I, Mary k Genis, hereby submit this original work as part of the requirements for the degree of Master of Architecture in Architecture.

It is entitled:
Defining an Architecture of Connection: A new mode of living for the digital age

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Defining an Architecture of Connection:
A new mode of living in the digital age

A thesis submitted to the Graduate School of the
University of Cincinnati
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Abstract:

Media and mass communication has been very influential on everyday life since the beginning of their existence, affecting the way individuals form connections with one another, their families, their communities, their physical surroundings, and other resources. These changed connections thus influence how homes and neighborhoods are organized and designed, invariably tying architecture to media. It is necessary to reassess the ways that today’s new media influence the composition of spaces that encompass everyday life. Now that we can communicate and access resources without reliance on space or time, it becomes important that the places we live adapt to re-establish and reinforce connections to neighbors, surrounding community, and physical context, while also facilitating new types of digital connections.

The project, Mt. Hope Ridge Urban Ecovillage in East Price Hill, Cincinnati, Ohio, resists the ubiquity of digital media and the resulting detachment and disassociation of physical space, re-situating these new routines and attitudes within physical relationships to the home and the neighborhood. As a cohousing ecovillage of smart homes, the project’s specific design aims are to: create a contemporary village context, strengthen a sense of place through distinctive tectonics, blur the boundaries of the home, and facilitate new connections as a threshold to the global village. These design aims effectively define the home as media space, and the neighborhood as an intimate web of paths, nodes, and activities that connect residents through everyday, in-person interactions, in order to create a lifestyle that promotes personal growth and community strength in the Digital Age.
Preface:

Early in my architectural education, I began to realize that architecture was important beyond just form and material. My goal became to define the meaning in architecture, and inquiry into the role it plays in quality of life and general harmony of society began. Eventually I began to see architecture’s ties to identity, and when I learned about modernism and the role of capitalism in contemporary life, especially the urban condition, my understanding further deepened. It became clear to me that globalization and its architectural responses can either improve or harm the conditions it has created, and prompted my thesis interest to build upon prior architectural theory by studying emerging technologies and global conditions, and their effects of societal behavior.

My personal desire to study the affects of the digital age on architecture and the way individuals live today stems from the influence of the media and the digital age itself. It seems that we are on the precipice of a new way of living and people are now trying to decide exactly what that means. From musical artist’s like St Vincent and her new self-titled album, to musical comedians like Childish Gambino and his album “Because the Internet”, to Spike Jonez’ film Her, individuals and artists explore the upsides and downsides to our digital age, and I wish to do the same. I believe we are again at a similar fork-in-the-road, so to speak, as the modernists were: we can use our emerging technology to further strengthen the role of capitalism on the lives of individuals, or we can use it to reprioritize equality, and harmony.
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What does it matter? Why should we care about this new kind of architectural and urban design issue? It matters because the emerging civic structures and spatial arrangements of the digital era will profoundly affect our access to economic opportunities and public services, the character and content of public discourse, the forms of cultural activity, the enaction of power, and the experiences that give shape and texture to our daily routines. Massive and unstoppable changes are under way, but we are not passive subjects powerless to shape our fates. If we understand what is happening, and if we can conceive and explore alternative futures, we can find opportunities to intervene, sometimes to resist, to organize, to legislate, to plan, and to design.¹

**An Architecture of Connection:**

Since the end of the 20th century, society has begun to experience an evolution in the meaning of connection. Previously, it was more common for ‘connection’ to refer to a one-to-one relationship, but with the emergence of digital media, connection has come to describe a condition where one can interact with an infinite many. New media have become channels of constant connection, communication, information, and expression, changing the nature of social life today, and affecting the roles of physical, long term community and the home. Digital media and the resulting reconfiguration of our senses of private and public, presence and absence, decentralization of power and information with participation in media have created a “global village”² where interaction is no longer fully reliant on space or time, and the physical neighborhood is no longer the primary resource for interaction or intimacy, be it with other people, information or goods. As a part of the global village, the boundaries of the formerly private home and the outside world have become more permeable, demanding spatial arrangements that are more accommodating to ways of living in the Digital Age.

The internet and other new media as extensions of space have allowed many of the connections that were previously occurring in our physical neighborhoods to be replaced with virtual connections inside the home or on an individual device, and yet the architectural housing schemes and qualities that organize and facilitate the way we live

today have yet to adjust to these new connections, ideals and needs of contemporary society, leading to displacement and disconnection within the communal environment. In order to take advantage of new conditions that coincide with living in a global village, it is necessary to establish a model of living that accommodates emerging lifestyles, but also uses architecture to mediate individual and communal connections that sometimes get lost in the digital world. A review of architectural theory back through the modernist period can uncover the strands of thinking needed to articulate such an “architecture of connection.”

Evolution of Technology in Discourse

Throughout time and architectural discourse, technology and media have been commonly studied for their effects on architecture. Pre-modern styles like art deco and art nouveau dealt with the changes in building technology that directly affected the form or ornamentation of space, but modernism began to look at the way media and technology affected behavior, and how that in turn affected interaction with space. Le Corbusier notably was at the forefront of this discussion with his text, *Towards a New Architecture*, which established an architecture for living that reflected new cultural attitudes as a result of industrial technology. Mass, surface, and plan must be rethought for new media, along with the idea of a “machine for living,” and home today may be instead thought of as a ‘device for living,’ due to its role in connecting the digital and physical worlds, or perhaps—as Fiona Allon later suggests—‘a total entertainment environment’ where media lives.

Le Corbusier declared, “the various classes of workers in society today no longer have buildings adapted to their needs; neither the artisan nor the intellectual” and it seems, in the emerging digital age, this condition has once again occurred. An architecture of connection, like Le Corbusier’s new architecture, seeks to take advantage of social and


technological conditions to improve the standard of living for all socioeconomic levels. However, in order to facilitate the connections that rebuild community, place, and locality, these conditions need to be reinforced, not ignored, through architecture. *Towards a New Architecture* is an important reference because Le Corbusier poses questions that are again pertinent to understanding media and technology in architecture in the context of today.

As the lifestyle and ideals of modernism began to evolve with time, technology, and media, architectural critics continued to debate the social and cultural role of architecture. More than half a century after Le Corbusier and a number of subsequent modern theorists, Kenneth Frampton reassessed the role of architecture in a modern world. His “Towards a Critical Regionalism: Six Points for an Architecture of Resistance,”

is one critique on modernism that begins to open up the discussion concerning modernization, technology, space, and place. He suggests the reintroduction of indirect, locally-inflected “peculiarities” that are expressed through daylight, climate, community, topography, tectonic language, and tactile senses in order to resist a sense of placelessness caused by globalization and modern conditions on architecture.\(^6\)

Frampton’s ideas are broad and pre-date the influences of digital modernism, but his suggestions for reestablishing locality may tie into the goal of recreating presence and mindfulness within a place. His argument also acts as a foundation to set a framework for existing, related issues that result from progressing technology, and may be built upon with understanding of today’s lifestyles and conditions. While not overly similar, an architecture of connection also prioritizes connection with place as a way to ground us to the physical world in the global village. Frampton also highlights the importance of focusing on community life and suggests a more village-like sense of community. Frampton’s emphasis on multi-sensory experience, tectonics, and hapticity, helps to establish place as against the forces of universal civilization, which may be an important element in emphasizing the connection between the individual and place and in creating shared experiences within these places to promote communal connections—two goals of an architecture of connection.\(^7\)

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\(^7\) Ibid
Steven Moore’s essay, “Technology, Place, and Nonmodern Regionalism,” expands on traditional critical regionalist theory from a more recent point of view. In the essay, Moore describes the evaporation of traditional communities with the rise of industrialization and the automobile, which has continued in some ways by television, and now the internet. This modernization and shift in societal priorities has “devalue(d) place as a concept relevant to conditions of contemporary life.” This is a common theme in understanding space and place in the digital age, which ties in with changing nature of private and public, discussed by other theorists in this thesis. Moore uses John Agnew’s definition of place as a combination of objective location, subjective quality or sense of space, and locale or context. Locale also acts to hold discourse of space and technology together, and it is with this specific subset of place that Moore’s theory diverges from Frampton’s. Moore proposes a “regenerative” architecture, which more positively prioritizes technology and place together. He claims that a regenerative architecture should create life-enhancing places by providing context to everyday life by promoting flexibility for changing behaviors, including tectonic references to the history of place, avoiding the overgeneralizations of modernism, and fostering human growth. The goals of a regenerative architecture align very closely with these goals of an architecture of connection.

Moore’s “nonmodern” thesis successfully supplements Kenneth Frampton’s argument for emphasis on regional features to combat the bland, alienated placelessness associated with globalization and modernization. However, Moore focuses more heavily on the role and importance of technology in everyday life, and how to take advantage of that architecturally. He points to the fact that technology and place must be more interwoven and foster human agreement, which is important to an architecture of connection, yet does not examine specific changes as a result of current technology and connectivity and how those changes can be utilized to reach the goals of regenerative architecture. Moore’s focus on the mingling of technology and place and promotion of social agreement add to the framework established by Frampton and build a stronger model for the goals of an architecture of connection.

These theories have introduced some architectural approaches that respond to conditions that have resulted from modernism and globalization at a societal level. However the modern or ‘nonmodern’ urban conditions that critics were responding to have changed with the evolution of the internet and its role on everyday life. The importance of studying critical regionalism and previous discourse as a building block for an architecture of connection comes from the focus on the potential interaction of technology and space, resisting the sense of displacement that currently exists, encouraging strong focus on community, and recreating village-like values. Regionalism requires a strong network of smaller physical communities and neighborhoods, and emphasizes the importance of everyday social life beyond the isolated individual home.

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9 Ibid. 433
10 Ibid. 440
Digital Media and the City:

While past architectural discourse creates a framework for a variety of ways architecture may respond to contextual conditions and starts to uncover the beginning of problems that exist in the digital age, such as a sense of displacement and evaporating community, it does little to recognize the influence of technology as ubiquitous media, and cannot account for more recent developments in that area. It is therefore important to build upon these prior inquiries with an understanding of media’s effects throughout time, and discussion on the state of media today, focusing more on the shifting senses of privacy, presence, and decentralized power of production/expression in cities.

Ironically, to understand the social and spatial perceptions and implications in the digital age, it is important to examine a text that seemed to predict today’s conditions almost a half a century ago: *Understanding Media*, by Marshall McLuhan. In 1964, McLuhan was already defining media as any extension of physical human features and explaining the importance of these extensions on perception and social organization throughout time. The introduction of the book illustrates the dramatic societal shift in that began with electric media, but perhaps even more accurately describes the mindset that is resulting from the internet and digital media:

> After three thousand years of explosion, by means of fragmentary and mechanical technologies, the Western world is imploding. During the mechanical ages

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This statement alone begins to point to many of the evolving conditions that factor into the shifting roles of the home and community that an architecture of connection seeks to understand and accommodate, including defragmentation of social roles and the emergence of a broad range of connections that have created the condition of the “global village.” The manifestation of consciousness also hints at the current de-prioritization of privacy and the idea that individuals are no longer just consumers of media, but also its producers. The idea of the global village, where electric media (and now digital media) have become so fast and widespread that human awareness is extremely heightened, begins to suggest the lessening importance of privacy and accurately describes the social condition that has only been reinforced in the digital age.

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In *Understanding Media*, McLuhan continues by introducing the now well-known expression “the medium is the message,” meaning that it is not the information that any given medium propagates that is of social consequence, but it is the scale and accessibility of the medium that is transformative and meaningful. In a sense, this suggests that it is the connections which media facilitates that are defining to communities—an idea that is pertinent in understanding the importance of an architecture of connection. Although it’s so important, McLuhan explains, media is neither inherently positive nor negative, rather the way they are used that establishes their value.

While McLuhan goes into far more depth in his explanation of the elements and importance of specific media throughout his book, his description of media’s direct effect on space is critical in understanding the order of contemporary ways of living. McLuhan listed three separate eras defined by their shift in dominant media and attributed a type of spatial environment to each as a result: the Oral Age, the Literate Age, and the Electric Age. The Oral Age, which ended before the 5th century BC, was defined by the spoken word, and thus was an era of acoustic space. In the Oral Age, society was organized in tribal webs and life lacked structure and order. Without the influence of linear text and narrative influencing fragmented perception of space and limiting access of information to relatively few, the tribal world relied on collective kinship to validate personal significance. The Literate Age, which lasted until the 20th century, defines an era of visual space, where written (and later print) media caused more order and independence, a more scenographic view of space, and organized communities. The final age in which we are currently in, the Electric Age, arose with industrialization and moving media. In this age, McLuhan declares a second era of acoustic space, because of new media’s ability to involve all the senses, like the Oral Age, access to information is not limited to a relative few, nor is production of media. The ability to again be connected to everyone creates a renewed sense of involvement and unification, and spatial organization can reflect that. McLuhan’s descriptions of visual and acoustic space help provide some clarity on the shifting roles of home and physical community and how digital media have changed the ways space is perceived and organized, which is important in accommodating a connected community in the digital age. He illustrates that electric media, which has evolved into digital media, has blurred the boundaries between home and community as once was done in the tribal world. He shows that electric media has reignited the desire for more open, village-like, intimate communities that foster connection and collectivity and homes that act as the threshold to the global village.\textsuperscript{13}

\textsuperscript{13} McLuhan, Marshall. *Understanding Media*. 1-68
McLuhan’s idea of the global village and the effects of media on social behavior have not been overlooked by theorists studying the social conditions and ubiquity of media in today’s age of hyper connectivity. Two of such pieces of work—City of Bits, by William Mitchell, and Digital Places, by Thomas Horan examine how digital technologies are affecting urban life today. City of Bits, the earlier text, bridges the conceptual ideas of displacement and communal formation that are mentioned in earlier discourse and applies them to specific conditions that exist today. With Mitchell’s declaration that the most crucial task before us is “imagining and creating digitally mediated environments for the kinds of lives that we will want to lead and the sorts of communities that we will want to have,”\(^\text{14}\)

\begin{figure}[h]
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\includegraphics[width=\textwidth]{figure3.png}
\caption{Diagram of McLuhan’s media ages.}
\end{figure}

the sentiment of “the medium is the message” rings true with the recognition that it is the media that influence our way of life. This idea also parallels the idea behind an architecture of connection that seeks to respond to evolving social conditions.

Mitchell clarifies the sense of displacement that occurs when virtual connections replace physical face-to-face interaction, due to the changing role of public space. While Mitchell’s suggestion for a ‘city of bits’ does a good job in understanding the existing and possible effects of the internet, it sometimes discredits the importance of physical space to facilitate and organize these new connections, and puts too much responsibility on the virtual world to play previously physical roles, even suggesting that a city of bits would not be locked into one physical location but determined by the internet network. This lack of focus on representing digital space in physical space would not aid in an architecture of connection, but Mitchell’s discussion about the role of the home, for the first time starts to define the new role of the home in the social life of the contemporary individual. He writes:

\begin{quote}

The domestic living room is emerging as a major site at which digitally displaced activities are recombining and re-grounding themselves in the physical world...In many places now, news and entertainment, education, work, shopping and banking, and lots of general social interaction are starting to flow in and out through small, housebroken, electronic boxes.\(^\text{15}\)
\end{quote}

This clearly reinforces the shifting idea of private and public, where the formerly private home becomes a hub of social life.


\(^{15}\) Ibid. 75
Digital Places explores many of the same topics as City of Bits, but Horan offers deeper, greater emphasis on physical place, and more specific suggestions on how cities can take advantage of the resources of the digital age. Instead of simply declaring how digital media are transforming the idea of a digital city, Horan examines the way they transform urban form and function. He also offers architectural responses to the set of conditions Mitchell describes as ‘Recombinant Architecture’ in City of Bits, by explaining that fluid locations interface between electronic flows and physical locations:

We need to create places that comprehensively integrate human and technological elements in a manner that both respects and stretches our traditional notions of place, in a way that links both electronic and physical networks through a process that engages a spectrum of participants.16

This idea emphasizes the fact that places need to accommodate the new types of connection created by merging physical and virtual space; To achieve this, Horan proposes the use of democratic design, which engages community members to participate and impact the planning process; meaningful space, which respects traditional architectural aims and considers the affect of digital media on the perception and use of space; and threshold connections, where the virtual space smoothly transitions into physical space. Both City of Bits and Digital Places share and support the thesis that using connectivity can help build community, helping to articulate an architecture of connection.

Connection and the Home:

The investigation of the impact of digital media on architecture and the city has led to a new understanding of how, where, and what type of connections are formed in our physical settings. With the support of the above theorists, it is impossible to ignore the transformative impacts that the intense nature of digital media has had on everyday life, accordingly demanding more accommodating spatial reconfigurations. In the global village, it is not only the fact that decentralization and defragmentation of information and communication alter spatial order at an urban or communal scale, but also the fact that the overwhelming presence of digital media in personal life greatly impacts the characteristics and meaning of the home.

As communication and resources that previously inhabited physical public space are shifting to virtual space, these activities are now being shifted to places within the home. No longer is the physical neighborhood the sole threshold for social life. Today, the home and individual devices within it lead to more connections than the physical neighborhood, making it the threshold for the global village. This “reconstruction of ‘private space’ as ‘media space,’” is essential in understanding the “new modes of living” that facilitate an architecture of connection.17

Two texts that explore the evolving nature of the home more closely are The Unprivate House, by Terrence Riley, and “An Ontology of Everyday Control,” by Fiona Allon. The Unprivate House establishes the importance of the house as the “man-made environment’s fundamental building block,”18 and uses this idea to illustrate how the home parallels social boundaries established by media, similar to McLuhan’s comparison of media’s effects on social formations and sense of space. As the title suggests, Riley focuses heavily on the changing nature of privacy in the digital age in relation to the home, an important factor in defining an architecture of connection. He points out that homes are no longer arranged around the “discernable separation of its inhabitants from both the public realm and other houses,” but maintains that the house is central in preserving and facilitating family life.19

Riley not only addresses the private house in terms of seclusion or exclusion, he also tracks the importance of the private house in terms of economy and social status throughout Western history. He reminds us that privacy within the house is something that did not always exist but evolved throughout time. He cites the example of open hall living in the middle ages, where families performed all domestic tasks in one large room. It wasn’t until the beginning of accessible print media that privacy became a priority for the house, and by the beginning of the industrial revolution, the home was seen as a retreat from work and the public world. The detached house featured seclusion and intimacy that reflected the social importance of individuality.

17 Allon, Fiona. “An Ontology of Everyday Control: space, media flows and ‘smart’ living in the absolute present.”

18 Riley, Terence. The Unprivate House: The Museum of Modern Art. 9

19 Ibid. 23
Today, the house is transitioning back towards the openness and gathering ability of the open hall and has become “a permeable structure, receiving and transmitting images, sounds, text, and data.” Riley illustrates this point through a number of examples that take these new conditions and media into consideration and experiment with permeability, translucency, and exhibitionism through elements like screens, surveillance, projections, and glass.20

Riley goes on to explain how the transformation of the family over time paralleled the transformation of privacy in the house and points out the reintroduction of work into home. The shift away from the state of the nuclear family to more single-parent, childless, and single-person households means that privacy within the house is a much lower priority, and the reintroduction of work into the house is another way digital media invites the public realm into living rooms. Instead of the physical public in the home of the past (like the open hall), the public in the home now becomes a “digital presence.” Riley emphasizes the importance of re-examining home design, stating, “The cultural definition of the private house is undergoing great change, a transformation that, in itself, can generate significant architectural invention.” This clearly echoes the sentiments of transformation of earlier theorists and stresses the need for an architecture of connection that takes advantage of this invention.21

In “An Ontology of Everyday Control,” Fiona Allon uses the example of Bill Gates’ house to elaborate on themes similar to Horan’s, Mitchell’s, and Riley’s regarding the reorganization of social life and space as a result of digital technology. Bill Gates’ house is an experiment in the possibilities of digital media and a prototype for the “networked smart house,” meaning that it is as automated and connected to the virtual network as technology will allow.22 This “technological utopia” 23 relies on the interaction of a number of automated networks within the house, from security, to communication, to appliances and environmental systems, and interacts with the user in a non-confrontational, sometimes invisible way while understanding his or her needs. Allon uses Gates’ house as a representation of the “restructuring of social and spatial relations by new information and communication technologies, and the inevitable reconfiguration of senses of inside and outside, presence and absence, and public and private space.” 24 This study is very important in defining an architecture of connection, because it not only lists the existing conditions that are so important in understanding how media affect space and social behavior (and this thesis), but it also explores the direct effects on the architecture of the home. Allon emphasizes the decentralization of information and communication due to digital media, and defines the “networked smart house” as “a node for circulation of media and information as well as a new domain for production and

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21 Ibid. 36
22 Allon, Fiona. “An Ontology of Everyday Control: space, media flows and ‘smart’ living in the absolute present.” 255
23 Ibid. 254
24 Ibid. 256
consumption, a significant site in which changes in the social economy of power and control can be observed.25

Accepting the networked smart house as a new mode of living allows the digital world to expand off of individual devices and into physical life, acting, as Horan might say, as a threshold connection. “An Ontology of Everyday Control” also asserts that the Gates' home and the smart house attempt to recreate a “communitarian nostalgia” that is centered around social harmony and stability that supposedly existed in a simpler time, pointing to McLuhan’s suggestion that man is again becoming more “tribal.” Allon’s text applies the effects of digital media explored by earlier theorists, and specifically studies them in terms of the home, appropriately implicating the central role the home plays in the digitalized community.26

25  Allon, Fiona. “An Ontology of Everyday Control: space, media flows and ‘smart’ living in the absolute present.” 255
26   Ibid. 253-274

In order to design a home that is accommodating to new forms of connection and acts as a puzzle piece for a strong physical community, it is important to consider
- The home as media space
- The social and informational permeability of the home
- The home as a reflection of the evaporation of strong social boundaries and hierarchies
- The desire for less specific, more open flexible living space
- The evolving nature of family and
- The connected networks of smart homes.

Today, a home should allow expression through digital media in the way space is both used and decorated in order to create a unique connection point between an individual’s virtual identity and physical identity, enriching the architecture of daily life and physical community.

Figure 5. ‘Networked Smart Home’
Connection and Community:

The works of architectural and media theorists begin to address how digital media, and media in general, shape the places and communities in which people live. The studies of the house hint at the evolving family communal structure. However, the central focus on the application of media fails to offer the detail in specific emerging human networks and face-to-face interaction that is explained in the contemporary sociological resources. The work of sociologists studying media and its effects on community, in many ways builds on the same ideas as the aforementioned architectural and media theorists, but allows a new understanding of societal changes from a more behavioral and social perspective. Understanding contemporary sociological studies of these issues allows one to grasp the changing needs and priorities of social spaces and the shifting nature of connection. One major difference is the emphasis on the importance of physical social interaction in a world full of constant electronic connection.

Sociologists recognize that the internet may allow people to feel more connected to more people, communities, and ideas all over the world that were previously divided by space and time, and that this is possibly creating more collectivity and comradery. But they warn that if face-to-face interactions—that promote codependence and introduce depth into person relationships—are neglected, physical communities and neighborly support will begin to dissolve. This work implies that physical interactions are very important to place and community because of their ability to create a shared experience within a place and a diversity of chance encounters, which leads to richer, more diverse communities than the niche communities that the internet often promotes.27

As a result of the division between physical and virtual activity in the digital age and it’s pull on our attention, sociologists insinuate that we are often missing the opportunity to share the experience of being present in the same environment and simultaneously experiencing the same conditions with those around us, thus missing the chance to interact and become familiar with the individuals outside of one’s social and familial groups. The internet has resulted in distraction from our surroundings, disassociation with place, and disconnection from people that may be unfamiliar, as media theorists also suggest. Digital and social media allow individuals to reach many people, but it is still easy for us to virtually surround ourselves with only like-minded people.

By understanding social behavior and networking, it becomes clear how the internet may be separating and dividing people, which reduced the chance for shared experiences with those with whom they may have little else in common. By not being exposed to or interacting with people from a variety of backgrounds, people lose a sense of compassion, and problems that have emerged from modernism only worsen. People care less about those who are not like them and forget that raising the quality of life for the least fortunate, will raise the quality of life for all. The neglect of physical neighborhoods and spaces helps maintain the division and disparity between diverse individuals and social classes, only exasperating negative

experience within a place and a diversity of chance encounters, modern conditions.\textsuperscript{28} In an architecture of connection, it is important to try to re-establish these physical interactions to supplement the shifts in community life that has been brought about by new, ubiquitous media. An architecture of connection should address the positive conditions expressed by architectural and media theorists, but mitigate the negatives posed by some sociologists.

In the introduction to her book, \textit{Personal Connections in the Digital Age}, Nancy Baym, communication and media expert, reiterates some of the shifting conditions examined by the media theorists and explains how to balance the positives and negatives of the digital age. She explains that there are thousands of new technologies for interaction, and throughout history when people are introduced to new interpersonal communication media (phone, telephone, mobile phone, email, blog, YouTube, instant messenger, facebook, Skype, smart phones) they either feel that it is threatening to their personal relationships and is increasingly shallow, or they feel optimistic as they are able to connect to new people and new diverse opportunities. She explains that we are at the point in the development of these new technologies, that it is time for social and cultural reflection and reorganization, pointing out the need for an architecture of connection.

Baym examines a number of themes surrounding social connectivity that are relevant to place-making and architecture. One very important theme involves the increasing the blur between presence and absence. Technology and the

\begin{figure}[h]
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\includegraphics[width=\textwidth]{Figure6}
\caption{Distraction Diagram}
\end{figure}

\textsuperscript{28} Carr, Nicholas G. \textit{The Shallows: What the Internet Is Doing to Our Brains}. New York: W.W. Norton, 2011. 4
virtual world have meant that people can be visually, intellectually, and mentally present when they are not physically present, and also intellectually and mentally absent although they are physically present. This absence/presence concept must influence both public and private space. Social connectivity has changed the way we define and display our identity. It has created a new level of control for individuals and organizations, and perhaps most importantly to architecture, has blurred the lines between public and private realms. In some ways, the internet allows for private space to be used as public space, like online shopping or chatrooms, and in others the internet (or more specifically cell phones) allows for public space to be used as private space, like conducting a private phone conversation or doing personal banking.

Baym also explains that media can be used to create privacy and solitude and can lead to individualism that is “increasingly defined through consumerist practices of purchasing mass mediated and branded products” which ties closely back to ideas mentioned in architectural theory. She states that communication is no longer from place to place, but from person to person and describes seven key concepts that are important to understand about the effects of hyperconnectivity: interactivity, temporal structure, social cues, storage, replicability, reach, and mobility. Most of these concepts have architectural implications or strategies that may be associated with them, and one must consider these terms to design an architectural solution to the overwhelming effects of new media on social connectivity.

While Baym’s suggestion that digital media can lead to individualism opposes the sense of collectivism that many other theorists believe is created, it is important to understand both arguments because in reality neither condition is comprehensive. Also, architecture can be used to mediate the individualism and collectivism that are invariably going to exist to today’s society, for example, incorporating screens and sensors to promote group usage and interaction between the digital and physical, emphasizing contextual elements and views to promote a specific physical temporal structure, and creating spaces tailored to new behaviors and types of interaction and social cues.

These sociological studies on behavior can further be linked with physical communities and built form through literature based around the effects of digital modernism on neighborhood and face-to-face interactions such as *The Vanishing Neighbor: The Transformation of American Community* by Marc J. Dunkelman. This book explores the shift in American’s attitudes and behavior surrounding physical communities as a result of technology and social media. He describes a new wave of social architecture that has gone unnoticed and affected the routine of the average American so much, that it is causing irritation and insecurity. Dunkelman explores the benefits of technology and how it expands social circles but emphasizes the lack of everyday interactions that were once central to neighborhoods and physical community. *The Vanishing Neighbor* is partially a critique of these contemporary conditions, but more importantly it seeks to


30 Ibid 20
understand but more importantly it seeks to our daily routine, and open up discussion and debate, and adapt outdated institutions to modern living.\textsuperscript{31}

There are many ideas and terms from Dunkelman’s book that point out the negative effects of digital modernism and describe the changes in social behavior that are happening currently. His argument supports many of the ideas mentioned by Baym, but is more focused on those effects applied to neighborhoods. Most importantly, Dunkelman points out that there have been three waves of society throughout—the first wave being focused around agricultural growth, where individuals were able to stop hunting/gathering and form towns, the second wave focused around industrial growth, where nuclear families, big business, and bureaucracy emerged, and the third wave we are experiencing now, which became focused around digitization, globalization, and the emergence of service economy.\textsuperscript{32} These waves are similar to cultural shifts suggested by previous theorists, and although they define different periods in time as important waves, they mirror many of the qualities of McLuhan’s era in the sense that the current state of community is returning to a more communal and village-like state, as opposed to the individualized and centralized state out of which society is transitioning.

\textsuperscript{31} Dunkelman, Marc J. \textit{The Vanishing Neighbor: The Transformation of American Community}. New York, NY: W.W. Norton, 2014. 10
\textsuperscript{32} Ibid. 13-23
Susan Pinker, a psychologist who studies social neuroscience, does focus specifically on the effects of digital media in the comprehensive way of the media theorists, in her book, *The Village Effect*. However, like Dunkelman, she points out the diminishing of face-to-face contact within communities and suggests the variety of benefits of a sense of codependence within a community. She also reminds the reader that social contact is a biological drive that is essential to life and digital contact cannot replace that. She defines ‘the village effect’ as a sense of belonging and the physiological immunity, enhanced learning, and the restorative power of mutual trust that face-to-face interaction fosters. She uses stories exemplifying instances where ‘the village effect’ is pertinent, such as one about Sardinian Villages where there are a number of centenarians who receive physical support from the community and in turn act as village mentors, another where a man needs a new kidney, and one where a friend sets up a future husband and wife.  

Most importantly, Pinker suggests that the cohousing movement is a manifestation of the village effect in the digital age. She explains that Cohousing aims to foster social contact through a collaborative lifestyle in which families and individuals have shared communal spaces with their surrounding neighbors. Pinker explores the importance of reestablishing points of connection and intimacy in our neighborhoods, not only for communal growth, but also for the physical, emotional, and intellectual well being of the individuals within the community. Pinker sees this as the ideal

understand but more importantly it seeks to our daily routine, and open up discussion and debate, and adapt outdated institutions to modern living.  

Understanding the role of social and physical interaction and the nature of the physical neighborhood as a social, emotional, and intellectual resource adds an element to an architecture of connection that digital media cannot—intimacy. While the internet opens individuals up to a vast array of conditions, ideas, people, goods, and opportunities that may have never been accessible before, it will never be able to replicate the complete effects and filters of our bodily senses and the chemistry that is created through human contact. Without providing opportunities for bodily interaction, a neighborhood misses out on the ties and relationships that have been the foundation of community since the beginning of time, and ignores the physiological benefits of contact that remain at the center of our humanity. No matter how comprehensive the internet and digital media become, people will always need people.

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33 Ibid.
Spaces of Connection:  
**Unite d’Habitation** - Le Corbusier

In order to define an architecture of connection, it is necessary to demonstrate the shifting roles of the home and neighborhood as a result of new media’s influence on the ideas of private and public, presence and absence, and the decentralization of power. However, in order to fully develop a new mode of living in today’s global village, it is necessary to study examples of architecture that explore these new conditions or in some way ingeniously facilitate connection—be it with another individual, with the digital world, or with neighbors. One built example of accommodating contemporary conditions (at the time) is Le Corbusier’s **Unite d’Habitation** built in Marseilles, France, between 1947 and 1952. The building is primarily an apartment building, but also features many mixed-use amenities including shops with architectural bookshop, sporting, medical and educational facilities, a hotel, and a restaurant. It was also designed to be a vertical garden neighborhood. The building was constructed of rough-cast concrete that formed large pilotis at the ground level, and modularized apartments run from font to back of the building including a balcony, and community amenity space on the roof terrace.

While this precedent may not examine present conditions or lifestyles, by sharing the same goal as this thesis there may be some overlap in functionality. Also, by investigating the building from today’s perspective, failures or shortcomings that distinguish important areas for change can also be identified. The modularity and standardization of the spaces in the Unite are quite successful in promoting equality through space and adequately providing for the needs of all inhabitants, but in relation to today’s context it isn’t responsive enough to environment, locality, history, and especially technology. Also, when people feel like they are part of an over-standardized system they tend to feel like they’ve lost control and may become disinvested. As a result of being pulled toward virtual communities and away from physical neighborhoods, architecture needs to do more than ever to create a sense of place and connect people. The fact that Unite d’Habitation in Marseilles is not unlike many other housing projects he designed only adds to this sense of placelessness that we must reconcile for the future. It also seems dark and narrow in the individual units. It does however accomplish tasks necessary for today such as providing spatial flexibility and slightly represents its time’s technology through use of poured concrete.

![Figure 10. Unite d’Habitation, Elevation](image-url)
Wyly Theater - O.M.A.

For my second precedent, the focus is on a more contemporary building that focuses on the use of innovative technological strategies in both function and construction to create a place that more adequately responds to the need of the contemporary condition and human behavior, and this can be found in O.M.A.’s Wyly Theater in Dallas. Wyly Theater was constructed with huge steel trusses to provide interior flexibility and openness of space. The construction allows the renovation of the form of theater space, providing for superfly/overhead space and space below foot that provides storage for flexible seating, stage setup, and elements that traditionally take place in back of the house. The skin of the building is comprised of aluminum tubes that stand out from, but still speak to surrounding downtown Dallas.

By using innovative ideas technology to design and construct this modern, flexible, and landmark space, O.M.A. has captured many of the desirable characteristics that positively support contemporary life without neglecting to respond to experiential and contextual qualities of place. By approaching the form of a theater in terms of new technology, theater practices, and specific user groups, O.M.A. emphasizes the power of technology in creating a sense of place. By allowing layout flexibility on the ground floor, the theater creates different means of bringing people together physically. The ability for the ground floor to be completely free, complemented with the transparency of the first floor glazing, promotes the sense of equity and freedom to enter and occupy the space. Like Le Corbusier’s Unite d’Habitation, the open ground floor invites physical connection between individuals interacting in and around the building. This openness supports the thesis goal of creating place and technology driven points of architectural and communal connection in order to promote an open, responsive, and connective way of life.
Kresge College - William Trunbull and Charles Moore

Kresge College, a live/learn campus built as part of University of California Santa Cruz, is an example of experimentation in creating community. According to the college website, the campus which initially served the fields of humanistic psychology, women’s studies, and environmental studies, was designed “with the concept of participatory democracy as a means of encouraging a strong sense of community.” Students were involved in the planning of the campus, with the assistance of architects William Trunbull and Charles Moore in 1974, and involved in governing the campus after its completion. A desire for a strong focus on community and a village-like lifestyle influenced Trunbull and Moore to base their design on an Italian hill village, which contained a variety of scales of housing—from single units to apartments to shared homes—arranged along a pedestrian street bending through redwood trees, accented with nooks of intimacy and larger scale gathering spaces, such as the “piazzetta” in front of the college’s “town hall.” The piazzetta is the main gathering area and public space for the campus where main events take place.

The views looking down the pedestrian road of the campus and at the piazzetta, features a sporadic group of trees, level changes, and pops of color to create a more informal, intimate scale of space that provides a setting for face-to-face interaction. While creating a theatrical and referential style of architecture is not necessary for an architecture connection, the strong emphasis on the importance of community, the variety of nodes of interaction throughout the site, and the idea to evoke the nature and harmony of a village attuned to its natural setting, is important in creating a way of life that rebuilds community, especially in an age when neighborhood interactions are challenged. The variety and nature of shared living and communal spaces in this project provides an example for a type of living that places the emphasis on community over the individual. The reference to the Italian village reflects the innate urge for a return to village life, and the participatory planning and governing process of Kresge College is an example of Horan’s suggestion of ‘democratic design’ and closely aligns with the processes of cohousing.
The Slow House—designed by Elizabeth Diller and Richard Scofidio in 1991 and featured in MOMA in 1999—is an interesting, but unbuilt, experimentation into the role of electronic media in the home, and is one of the precedents listed by Terrence Riley in *Unprivate House*. This three bedroom weekend house set in Long Island, New York, overlooking the sea, is somewhat crescent-shaped with one end of the crescent just wide enough to feature the door, and the other much wider, to swallow the view. Adjacent to the large window wall that features the ocean view, is a movable screen that plays video of the exact same view (which is also viewable from the owner’s city home). This replication of the view emphasizes its importance and plays with the theme of presence and absence and connection to nature through new media. The image on the screen, while always the exact same view, sometimes features the view in better weather or different time of day than reality, hinting at media’s ability to eradicate space and time, and pose the question of whether they can improve on reality. The house is described by the architect as “a door that leads to a window,”35 emphasizing the importance of the view in both the traditional way, through the window, and also through the screen, and thereby possibly even challenging the notion of a window.

In many ways, The Slow House is a prime example of architecture that addresses different types of connections that occur as a result of new media. It challenges the role of media in the home and the ability of media to create a sense of reality and presence that operates separately from physical space. The use of the screen also seems to suggest the ability of digital media to erase or hide the architecture, connecting interior and exterior, or one place to another. Aside from the literal implementation of media within this house, it also features a more compact and open floor plan, which may reflect the desire for de-fragmentized, communal spaces over private, specialized, and controlled spaces within the home. This house is important precedent to an architecture of connection because it proves that digital media and technology can be used to reinforce a sense of place and connect one with their physical context and landscape, instead of distracting or displacing them from it. While this example does not fully realize the home as ‘media space,’ it does use media as a material to alter the perception of space. Also, it does not yet encompass the idea of the screen being an interactive and functional interface that bridges communication nor engages more senses than just vision.

Creating Connection:

As Le Corbusier once attempted to define architecture that captured the new spirit of industrialization, today as a result of great technological change, it is necessary to define an architecture that captures the new spirit of digitalization, and that spirit is centered around the nature of connection. By understanding the impact of media on space and social behavior, it becomes more obvious how influential it has become with its rise of the ubiquity of digital media in everyday life. New media have altered the way individuals interact with their communities, their families, places, the public, the outside world, and other individuals.

It has created new connections through the internet and social media, and challenged existing connections in both positive and negative ways. No longer is communication or connection reliant on physical space or time, nor is ‘the public’ reliant on physical public space. The reallocation of many daily tasks and the consumption and production of media from physical space to the virtual space on personal devices, is transforming the home—where the individual and their device live—into the primary connection hub between the individual and the rest of the world, weakening the functional necessity of the physical neighborhood and the connection the individual has to it. However, by taking advantage of new social attitudes regarding collectivity, openness, and awareness, the physical neighborhood can utilize architecture to promote uncontrolled face-to-face interactions to provoke intimate connections that rebuild a sense of community and fulfill the biological need for contact. In order to create new modes of living that accommodate and enhance the way of life in the global village, architecture must address:

- the blurring of private and public
- the blurring of presence and absence
- the decentralization of power and information
- the home as a place of consumption and production of media and
- and the shortage of intimacy and face-to-face interaction today.

An architecture of connection defines one new mode of living that recognizes the home as media space and a hub for new kinds of connections to the world, and the neighborhood as

Figure 18. Types of Connection.
a setting for intimate connections to the immediate people, places, and things. Digital media are beginning to remove a fair amount of day-to-day politics and socialization from physical communities, and instead of competing, the neighborhood must emphasize its qualities that digital media cannot replicate—social contact and connection to context. If the medium really is the message, as McLuhan suggested a half century ago, then digital media has a message of openness and collectivity, traits that should be reflected within the architecture of our contemporary neighborhoods.

In order to create an example of an architecture of connection that understands social conditions in the digital age and takes advantage of the new roles of the home and the neighborhood, I propose a next-generation Ecovillage of networked smart homes at the edge of East Price Hill, overlooking the Ohio river and Cincinnati skyline, specifically called the Mt Hope Ridge Urban Ecovillage. Every element of this project—including the building use, site scheme, location, house type, and tectonics—plays a part in accommodating different types of connections that exist and need to be improved upon in the digital age. The connective architecture of the eco-village uses a cohousing scheme that rebuilds community through programmatic features and various interaction nodes driven by unique site conditions. The scheme of the ecovillage also includes a variety of communal amenities such as pedestrian paths, forest framing, porches, benches, small plazas, and a central garden/agriculture space to evoke a village community and sense of collectivity. The ecovillage features open, flexible, compact homes that act as a threshold to the global village and center for the production and consumption of media through smart appliances, movable partitions, and utilization of projections, screens, and sensors to regulate the space. The forms of the houses are meant to emphasize the view of the city and the river, and take advantage of measures of environmental control. This emphasis creates a strong connection between the individual within the space and their context.
Cohousing

One of the most important elements of this contemporary mode of living is the cohousing component. Cohousing, based on the increasingly independent movement that originated in Denmark in 1964, differs from traditional living schemes. The Cohousing Organization of the United States defines cohousing as:

a type of intentional, collaborative housing in which residents actively participate in the design and operation of their neighborhoods. Cohousing provides the privacy we are accustomed to within the community we seek. Cohousing residents consciously commit to living as a community. The neighborhood’s physical design encourages both individual space and social contact. Private homes contain all the features of conventional homes, but residents also have access to extensive common facilities such as open space, courtyards, a playground, and a common house.

Cohousing is a way of living that can address so many of the shifts caused by the digital age and creates opportunities for all kinds of interactions. Cohousing creates an unavoidable connection between home and physical community, one that is frequently weakening in typical housing schemes today. It encompasses the evolution away from the private home in both the communal and economic sense, reflecting a societal urge to be more accessibly socially, set up a more collective codependent community, and shift away from centralized and

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Cohousing is an ideal model for living in the future, because of the strong sense of community, commitment to cooperation, and sense of respect and shared responsibility towards the physical context. These principles, coupled with architectural features that promote connectivity between the digital and physical world and accommodate for the new states of absence and presence, will create an ideal lifestyle for the contemporary individual who is fully involved in the digital world, but recognizes the benefits of forming strong communal bonds. The strong built-in community of cohousing also offers much more support for individuals who may struggle on their own, such as single parents or elderly people, lifestyles that are becoming increasingly common today.

Unlike traditional cohousing, where individuals intentionally choose to be committed to physical community, the new living community will seek to attract individuals to the idea of cohousing through desirable site conditions and architectural offerings. The design breaks up the program of the common house to create a more village-like living condition. The Mt. Hope Ridge Urban Ecovillage reexamines the traditional forms, scales, and aesthetics to accommodate a flexibility in lifestyles and conditions of living throughout the site. There are family houses, compact townhomes, condos, and apartment units, some of which rely more on the communal amenities and some that are more separate but interact more with the exterior neighborhood.

Ecovillage

The specification of the Mt Hope Ridge Urban Ecovillage as an Ecovillage provides the site with even more opportunities for connection. As an Ecovillage the community commits to the idea of ecological respect, and takes advantage of all available tools, land, and conditions to promote environmental sustainability and cooperative agricultural production. In this way, the Ecovillage promotes a deeper connection with place and influences the form and orientation of the structures on the site, to take advantage of environmental systems. The Ecovillage, with its central and peripheral agricultural spaces will take advantage of modern technologies to reinforce ecological commitments and improve the community’s ability to work together to create a successful, healthy community. As the name suggests, the Ecovillage also reinforces the village ideal by responsibly taking advantage of resources of the site to become more self-reliant. At Mt. Hope Ridge, it is important to create open interior and exterior public spaces that interact with the work areas, and that will promote community interaction and appreciation of others and the cooperative work.

Figure 21. Ecovillage Features.
Site

The site chosen for the Ecovillage, a large wooded lot near East Price Hill’s Incline district also plays an important role in creating an architecture of connection due to its location within the city and the neighborhood, and the site scheme that forms there. The site not only provides a connection point between the individual who lives there and the physical environment, but also connects the community to the city. The position of the site atop the ridge provides panoramic views that feature both urban and pastoral views. This position entices people to participate in this type of lifestyle, and provides one focal point for the village. The position of the urban city view and the rural river view, align with the transitioning character of architecture and scale of home from the denser, taller, condo building and public space creating an urban-like condition to the north end of the site, to the smaller scale, more spread out, garden-centered scheme on the south end of the site.

As the site facilitates both of these living conditions, it satisfies the desires and needs for a wider variety of people. Its place within East Price Hill, also facilitates a greater diversity of connection because of the existing diversity that the community already offers. The addition of the public restaurant to the typical cohousing/Ecovillage scheme creates an opportunity for the local village community to interact with other member of the neighborhood and the city. The depth of the site also allows a cohousing scheme that organizes homes along an interconnected web-like series of paths, to promote collectivity and reflect the conditions of social connection today.

Figure 22. Site’s Relationship to city.
Figure 23. View from Site
Figure 24. View of site
Figure 25. Street view of site
Design Aims

In addition to the design characteristics that facilitate connection through cohousing, Ecovillage, and site, there are specific design aims for an architecture of connection—specifically for the Mt Hope Ridge Urban Ecovillage—that reflect the changing social interactions to create a new mode of living in the digital age. These include:

1. Creating contemporary village context
2. Place-making through tectonics
3. Blurring the boundaries of the home
4. Facilitating new connections as a threshold to the global village

Through these design aims, the new media’s affects on space and social behavior are represented in an architecture of connection that effectively defines the home as media space and uses the neighborhood as an intimate web of path, nodes, and activities that connect residents through everyday, unplanned and planned, in-person interactions. Throughout the Ecovillage, these four design aims, and the more secondary qualities they must encompass, are represented and manifested in a myriad of ways:

1. In order to create a contemporary village feel, the arrangement of the living and shared spaces along a series of paths throughout the site, and the porches and terraces along those paths create opportunities for everyday interaction and community strengthening and add to a village setting.
2. To reinforce a sense of place on the site through tectonics, the project utilizes materials to reinforce or recollect unique qualities of the site, and attempt to represent the blurred and connected nature of life at Mt Hope Ridge Urban Ecovillage. The solid vertical wood siding contributes to the modern village feel, but also speaks to the forested nature of the site. The dark metal paneling connects to the urbanity and industrial areas that surround the site visually, and the screening allows for more light, and more openness, while also mimicking views through trees in a forest. The structural columns holding up the balconies on the ridge are also reminiscent of tree branches.

3. The form of the structures reinforces unique site conditions by utilizing angles to take advantage of solar power, emphasize views of the site through openings and screening, and break up the scale of the Ecovillage to fit along the hillside.

4. The operable, rotating wood screen also creates more visual openness and reflects the blurring boundaries of the home that are present at the Mt. Hope Ridge Urban Ecovillage. The permeability of the home and of private space also greatly influenced the standard unit plans throughout the site. Each unit as a straight-through, open living space to easily connect residents with both the view and their neighbors. The units also have a more private side that holds the kitchen, bathroom, and bedroom(s) but the wall separating these private and public spaces is very flexible and able to fully open, for even more possibilities for open, unprivate space.
5. The openness of the units also works well with ‘smart technology’ and networked appliances and systems to facilitate new connections as a threshold to the global village. Other than just smart homes filling the site, media screens will be both decorative and functional in the gathering spaces on the site, like the community plaza and the apartment facade. These could feature a democratically designed digital mural, community information, garden and community statistics, information from social media, or video. The site would also features sensors for environmental monitoring, such as automatic following lights and interhousehold info sharing.

6. The Mt. Hope Ridge Urban Ecovillage at 573 Mt Hope Ave. will be the ideal place for living responsibly and harmoniously in the digital age, without abandoning emerging technologies, and the opportunities for connections those provide. By creating a community where residents work together and are open to building personal physical connections, but also are so accessible to the global village. Residents can take advantage of a breadth of experiences, relationships, and information without missing out on deeper, more personal connections that are provided by daily physical interactions.
Bibliography:


