of digital media also encompasses the phenomenon of experience. Dutch authors Fritz Giersberg and

Figure 11: Apple’s iPod as fashion accessory and status symbol
Bas Vroege discuss this point in the introduction to the book they compiled, *Experience, the Media Rat Race*. In it, they discuss the nature of media and architecture as being ultimately about experience. They draw a comparison between the trends in branding products as having experiential qualities and the resultant architectures that are produced to reinforce this point, such as kitchens made ready for the demonstration of products for sale and visitor centers at Volkswagen factories. The purpose of the architecture is to provide an environment conducive to the experience of the product. An example of an environment so consumer driven and fantasy oriented is Disneyland. Key to both Disneyland and its architecture of experience is the immersive quality of the environment. Without immersion the illusion could not be complete and the experience is weak. Gierstberg and Vroege conclude with the idea that the reality of the environment is irrelevant as long as the experience itself is real and memorable. This is the “Been there, done that, bought the T-shirt” mentality that neatly sums up the consumerist nature of experience and the need for a tangible memory of a unique, personal experience.9

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This relates quite well to the consumption of digital media, since in the absence of the spatial needs of the media storage, the experience of the consumption and the consumption of experience is the motivating factor in defining space. The ideal manifestation of the tangible memory of a media experience would be akin to a souvenir CD or DVD of a concert you attended, or even simply the access to the data as a means to get around even the physical need of a tangible memory. One could relive, or re-experience, the original experience at any time.

Of the three aspects of consumption outlined above, the ones more concerned with the formulation of space are the social and experiential. In order for a facility to function properly as a place for the consumption of media, it has to provide for the social and experiential aspects of consumption. If a space intended for the consumption of media does not provide for social interaction and media experience, and provides only for the economic mode of consumption, then the need for the space is negated in a system of proliferated technology. This is bad news for architecture, and one needs only to look at the Amazon.com or iTunes Music Store model of media retail for confirmation of this.

The first step in satisfying the social aspects of media consumption is to accommodate the varying scales of user participation as outlined for each media in the preceding chapter. This means providing both space for structured activity and
informal interaction. The activities programmed for the facility will have to correspond to the inherent natures of the media they are designed to enhance. The technological infrastructure within the facility can formulate book clubs and reading groups, listening groups or even concerts, film festivals, clans or ladders for the gamers, all dictated by the interests of people who buy their media from the facility. This arrangement can happen almost automatically because the technology of the facility can track the preferences and tastes of its users and respond dynamically, much in the way Amazon.com and iTunes do already. The result is that the facility is versatile enough to transform itself as its constituency needs while being a vehicle for the constituency to gain access to the infinite variety of media just waiting for them to discover.

The end result is that the facility will have to experientially provide for the users to communicate their consumption in two ways. The first is if you are doing something (i.e. consuming media) then someone has to be able to see you doing it. The second is if you have something in your library, the facility has to be able to communicate that to the other users. As a result, the experience of the facility will allow for the users to interact with each other around the media.

By attempting to satisfy the experiential and social aspects of consumption, in addition to the commercial exchange of information, an argument can be made that a place for the consumption of digital media should be a real place, as opposed to

Figure 13: Amazon.com compiles recommendations based on your previous purchases. A similar technique can be used for programming future activities.
simply being a virtual space. Place, and its nature as a forum for the commercial, social, and experiential aspects of digital media consumption, is the subject of the next chapter.
Chapter 3: Place

As the chapter on consumption began to explore, there is more to the consumption of media than the purchase of or the act of accessing the information. The social dynamics of status as defined by consumption, and the experience of consumption are what remain after the spatial needs of physical media are eliminated, and it is these two concepts combined that underscore the importance of place as being necessary for the social and human factors associated with the consumption of media. The above definitions speak of place very abstractly, but they have in common themes of adequacy, propriety, and function, dependent on the particular usage of a space.

Mitchell discusses the importance of space in an essay published in the book *This is Not Architecture*, a volume interpreting the realities created in a media landscape. In this essay he states “The special qualities of particular places are

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Figure 14: Technological networks are becoming more and more prolific.
more important, not less so, in the digital electronic era. This will come as a surprise
to acolytes of the now standard e-gospel – the narrative of an electronically shrunken
planet, a weightless economy and an era of anything anywhere.”

Mitchell describes for us two potential extremes of societies focused on digital
technology, and then examines some of the implications that digital technology has
regarding the physical environment. The first scenario is entitled “Vatville”, in which
people are reduced to the equivalent of brains in their respective vats, supplied with
all of their essential needs by their local infrastructure, communicating with the rest of
the world via the digital infrastructure of a high-speed, high-bandwidth network.
Isolation, anonymity, impersonality, virtual reality and virtual relationships are enabled
by the self contained ‘vat’, and the place with the better infrastructure is the better
place to be. The second scenario is called “Swarmcity”, where all people are
connect-able and their locations dynamic, all made possible by
telecommunications. It is a society of electronically enhanced hunter-gatherers
searching for their goals (“food, fuel, campsites, shelter, points of interest, the
companionship of their friends, opportunities for confrontation, customers, victims,
raves, or whatever”). Their unencumbered mobility is a necessity, while landmarks
become temporary and transient, based on their given situation. The relative

11 Mitchell, William J. “The Revenge of Place” in Rattenbury, Kester, ed. This is not Architecture.
importance of a location is determined based on its being the focus of an “electronic pointer”, which is aimed based on personal interest, essentially the GPS of selected destination so picked because it has something the individual wants.\textsuperscript{12}

Mitchell uses the events of September 11, 2001 as a real life example of the relationship between these two hypothetical, idealized scenarios. The towers of the World Trade Center represent Vatville. Their power, prominence and location within the financial heart of Manhattan made them inviting, while their spatial concentration made them vulnerable. The terrorist network which destroyed them is indicative of Swarmcity; modern, telecommunicating, and mobile. They were dependent on the infrastructures of transportation and mobile communication to accomplish their goals.\textsuperscript{13}

The end result of this exploration is that place becomes attractive for the following reasons: fixed attractions (water in a desert, scenery, climate), accessibility advantages (techno/mobile infrastructure, proximity and connections), and stability advantages (maintenance of investment in infrastructure). Vatville is a static model of these characteristics, while Swarmcity is a dynamic one.\textsuperscript{14}

\textsuperscript{12} Mitchell, William J. “The Revenge of Place” in Rattenbury, Kester, ed. \textit{This is not Architecture}. Routledge: New York, NY, USA. 2002. pg 46
\textsuperscript{13} Ibid. pg 48.
\textsuperscript{14} Ibid. pg 50
The proliferation of efficient networks, particularly of digital telecommunication, undermines the model of place worth previously outlined because the features of commodified accessibility become equally ubiquitous. It is in this new model of potentially irrelevant place where Mitchell says that worthwhile place has its "revenge". To be competitive, places have to have something you cannot find anywhere else.

This need of unique character is the same as the need for a paradigm shift in the way media is accessed and consumed, and it is the purpose of this project to satisfy that need. Architecturally exploiting the rules of openly consuming media and an experiential representation of media library content is what will make the spaces required to consume the individual media types (as outlined in the chapter on media) unique. To achieve this end, the social consumption of the media must first be emphasized. Visitors to this facility are intended to utilize it as a source for media lifestyle, and a dynamic is set up where the facility influences the media that the visitors consume, while the media that the visitors consume influences the activities held within the facility.

The social nature of these activities are intended to enhance the second unique aspect of this facility, that of experience. The experience of consuming media in this forum is intended to be more than simply purchasing the access to the information; it is accessing the information while keeping tabs on what other
individuals are accessing. This experiential quality is inextricably linked with the social interaction.

These motives form the basis of the intent behind the program of this facility, but do not yet address the aspects of form or quite the content that the facility will need. The specific architectural tactics this facility will employ to address these concerns will be outlined in the Proposal chapter. There are however, other implications that digital technology has for architectural expression. Those implications are the next topic of investigation.

Italian author Luigi Prestinenza Puglisi discusses the architecture of technology in his book *HyperArchitecture: Spaces in the Electronic Age*. He begins his discussion by examining the Pompidou Center in Paris as an “antecedent” of buildings driven by technology. Drawing more from the original design intentions of architects Renzo Piano, Richard Rogers, and Gianfranco Franchini, than the eventually completed building, Puglisi presents the Pompidou Center as being an exemplar of three traits: *immateriality, sensoriality*, and *multimediality*.15

The immateriality of the Pompidou Center is displayed chiefly in its material palette. Transparency via glass, skeletal steel framing, and exposure of mechanical and circulation systems serve to break down the façade of the building and, at least

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experientially, blur the boundary between the building and its context. Puglisi relates this to the Archigram practice of devaluing traditional ideas of architectural composition, leaving the emphasis on making connections between spaces, function, systems, and activities which flow together in an immaterial way.\textsuperscript{16}

Puglisi cites the Mediatheque Sendai by Toyo Ito as another example of this immateriality of form. In the use of a glazed façade and structural expression that can best be described as forested columns, a similar effect is achieved to that of the Pompidou center.

What this notion of immateriality could mean for the architecture of the proposed facility is an exploitation of the indeterminacy of the boundary, both between the building and its context, and between the spaces within the building. The boundary of the proposed building could exist not as a succinct, singular entity, but as a composite layering of structure, enclosure, and circulation. The visual effect of this layering and system articulation is what most successfully conveys this immateriality, as the experience of such a form allows for the visual and physical permeation on the part of the visitor. Immateriality can be coupled with the rule of social consumption to see and be seen consuming media, resulting in a potentially powerful driving force in the design of the building.

\textsuperscript{16} Ibid. pg 10.
Sensoriality, the second trait defined by Puglisi, is the building’s interaction with its users and its context. As part of the original design of the Pompidou Center, the building was intended to be configurable to a diverse range of possibilities. The floors were to move, the walls were to move, the mechanical systems were supposed to be easily maintained and replaced. Rogers described the building as a system of muscles controlled by an electronic nervous system, sensing environmental change and responding to individual requirements.\(^{17}\)

The concept of sensoriality, as Puglisi defines it, relates closely to the mode of consumption described in the last chapter, in particular the provision of a versatile facility that might change depending on how and what the visitors to the facility need to consume. Whether this results in literally reconfigurable space or otherwise highly versatile space remains to be seen, but both are similarly applicable under the idea of sensoriality.

Multimediality is the last concept that Puglisi uses to describe the Pompidou Center. This comes first and foremost from the intention for the building to convey messages in a fashion integral to its fabric. It was part of the original intent in the competition winning entry to integrate a screen into the façade of the facility, which would display information concerning upcoming events, news and other points of

\(^{17}\) Ibid. pg 10.
interest to the public outside. If done properly, the building actually becomes a screen that emits lights and sound while communicating information. Puglisi also relates this concept to the immersive commercial environments of Tokyo and Times Square in New York. ¹⁸

Multimediality, particularly as it relates to integration into the systems of a building, is the most self evident of the above principles to apply to a place for the consumption of digital media. Integration of the presentation of the media into the fabric of the building serves to reinforce the intention of the place to be driven by the consumption of media. The thoughtful integration of technology into the fabric of the building can also serve to address the second rule of social consumption, the expression of media library. This integration will also serve to make the experience of the facility more encompassing and complete, and respond to the trend towards ubiquity of media in a technologically saturated society.

**Summary: Criteria for the Evaluation of Precedents and Design**

The chapters leading up to this point delineate a set of criteria for the analysis of the precedents in the next chapter and for the evaluation of the eventual design project.

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¹⁸ Ibid. pg. 10.
The first of these criteria is derived from the nature of digital media and is the independence of the media from physical artifact space. This is not to say that if an emphasis on the storage of physical media is found within a precedent that that precedent is invalid, but rather that precedent will need to be reconfigured or utilized as a basis for reinterpretation in the final project. The second criterion is the satisfaction of the spatial requirements for media consumption as described in the section on the spatial contexts of media types.

Third and fourth criteria are the exploitation of the two rules required for social consumption and experiential consumption in the function of the precedent. Since a place for the consumption of digital media can no longer function on the basis of purely economic distribution, it must depend on the experience of consumption and the consumption of the experience. Again the two rules are to see and be seen consuming media, and the communication of the media library to the other users in the facility.

The last three of these criteria are the ones described by Puglisi as being exemplary in the design intentions behind the Pompidou Center: immateriality, sensoriality, and multimediality. Immateriality being defined as the breaking down of the mass of the building via the layering of envelope, structure, and circulation and the capitalization on the effects of transparency; sensoriality as being the ability of the building to “flex” to accommodate a dynamic function; and multimediality as being
the ability of the building to convey a series of messages across a variety of media. In instances where the precedent is not a building, the above concepts must be applied abstractly.

By evaluating the precedents in the next chapter on the above criteria, it is the intention that the design project to follow will respond to the tactics employed by the precedents and thus be informed logically and coherently by the ideas set forth in the preceding chapters.
A place for the leisurely consumption of digital media does not immediately have a given form or program content. However, with the study of several precedents in the respective realms of the distribution and experience of digital media, several logical inferences can be made that will help inform the design of such a facility.

The specific architectural examples were chosen because of their intentions as facilities as places for media consumption. The first example, ZKM Karlsruhe, was intended to be an educational and cultural institution with media technology as its focus. Sony Center at Potsdamer Platz is an example of the more social idea of a media environment implemented on an urban design scale. The formal and programmatic strategies in the above examples are intended to provide a starting point for the formal and programmatic strategies of the proposed facility.

The non-architectural examples provided are intended to inform the design of the proposed facility on a more abstract level. Amazon.com is an online retail store that sells not only media but a nearly infinite variety of consumer goods, and the store’s methods of presenting this variety in a manageable fashion is of particular note. iTunes is similar in nature to Amazon.com, but also serves as a model for versatility and integration of media experience, socialization, and acquisition.
ZKM Karlsruhe

The Zentrum fur Kunst und Medientechnologie Karlsruhe, or Center for Art and Media Technology in Karlsruhe, Germany is a 76,000 m² (818,000 s.f.) renovation and addition to an early 20th century munitions factory. Completed in 1997 by architects Schweger and Partner, it houses four municipal and state level institutions, the Center for Art and Media Technology, State Design Academy, State Museum of New Art, and the Municipal Gallery. The four institutions together are intended to form a complete world of digital media experience19.

The original designs for the ZKM were done by Rem Koolhaas, who won a competition when the center was intended to be comprised of two facilities. The city elected to consolidate the entities that comprise the ZKM into a singular facility located at the former Industriewerke Karlsruhe-Augsburg factory site, at which point Schweger and Partner won a separate competition based on the new site criteria.20

In the original Koolhaas scheme, the functions of the ZKM were integrated with a train station and sited adjacent to a major motorway. Koolhaas intended for the building to exist at the intersection of these modern urban elements and the traditional Baroque nature of the city of Karlsruhe. As a result, the building could

19 Klotz, Heinrich. “Centro per l’arte e le tecnologie dei media, Karlsruhe, Germania” Domus, issue 805, 1998, pg 97
function as a vehicle for experiencing the city, as well as the media the museum was intended to hold.\textsuperscript{21}

The design of the Koolhaas facility was arranged abstractly about a series of “axes”: connection to the city, circulation within the building, and verticality. The actual formal composition of the spaces was driven by locating the primary experiential spaces rising through the center of the building, surrounded by servant spaces of circulation, offices, technology support, and balconies. The character of the building was designed to be more and more theatrical as the vertical progression to the upper museum floors was completed.\textsuperscript{22}

This public circulation system was intended to snake around the experiential spaces at the core and penetrate into and through them at strategic locations, scripting the exposure to the center’s activities.\textsuperscript{23} There is a lesson to be learned from this usage of sequencing spaces along the path of circulation, or the architectural promenade that is the essence of the Koolhaas design. In all the enormity of the proposed project, including spaces for public transit, research, production, education, preservation, and display of media and technology, a legible method for experiencing the facility emerges. Given the potential for point to point

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure22.png}
\caption{Conceptual axon of spaces within Koolhaas’ ZKM scheme.}
\end{figure}

\begin{thebibliography}{99}
\bibitem{Ibid} Ibid. pg 32
\bibitem{OMA} OMA@work.a+u. Tokyo, Japan: a+u Publishing Co., Ltd., 2000, pg 254.
\end{thebibliography}
circulation as each individual component of the program is visited, the sequence of events is clearly defined. The programmed spaces are divided experientially by the circulation paths, an arrangement which serves to emphasize the individual experiential spaces as discreet entities. The discreetness of the experiential spaces in Koolhaas’ design is emphasized by the utilization of vierendeel trusses, providing for vast column free spaces at every other floor and the definition of those rooms as pure geometric volumes.

The sequencing of the spaces is representative of one way of presenting a project with such a diverse range of content in a logical way. The system of circulation serves to provide access to each discreet program function, much in the same way a retail outlet, whether virtual or physical, has its inventory divided typologically as a way of easing the “browsing” of the shopper. This particular ingredient in the un-built ZKM project lends a clear formal strategy for circulation as it applies to the experience of space. A scripted path of circulation provides a clear method of controlling the experience and ensures that the user will be given a thorough exploration of the facility merely by following the path. The benefit of this strategy to media retail is that the customer might be encouraged to buy more if he is exposed to more products.

Koolhaas’ design was complete by 1989. This is before the theoretical works of Mitchell and Negroponte mentioned in the earlier chapters. Consequently, the
project places an emphasis on the technology of the media and devotes a significant amount of space to technical aspects of the building. The progress of technology since 1989 has been significant (see Appendix B), as a result, the spaces required for technology has shrunk dramatically. This leaves technology a poor choice of driving principal in a building design.

It is difficult to analyze the un-built work in terms of the social consumption rules established in the consumption chapter, since the project was designed more along the lines of a museum than a facility for media consumption. The Koolhaas facility did, however, exhibit a provocative technique for relating media consumption to its context. The east façade of the facility was intended to function as a giant electronic billboard to convey information of interest and the activity taking place inside the facility to the outside (see fig 21). The billboard functions similar to the rule of social consumption of seeing and being seen consuming media. The facility gives no indication that it attempts to convey the media libraries of its users.

Koolhaas’ ZKM is a better example of Puglisi’s criteria of immateriality, sensoriality, and multimediality, than it is a vehicle of social consumption. Immateriaility is exhibited in the design of a multicolored translucent glass façade which “sometimes mimics, sometimes contradicts the movement behind it”\textsuperscript{24}. This

is also the case in the east wall, where exterior space elements such as balconies and ramps are cordoned off with a screen of expanded metal, and the south, where a translucent corrugated polyester skin serves as the cladding of the mechanical “fly space”. These more ephemeral—immaterial—elements contrast the inarguably solid west façade, which is clad in glazed brick.

As an example of sensoriality in the ZKM is found in the intentions behind the “robot”, or the adaptation of the theater fly tower. It is designed to transport stage sets, electronic devices, projectors, art, containers, and capsules into positions where they create new conditions on particular floors. This configurability, coupled with the versatility of large open spaces in the functional core of the building allows the building to adapt in a small part to the needs of the staff and the program of events held at the facility. A more developed case of this characteristic would involve the building configuring itself towards the users who utilize it.

Multimediality is directly expressed in the east zone where the expanded metal screen serves as a projection screen as well as the enclosure for the exterior spaces behind it. This integration of media directly into the façade is exemplary of the visual side multimediality, although it is unclear how the imagery is projected against the screen or how sound is transmitted to the public realm. Incorporation of

\[\text{25 Ibid, pg 699.}\]
the technological requirements for media presentation into the south wall reinforces the multimediality of the building in the broader sense, as it provides an infrastructure for the transportation of required hardware for any kind of media consumption.

The actual built project for the ZKM was executed as an adaptive reuse of a munitions factory building designed by Phillip Jakob Mans and completed in 1918. It is a symmetrically arranged series of wings enclosing 10 courtyards arranged linearly along a north/south axis. The structure of the original building is a four story concrete frame with a brick and masonry façade wall.26

Schweger and Partner added 31,000 m² of enclosed space to the existing footprint of the original factory by glazing over the 10 central courtyards, creating a series of individual three story volumes. One of these volumes houses the Media Theater, a space “…where performing arts can be staged and, using novel technologies, complex forms of presentation can be implemented.”27 Other courts are utilized for the functions of exhibition spaces, entry foyer and a studio room.

The glazed cube in the front of the original building houses the Music Studio, a specially designed space for the performance and recording of music articulated as an independent volume for the purposes of acoustic and vibratory isolation. The

27 Klotz, Heinrich. “Centro per l’arte e le tecnologie dei media, Karlsruhe, Germania” Domus, issue 805, 1998, pg 97

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slick glazed façade (with solar shading along the south facing wall) belies the mostly black box condition of the Music Studio within. It has essentially become the face of the institution\(^2^8\), surely owing to its axial relationship with the approach sequence to the institution.

Aesthetically, the historical façade of the original building has been kept intact and preserved, while the concrete structure on the interiors of the building was purposely left unaltered in order to contrast with the new construction interventions. Stairwells and walkways are handled as individual, independent entities similar in fashion to the cube on the front of the building, while mechanical and other service runs are left exposed, given the lack of dropped ceilings or permanent enclosures. Spaces in the building, where necessary, are cordoned off by moveable partitions, except for the specialized media spaces such as the Media Theater and the studio space, both of which are articulated as singular objects.\(^2^9\)

In comparison to the un-built Koolhaas project, the as built ZKM Karlsruhe shares a few similar elements but many different ones. Many of the primary spaces are articulated as exclusive spaces (see fig. 25) but on the whole the remaining spaces are very homogenous, peripherally arranged, and non sequential. This gives

\(^{2^9}\) Ibid
the Koolhaas project an advantage when it comes to presenting all the facility has to offer to the user, based on its sequential spatial arrangement.

The as built ZKM also lacks any significant contribution to social consumption. As a museum the project is articulated as a shell of a building intended to house the functions within in the most basic and unobtrusive way.

The only criteria of architectural expression defined by Puglisi that is well defined in the existing ZKM is that of immateriality, and that only in the exterior façade of the Music Cube (see fig 26). It is unfortunate that this effect is not carried through to be an experiential element in the façade of the addition. Instead a second façade within the complex and immaterial skin completely encases the functional space in a black box.

The existing facility begins to address sensoriality by providing for moveable partitions and reconfigurable space, but this user level of configurability is weaker even than the un-built ZKM scheme. In order to truly represent sensoriality the building itself needs to respond and adapt dynamically based on the ever changing user base within.

Multimediality is the least represented of the three architectural criteria in the existing ZKM. Media spaces are succinct spaces and isolated. No attempt is made to bring the media out in to the public space surrounding the building or to the public spaces within the building. An important consequence of multimediality is the
immersive potential in being surrounded by the media. Without this, any place for the consumption of digital media falls short of its ideal.

In summation, the un-built project of Koolhaas lends a spatial logic of servant and served spaces, spatial progression, and the usage of the wall as a versatile and dynamic element. Its approach to media technology is dated, given that technology is inexorably advancing to the point of complete ubiquity and integration into daily life. Social consumption is poorly represented but present in the fact that the building attempts to communicate what is being consumed within to the outside. Immateriality is well expressed in the articulation of the exterior walls, circulation, interior spaces and structure. Multimediality is introduced in the same gesture as as the social consumption. Sensoriality is present only in the reconfigurability of the technological infrastructure in the “fly space”.

The actual built ZKM Karlsruhe has a developed system of articulated volumes in space, where the volumes define distinct programmatic functions. These discreet spaces are awash in a sea of the more general use spaces, which leads to an overall weaker sequence of experience than the Koolhaas project. There is nothing in terms of the social consumption criteria or the architectural criteria that the existing ZKM exhibits that would not have been better executed in the Koolhaas proposal.
Sony Center at Potsdamer Platz

Completed in 2000, the Sony Center at Potsdamer Platz in Berlin, Germany represents Chicago architect Helmut Jahn’s vision of the 21st Century “Kultureforum”\(^{30}\). It comes as a result of a massive development campaign in the city of Berlin targeted at the revitalization of historic Potsdamer Platz, which had been ravaged by the events of the 20th century, including World War II and the building of the Berlin Wall.

The development, which encompasses 1.4 million s.f. of commercial, retail, and residential space\(^{31}\), defines areas of urban public space of varying sizes, despite its monumental scale as seen from the outside. The most significant of these spaces is the Forum, sheltered from the sun and rain by a massive swooping canopy of steel and glass. The canopy is probably the most recognizable element in the whole project, with its central structural component being a 17 story lance aimed dramatically at the Forum below. The plaza level of the space is surrounded by retail shops, restaurants, an IMAX theater, additional standard movie theaters and the German Film Institute. The Forum itself is intended for use as the primary

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\(^{30}\) http://www.murphyjahn.com

gathering space within the development, and is the central collecting space in the composition. It is the heart of Sony Center, and is the seemingly vibrant hub of activity.

When compared to the ZKM Karlsruhe, Sony Center’s ambiance is immediately recognizable as being focused on commercial entertainment as opposed to study and appreciation. Though some of the included amenities are educational (the German Film Institute, for instance) the dominant theme is that of leisure. In particular the ZOON.COM installation, which presents itself as an interactive lifestyle magazine, targets the teenaged market with its access to the internet in a trendily styled environment with chatballs, trend-information pillars, and lounges\textsuperscript{32}. The wealth of dining options from quick snacks to elegant dining in the former Grandhotel Esplanade reinforce the notion that this location is driven by the need to consume entertainment and leisure. The only thing missing is the roller coaster.

The formal and programmatic layout of the Sony Center Potsdamer Platz places an emphasis on the center as being the destination for the experiential use of the space. The more mundane functions within the development are at the

\textsuperscript{32} http://www.sonycenter.de/sonycenter_eng/
periphery and serve to enclose the central space—the space where the media is (see figs. 28, 29).

Positioning is key to the messages that the Sony Center is trying to communicate. The functions of living and working are arranged at the perimeter of the development, defining the edge and lending stability and credibility to the project. It is an arrangement common to the idea of forum since Ancient Rome (see fig. 30). Without the presence of the living and office spaces towering above the development on all sides the development would amount to little more than a suburban strip mall. The relative scales of the buildings are juxtaposed against their importance in defining uses. The media and entertainment spaces, which are what the project is really about experientially, are the smallest buildings, and are huddled into the center, surrounded by anonymous towers and sheltered by an envelope of steel and glass. The corporate offices are much larger, yet are articulated plainly, as if to understate themselves. This envelopment results in the forum being a world within a world, isolated from the rest of the city and immersive in its quality.

With such a historically rich basis, the forum is deeply ingrained with socialization within the urban context. This forms the basis for the first of the two social consumption criteria—to see and bee seen. The forum is, in the terminology of Mitchell an ideal manifestation of Swarmcity, where the destinations within are commodities to be sampled by the swarms of people encountering the space. The
space however is more about the actual consumption of media—in groups, in theory—than it is about socially consuming media in the more sophisticated manner described in previous chapters. This holds back the true potential of social consumption along the first rule, since the methods for consuming media within the forum are largely traditional theaters and the like. Furthermore, the second rule of exposure to media libraries is not possible here, since the technology required to do so is concentrated in so few spaces. The Sony Center Forum is primarily concerned with the economic mode of consumption, while the social aspects are a secondary consequence.

Architecturally speaking, applying Puglisi’s criteria of immateriality meets with mixed results. There is some layering of transparency and structure in places, mostly in the corporate facades (see fig. 31). The articulation of glass and structure in the name of transparency is most successful at the edges of the buildings, while is practically non existent for large extents of the façades.

Beyond immateriality, however, the last two architectural criteria derived from Puglisi are sparse in the case of Sony Center. The complex does not adapt itself to the users within, so sensoriality is virtually nil. Multimediality also is low since the media consumption environments are primarily movie theaters and thus are in black boxes with no relation to the outside. There is seemingly no attempt to integrate media in to the fabric of the built environment.
The most significant lesson to learn from Sony Center is derived from its formal arrangement of building versus public space, defining a perimeter and a forum within. Corollary to this is the typology of spaces located at the forum versus the outer perimeter (i.e. experience/consumption spaces in the center, live/work on periphery) The result of the centrality and enclosure of the forum is immersion which, when coupled with a more developed strategy for multimediality could create a successful environment for the consumption of digital media.
Amazon.com

Although it is by no means a physical manifestation of media retail, the internet based shopping giant Amazon.com is an example of an infrastructure for media distribution worthy of study by virtue of its customization features and presentation of its vast array of media products. By examining the manner in which Amazon.com goes about the business of selling its wide variety of products can help inform the manner in which a physical space should operate in order to successfully peddle its wares.

In addition to the toys, clothing, accessories, electronics, and house wares, what the website is perhaps best known for is its media products—books, video, and music. The network of independent retailers who participate in the sale of products via Amazon.com allow the online marketplace as a whole to maintain an inventory of even the most obscure items. This relationship also works in reverse, where the retailers who sell on Amazon have access to a larger market, thus giving an assurance that obscure or surplus items have a better chance of being sold. The networking of specialty sources across a large market is one way around the problem of inventory, which both Mitchell and Negroponte describe as being a significant proportion of the cost of any product.

The product categories at Amazon.com are inclusive of an enormous variety of products that can easily become overwhelming. It is as if a department store

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were combined a media megastore, a bookstore, and an electronics store, each of which is complete with a nearly infinite inventory in ample supply. It would be easy to get lost in such a store.

Amazon avoids the possibility of disorienting (and inevitably losing) its customers by first neatly categorizing the products it is selling and allowing the shopper to search by category (see fig 24). If you were looking for a particularly well cross-merchandized product (say Star Wars paraphernalia) you could narrow your search if you were looking for just DVDs, toys, video games, or even bed sheets.

The second way in which Amazon handles the display of its huge inventory is by customizing its webpage to the individual shoppers (Fig. 26). Once the website knows who you are—you are required to register an identity with Amazon in order to order anything—the webpage utilizes the cookie capacities of your browser to remember the things you’ve ordered or even browsed in any detail. Once it knows this, it displays more items it thinks you would want to buy. For instance, if you’ve recently purchased a book on a particular theme, the webpage would constantly be recommending other books on the same theme whenever you were looking at books on the website. If you had already obtained a particular book from another source, you will typically see an option to tell the website that you already own that book, and it will avoid displaying that recommendation. Accompanying these
recommendations are often customer ratings, anywhere from 0-5 stars with a relevant written review, serving to reduce the possibility of buyer’s remorse.

In addition to the ratings system, the shopper is given another opportunity to get better acquainted with their potential purchase by way of the various preview functions the webpage provides. In the case of music, the website provides both the cover art of the album, as well as abbreviated samples of the individual songs for the customer to download. For books, the cover of the book is displayed, and the customer has a chance to “look inside” the book, usually through the table of contents and the first few pages of the first chapter. The ratings, previews, and discreet categories help create a successful online shopping experience.

If one were to design a building based on the organizational principals of Amazon.com, the result might go as follows: Once the user arrives they would immediately be confronted with an individualized space showing them a range of things that, based on prior experience, the store thinks that the shopper would want. From there the customer would access via a portal a floor where the type of product they were looking for would be located; we’ll say Floor 3 for movies. The shopping room floor would need to be huge to accommodate the inventory, but likely all one continuous volume. The products on that floor would be arranged typologically as opposed to alphabetically by genre. This means that once they narrowed their search to a specific film they would be taken to the place on the floor where their
searched film was found, along all the other movies that were similar to the aforementioned one, as well as movies that were purchased along with the one movie the customer was interested in. In addition to seeing the movies, they would be looking down to the floors below, where they would see the soundtrack for the movie on sale and/or the book on which the movie was based. Each small step in the browsing would slightly change the locus of interest for the shopper and slightly change inventory he would be looking at, but everything shown would be constantly referenced to some other location in the store. The area of focus can become more specific based on the search, until the customer is no longer within a space with the media arranged for the browsing, but actually within the media itself, as in the case of the “Look Inside” feature for books.

A more precise relationship with the built form of this project can be determined by evaluating Amazon.com along the same criteria established in the first three chapters, the same criteria applied to the architectural examples previously discussed.

Amazon.com is first and foremost a vehicle for the purchase of physical artifacts. The objects containing media are not treated in a dissimilar fashion to the products that have nothing to do with media. The website does, however, provide the user with the opportunity to preview the media products. Since the retail environment of Amazon.com is virtual as opposed to physical, the website is at once
a good example and a poor example of independence of physical media space—
good in that the presence of physical media is zero, poor in that the media sold is
still primarily bound to its physical artifact.

With respect to the rules of social consumption, the website does well in that
it offers suggestions based on what other customers who have purchased the
product you in which you are interested have also purchased. This goes a step in
the direction of communicating what is in other peoples libraries to you, as well as
telling other people what you have purchased. It is important to note that the website
is primarily a point of access to the media and information, and is hardly a vehicle for
actual experiential consumption.

Even though the environment for consumption that Amazon.com provides is
not represented by a physical space, some of the criteria as defined by Puglisi are
still applicable. Immateriality is a given since the precedent in question is a website,
but heightened in the way that the catalogue is built by processes and programming
that is unseen. The individual store components of search criteria, product type,
recommendations, and history, each influence what is eventually presented in the
product catalogue, but they do so in a very subtle fashion. Sensoriality is well
represented in the Amazon.com model via its customized interface. Multimediality
is the weakest of Puglisi’s criteria. Even though the website strives to communicate
information in a manner integrated into what could be called its fabric, the method used is almost exclusively text based.

As a result of the above analysis, it can be concluded that the features of Amazon.com are best applied to the technological interfaces within the proposed facility as opposed to the actual arrangement of physical spaces. The Amazon.com model implies a technological base to the program of the building that considers what media the individual user possesses, what the user is interested in, and what other users with similar interests in media. The result of this consideration might well be a digital "matchmaking" whereby a user can find another user with similar interests or, at the very least, a specific location within the facility where his interests are focused. As a result, the purposes of social consumption in the facility are underscored.
iTunes

iTunes is a comprehensive music player for both Macintosh and Windows based systems while simultaneously functioning as a retail outlet for the legal downloading of music. The conjunction between the player aspect of iTunes and its music store capabilities make it a very integrated and complete vehicle for the experience of digital music. According to the Neilson Soundscan ratings, iTunes is the #1 legal music download store. As an online music store, iTunes offers the same sort of categorization exhibited by Amazon.com, simply focused exclusively on music. The store browser is actually integrated into the player itself instead of being accessed via a web browser, and is accessed by a single click within the window. Song properties already in the user’s library contain links to the music store, so that a search for more material by an artist or more songs on the same album can be located with a single click. Once a search has been executed, the browser window displays all the relevant information on the track, the cover art of the album, as well as information on what people who purchased the queried item also purchased. This operates in a similar manner to the Amazon.com system, however, the iTunes Music store

http://www.apple.com/itunes/
maintains an account history for all individuals who have registered with it (the registration is necessary for purchasing, but not for browsing.)

The iTunes Music Store echoes the Amazon model by offering previews of the tracks it offers for sale, enabling the user to sample the music before committing to purchase. iTunes also offers popular selections, based on its own records of top downloads, as well as promotional offers, as any good retailer would. In addition to the music, iTunes music store also offers access to a collection of music videos and movie trailers, as well as a library of audiobooks.

The player aspects of iTunes serve to broaden the digital music experience, once again through its thoughtful integration of features. It can create digital music files from a source CD, complete with all the artist and track information it can automatically acquire from an internet database. The process also works in reverse, with a built in CD burning feature that decodes the compressed data into either audio CD format or a digital music archive. While the songs purchased from the music store can only be played in their intact digital format on select authorized computers only, they can be decoded and published to an audio CD any number of times. Other key features of the iTunes music experience include: the ability to play music from any shared library or playlist located on any iTunes enabled computer on the network on another; the ability (with additional hardware purchase) to stream wirelessly or over a wired network to an external speaker system via the Airport

Figure 39: The day’s top songs.
Express module; integration with Apple’s iPod music player; and connection to an index of internet based music stations from around the world. The result is an all-in-one program for digital music experience.

If one were to spatialize the organization of the iTunes Music store it would look very similar to the Amazon.com model, although slightly smaller since it would only be concerning itself with audio offerings. There would also likely be less interconnectivity around the shopping floor. You also would not encounter a customized space to fit your shopping interests. However, what you would find in iTunes that you would not in Amazon.com are very large displays for the more popular audio choices, since the top songs are almost always on display within the Music Store; adjusted to meet the context (general top downloads on the overall view, top downloads for genre when looking at genre, top downloads for artist when looking at artist). The biggest difference between iTunes and Amazon.com is that once you make your purchase and leave the iTunes store, you will have your purchase. This is not the case with Amazon.

The store would not, however, be the end of the iTunes experience. In a separate wing of the building would be your library, where you would go to listen to your music. While in your library, you could easily look out across a sea of other

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34 http://www.apple.com/itunes/
libraries and figuratively “borrow” someone else’s music for a while. In this way you
could see what you had in relation to someone else, and find commonalities or
differences to help you on your quest for more media.

Since the iTunes music program is a program designed for media
consumption, and does not depend at all on physical artifacts, it is a better
precedent for actual digital media consumption than Amazon.com. The connectivity
of the program to its own library and especially to the libraries of others is much
closer to actualizing the potential of digital media.

The first rule of social consumption is not as well followed by the iTunes
music player and store as the second. This is due to the fact that there is no real
way to convey what iTunes is playing to another user. The rule of see and be seen is
half met by the way that the iTunes Music Store presents the top downloads to the
shoppers. In this way the satisfaction of the first rule is similar to that of
Amazon.com. In terms of the second rule, that is, to convey what users have in their
library to other users, iTunes is quite successful. The shared music feature, as well
as a feature in the Music Store similar to the Amazon.com “people who bought this
product also bought the following” recommendation, serve to expose users to other
users libraries.

In terms of Puglisi’s first criterion of immateriality, iTunes is less fitting than
Amazon.com. This is because the filtering of information displayed in the media list
portion of the iTunes window is a user controlled feature as opposed to analysis on the part of the program. The user selects what to play and when, as opposed to the program making recommendations on its own. Sensoriality is also lacking in the iTunes program, again determined by the conscious user customization on which iTunes is dependent. Multimediality is nicely done in terms of music consumption only, since the program is capable of ripping, encoding, playing, decoding and burning digital music files.

It is clear from the above analysis that the most successful aspect of iTunes in terms of the proposed facility is in the sharing capabilities of the program. Since one can find another person with similar interests in media by having the ability to browse someone else’s library, a social connection can be made. Incorporating this experientially into the technology and architecture of the facility would correspondingly reinforce the social nature of the project.

The primary role of both Amazon.com and the iTunes Music Store is access and organization. Both examples take into account the preferences and tastes of those who use them, and use this information to manage the infinite variety of information they access. The role of the software in informing the design of the proposed facility is to serve as a model for the function of the facility—to expose its users to the potential of digital media, as well as the tastes of the other users within the facility, while interactively changing its offerings to better serve its users.
Chapter 5: Summary and Design Objectives

The trend in digital technology is toward proliferation and miniaturization. If this idea is taken to its logical conclusion, then the resulting environment will be thoroughly and seamlessly integrated with the technology that we will become more and more dependent upon to live our daily lives. This can mean that any space could be the place for the consumption of digital media, but only on an individual basis. This, unfortunately, nearly negates the purpose of architecture in defining the space. However, once the aspects of social consumption are included, the need for an architecturally determined space is reaffirmed. The result of this incorporation of social consumption of media is that space becomes not only the technological infrastructure for consumption (“Vatville”) but a space for social interaction and getting together as well (“Swarmcity”). Once these programmatic considerations are employed in conjunction with the architectural tactics of immateriality, sensoriality, and multimediality, a unique architectural form, and new model of media experience/retail can be established to fill the void left by the absence of physical media.

The following are the design objectives proposed for this thesis:

1. To design a facility which provides access to the nearly infinite variety of digital media while:
2. Utilizing the formal nature of the facility designed to categorize the experience of the digital media, in order to make the variety more manageable (building as a search engine)

3. Keep the program of activity the facility can sustain versatile enough to respond to the variety of uses a wide variety of media and users will demand.

4. To capitalize on the spatial implications of the miniaturization of physical media in pre-existing media outlets as a source for locating the facility.

5. To arrange and articulate the spaces, defined in conjunction with a technological infrastructure, so that the ability to see and be seen, and the representation of personal media library are both possible.

6. Exploit the architectural language of immateriality, sensoriality, and multimediality in the articulation of the required program elements.
Program

The fundamental basis of the program is that it will be divided into three phases, and implemented at three different scales: small, medium, and large. The reason for this is to respond both to the variety of scales in which we consume media in groups (from small groups of two to three to thousands) and to respond to the varying scales at which media retail exists today. This multi-scalar quality is possible due to the potential connectivity of digital media to an infinitely large library without suffering the spatial requirements of inventory. The three prototypes will collectively be known by the brand name “mPlace”.

Prototype I

Derived from the dimensions of a typical living room home theater, and locatable in a public space (public square) or transportation facility (airport, subway station, etc.), this is the smallest scale intervention. It will be a single multi purpose forum appropriate for all four media types. It will serve functions of billboard, public expression and display of media, as well as access to the broader mPlace network and library. It is intended to be a convenience outlet, and not necessarily a place where an extended period of time is spent.

Small Forum: 300 square feet
Prototype II

Derived from the floor area of a ‘big box’ type retail store to media on physical artifacts (approx 12600 s.f. in the case of Best Buy), this scale forum is designed to replace the space formerly devoted to media storage with spaces devoted to social media consumption. It will be designed as a retrofit to enter an existing store model in a suburban retail strip mall establishment and respond to/influence the locations of hardware that will still be sold in the retail store. It will include spaces unique for each media type. Spaces are still intended to be semi-transient so there will be no long-term stay in the facility. The grossing increment for this facility will be 100% to accommodate for ample circulation to see and be seen.

Reading group rooms: 3 @ 250 s.f.
Read to Room: 1@ 500 s.f.
Individual text stations: 10 @ 25 s.f.
Headphone Audio Browsing: 800 s.f.
Audio “iPod” Lounge: 800 s.f.
Video theater browsing: 3 @ 500 s.f.
Video Game Arena: 1600 s.f.
Subtotal: 6200 s.f.
Grossing increment @100% = 6200 s.f.
Medium Forum: 12600 square feet total
Prototype III

Derived from the square footage of a stand alone retail outlet, the largest scale forum will include the same programmatic elements as the medium forum, only twice in number. It is intended as a prototype to be the same size as a stand alone retail establishment, without being surrounded by the supporting hardware retail. The stand alone establishment will be located in a prototypical strip mall retail outlet. It is intended to merit the longest stay of the three prototypes. As such it will include spaces for convenience dining, sandwiches, coffee, snacks, etc. The grossing increment will remain at 100%.

- Reading group rooms: 6 @ 250 s.f.
- Read to Room: 2@ 500 s.f.
- Individual text stations: 20 @ 25 s.f.
- Headphone Audio Browsing: 1600 s.f.
- Audio “iPod” Lounge: 1600 s.f.
- Video theater browsing: 6 @ 500 s.f.
- Video Game Arena: 2 @ 1600 s.f.
- Subtotal: 12600 s.f.
- Café/Snack Bar: 2 @ 200 s.f.
- Café/snack seating: 2 @ 400 s.f.
- Grossing increment @100% = 13800 s.f.
- **Large Forum: 27600 square feet total**
Conclusion

Based on the exploration into the nature of digital media up to this point, it is clear that our current model of media retail is inadequate for an era of digital media, since digital media does not need to be bound by the physical artifacts on which it is recorded. Since we as humans generally desire social interaction and the consumption of media in a social context (nightclub, movie theater, poetry reading, etc.), this social need can become the reason for establishing physical place in a time of digital communication. This social need for interaction is also critical to find one’s place in society, and the culture of media consumption is not any different.

As a result of this need for social interaction, coupled with the absence of a need for inventory space in media retail, this thesis proposes to replace and enhance our existing model of media consumption. This is accomplished by replacing space devoted to media inventory with space devoted to media experience. The architectural method of this intervention is defined by the rules of social consumption of media and the characteristics of an architecture of technology. Analyzing existing examples of media consumption and experience in terms of these rules and characteristics provides the basis of an approach for the execution of the design.
Bibliography


Mitchell, William J. City of Bits Cambridge, MA, USA: The MIT Press.


OMA@work.a+u. Tokyo, Japan: a+u Publishing Co., Ltd., 2000.


World Wide Web Resources

http://dictionary.reference.com

http://xroads.virginia.edu/~HYPER/VEBLEN/chap04.html

http://www.murphyjahn.com

http://www.sonycenter.de/sonycenter_eng/

http://www.apple.com/itunes/
Appendix A

Plans of Rem Koolhaas’s ZKM Karlsruhe

Figure 41: Plans of the ZKM Karlsruhe as designed by Rem Koolhaas OMA@work. a+u. Tokyo, Japan: a+u Publishing Co., Ltd., 2000, pg 259.
Figure 42: Sections of the ZKM Karlsruhe as designed by Rem Koolhaas
Appendix B

History of Media Timeline
Prehistoric humans paint images on the walls of their caves (including a narrative composition) in the Grotte de Lascaux, France.

The roots of Western music are developed in Mesopotamia. Future artifacts will include an undecipherable song carved in stone (800 BC).

Sumerians create the first known system of writing.

Egyptians begin using papyrus

Chinese entertainers use firelight to project silhouettes of puppets onto a screen.

Pre Archaic Greece, Iliad and Odyssey by Homer

Pre-Columbian civilizations in Mexico begin to develop writing

Thespis of Attica introduces the actor (or protagonist) to Greek dramas, which until now had consisted of recitations and dancing by a chorus.

Herodotus of Halicarnassus writes The Histories

Classical age of Greek Literature

Library of Alexandria

Old Testament translated to Greek

Alexander conquers Greece

Roman poet Lucretius discovers the persistence of vision. The phenomenon (proved 230 years later by the Egyptian astronomer Ptolemy) allows the eye to see a series of rapid stills as one moving image, the future basis of motion pictures.

Virgil writes the Aeneid

Height of Roman literary tradition

Athens sacks Rome

St. Augustine begins The City of God
1200 AD

1202 Hindu-Arabic numbering system introduced to west by Fibonacci

c. 1250 Thomas Aquinas writes the Summa Theologia
c. 1321    Dante Alighieri writes The Divine Comedy
Chaucer begins *The Canterbury Tales*

Leone Alberti writes *Della Pictura*, a treatise on the laws of perspective. The book systematizes the rules for drawing three-dimensional scenes on two-dimensional planes.
1455
Printing press - Johannes Gutenberg
1505
Machiavelli writes The Prince
1517
Martin Luther's 95 Theses
1525
Laurentian Library, Michelangelo
1700 AD

1702
The first English daily newspaper, The Daily Courant, begins publication.

1709
Piano invented
<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1755</td>
<td>First dictionary of the English Language</td>
</tr>
<tr>
<td>1771</td>
<td>England's Parliament formally concedes the right of journalists to cover its proceedings.</td>
</tr>
<tr>
<td>1776</td>
<td>Thomas Paine writes <em>Common Sense</em>, drawing upon the latest European political philosophy</td>
</tr>
<tr>
<td>1791</td>
<td>The First Amendment to the U.S. Constitution guarantees freedom of speech and freedom of the press.</td>
</tr>
<tr>
<td>1798</td>
<td>Lithography</td>
</tr>
<tr>
<td>1810</td>
<td>Improved Printing press - Frederick Koenig</td>
</tr>
</tbody>
</table>
1827 Charles Wheatstone invents microphone
1829 Louis Braille invents Braille printing
1834 Charles Babbage conceives the first automatic digital computer, the Analytical Engine. A working model is not built until 1991.
1835 Calotype photography - Henry F. Talbot
1837 Samuel F.B. Morse invents telegraph
1839 Louis Daguerre and J.N. Niepce invent Daguerrotypes
1843 Magazines begin publishing woodcuts and lithographs produced from daguerrotypes.
1844 First Facsimile
1848 Associated press formed to defray costs of telegraph use
1851 Sir David Brewster exhibits the Stereoscope at the Crystal Palace in London
1854 Harriet Beecher Stowe writes Uncle Tom's Cabin
1855 Roger Fenton photographs the Crimean War, but the pictures remain unseen by the general public because newspapers cannot yet publish photos.
1860's Transatlantic telegraph services begin
1867 Christopher Scholes invents modern typewriter
1876 Alexander Graham Bell patents Telephone
1877 Emile Berliner invents Gramophone, first multi-playable, reproducible sound recording
1878 Edison invents Cylinder phonograph (tin foil)
1879 Boston Public Library-McKim, Meade, and White
1881 Ernst Siemens patents first Loudspeaker
1883 Development of the halftone process makes it possible to reproduce photographs in books and newspapers.
1885 Edward Leveaux patents player piano
1887 Mark Twain writes The Adventures of Huckleberry Finn
1888 George Eastman introduces the Kodak camera and roll film.
The first "juke box" was the coin-operated cylinder phonograph with 4 listening tubes
1889 Edison projects Film (kinetoscope)
1890 Louis Lumiere and brother present first projected moving photographic pictures to audience of more than one.
Great leaps forward are made in communications and computer technologies. Disney uses animation to illustrate complex subjects in technical training films.

Vannevar Bush proposes hypertext

Transistor invented by Bardeen Brattain and Shockley

Wurlitzer Jukebox invented by Robert Hope-Jones

Columbia Records introduces the 33 1/3 RPM vinyl record

RCA counters with the 45 RPM record

Early 1950s Computer technology is used in flight simulators; arguably the first application of computer interactivity.

1951

1953

1954

1955

1956

1957

1958

1962

1963

1964

1965

1966

1967

1968

1969

1970

1971

1972

1973

1974

1975

1976

1977

1978

1979

1980

1981

1982

1983

1984

First home LaserDisc players sold

Pink Floyd performs multimedia show of The Wall

Sony introduced first consumer video camcorder

MTV debuts

Star Trek II: The Wrath of Khan becomes the first film to utilize an all-digital computer graphic sequence

Ridley Scott releases Blade Runner

First digital audio 5-inch CD discs marketed

Spatial impact of digital technology