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I, Evan B Henderson, hereby submit this original work as part of the requirements for the degree of:

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Establishing Identity in Low-Cost Homes: Increasing Inhabitant Self-Esteem and Life Satisfaction through Ownership, Control, and Perception

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IDENTITY

ESTABLISHING IN LOW-COST HOMES:

INCREASING INHABITANT SELF-ESTEEM AND LIFE SATISFACTION THROUGH OWNERSHIP, CONTROL, AND PERCEPTION

A Thesis submitted to the Division of Research and Advanced Studies of the University of Cincinnati in partial fulfillment of the requirements for the degree of

Master of Architecture
School of Architecture and Interior Design
College of Design, Architecture, Art, and Planning

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ABSTRACT

The identity of the American household has faced increased threats as economic troubles force residents to choose from the often inhumane, expressionless and stigmatized low-cost housing options currently available. Architecture has forever been a means of expression and a defining symbol of its developers and often the surrounding local culture. In present day American culture, there exists an inordinate level of concern for developing individual identity, a reason for architects to rethink the importance of user participation in the formation of the built environment (Rapoport 14). This thesis looks to increase life satisfaction and self-esteem in lower-middle income home buyers by engaging users in the process of shaping their home into a symbol of individual identity, an opportunity typically within reach of a limited population of skilled craftspeople and wealthy custom home buyers. Smothering of this human desire has lead to limited self-guided personalization through non-fixed and semi-fixed architectural elements often restricted to the interior, limiting one’s ability to influence how they are perceived. The architectural community has responded with community-based design, involving inhabitants throughout pre-occupancy design to strengthen user attachment to the fixed elements of built form. However, writers Stewart Brand, Clare Cooper-Marcus, and Nicholas John Habraken, among others, have for decades noted the continual lack of post-occupancy freedom, calling for buildings that learn, that express the values of their inhabitants, and that involve inhabitants in their formation, developing a deep connection to the soul and their individual identity.

Experimenting with a small development of six detached homes, this thesis develops individual identity through homes designed to achieve occupant ownership, encourage individual control, and shape positive personal and communal perception. Providing an opportunity for new homeownership to renters and those in need of reasonably priced homes, the thesis studies the neighborhoods of Cincinnati, Ohio to target a local portion of this common American population. The inner-ring neighborhood of Northside, one of the most diverse and progressive neighborhoods in the city, provides an opportunity for low-cost development within close proximity of the intended audience and without preconceived negative connotations. The homes are designed to build upon the tradition of self-guided user personalization framed by architectural environmental cues, instilling inherent potential for user modification beyond the traditional organization of non-fixed and semi-fixed elements. The design embraces the inventiveness of the individual, encouraging post-occupancy inhabitant involvement in the shaping of their living environment through the definition of spaces and the manipulation of form, among more traditional means. The result is a collection of unpretending homes representative of the individual identities by which they were created.
IDENTITY

ESTABLISHING

IN LOW-COST HOMES:

INCREASING INHABITANT SELF-ESTEEM AND LIFE SATISFACTION THROUGH OWNERSHIP, CONTROL, AND PERCEPTION
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01 INTRODUCTION
“What of architectural beauty I now see, I know has gradually grown from within outward, out of the necessities and character of the indweller, who is the only builder – out of some unconscious truthfulness, and nobleness, without ever a thought for the appearance...”

- Henry David Thoreau
"Man no longer houses himself: he is housed."

N.J. Habraken

01.1 Patrick House by Rural Studio acts as a symbol of its inhabitants
01.2 Monotonous housing in Ohio
01.3 The Lustron Home, a kit home attempt at low-cost housing
INTRODUCTION

As more Americans are forced to face the realities of a limited income, it is appropriate to seek innovation of lifeless and stigmatized low-cost housing options by engaging users in the process of shaping individual identity through their built environment. The home, like all possessions, has long been recognized as a symbol of its inhabitants. People form a deep connection to architecture through their experiences and their memories in and around the built environment.

“Man no longer houses himself: he is housed,” writes N.J. Habraken (9). According to Suzanne Corcoran, 85% of housing in the United States targets middle and upper income home buyers (Schmitz 37). The options are limited for lower-middle income individuals looking to transition from rent to homeownership. They often can not afford custom homes from a home builder or designed by an architect. In an effort to keep costs low, America has been inundated with duplicate homes spreading through the suburb, massive housing blocks, and monotonous strips of townhomes. Individual involvement of these households earning between 60 and 100% of median income has been limited to their ability to choose from the lifeless stock within their economic reach or to overspend on a more desirable home.

Architects have recognized the need for low-cost, quality housing since the late 19th and early 20th centuries. Housing crises resulting from economic downturns have been a common motivator in the innovation of residential architecture. Experiments in massive urban complexes, do-it-yourself kit homes, prefabricated homes, and custom manufactured homes have jostled to become America’s standard in low-cost housing. Homebuyers have been forced to accept the status quo, stretch their budgets and conform their lives to live in the home presented as the home of their dreams. While each architectural response has brought with it an attentiveness to perceived human need, the particularly American human desire to customize one’s space and shape one’s individual identity has often been overlooked.
01.4 A facade is full of life, carved into by its users in Lecce, Italy
“The most interesting dwellings in this country... are the most unpretending,” wrote Thoreau in 1854 (45). Now, in 2010, as the American economy sits still in shock from the collapse of the housing market, fiscal reality reveals itself to many Americans. This author cannot help but think of the Italian countryside, where vacant concrete frameworks of homes sit waiting to be completed over time as the future inhabitants budgets, lives, and desires permit. The benefit of time is evident throughout Italy as buildings transform over hundreds of years to meet the needs of changing users. Architecture, like people, may be alive or dead. Visit the rows of affordable housing in American cities like Marietta, Georgia or observe your local ‘cookie-cutter’ tract housing development, both are dead, untouchable, assumed perfect just as they are. Then look at the buildings that have been carved into, built upon, decorated and adapted, they are full of life. It is these disruptions and their differentiation from the expected that awaken users from the state of distraction in which they experience the built environment.

In the United States one sees two types of life in housing, one being designed personalization through home owner selection of custom home builder and architect designed homes where the user is involved in pre-occupancy design decisions. Herman Hertzberger notes a common issue in the United States, as one’s prosperity increases the quality of one’s space increases, increasing one’s independence and diminishing one’s reliance on outdoor space and the assistance or social activity of others (49). The homes of the independent often consist of abundant spaces and unique forms encouraging activity in the created spaces. On the other hand, most Americans take the approach of individual personalization through decoration and organization of personal “stuff.” Occasionally, the skilled craftspersons may further personalize their home through more technically involved adaptation. It is this individual personalization with which one identifies, that is full of life and activity and has a quality of humaneness.

01.5 The framework of an Italian home waiting to be completed
01.6 ‘Cookie-cutter’ homes in Marietta, Georgia
01.7 Individual personalization through the arrangement of “stuff” in Kenai, Alaska
difficulty is in achieving genuine individual personalization that goes beyond a transient layer of “stuff” and is feasible in the lifespan of the inhabitants.

In Thoreau’s Walden, he writes of the unique strangeness of the human tradition of inhabiting shelter created and often used by others. “No doubt another may also think for me; but it is not therefore desirable that he should do so to the exclusion of my thinking for myself,” he writes (44). Bonnie Loyd, in Housing and Identity notes, “The home is a ‘family’s major symbol of status and identity,’” yet it is created with little input from its users (Rapoport 4). With the inordinate amount of time and energy expended in the United States in shaping individual identities, housing options that do not offer opportunities for further definition of the individual can damage one’s self-esteem and overall life satisfaction (Rapoport 14; Rohe). Three forces shape an individual’s self-esteem; how one is viewed by others, how one compares himself to others, and how one perceives the success of his own behavior (Rohe 305). Self-esteem and life satisfaction can be increased through the development of one’s individual identity.

Identity is a term used to summarize the defining characteristics of an individual or a group of individuals. The home has an opportunity to play a role in the definition of the individual by encouraging inhabitants to make their home true to the individual. The home shall be a catalyst for individual personalization or beautification through occupation. By extending the freedom of user participation in pre-occupancy design through the life of the home, the inhabitants are given the opportunity to express their defining characteristics, adapt to their changing functional needs, and differentiate themselves from others within the household and within the community. Strengthening of personal identity will create spaces of a quality worth preserving, encouraging longevity of habitation, and enrich neighborhoods with complex and active built environments. Architecture’s particular role in determining identity involves the level of personal ownership, the level of individual control, and the maintenance of personal and public perception.

THREE FACTORS IN SHAPING SELF-ESTEEM

1] HOW ONE IS VIEWED BY OTHERS
2] HOW ONE COMPARES HIMSELF TO OTHERS
3] HOW ONE PERCEIVES THE SUCCESS OF HIS OWN BEHAVIOR

IDENTITY

CONTROL
PRIVACY
CONTINUAL ENGAGEMENT

OWNERSHIP
OCCUPANT RESPONSIBILITY
ACHIEVING OWNERSHIP

PERCEPTION
DESIGN PERCEPTION
MAINTAIN PERCEPTION

01.8 The role of architecture in establishing identity
02 IDENTITY THROUGH OWNERSHIP
Developing ownership and pride in low-cost homebuyers increases place attachment and perceived control (Rohe 303, 306). “Owners... are said to have higher social status and thus more self-esteem,” writes Rakoff (qtd. in Rohe 304). This thesis will focus on the concept of new home ownership for those currently in a rental situation or those in need of a reasonably priced home, although the discussion may also be applicable under varying conditions. The role of ownership in establishing identity has two priorities, to develop occupant responsibility and the feeling of ownership and to assist the household in achieving literal ownership, the initial being applicable in situations where legal ownership is not possible.
02.1 City West by Torti Gallas and Partners took clues from local context

02.2 Historic Dayton Street provides precedent for City West
Homeowners and even renters begin to feel responsibility or ownership over their dwelling when they are involved in the pre-occupancy decision-making and in a study by William Rohe, homeownership is credited to increased inhabitant self-esteem and life satisfaction (317). Community-based design, a process utilized by architects in large scale developments, involves community members to help create an end project that represents the identity of their collection of people. In individual home building or small scale residential development, users may have the opportunity to be involved in the pre-occupancy design process either through their selection of an already existing home or through their limited decision making ability in creating a custom home. Obviously, this limitation does not exist for those that are able to build or design their own dwelling, although still influenced by society. In developments such as Cincinnati’s City West by Torti Gallas and Partners or most of the project by Abode Communities in Los Angeles, the future tenants of the low-cost homes are unknown and thus clues have to be taken from past projects and surrounding context (Antoine; Kohut). On the other hand, looking at a smaller scale project such as a home from a local home builder, one sees more individual responsibility for decisions such as site use, finishes, layout, boundaries, light and ventilation levels, and somewhat the overall aesthetic. These decisions are limited to the original homeowner, come at an added expense, and are far more limited in low-cost options such as self-help housing. Residents without these options may lack a sense of ownership or will give themselves options through un-designed individual personalization.
02.3 Community based design is used for the design of a new school.

02.5 A home builders’ website advertises personal decision making ability.

02.4 Stewart Brand’s diagram “Shearing Layers of Change”
Often, un-designed individual personalization is the primary median of individual identity in the home. Occasionally, homes are designed to accommodate and encourage these unexpected activities. By designing the home and the development process to extend user participation into the post-occupancy stages of home formation, individuals feel greater responsibility and ownership (Hertzberger 25). In most homes, user post-occupancy participation is limited to non-fixed items, or “stuff” like furniture and personal belongings, and semi-fixed items like mailboxes, shutters, or wall color. By considering the potential of continual user involvement when designing the home, opportunities can be provided to engage users with elements typically recognized as fixed or off-limits such as the space plan, the skin, and potentially even the structure. Consider the 99K House by Hybrid Architects, which provides ongoing flexibility through user involvement in the arrangement of interior walls. This topic of post-occupancy user participation and individual control will be discussed in further detail in the next chapter.

02.6 Hybrid Architects’ 99k House involves users in shaping interior spaces

02.7 Hybrid Architects’ 99k House offers an infill expansion method
Unique home forms, materials, and decorations create a cohesive appearance on Dayton Street in downtown Cincinnati.
Herman Hertzberger, in *Lessons for Students of Architecture*, writes of the need to reappraise the current division of responsibilities in the building design and maintenance process (25). By giving users responsibility and deeply involving them in their built environment, they build pride, ownership, and place attachment feeling more responsible for the ongoing upkeep (PSHH). By giving more responsibility to the user, the end result is a home that is more representative of the user (Habraken 81). Designing for greater occupant responsibility need not result in a chaotic built environment. Murphy Antoine of Torti Gallas and Partners suggests that it is the role of the designer to be a catalyst for individual personalization, mediating chaos by initiating clues or hints as to how the occupant might utilize their space. Developing occupant responsibility, or “perceived control,” as Rohe notes, may increase one’s sense of ownership even where literal ownership may not exist, increasing occupant satisfaction and tenure (Rohe 307).

**It is the role of the designer to be a catalyst for individual personalization**

02.9 Users find an opportunity for a personal touch in Cincinnati’s City West
Three Factors in Achieving Low-Cost

1] LOCATION

2] LOCAL INCOME TIER

3] FUNDING SOURCES AND SUBSIDIES
“Tremblay and Dillman (1983) suggest that ‘to live in a conventional single-family detached house that one owns is more than an American Dream. For the majority of Americans, it is a firmly held life expectation’” (Rohe 308). The detached home provides great opportunities for establishing identity through differentiation, however, the density associated with homes is not always feasible. Homeownership in the form of townhomes, duplexes, and condominiums, while potentially providing less opportunity for differentiation, most notably through the available exterior canvas, may still result in improved resident self-esteem and life satisfaction. “A large proportion of homeowners surveyed did credit homeownership with increasing their self-esteem, perceived control and life satisfaction,” notes Rohe (317). “71 percent said that owning had given them increased control over their lives” (Rohe 317). In achieving homeownership for low-cost homebuyers, this thesis considers establishing the initial low-cost of development, the use of owner equity, and the provision of income earning opportunities for inhabitants.

Murphy Antoine, lead architect in Cincinnati’s City West development, credits three forces in achieving low initial cost. The first, location, is often uncontrollable yet still plays a large part in determining project costs. The cost of land, labor, and materials can vary greatly by location. Also fairly uncontrollable but critical in project feasibility is his second force, the income tier of the local population. Local income tiers play an important role in determining a realistic and feasible cost of ownership and determine the need for Antoine’s third force, funding sources and subsidies. Often, finding a location in a desirable living environment at an economical price with a population that can afford a reasonable cost per square foot is made possible through a variety of funding sources or subsidies. These may come in the form of private and public grants, such as City West’s Hope VI funding through the U.S. Department of Housing and Urban Development (Cincinnati). The motivation of the developer also plays an important role in determining the utilization of funding sources...
“Dwelling is indissolubly connected with building, with forming the protective environment. These two notions cannot be separated, but together comprise the notion man housing himself; dwelling is building.”

N.J. Habraken
as some come with restrictive guidelines while others involve less traditional subsidies through the development of owner equity that require additional developer involvement and oversight.

Owner equity, typically in the form of a mortgage or down payment, can also be earned through programs such as rent to own, self-help housing, and sweat equity. In a rent to own situation, the inhabitant is given the opportunity to build financial equity toward the purchase of a home through higher monthly rent payments, but can also gain equity through the contribution of value to the home. In the project proposed by this thesis, this type of equity could be built if a developer built the initial home models or previously occupied home models were utilized as rent to own. However, this thesis will focus on the building of owner equity through a self-help model. Using owner or volunteer labor for 60% of the total labor can reduce the project’s overall cost by 30%. Beyond the benefit of lower initial cost, user involvement builds psychological ownership, pride, and a connection to their new possession. “Dwelling is indissolubly connected with building, with forming the protective environment. These two notions cannot be separated, but together comprise the notion man housing himself; dwelling is building,” writes Habraken (18). He explains that dwelling should enable inhabitants to perform actions themselves and allow them to function (Habraken 18). This goes beyond user involvement in building a home that they have chosen from a plan book as is often the case with homes from self-help organizations such as Habitat for Humanity. Similar to N.J. Habraken’s quote “Give a child building blocks rather than a finished doll house,” a lot is to be gained through the users’ physical participation in the shaping of their home over time (13). Rather than growing into a home that is complete before one even occupies the space, the home may be grown and formed by the user. Habraken refers to this as a “natural relationship,” where the home is shaped by human activity, “all impulsive variation, all everyday inventiveness, all spontaneity” (19).

This thesis proposes utilizing owner sweat equity to develop initial homes in a variety of stages of fullness, ranging from an essential core home of 550 square feet to a home capable of suiting extended family or live/work situations at 2,000 square feet. Owners will begin with a home of a size they need at a price range they can afford, while environmental cues in the home design and evident in adjacent homes will encourage future occupant expansion or adaptation. This allows the occupants to grow their home as their lifestyle and budget change and creates a blatant differentiation of home form symbolizing the individual household identities. Besides making ownership economically within reach, the responsibility and skills gained through self-help housing gives occupants a sense of control of not only their home but also their life.

### Form Adaptation Methods

- **Linear Method**
  - **Infill**
  - **Linear Method**
  - **Framed Expansion**
  - **Centralized Method**

### Phased Expansion Methods

- **Linear Method**
  - **Infill**
  - **Framed Expansion**
  - **Phased Expansion**

02.13 Form adaptation methods, illustrating means of adapting a home. This thesis follows the phased expansion method. Using the centralized method to achieve equality of spaces through interior environmental conditions and the breakdown of perceived hierarchy.
03 IDENTITY THROUGH CONTROL
Developing identity through ownership instills greater occupant responsibility and thus greater occupant control over their homes. The broad education of the architect does not include the individual goals, dreams, and lifestyle patterns of every potential user that might occupy one’s designed environment. The designer of such an important environment, the home, can never fully understand how inhabitants will utilize their space, and must design for the unexpected. Hertzberger notes, even when people built their own homes, they were still subservient to the expectations of society, to behave as they desired others to perceive them (158). The role of the architect then is to demonstrate the possibilities inherent in the design, especially those within the reach of everyday occupants (Hertzberger 158; Antoine). Occupant control creates opportunities for individual expression and identity building, particularly when it is a lasting sense of control that involves the user throughout the life of the home. “Increase in control is thought to contribute in turn to a more general sense of control over important life events,” especially important to low-cost homebuyers as they transition into the lifestyle of homeownership (qtd. in Rohe 304). Two priorities in establishing identity through control are providing occupant control of privacy and continually engaging users in their built environment.
03.01 Hertzberger’s design prompts users to define a boundary with plants

03.02 Window coverings are often used to mediate access and exposure
CONTROLLING PRIVACY: MEDIATING ACCESS AND EXPOSURE

Nasar explains, “Privacy is not just curtailing exposure to prevent invasions of self. It must also include sufficient access to interpersonal opportunities and obligations to enable one to present oneself in a favorable manner” (Archea 21). When considering occupant control over privacy, one must consider both exposure and access. Nasar gives an example of a man in an opaque box with no windows but an unlocked door. The man has privacy in terms of exposure, as no one can see into the box, but no access is provided to the outside world and he could easily be surprised by a visitor at the door. Access to one’s surroundings assists one in determining acceptable behavior as well as potential interpersonal relationships (Archea 10). Exposure to potential monitoring by others determines one’s level of accountability and provides an opportunity to present oneself and influence other’s impressions of their characteristics (Archea 11). Privacy through access and exposure is shaped through both visual and aural means and can be influenced by architectural decisions such as site use, boundaries, program, fenestration, and most often, user implemented details through semi-fixed elements such as window coverings, plantings, or fences. Encouraging occupants to take control over balancing their level of access and exposure will maximize individual privacy and create a strong community (Archea).

Great examples of occupant-controlled privacy exist all around us in traditional U.S. neighborhoods. Most common, is a trend to limit unexpected exposure and maximize access, however, as already noted, this balance can vary greatly by the user. Considering the existing context of the site proposed for this thesis, one witnesses several levels of exterior privacy starting at the street level. Parking on the street, residents are exposed to neighbors for chance personal interaction. The sidewalk adjacent is also exposed yet those in the public space have limited access to private properties through a stepped site section and boundaries ranging from the retaining wall for the site to an added fence and gate. The home then sits back from the public edge, often with semi-enclosed exterior spaces, providing
03.03 Street parking encourages personal interaction in Northside

03.04 Stepped sites limit exposure of home occupants in Northside
comfort to the occupant by limiting their exposure and maximizing their access. These boundaries and exterior spaces are often utilized as opportunities to present oneself even in their physical absence. Similarly, on the interior, the designer has an opportunity to make individuals feel less exposed by separating personal spaces through distance or by access route. Giving individuals the opportunity to control their access and exposure through doors and windows and providing additional boundaries such as adjacent circulation areas or exterior spaces, encourages users to claim additional space and display their identity. To provide residents greater flexibility in balancing their privacy and formulating their individual identity, the users require the ability to make decisions based on their own lifestyle and increased engagement in the built environment.

03.05 Northside households have distinct levels of privacy
03.06 A gate, fence, retaining wall, and vegetation limit access to this site
03.07 Exterior spaces are enclosed to varying extents in Northside
03.08 Individuals often use decoration to express their identity.

03.09 Less frequently, users manipulate semi-fixed elements like shutters.

03.09 Non-fixed elements like furniture are often used in personalization.
ENGAGING USERS IN THEIR BUILT ENVIRONMENT

“79 percent of participants in a low-income homeownership program agreed that fixing up the house and yard the way they wanted to was a major reason for wanting to own a house” (Rohe 307). Beyond the control of privacy, inhabitants deserve the ability to interact with and shape their living space inside and out. When the individuals are enabled to express their values or their “messages from the unconscious,” as Clare Cooper-Marcus notes, they can achieve true personal growth (House 52). These “messages” can be sources of insight for the occupants and contribute to a neighborhood of rich complexity. “Finishing is never finished,” quotes Stewart Brand (206). The level of finishing or responsibility left to the users will determine their involvement and connection to their space.

Because most American homeowners buy their homes, rather than build them, much of the expression of identity is achieved through personalization or manipulation of non-fixed and semi-fixed elements (Rapoport 21). Low-cost housing available today can be found in a variety of forms such as mobile homes, condominiums, multi-unit homes, townhomes, and small single-family subdivision homes. Often, these homes are purchased after they have been “completed,” yet residents find many outlets for self-expression and customization. When available, the private yard is often the most public opportunity for the expression of household identity through plantings, flags, yard decorations, furnishings, patios, and activity. The exterior of the home is often personalized through changes in color, shutters, fences, lighting, holiday decorations, mailboxes, and other semi-fixed elements. The interior of the homes witness a similar transient personalization, although on a more individual scale as the individual relates to the household rather than the household relating to the community. The interior is largely personalized through the arrangement of furnishings and other personal belongings, the “stuff” in Stuart Brand’s diagram. Penetrable materials, such as drywall, permit the attachment of belongings to walls. Other common alterations to the interior include the changing of hardware, floor finishes and
03.11 Inhabitants alter windows and rooflines at Corbusier’s Pessac
03.13 Corbusier shifts forms to frame exterior space

03.12 Corbusier’s work is almost unrecognizable after user alterations
03.14 Framed exterior spaces are infilled and facades are manipulated
wall color, and the replacement of millwork and light fixtures. The manipulation of these semi-fixed elements helps residents adapt and fit into their home, a trend architects have been forced to notice.

While not intended by LeCorbusier, the social housing at Pessac, France in its initial stark white modernism, has afforded inhabitants the opportunity to easily adapt and grow their individual homes. The blank facades, large open terraces, and framed exterior spaces easily allowed inhabitants to take control of their home, adding rooms, decoration, windows, and much more. “Instead of installing themselves in their containers, instead of adapting to them and living in them ‘passively,’ they decided that as far as possible they were going to live ‘actively.’ In doing so they showed what living in a house really is: an activity” (Lefebvre). Near the end of his life, upon learning of the adaptations at Pessac, Corbusier conceded to the user takeover, explaining, “it is always life that is right, and the architect who is wrong” (Boudon 2). Architects such as Herman Hertzberger observed the desire for personal control and began offering new opportunities for user engagement in the 1970s. His designs include autonomous spaces to be completed or designated by the occupants, encouraging users to disregard the typical hierarchy of home program and to utilize their space as best fits their individual needs. For example, exterior spaces are left as simple framework to become a patio, a place for plants, or anything else the inhabitant might create. Interior spaces break the typical hierarchy of home programming through open split level spaces organized around two central cores, creating visual and physical connections between spaces. Hertzberger and Habraken write about a theory they refer to as “structuralism,” where a more permanent structure acts as the framework for more temporal infill by residents. While this attitude is evident in Hertzberger’s work, in its

03.15 Once identical units now have varying window sizes, roof styles, forms, and boundaries.
03.16 Hertzberger’s framework is filled with a new entryway
03.18 Split floor levels connect interior spaces

03.17 Shifting forms frame exterior space for user manipulation
03.19 Split levels create autonomous spaces
truest sense it likely would not be embraced in the American culture as homeowners have expressed a disinterest in an environment that appears temporary or incomplete (Cooper-Marcus, Housing 64). Both writers attempt to address the human desire to adapt their home to their lifestyle, rather than adjust their lifestyle to the home.

“We live it, we don’t live in it,” says Bill, a homeowner interviewed by Clare Cooper-Marcus in her book House as a Mirror of Self: Exploring the Meaning of Home (54). Bill is referring to his home, which he considers an extension of his family. “We don’t change our habits to suit the house... we change the house to suit us,” he goes on (54). By increasing the level of finish left to the user the control of one’s identity is shifted from the designer and/or developer to the individual. “The problem with architects is they think they’re artists, and they’re not very competent,” comments Marvin Minsky, co-founder of the Artificial Intelligence laboratory at M.I.T. (qtd. in Brand 54). When the architect frees the home design of personal interests and styles of the moment, the result is a “continual house,” as Matisse Enzer explains (Brand 191). A “continual house” develops complexity over time. The architect can embrace this idea by designing for the unexpected; by accepting and encouraging the fact that individuals will adapt their home. This personal engagement can come at the scale of home form or at the placement of a lamp. By creating boundaries in the form of level changes or framed spaces and by breaking down the hierarchy of interior spaces, the inhabitant is given increased control over how they express their identity. By framing spaces, connecting interior and exterior spaces, and designing for disassembly, the user is encouraged to territorialize and activate more of their space. Design for disassembly (DFD), an emerging technique in building construction, allows fully completed buildings to be easily disassembled and reused. Rather than building a “complete” home for an unknown user, this thesis explores the capabilities of a home that can be grown by the user through a self-help housing method. By using standard sizes and simple assembly techniques, the occupants can be involved in the physical growth of their home, freeing them to adapt their home to meet changing lifestyle requirements and to create the image they desire to present to the public. The result is a series of homes each with a personality unique to its inhabitants.

03.20 The FlatPak home uses panelized construction allowing for ease of assembly and disassembly.
04 IDENTITY THROUGH PERCEPTION
One of the keys to improving occupant self-esteem and life satisfaction through identity is positive personal and public perception. By encouraging ownership and control in low-cost homebuyers, the user is given freedom to shape how they are perceived by others. Perception’s influence on self-identity is a balance of how one sees himself as well as how they are perceived by others. The type of project proposed by this thesis will attract homebuyers with a common desire to develop their individual identities as part of the local community. Their involvement in the formation of their home will not only improve their self perception by learning new skills but also improve their public perception as hardworking, ambitious, and capable homeowners (PSHH). In communicating a household’s identity to an unknowing community, “environmental cues become increasingly useful – they act as mnemonics, reminding both ‘us’ and ‘them’ about the nature of the settings, their meanings, the behaviours [sic] appropriate to them and hence about the identity of the occupants of such settings” (Rapoport 17). In establishing identity through perception, two priorities for the designer are shaping a positive initial perception and designing to maintain positive perception throughout the lifecycle of the home.
04.01 In the traditional American neighborhood, homes fit in while maintaining unique character.

04.02 At the intersection of personal and public perception lies one’s home.
SHAPING INITIAL PERCEPTION

At the intersection of one’s personal and public perception lies one’s behavior and lifestyle, materials and belongings, and one’s home, a large piece in how one presents himself. The home “is seen as an indicator of personal status and success, both one’s own and others,” writes Rakoff (qtd. in Rohe 305). Prior to home occupancy, the designer and developer are responsible to shape the initial perception of the project through site selection and use as well as the initial built form. A site must be selected with care to avoid association with preconceived negative connotations such as undesirable or dangerous neighborhoods. Likewise, site development should be in a manner similar to the existing context. By developing in a similar density with a similar home type, the project will strengthen the existing neighborhood identity and connect inhabitants to their new community. Capitalizing on and developing existing opportunities such as the relation to existing streets, sidewalks, or alleys, and the relation to neighborhood amenities like parks, retail districts, or schools will improve public perception of the project and perhaps even serve as a catalyst for further neighborhood improvement.

Initial perception is also shaped by funding sources, marketing methods, and the initial aesthetic. Avoiding the use of public funding with the associated public scrutiny and other forms of restrictive funding, will not only allow more freedom in design and occupant use, but also relieve occupants of the watchful eye of invested parties. Marketing the homes to a diverse audience can also play a role in shaping the initial perception and influence the unique personalities present in the lifecycle of the development. With a project so heavily reliant on user control of their public presentation, one must still consider the initial aesthetic and the method of user manipulation to the initial form. Clare Cooper-Marcus notes, “the overall exterior impression of a house... significantly affects how residents feel about their homes, sometimes even how they feel about their own worthiness” (Housing 45). There tends to be three paths one may take in determining the initial aesthetic. One can blend in, copying the vernacular of local
04.03 Identical homes allow residents to blend in

04.04 A house stands out from its traditional surroundings in Toronto, CA
context; one can stand out, separating their design from the context; or one can fit in uniquely, using similar forms and materials of local context but in a unique manner. For example, in publicly sponsored affordable housing schemes, where little choice in residence is left to the user, a home that blends in and feels ‘normal’ is important in providing stabilities in an often chaotic life. At the opposite end of the spectrum, some choose to develop custom homes that stand out with little relation to their context, creating a neighborhood of individuality and disconnectedness. Somewhere between these examples lies the traditional American model of homes developed individually within the standards of local vernacular and regional climate response. These homes create strong neighborhoods but are often not available to low-cost homebuyers as efforts to maintain low costs often result in identical home forms and material palettes. This thesis seeks to maintain and build upon the character of the neighborhood and give low-cost homebuyers the opportunity to shape their identity by fitting in uniquely. Herman Hertzberger, at his Diagoon Housing in the Netherlands, encourages users to adapt their homes that are initially identical and to present their identity within a framework similar throughout the community. While these homes are all designed by one architect, the result can be unique homes adapted by individual households. However, an issue that arises in designs encouraging user adaptation, is maintaining the perception of completeneness. Bare framework or empty planters can lead to a stigmatization of the project and its inhabitants as unsuccessful. By using a framework that is part of the site and the building, this thesis maintains the perception of completeness while providing cues for future adaptation. While the initial aesthetic of the designed homes may be similar, the designer must pass the responsibility for the building and maintenance of perception to the users. The designer is responsible for creating the catalyst to ensure that a positive perception is maintained through the freewill of the inhabitants.

04.05 Hertzberger frames spaces for occupant intervention
04.06 By not designing for occupant intervention, the result at Pessac is at times chaotic and damaging to the communal perception

04.07 Inhabitants utilized the opportunities of framed spaces, filling them as they needed
Ownership will lead to occupant care and upkeep but it is architectural limitations and provisions that will lead to occupant development of positive perception. John Archea writes, “the utility of verbal, paraverbal, and other behavioral means of controlling the flow of information about oneself cannot be fully ascertained without considering the spatial relationships among the actors and the limitations imposed by the organization of the architectural surroundings” (Archea 20). Thus, the maintenance of positive perception is highly reliant on the level of occupant control discussed in the previous chapter. As Archea notes, “the process of controlling the manner in which information about oneself is made available to others is a function of visual access and exposure” (Archea 19). Increased occupant control tends to worry some of the end result, fearing a chaotic compilation, damaging to the perception of not only the inhabitants but also the local community. This fear is not entirely unwarranted, as the chaotic overthrow of architecture is present in historic precedents including Le Corbusier’s worker’s housing in Pessac, France. The issue at Pessac however, was that the activity and desires of the inhabitants was not planned for. Corbusier created sleek modern housing unexpressive of its inhabitants with little relation to their lifestyles. Architects have a history of disregarding the desires of the occupants, most memorable is Frank Lloyd Wright’s obsession with rearranging his homeowner’s furniture to its designed position.

The architect that respects the capabilities of potential users will develop an architecture expectant of the unimaginable activities and uses of the inhabitants. The goal in developing a residential neighborhood is a clear, complex, and rich assemblage of occupant identities (Cooper-Marcus, Housing). The architect may achieve this aesthetic and facilitate continual positive perception by providing environmental cues for users as they are engaged in their built environment. Architect, Herman Hertzberger, strives to accommodate user inventiveness while maintaining the overall quality of the built environment and thus the positive perception of both the users
04.08 Hertzberger’s framework is filled with a small balcony

04.09 Hertzberger’s uses low walls to frame space and encourage users to maintain a positive perception
and the public. The opportunities Hertzberger creates previously discussed under engaging the user, can be seen in a larger framework of the design. For example, at his Diagoon Housing project in Delft, Netherlands, Hertzberger frames an entry way on three sides and provides a vacant structure above. He gives cues to how this might be utilized throughout the design where we see similar spaces infilled with windows, serving as terraces, or growing plants. He does the same with the roof terraces and garage spaces, framing them on several sides, taking the initial step in activating the space yet leaving it autonomous enough to be repurposed by the user to create rich variety within the community. With these techniques in mind, the design process of this thesis begins in the next chapter by locating a site that permits the shaping of positive perception.
05 SITING FOR POTENTIAL
ATTRACTION THE TARGET AUDIENCE

Understanding the theories of establishing identity in low-cost homes and the potential inhabitants of such a project assists in determining requirements for site selection, when this decision is not predetermined. This thesis attempts to develop unique identities and build positive perception, searching for a site free of preexisting negative connotations, in an area of progressive thought, and of a population diverse in occupation, income, race, education, age, and household structure. Targeting a population earning 60-100% of median income, the proximity of and access to daily amenities plays a great role in site selection. Access to highways, bus routes, and bike paths, and proximity to healthcare, jobs, schools, recreation, and retail areas influences the perceived and actual control the population feels over shaping their identity. Immediately, these criteria narrow the search to a semi-urban area. Understanding that identity is lacking in low-cost housing throughout the United States, this thesis looked to the 52 neighborhoods of Cincinnati, Ohio for a site.
Analyzing Cincinnati’s 52 neighborhoods for diversity (blue), schools (orange), recreation (green), healthcare (red), employment, and access to transportation, Northside is found to have the greatest potential for this thesis.
Using the same criteria previously outlined, a neighborhood was found with age and race demographics similar to the Cincinnati average and within close proximity of two major highways, several bus routes, a new bike path, several hospitals, some of the area’s largest employers, multiple schools and universities, large public parks, a historic retail center, and potentially a future light-rail system. Northside, a progressive neighborhood, once known as Cumminsville, is full of potential for a project in low-cost housing. Within Northside, areas have been targeted by the community for development, while others have been highlighted as priority zones where the quality of housing and the safety of residents has come into question. A development plan by local architects, Bloomfield Schon and Partners, for the historic American Can Factory and surrounding site, is very close to many of the amenities of Northside and is positioned within the community to act as a catalyst for positive improvement between the historic center and one of the large residential priority zones. The area sits at the intersection of retail, industrial, and residential zones with
05.03 A 1/2 mile radius map highlighting priority zones in Northside
many vacant lots capable of creating a cohesive mixed-use area. Six sites were considered, analyzing each for environmental conditions, surrounding context, potential for integration, access to amenities, and project scope opportunities. Realizing that 48% of Northside’s residential units are detached homes, the northernmost site (site 3) was determined to have the greatest potential for experimenting with a small number of new homes. Surrounded by existing homes, the site offers the best potential for integration into the neighborhood, especially considering Northside’s history of developing in subdivision fashion, building three to six homes of similar style at a time (Woellert.)

Northside, initially a small community along Mill Creek, was a popular trade route with its historic retail district developing along what was once an Indian trail (Woellert.) Several large industries developed in the community attracting the construction of wood

<table>
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<tbody>
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<td>Site 1</td>
<td>Site 2</td>
</tr>
<tr>
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</tr>
<tr>
<td>Market Value</td>
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</tr>
<tr>
<td>Home Lots</td>
<td>0</td>
</tr>
<tr>
<td>Axis</td>
<td>N/S or E/W</td>
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<tr>
<td>Borders</td>
<td>Retail Parking</td>
</tr>
<tr>
<td>Existing</td>
<td>Vacant</td>
</tr>
<tr>
<td>Access</td>
<td>Hamilton Ave. 1050’</td>
</tr>
<tr>
<td>- Bus Stop</td>
<td>0’</td>
</tr>
<tr>
<td>- Bike Path</td>
<td>0’</td>
</tr>
<tr>
<td>Notes</td>
<td>Historic Commercial District</td>
</tr>
</tbody>
</table>

05.04 Six sites surrounding the American Can Factory

05.05 Each site was analyzed, resulting in the selection of site three
frame Irish homes and masonry German homes, thus a large portion of the existing housing stock is well over 100 years in age. The high density compilation of single-family detached homes average five to six rooms with two to three of those being bedrooms. With little new construction in the area and a collection of vacant large industrial buildings, developers are proposing mixed use development in historic buildings such as the American Can Factory.

The site selection for this project, adjacent to the redevelopment of the American Can Factory, aims to capitalize on the attention of the new development to build home value. The combination of developments will serve as a catalyst for further development, creating a more connected and expressive neighborhood. With its prime location, the site has the opportunity to attract renters from adjacent blocks into affordable homeownership options, while also serving as an alternative to the proposed strips of rowhouses to be developed on the south side of Knowlton Street. The existing site is partially used for church parking while the other portion is fenced off and overgrown. Framed by overgrown but historic brick alleys on the north and east edges, and existing homes to the west, north, and east, the site offers great potential for integrating new homeowners in the existing neighborhood while encouraging neighbors with the improvement of and connection to shared spaces.

The local vernacular is diverse, just like the people. Most of the homes were built in the early 1900’s or late 1800’s and their exterior facades primarily consist of masonry or wood siding. Roof styles are most often gabled or cross gabled, although occasionally homes are topped with mansard, hip, or flat roofs. Choosing materials and forms that relate to the existing context will help inhabitants feel connected to their surroundings and assist in building a positive communal perception. The prevalent site section and street parking of neighboring sites creates a great deal of opportunities for user controlled access and

05.09 Bloomfield Schon and Partners plan for the American Can Factory
05.10 Two new homes feature shed style roofs and unique form
05.12 Several homes feature wood siding
05.11 Varied heights, styles, and materials create a rich neighborhood
05.13 A row of small painted brick homes sits near the site
exposure. Similarly, the thin, predominantly 25’ wide sites offer a density of potential interpersonal relationships including the potential for security through the ease of access. Most of the neighboring properties include covered outdoor spaces adjacent to the main entrance again developing user control of access and exposure, but also offering an extension of interior space, particularly useful in low-cost housing when attempting to increase the perceived size of space and availability of personal space. The density also provides a wind block to the new development while leaving each home access to southern exposure. While the existing site vegetation consists of minimal weeds, the surrounding context offers a variety of aged trees and plants that may be mimicked on the site. However, several issues exist in the surrounding sites and building typologies that may also be addressed by this new development. The properties, stretching 125’ to the rear alley, most often have under utilized and overgrown rear lots, not just losing potential usable space for the inhabitants but also creating an inactive edge to the historic alleys. A home of less height might better utilize the property while allowing more daylight to access the northern lots. Another dominant issue of homes in thin, long sites is achieving daylight and ventilation in centrally located spaces. Potential solutions may include dividing the home form, utilizing light and ventilation towers, or a step-back design. The site offers great potential and useful precedent, but it is the potential inhabitants and their unexpected methods of identity building that will play the greatest role in shaping the project design.

05.14 A panoramic of the site showing three masonry homes on the west and a wood sided home on the east
06 UNDERSTANDING POTENTIAL INHABITANTS
Many non-profit organizations such as Habitat for Humanity assist households earning poverty level incomes. Federal funding is also made available, often through H.U.D., to subsidize the expense of housing for those earning less than median income. This thesis provides a housing option to those earning a low-middle income, without the subsidies of public grants. People earning 60-100% of median income have limited options in housing, often choosing from a stock of ‘cookie-cutter’ homes or stretching their budget for something more desirable. By designing homes for ownership, user control, and positive perception, homes in this price range can become more desirable to their potential inhabitants.
06.01 A diagram demonstrates the target audience between 60-100% of median income.

06.02 Graphs illustrate common Northside occupations as well as racial and age diversity.
UNDERSTANDING
POTENTIAL INHABITANTS

Looking more closely at the population of Northside, one can better understand the diversity of the neighborhood and the potential inhabitants of the project. With a median income of $38,000, the target audience earning 60-100% of median income makes between $22,500 and $38,000 per earner each year. Common occupations include the fields of service, sales and office, and production while males also see large concentrations in the fields of transportation and construction maintenance. Northside is also one of the most racially diverse neighborhoods in Cincinnati with a population that is 58% white, 39% black, and 3% other. The age diversification of Northside is also comparable to Cincinnati’s average with 73% of the population over the age of 18. Recently, Northside has experienced a trend in increasing singles, blacks, and renters largely attributed to the demolition of several large public housing complexes in Cincinnati’s West End neighborhood (Northside Comprehensive 12). The neighborhood averages 49% homeownership and 51% rent as of 2008 with an average of 2.3 people per home, although when considering only the detached homes of Northside, the homeownership increases to 74% (“Northside Neighborhood”). These households are of a variety of compositions including nuclear families, college students, single parents, unmarried couples, and retirees. Even what the potential inhabitants have in common, the need for low-cost housing, varies greatly between those earning 60% of median income and those earning median income.

Common advice suggests that a homebuyer spend no more than 200-250% of their annual income on the purchase of a home. By utilizing the self-help housing method, the cost of the home is reduced 30% by inclusion of owner sweat equity for 60% of construction labor. This permits this thesis to make feasible a small starter home of approximately 550 square feet to households with two earners of 60% income at $65,000. A larger home, up to 2,000 square feet, can then be developed over time or will be initially feasible to households with one or more earners nearing median income with the maximum cost
### HOME COST GOALS

<table>
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<tr>
<th>250% ANNUAL INCOME</th>
<th>WITH 60% LABOR IN SWEAT EQUITY</th>
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<th>1400 SF</th>
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<tr>
<td>1 EARNER [60%]</td>
<td>$22,800</td>
<td>$33,000</td>
<td>$73/SF</td>
</tr>
<tr>
<td>2 EARNERS [60%]</td>
<td>$45,600</td>
<td>$65,000</td>
<td>$144/SF</td>
</tr>
<tr>
<td>1 EARNER [100%]</td>
<td>$95,000</td>
<td>$135,000</td>
<td>$300/SF</td>
</tr>
<tr>
<td>2 EARNERS [100%]</td>
<td>$190,000</td>
<td>$270,000</td>
<td>$600/SF</td>
</tr>
</tbody>
</table>

### HOME TYPES AND AVERAGE COST

<table>
<thead>
<tr>
<th>DETACHED</th>
<th>TOWNHOME</th>
<th>2 UNITS</th>
<th>3-4 UNITS</th>
<th>5+ UNITS</th>
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</thead>
<tbody>
<tr>
<td>48%</td>
<td>2%</td>
<td>18%</td>
<td>10%</td>
<td>22%</td>
</tr>
<tr>
<td>$117,960</td>
<td>$63,722</td>
<td>$72,147</td>
<td>$120,073</td>
<td>$140,915</td>
</tr>
</tbody>
</table>

AVERAGE RENT $486 / MONTH

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06.03 Northside homeownership rates and household size, thesis cost goals, and local home types and cost
of $270,00. The local stock of detached homes averages $118,000 in cost and can be found in a variety of unique forms, offering similar opportunities for one to find a home that represents their identity. However, this thesis seeks to serve as a model for new low-cost home construction, in a way to break the trend of monotonous low-cost development and offer an opportunity for similar richness through the establishment of identity.

The diversity of the intended audience mandates diversity in design. The range of possible occupants calls for homes able to house one to eight people and accommodate those seeking to earn an income within the home. Six homes will be developed, each on their own 25’ x 125’ property, similar to the surrounding context, giving each household the opportunity to relate to the community. The design will be of an essential core home, beginning with a minimum of 550 square feet. These homes will be built in a variety of stages, with the largest of 2,000 square feet displaying the inherent potential of the home. The essential core is able to serve as a starter home, providing an opportunity for homeowners to develop their home over time. Many of the programmed spaces are similar to those of a typical low-cost home and are based on standard reasonable dimensions. The differentiation lies in the use of autonomous spaces to encourage user designation and their arrangement to facilitate privacy and spaciousness in the small home. Smaller size and well-designed exterior connections will encourage user involvement outside the home, influencing perception and user control over that space (Cooper-Marcus, Housing 64). Arranging spaces with indirect connections between personal spaces will increase the individual’s level of control over their privacy, both access and exposure.

**ESSENTIAL CORE**

- BATH 60
- SPACE [SLEEP] 90
- COOK 60
- MECHANICAL 60
- SPACE [LIVE] 120
- CIRCULATION CORE 120

**TOTAL 550 SF**

**FULL EXAMPLE**

- BATH/MECHANICAL 3 AT 120
- SPACE [SLEEP] 4 AT 120
- SLEEP STORAGE 4 AT 15
- SPACE [GATHER] 360
- SPACE [EAT] 120
- COOK 2 AT 120
- REAR FLEX SPACE 220
- CIRCULATION CORE 120

**TOTAL 1,960 SF**

06.04 A diagram demonstrates the arrangement of spaces around a central core beginning with an essential core of 550 square feet. Program spaces identity potential uses in brackets, but space designation is controlled by the user.
06.05 Desirable spatial relationships

06.06 Spatial groupings diagram, illustrating a desire for separation between personal and household spaces

06.07 Spatial proximities diagram
07 DESIGNING FOR IDENTITY
The design process for this thesis began with locating the target audience and choosing an ideal site as discussed in chapter five, continued with understanding the potential inhabitants and their programmatic needs as discussed in chapter six, and concludes with the distilling of particular design implications based on the goals of the thesis. While the process is not that unique, goals differing from those of a typical home developer lead to different design implications. In this thesis, the designer is responsible for creating a game, making provisions for the unexpected, understanding that ever changing variety is possible (Habraken, Supports 43). By creating the rules for the game, the designer may limit or enable the endless, yet sometimes unconscious, creativity of the users.
07.01 Six design implications to achieve ownership, control & perception

07.02 Site use diagrams demonstrate methods of creating zones of activity

07.03 Environmental conditions seek light and ventilation on a narrow site
As chapters two, three, and four understood how ownership, control, and perception contribute to establishing identity in the home, particular design implications arose. Six key factors have been identified, many of which interrelate between addressing ownership, control, and perception. The key factors this thesis addresses are self-help assembly, site use, environmental considerations, personal and public perception, privacy, and engagement in the built environment.

Self-help requires that the home is able to be assembled by largely unskilled labor, leading to standard unit sizes and simple forms. By leaving finishing and phase compilation decisions to the user, the users build responsibility and gain skills for their “spontaneous inventiveness.” Phased assembly encourages users to grow the home as their budget, schedule, and life permit, creating a home representative of its owners.

Site use involves connecting new inhabitants to the existing neighborhood by building upon common qualities such as large vegetation and stepped site sections. The site is designed with environmental cues to inform inhabitants of its inherent potential and activate the entire site. By extending the framework developed in the home throughout the property, the user’s usable space is increased, creating a larger area on which one can present himself to the community. Hertzberger, in Lessons for Students in Architecture, writes of the potential for intensive site use when the inhabitants are encouraged to contribute their “personal love and care” (45).

Environmental considerations take advantage of the southern exposure and respond to the issues of light and ventilation in this particular house type by bringing light and ventilation to the center of the home. The issue of daylight on the northern portion of the lot and the shielding from Cincinnati’s various weather patterns is also critical in developing a quality home. By positioning the home further north...
07.04 Privacy diagrams show a desire for separation of personal spaces
07.06 Control diagrams demonstrate autonomous overlapping spaces
07.05 Perception diagrams look at personal and public perception
07.07 A section perspective illustrates changes in floor and site section
than surrounding homes, residents are given more opportunities for southern exposure and by keeping the home fairly low, some winter sun will still reach the northern portion of the lot.

Personal and public perception leads to a home that feels spacious while also appearing of an average size. Varying floor levels and ceiling heights, while also separating personal spaces, leads users to a greater sense of spaciousness. Public perception is enhanced by a home that is full in height and width and provides many boundary opportunities for individual expression. The homes relate to their local context through size, form, and material, and enrich the neighborhood through their clear and complex aesthetic.

Considerations of privacy develop connections between the homes and shared public spaces such as alleys and sidewalks, giving inhabitants the opportunity to determine their level of access and exposure. The home instills a sense of privacy or ownership in individuals through indirect connections between personal spaces and user control of the access and exposure of those spaces. Similarly, the home is able to accommodate live/work situations without disrupting the privacy of the household with separate access points.

Engagement in the built environment is encouraged through architect designed environmental cues and guides, serving as a catalyst for differentiation through exterior presentation and home form, and interior programming and organization. The interior of the home is a destruction of hierarchical plans, creating a space plan that responds to programmatic changes over time. However, the greatest challenge on the site, is in engaging users and the community on the northern portion of properties where current trends have lead to under utilized and overgrown public alleys and personal property. The design activates this area by creating zones of potential activity through connecting interior spaces to exterior spaces, breaking up the site with circulation, and providing an opportunity for interior program to be positioned along the alley.

The thesis explores a prototype home that is adapted or inhabited over the lifecycle of its users, beginning with an essential core and growing with residents to establish their identity as their lives change. As Thoreau writes, “the fruits do not yield their true flavor to the purchaser of them... it is a vulgar error to suppose that you have tasted huckleberries who never plucked them” (164). Similarly, one may never express his true identity through the purchase of a monotonous, expressionless low-cost home. Many architects think they have the ability to design the perfect home, some going to the extent of understanding it will not be initially perfect and giving residents the ability to adapt the home with designed pieces and parts. When more architects realize that people are capable of unimaginable adaptations and that they will inhabit their homes in very unique ways, the architect can design for the unexpected. By providing opportunities for identity and creating a framework of environmental cues, the architect encourages users to adapt their environment while maintaining an organized communal perception.
07.08 Floor plans of the essential core show a lofted space over a double height living space and a basement

07.09 Floor plans demonstrate how the home may be filled out by inhabitants with a master suite in the basement and studio in the rear
07.10 A site plan demonstrates the potential forms inherent in the design.

07.11 An elevation begins to show the unique identities of each home.


Kohut, Tim. Abode Communities. Personal Interview.


Deighton, Matt. Personal interview. 3-17 Sep. 2008.


Rowan, Martha. Personal interview. 19 Nov. 2008.


Tuan, Yi-Fu. “Space, Place and the Child.” *Space and Place*. Minneapolis: University of Minnesota, 1977.


01.4 Photo by author.

01.5 Photo by author.


01.7 Photo by author.

01.8 Diagram by author.

02.1 Photo by author.

02.2 Photo by author.


02.8 Photo by author.

02.9 Photo by author.

02.10 Photo by author.


03.02 Cameras Not Allowed. Flickr. Accessed 13 May 2010. <http://www.flickr.com/photos/89525842@N00/4242516300/>

03.03 Photo by author.

03.04 Photo by author.

03.05 Photo by author.

03.06 Photo by author.

03.07 Photo by author.


03.13 Diagram by author.


03.17 Diagram by author.


03.20 Photo by author.

04.01 Photo by author.

04.02 Diagram by author.


05.01 Diagram by author.

05.02 Map by author with Google Maps.

05.03 Diagram by author.

05.04 Diagram by author.

05.05 Chart by author.

