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Rethinking the House and the Family Within: A Needs-based Approach to Design

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Abstract

Consumers searching for cheaper housing have changed the residential housing market from one based on design to one focused on time and budget. Instead of using innovations to drive down the price, it is the opinion of some that the housing industry has cheapened the product. Typical developer housing provides only a few pre-designed models with the option of changing only a few superficial elements. However, trends show that society is increasingly interested in housing that responds to consumers’ specific interests, needs, and preferences through design. The growing popularity of home improvement television shows as well as designer products demonstrate the desire for a well-designed place to live. This research will provide ways to improve current design practices in residential architecture for middle class families while maintaining the same relative cost of a developer house.

Precedents include the classic designs of Frank Lloyd Wright’s Usonian houses. These designs used various principles to address issues of space and sequence, use of the site, privacy, and construction. Using these principles in residential design, innovative advancements in building construction, and other designer products, will aid in finding a solution to the problems of moderately priced houses today.

This research will be utilized to produce a design that can be customized more toward the individual characteristics and desires of the homeowner unlike many current builder houses. This research will present ideas for improving the quality of residential design for the average home buyer as they discover a greater appreciation for a product designed specifically to their desires.
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1. *Introduction*

Traveling through recent suburban developments, one realizes that most of the houses look very similar despite slight differences in paint color, landscape, or window arrangement. Further, the commonality goes beyond differences in style: English Colonial, American Ranch, Traditional, Georgian, Romantic, Gothic, or Victorian, which tend to look the same by virtue of a commonality of materials.

Through my architectural studies, a sense of dissatisfaction with these designs has grown from two major issues. First, these “developer subdivisions” do not provide a “home” in the complete sense of the word. “Home” is like the word “love”. Both words are used very often, but unfortunately, they are rarely used to describe the true emotional attachment that they were invented for. The “home,” for instance, that nearly all developers claim to provide, does not actually become one until someone makes it thus. What is provided initially is simply a building structure often with only a few choices to customize it for a specific homeowner. The choices are typically limited to colors and materials. It only becomes a home when one begins the journey of memories, leaving breadcrumbs along the way that become symbols of events in their life. When one paints the guest bedroom pink for their first baby girl, plants a tree in the yard for their sixteenth birthday, or proudly hangs the flag of their son’s or daughter’s university, then one’s house takes on an entirely new meaning—home.

Second, architects do not typically design single-family detached residential buildings. Architects are trained in the art of designing buildings, yet they usually do not design the most common and important building type. The house is something that one lives their lives in. Thus, architects should use their expertise to attempt to bridge this gap between “house” and “home”.
Therefore, improvements can be made to the current practices of residential design. Through my studies, I have come to realize why these two problems exist. This has aided in directing my interest in this topic by looking at how to make a home customizable for a specific client, yet more affordable than most architect-designed homes.

Central to the notion that architects can make the house more of a home are the needs and preferences of society. Attention to this question allows the designer to discover what is important to various people. The foundation of this discovery is Maslow’s hierarchy of needs, which delineates the inherent basic needs of every individual from their physiological needs for shelter and nourishment to the need for self-esteem and eventually self-actualization. This psychological study allows one to look at the fundamental reasoning behind many of the decisions one makes not only in the course of a day, but also in where and how one lives. Similarly, a look at people’s values, in much the same way as marketers look at them, has provided a way to further look into the reasons why people make certain choices.

A detailed study of people’s lifestyles can provide a foundation to understand how people live and what choices they make through what they buy. By looking at various market segments, one may begin to understand to what degree cost, function, or status are important factors in their lives. People can then be grouped into various clusters, then compared and contrasted based upon their distinct differences. This has opened the door to the discovery of various needs and preferences that shape what someone is looking for in the place they call home.

Designers may then provide a building that can be far closer to a “home” when one initially moves in. This is possible because it will reflect many of the memories that shape a home through the choices made by the homeowner to make the house their own. Their own history of homes provides pieces to solving the puzzle of their ultimate “dream home”.
The general history of housing and the suburbs provides a palate to draw from in order for a designer to create a clearer picture of what people want through what has been successful in the past. First, the suburbs are studied in their relation to creating an environment conducive to residential design.

Realizing the reason why many things have evolved into the way they are today aids in the discovery of how they could be improved for the future. For instance, the suburban dependence on the automobile that has facilitated its evolution may not easily be reduced without a change in philosophy by society.

Past housing visionaries have also been reviewed, in order to understand what some of the best designers through history have done in an attempt to improve residential design. Some of the early houses in suburbs have been studied to find what was done to solve the design problem at the time when the suburban house was a new building type. Also, renowned designers were studied to discover the innovative ideas in residential architecture brought forth by some of the best architectural minds through history.

One such renowned architectural visionary is Frank Lloyd Wright. His Usonian Houses give a glimpse into a method for designing a custom house using design principles to guide the planning and construction. These design principles, or guidelines, also help to control costs by reducing the amount of unused spaces for the specific homeowner. By designing specifically for a certain type of user, the house becomes a reflection of their lifestyle. This is one way the design of a house can move closer to being a home from the start.

Finally, this all provides a basis for creating something that has never been done before: a needs-based design that provides a house closer to home. Discovering what people want and how they perceive their housing environment aids in developing designs that are valued much more. This is not only beneficial, but a responsibility which designers must undertake.
2. Needs and Preferences

2.1 Hierarchy of Needs: discovering what is important for design

Good design affects a person’s psychological perception of something in a manner that invokes a positive reaction. If a designer were to discover what causes such reactions, then good design should be more easily achieved. Designers could also use this information to become more knowledgeable as to why certain designs and products are successful or not.

One of the fundamental reasons why people act in certain ways is based upon their needs. Thus, a study of needs, and how those needs are satisfied, may lead one to discover more fully what drives people’s actions or why they buy certain things. Many psychologists have studied human needs and devised theories, but the most prominent theory probably is that of Abraham Maslow. In the 1950’s he developed a theory of human motivation to explain workplace behavior patterns, which has been broadly extrapolated to explain other human behavior. His approach established a hierarchy of basic needs. Maslow contended that human beings continually desire means of satisfying needs throughout their existence. A human being rarely reaches a state of total satisfaction, except in a few instances that occur for an extremely short time. For instance, a person may eat until they are full, but if they were given their favorite dessert, they may feel the need to eat more. Maslow further believed that as one desire is fulfilled, another arises to take its place.1 Because of the hierarchy, each need is interrelated and depends upon another. For example, a person may not feel the need for safety, if one is starving. Further, a person may feel hungry if they are not loved, even though they have consumed a necessary amount of food. The hierarchy is comprised of five basic groups of

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needs ranging from the most potent to least potent: physiological, safety, love and belongingness, esteem, and self-actualization.

The foundation need is physiological: without this need, no other need is relevant. It is the most basic and obvious of all mankind’s needs. There are numerous examples of physiological needs for humans: food, water, shelter, sleep, air, and so on. These needs are also known as survival needs for obvious reasons. Basic shelter from the elements is also included at this level in the hierarchy. However, fulfilling this need does not necessarily provide a sense of home. The sense of home involves more than shelter to protect oneself from wind and rain. It involves higher needs such as belongingness. Even people who cannot afford to buy an apartment, much less a house, still desire a place to feel at home. Examples where housing fails to provide some sense of home and community are many: the failure of the numerous 1960s housing projects illustrate this clearly, as they are being demolished and replaced by designs that provide a better setting for creating a community.
The physiological need also includes sensory needs, depending upon the subject. For example, sight, touch, and even sex could be included in this category, because they strongly affect people’s behavior. Their importance depends upon the person and the circumstances in much the same way as being cold is comparable to needing security in one’s environment. Architectural design can have an affect on this need by providing quality sensory experiences, such as textured and natural materials that are seen as comfortable, and day lighting that connects with diurnal rhythms. In terms of the spaces in a home that could respond to such issues, an emphasis on a romantic bedroom and bathroom, as well as a kitchen that is open to the rest of the house could also enhance these sensory needs. For instance, simply adding dim lighting to a bedroom may increase the sensuality of the space. In contrast, adding curtains or partitions might enhance a sense of privacy satisfying the safety need. In addition, providing an opening between the kitchen and the living room may help the cook feel more connected to family or guests, which would satisfy the need for belongingness.

Maslow also found that if one particular need is not satisfied, then the entire outlook on the future changes. If a person is completely dehydrated and thirsty for instance, then one believes that water is the only true need; and that clothing, shelter or even love are unnecessary. That person would believe that complete happiness could be achieved if something would only fulfill their thirst.

According to the hierarchy, once the physiological needs are met, then one finds an entirely new set of needs that Maslow categorizes as safety needs. They include such things as: structure, order, stability, protection, and security. When these needs are not satisfied, other needs seem to be unimportant.

Children are generally more inexperienced than adults, and adults tend to be satisfied in terms of safety. Safety needs can be derived relatively easily in a child by the way they tend to cling to their parents, or a security item such as a blanket or teddy bear. Children also tend to desire some type of regularity giving
them a greater sense of security in terms of time and space. Only when one feels safe does one feel ready to move forward.

In terms of society, only when there is a general sense of safety will time and energy be spent to further develop other needs. For example, terrorists depend upon safety concerns because if a society lives in fear then they are more likely to succumb to the demands of the terrorists because the desire to feel safe is a fundamental need. The desire for safety needs in society can also be seen through the preference of familiar or known things rather than unfamiliar or unknown things. This desire can be satisfied through residential design by using familiar styles and spatial layouts.

The search for safety is taken to an extreme in what psychologists label compulsive-obsessive disorder. People with this condition spend most of their energy in an attempt to organize their surrounding spaces to eliminate the possibility of the unknown. They feel that happiness can be reached only if their spatial environment is thoroughly ordered and the possibility of unfamiliarity is eliminated. These people find it vital that the spaces they inhabit are functional and regimented in design. Some may refer to people who act in such ways as controlling. Healthy people also desire safety, order, and stability, but do not see these needs as absolute necessities.

Once the physiological and safety needs are met, people seek to satisfy higher needs such as belongingness and love. A person who does not feel loved will be highly aware of a lack of friends and family. Maslow found that a lack of love prevents the growth of a healthy person. “It would not occur to anyone to question the statement that we ’need’ iodine or vitamin C... the evidence that we ’need’ love is of exactly the same type.”\(^2\) He saw love as something that required mutual trust, and if one was afraid then true love could occur.

Love is not to be confused with sex however. The desire for sex has many influences including love, but also affection, self-esteem and even physiology. Providing spaces that promote affection and self-esteem will bring someone closer to experiencing love. For example, bathroom designs today reflect added interest in romance. These bathroom designs are open to allow views into previously private functions, which may result in a sensual experience. A design does not necessarily foster love, however, because sex sometimes is one-sided, whereas according to Carol Tribe, love is dependent upon both giving and receiving.³

Maslow also found that children might be severely harmed by moving too often and thereby being deprived of finding their roots.⁴ This lack of belongingness to a place may also lead to a lack of the sense of home or family, and lead to a sense of being a visitor instead of a native. Having a home, a neighborhood, and a sense of being with one’s own kind is very important to a psychologically healthy person. According to Tribe, humans have an instinctive urge to belong to a group.⁵ This relates to the next level in the hierarchy of needs: the esteem needs. While in this stage of development people gain self-esteem and respect from their peers if they belong to a group.

These needs are known by some to be the dependence needs. This means that the surrounding environment can help satisfy these needs. Once they are met one strives to fulfill the independent needs. These needs rely far more heavily on the individual person to reach their potential. The first of the independent needs are the esteem needs. Nearly all people in society need self-esteem and respect. Self-esteem includes the need for confidence, and the

³ Tribe, Carol, Profile of Three Theories, Kendall/Hunt, Dubuque, IA, 1970. p. 55
⁴ Ibid. p. 54
⁵ Ibid. p. 53
desire for mastery, independence, and freedom. Respect includes the need for prestige, status, reputation, attention, acceptance, and appreciation.

Someone who has these needs fulfilled tends to be more confident and productive in his or her ways. In contrast, someone who does not have these things might feel inferior or helpless. "The most stable and, therefore, the most healthy self-esteem is based on deserved respect from others rather than on external fame or celebrity and unwarranted adulation."\(^6\) People that are highly respected by others for their deeds tend also to have high self-esteem because they feel that their higher status as perceived by others makes them stronger. This need for high self-esteem can be fulfilled through residential design by the way the house represents certain attributes of its occupants. If the house is a positive reflection of someone, then his or her esteem will be increased as a result.

The highest level of needs in the hierarchy developed by Maslow is that of self-actualization. He identified this as the need for growth and development. Specifically, he described it as the desire to become everything that one is capable of becoming.\(^7\) This level in the hierarchy, as with the other levels, is dependent upon those below it. Therefore, it is dependent upon having a positive environment, including healthy relationships with one’s family. Particularly since most people (especially children) are strongly affected by advice from others.

For some people self-actualization negates the influence of other needs. For example, a monk may minimize other needs in full pursuit of the highest level in Maslow’s hierarchy. Unlike the other needs however, self-actualization is measured in terms of how often it occurs and its amplitude. It is a matter of a person making the best choices in life. Someone either makes a choice that moves them forward or makes them worse off than they were before the

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\(^7\) Ibid.
decision was made. If one is honest in making decisions, they are more likely to reach self-actualization. Further, one is also more likely to reach this level if one takes responsibility for their actions.

Needs are the strongest driving forces for humanity. Needs are necessary, unlike tastes and preferences. The way these needs are satisfied range from humble to luxurious. For instance, if a person does not have enough food to survive, then whether that person is given something they hate or love to eat, does not matter. However, understanding people’s needs is only the beginning of understanding how to improve residential design. To create better designs, it is also important to understand what people value and why. Thus we turn to understanding tastes and preferences and the value systems that drive them. The things we buy and do ultimately reflect our needs and values. What is valuable to one person is useless to another, although both seek the same underlying need. For instance, a homeless person might find great value in a community shelter during a winter storm, while an extremely wealthy person might not even consider entering such a building. However, both have the basic need for shelter, although each satisfies the need in starkly contrasting ways. Thus understanding human values systems looks closer into what drives people in their perception of good residential design.
2.2 Values: Categorizing people by their values systems

Whatever people buy reflects their values. Simply, people buy something because it has value to them, relative to other things. Thus, a house must appeal to someone in order for that person to be interested in buying it. But what is it about the house that has so affected the person that they “must have it”? Is it simply a matter of location, the number of bedrooms, the shape of the kitchen? Or is it something intangible that strikes a chord and suggests that it will complement one’s lifestyle? By looking at people’s values, tastes, and preferences, designers can find ways to satisfy needs that will attract interest in their designs simply by appealing to those values.

One of the leading systems used to determine human values is titled “VALS2”. It is a psychographic segmentation tool that was developed in 1978 by the market research firm, SRI International. VALS was initially developed through a study of the United States population that grouped people based upon their values and lifestyles. At the time segmentation approaches used socio-economic factors: race, religion, income, education and so on. The value approach generally enhanced how the market was understood. Eventually, VALS developed this into a system that did not look at social trends, but a person’s resources and self-image. Interestingly these tend to be more descriptive and stable. One’s resources are defined not only as finances, but health, education, and self-confidence as well. One’s self-image is determined by their behavior in portraying the image to others.\(^8\) VALS now uses the personality traits of society to determine purchasing behavior.

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The VALS system uses three main self-image patterns to help define the groups: people that are principle-oriented, status-oriented, and action-oriented. The resource levels used to define the groups range from abundant to minimal. This is used to look more closely at the psychology that is behind consumer preferences. VALS asserts that people express their personalities through their behaviors. Thus by looking at the underlying reasons why consumers act in a particular matter, one may predict future behavioral patterns.

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There are eight categories that VALS uses to group the population for research: Innovators, Thinkers, Achievers, Experiencers, Believers, Strivers, Makers, and Survivors. The innovators group, or actualizers, is comprised of confident, successful leaders who exhibit qualities similar to those groups with abundant resources.\(^{11}\) They enjoy innovative ideas and are open to new technologies. They may also be open to more contemporary designs although there is no statistical evidence to support this. They seek out information and keep up to date, usually in certain areas, but this does spill over. They are very active consumers and reflect their tastes through the purchasing of high-end, niche products with their high level of resources. The architecture they prefer most likely reflects this as well, and may include contemporary design. Image is important to them in terms of emanating their tastes rather than what others perceive. So they may not necessarily desire high-end design for the sake of it being high-end, though they do have distinct tastes.

People who value order, knowledge and responsibility characterize the thinkers group, or fulfilleds.\(^{12}\) They typically are well educated and consistently strive to broaden their knowledge to enhance their decision-making processes. Thus, they are typically in tune with world and cultural events. Also, they are most likely in tune with cultural vernacular architecture. They respect institutions, but are open to new ideas. Though this group tends to comprise those who have abundant resources, their purchasing behavior reflects an interest in functionality, durability, and overall value.

The achievers group is very goal oriented as their name suggests, and they are also very family and career oriented.\(^{13}\) These people tend to have home-offices to accommodate a hard working lifestyle, yet this allows them to be

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12 Ibid.
13 Ibid.
close to the things that are important to them, namely family. They tend to spend their lives focusing on family, religion, and work and tend to be economically stable. The decorations in their homes probably comprise religious items as well as family photographs and memorabilia. They have strong values for stability, predictability, and consensus. One can deduce that they are active consumers with interest in timesaving products and spatial functionality to accommodate their busy lives, as well as things that depict a sense of high status to their peers because they are interested in the image they are projecting to others.

Those in the experiencers group enjoy expressing themselves and are impulsive consumers who get enthusiastic about new products, but also pull away from them quickly as well. This makes it a difficult, and possibly not worthwhile to design and market towards this group of people because they follow changing trends and styles so rapidly. They let out their energetic personalities through exercise and recreation. Therefore a connection with nature and the surrounding landscape are important design factors to them. Their buying patterns reflect a strong desire to be “cool” and they are able to do this given their relatively higher economic status. Thus a strong connection to current styles and trends in design will attract these types of people.

Similar to the thinkers group, the believers are motivated by ideals in terms of family, religion, community, and their nation. They follow regimented routines largely based upon their ideals, and desire designs that also reflect them. The believers group has consistent buying characteristics in that they purchase those things that are familiar to them, and typically what is made in America. Thus they prefer traditional design styles, especially those that reflect American culture.

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15 Ibid.
16 Ibid.
17 Ibid.
As with the experiencers group, the strivers group focuses on trends because they care about other people’s opinions. Unlike the experiencers group however, they do not have enough money to satisfy their purchasing preferences, although they would like others to perceive them as having the wealth that those in the experiencers group have.\textsuperscript{18} Therefore an emphasis on low price is just as important as quality design for this group. Most people in this category see the way they make their living more as a job than a career, lack skills, and do not have the motivation to move forward in life. They are impulse buyers based upon their ability to do so, thus if given inexpensive options they are likely to take them.

Also similar to the experiencers group, people in the makers group show the world their status through their possessions, however their possessions are often homemade for many reasons including their often relatively unstable economic status.\textsuperscript{19} They are typically known as “do-it-yourself” types of people, with everything from their homes to their vehicles. Therefore a more rustic, handmade, quality design is highly desirable. Also, they don’t care about luxury, but rather functionality of design. Makers typically take pride in their constructive skills, and sense of self-sufficiency.\textsuperscript{20} They primarily care about their family, work, and recreation. Therefore they prefer the ability to work and play at home equally. A home office, and entertainment room, or bar would most likely be desirable accessories in the housing designs for this group. They prefer consistency, and are skeptical of large institutions such as government and big business.\textsuperscript{21} Thus, they are more likely to prefer working with a small architecture firm rather than a large developer.

\textsuperscript{19} Ibid.  
\textsuperscript{20} Ibid.  
\textsuperscript{21} Ibid.
The final group is the survivors group, or strugglers. As their name suggests they focus on surviving and struggle with their lack of resources. Thus, their primary concerns are with safety and security, and designs that provide for these concerns while remaining inexpensive are the most desirable. They do not have a consistent motivation however, because their needs are continually in flux. They are brand loyal however, especially if the brands are less expensive than their counterparts.

Marketing companies and designers can use this consumer typology to determine what matters the most to a group of people so that products can be better designed to reflect those desires. Designers can also use this information to create things that are more closely related to that which their clients want. One’s values directly relate to what one is willing to pay for. For instance, if someone gives high value to food then they will want to spend their money on it. Basically, if a designer can provide what people want, then they will be highly successful.

Using these value systems, designers may discover insight into what people value without actually asking them. For example, if one were to design for people in the makers group one would focus primarily on the functionality of the design. Also, if one were to design for the experiencers group, one would focus on current trends and styles to create something that would be more appealing to them. Thus by looking at people in groups one can better determine how to design specifically for that group, yet not be forced to design something that is completely unique to each individual and thus very costly.

\[22\text{Ibid.}\]
2.3 Lifestyle Clusters and their use as market research

Just as people’s different value systems can be divided into groups using VALS in order to more easily study them, people with similar lifestyles can be grouped together using market segmentation. One way in which researchers have subdivided people into groups through the use of market segmentation is to create lifestyle clusters. Market segmentation techniques are used to subdivide a population according to certain criteria that are relatively homogeneous for a grouping, yet differentiate it from other groups. For example, subdividing by race, economic class, or religion yields within-group homogeneity, and distinct between-group separation. Why should market segmentation be studied? Market segmentation can be used to divide a population of lifestyle clusters in order to better understand lifestyle differences, people’s needs and to develop (target) specialized markets. Other benefits include goods and services that can be designed specifically to the needs of certain groups of people, benefiting those people by bringing them something that is closer to their desires and preferences. Market segmentation can also monitor how buyers are evolving in distinct areas.

There are many differences between people, including race, sex, social status, housing type, or religion. For race alone, in the 1990 census, Americans identified themselves as belonging to 300 races. These differences might be seen as a hindrance to providing a product that would be desired by everyone. A Latvian Catholic might categorically reject what a Japanese Buddhist might prefer. On the other hand, the differences can be used to provide something that is highly desired by a particular group based upon their distinct preferences, rather than appealing to universal nonspecific needs.

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It's becoming increasingly important to study the differences among people. One of the most important differences is lifestyle. According to the geodemographers at Claritas, a marketing information company, American society today is composed of sixty-two distinct lifestyle types. This is a 55 percent increase over the forty segments that defined the U.S. during the 1970s and '80s.24 This reflects a better understanding of research methodology, improved access to data, and greater differentiation in postmodern society. With this in mind, an appreciation of changing lifestyle types can give advance notice of coming trends. For example, the current retro fad that is so prevalent in automobile design reflects lifestyle changes that were developing twenty years earlier.

Increasingly, people’s economic status is becoming both more important and more of a differentiating factor. Some sociologists believe that things such as global competition and the cyber-revolution have increased the difference between the have and the have-nots.25 The wealth of the country no longer depends on a few key markets, but rather companies that have products and services in virtually all markets in every corner of the world. In this new world, the differences among products become apparent since competition quickly eliminates hundreds that are of low value.

There are many different lifestyle clusters that people can be placed into. There are no longer just a few basic subdivisions; instead there are groups within groups that attempt to pinpoint the many lifestyles within modern postindustrialized society. The “Average American” may just be a figment of statisticians’ imaginations, since the “average” lifestyle cluster accounts for less than two percent of the American population.26 Further, the middle class is actually comprised of many groups, ranging from suburban white-collar couples to rural blue-collar families.

25 Ibid: 15
26 Ibid: 16
The largest lifestyle cluster in the United States today is called the “Kids & Cul-de-Sacs” cluster by Claritas. It may be described as a collection of white-collar family suburbs, such as Wheaton, Illinois. This cluster is known for its noisy medley of bikes, boom boxes, carpooled kids, and dogs.\(^ {27}\) This cluster comprises about nine million people, and is eleven times larger than the smallest cluster; it is representative of U.S. lifestyle patterns and demographics. It differs from smaller clusters that are mainly comprised of singles or couples. Despite this, only 3.5 percent of all Americans are included in this lifestyle cluster by Claritas. Although it doesn’t represent the “average American” type in any true statistical sense, the sheer size of the lifestyle closely approximates a “typical American”. It is an important lifestyle cluster to market towards since it is the largest.

There are many trends that give rise to the idea that the world is coming closer to a single culture, a phenomenon that scientists have called “the McDonaldization of society.”\(^ {28}\) For instance, there are people flipping identical hamburgers in identical strip malls from the east coast to west. Across the country, retailers like Wal-Mart and Home Depot smother the local shops that in the past gave cities and small towns their individual character and charm.

There is more evidence of cultural homogeneity: the adverse affects of, “…the creeping sameness of malls is one reason that over the last three years, some analysts estimate, as many as 600 of the nation’s 2,000 malls have experienced financial trouble.”\(^ {29}\) Everyone has a different perspective on how brands reflect their social status, yet in some areas generic products predominate.

By contrast, the clustered world reveals that sometimes mass-appeal businesses reach out and touch millions, but the vast majority of them do not.

\(^{27}\) Weiss, Michael J. *The Clustered World*. New York, 2000: 17
\(^{28}\) Ibid: 17
\(^{29}\) Ibid: 18
“In the kitchens of the Northwest, coffee bean grinders are mandatory. Salsa has outsold ketchup for years in the Southwest, and as they like to say, “If it ain’t fried it ain’t Southern.” Across the country there are examples of regional marketing.

In another example, people look at branding the products they wear in a manner that has a significant impact on their lives. “Along the mean streets ... in the South Bronx, some young adults will literally kill for a Starter jacket or pair of Timberland shoes... (In) Northport, some shoppers cut out the designer labels of new clothes so they won’t be judged by anything so superficial.” However, they all go in for a cup of java at Starbucks, which incidentally offers numerous different varieties of coffee to meet different tastes and preferences.

Similarly, depending upon where one lives, people look at varying attributes to measure one’s success. In Mount Juliet, Tennessee, “...an important measure of success is which college your child attends... But in Lynchburg, Tennessee, a downscale rural town, what matters is how your son or daughter performs on a basketball court or athletic field.” This illustrates the profound difference in value systems. What is most important to people in their lives is precisely what should be considered designing or marketing to these various groups.

Lifestyle clusters typically are derived from where one lives. Approximately twenty percent of all Americans moved every year twenty years ago, however, today that figure has dropped to under seventeen percent. This is the case despite increasing divorce rates, which one may deduce would increase the mobility of society. Kristin Hansen, a mobility expert at the Census Bureau, reports, “Most people move to where they’ve been before, either where they went to school or vacation.” This may be because they find it familiar.

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31 Ibid: 19
32 Ibid: 19
34 Ibid.
This also may explain why people tend to prefer traditional housing styles that they can associate with memories from their past.

People also look for comfort and security in the communities where they live as opposed to taking a risk moving to an unfamiliar setting. “...only 18 percent of laid-off managers and executives were willing to relocate for a new position in 1995 – the lowest figure in a decade,” according to Challenger, Gray & Christmas, an international outplacement firm. This can be interpreted as an illustration of the increasing importance of comfort and security to society. This may also be an important factor when looking at what is important to people when they buy housing.

Although there are innumerable differences among people in a society, people can still be grouped together because of similarities. Depending upon what a researcher, marketing professional, or designer wants to study, an entire population can be categorized into groups. Each person has distinct characteristics that can be compared and contrasted to other people. Grouping can then be based upon the similarities and differences of those characteristics.

Lifestyle clusters are one method used to better understand the various differences and similarities of a population. Studying these clusters as well as people’s needs and values can help designers to establish the desires and preferences of certain markets and thus use them as a basis for design. This can be used to design more specifically for a target market, thus providing something that is closer to their needs and preferences. By doing so, the end product will be of much higher value to the potential buyer. Therefore, they will be generally happier than they would be buying something that is not designed for them, such as what is typically offered today.

Finally, each method aids designers in different ways. The “hierarchy of needs” is a method of understanding human behavior based upon their needs to better comprehend the fundamental driving forces behind people’s decision.

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Thus satisfying one’s needs is the strongest and most basic method of increasing their happiness for something. “VALS” is a market-research approach for understanding what people value by placing them into categories. Lifestyle clusters is a similar method of understanding various lifestyles within society. The Lifestyle Cluster method of grouping people is the most in-depth because it includes buying characteristics as well as demographic information such as economic status and education.
2.4 Human Preferences: how they relate to architecture

Preferences of Residential Scenes

Studying the needs and values as well as the lifestyle clusters of society helps one to understand what drives people’s preferences. In residential design these preferences show a relationship with the functional and aesthetic qualities of the house, its interior, and its surrounding environment. Another way to study what people desire in terms of residential design is to look at how they react to scenes through their visual perception of them. This can give important clues to how needs may be satisfied.

Although all of our senses partake in the experience of spaces, only rarely are these senses studied for design purposes. This is because, “the visual experience typically is the most important to humans and is more central to design attention than our other sensory experiences.”36 In architectural studies, most of the emphasis is based upon understanding human visual perception. Understanding human visual perception is extremely important because it is the most common perception by the current and potential users of a building.

Although people have different opinions and preferences about spaces, Berlyne and Wohlwill have pointed out that common patterns of preferences can be found.37 For instance, some would argue that ambiguity in design might be preferred. However, Naser cites Lynch, Kaplan, and Wohlwill, who all argue that people prefer legibility and organization in the environment.38 This is good because it gives a sense of identity to the space.

Openness, spaciousness, or depth of scenes has been related to preference in many environmental contexts. In fact, it has been suggested that

37 Ibid: 590.
38 Ibid: 591.
the spaciousness or constriction of streets is the most important aspect of the pedestrian’s experience of the cityscape. Further, it has been hypothesized that the sense of spaciousness or constriction of streets strongly relates to the openness of various residential scenes.

In a study by Jack Nasar, certain attributes were expected to clearly demonstrate differences in people’s preferences for the built environment. In order to limit the variables in explaining these preferences only residential land-use was studied. Separate studies were done to determine the emotional quality of scenes versus the physical attributes (see “Fig. A” in Appendix A). The responses to scenes were obtained from various people who might normally pass by the scenes. The judgments of the physical attributes of the scenes were obtained from design professionals.

The data to determine the physical attributes of the scenes was obtained from planners and architects. They were shown slides of sixty residential street scenes in Pittsburgh, Pennsylvania, and were asked to judge each scene. The data for the emotional quality of the scenes was obtained from two samples of laypeople from Harrisburg, PA (so they wouldn’t recognize the pictures of the scenes). Each was shown half of the 60 scenes and asked to evaluate each scene.

The types of scenes chosen covered a range of residential options including: single family suburban/large lot, single family small lot, two family, multiple family low density, multiple family medium density, and multiple family high density, and planned unit development. Scenes were then selected at random from within these particular areas. In order to focus on the subject as opposed to the composition, the views of the scenes were standardized reducing effects of differences due to lighting, obstructions, and view angle. (For a detailed description of the data gathering method see Appendix “A”.)

40 Ibid: 592.
41 Ibid: 592.
The results supported strong relationships between predominately established attributes and general emotional preferences to be very accurate in determining the preferences of scenes. There were direct correlations between the results of the study, where “…composite preference scores were associated with the judged ornate-ness, upkeep, and naturalness of scenes.” Thus the preferences of the people correlated with the design professionals’ assessment of the scene. In particular, the preference of certain scenes were associated with the decreased prominence of obstructions such as poles, wires, signs, and automobiles, as well as the increase in colorfulness, clarity, and surface prominence. In another instance, preferences were associated with increases in openness, and the prominence of shapes. The results also supported the conjecture that overall order was also preferred. Four descriptors were chosen for testing, which had significant correlation with preference: ornate – plain, well kept – dilapidated, ambiguous – clear, and closed – open.

Preference for a residential design will be greater if it is kept up well, displays openness, is ornate, and if its functional elements and purpose are clear. “People’s evaluations of the visual quality of neighborhood scenes were found to be related to design professionals’ assessments of attributes of those scenes.” Furthermore, other studies have shown similar results in terms of what determines people’s preferences of spaces. Naser cites Kaplan and Wohlwill, who agree that complexity and coherence or structural organization play a role in preference.

The reasons for these results can be explained in many ways. For instance, Appleton (1975) suggests that early in human evolution, open views might have instinctually been preferred. “Such views would have allowed the human hunter to observe and predict the action of predators and prey, and to

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44 Ibid: 608.
act accordingly."\textsuperscript{45} This is an example of how researching human preferences can be used by residential designers.

Designers should use research such as this as a basis for design decisions. The scientific investigation of people’s preferences in residential scenes describes what seems to be the most important to people in terms of design. This is fundamentally the purpose of design.

\footnote{Ibid: 611.}
Style Preferences

Supposedly, architects are trained to design by giving people what they want. However, research has consistently shown that architects and the general public differ in terms of what they believe to be good architecture.\(^\text{46}\) There are many possible reasons why this occurs. To begin with, people have different tastes and preferences as a result of what they are exposed to in the course of their life experiences. It is possible that those who choose to become architects tend to have superior aesthetic preferences or that the process of training to become an architect develops values and tastes, or at least entails exposure to vastly different experiences. For instance, some sociologists believe that architects prefer “high” styles as opposed to the “vernacular” styles that the general public prefers.\(^\text{47}\)

In determining why certain styles are preferred over others, one must look at what they mean. Simply, people assign different meanings to things based upon how they evaluate the object’s affective qualities. A person’s views change, depending upon the social, environmental, and cultural experiences he or she has had. For example, the meaning associated with one’s environment can depend upon specific events.\(^\text{48}\) For instance, a traumatizing experience in a room painted


blue, is likely to become a dislike for that color and a preference of rooms of another color besides blue.

However, meaning is more than a one-time experience. Some groups may assign different symbolic inferences depending upon their environmental and cultural context. For example, some cultures believe that using a restroom is a private function, while others believe that it is acceptable as a public function. For example, not everyone sits down to defecate such as in the case of the Turkish toilet. Spaces that provide for these functions thus reflect a sometimes unique social value through their physical attributes.

Various social groups may also be clustered based upon shared similar experiences. Therefore, people may have different or similar views depending upon which past experiences are invoked to give certain meanings to spaces. For instance, some studies have shown that people of different education, income, and social class have different views towards housing. Furthermore, people that are the same in these categories will have the same views towards housing, so one could design specifically for them as a group rather than differentiating for specific individuals. Thus, the housing option created would be at a lower cost than one that was completely custom-designed.

Among groups of housing in certain situations, Kinzy states in “Suburbanites Rating House Styles” and

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49 Michelson, W. *Man and His Urban Environment*. Addison-Wesley, Reading, MA. 1976
Tuttle\textsuperscript{51} found that people prefer Tudor and Farm style houses. However, Kinzy used unrealistic drawings that had variations unrelated to the styles of the house (size, number of stories, garages, windows) that may have biased the results. Tuttle also had variables in nonstylistic factors such as size, labeling, vegetation, and drawing quality that may have skewed results.

Jack Nasar attempted to improve past research on housing and society in four ways: First, he studied not only preferences, but attempted to find the greater meaning in terms of the perceived status and friendliness associated with people who generally live in the various styled homes. Second, his study drew its data from a far more socio-demographically diverse group of observers. This also allowed for testing based upon specific group types such as age, education, occupation, gender, and so on. Next, two diverse cities in Los Angeles, California, and Columbus, Ohio, were compared, enabling a greater diversity of opinion and a better sense of the differences in the vernacular. Finally, the differences between preferences of architects and non-architects were further confirmed.

Six styles of homes were represented by artists’ renderings: Farm, Tudor, Mediterranean, Saltbox, Colonial, and Contemporary (Fig. 2.4 – 2.10). The renderings limited differences in terms of the view angle, size, overall height, and quantity of windows. The goal was for the images to only differ in terms of the house

styles. Even the vegetation and shading were consistent. Further, the names of the styles were never disclosed to the participants.

There were three major types of meaning that the study considered: evaluation, friendliness, and status. People were asked to imagine that the house they chose would be the one that they would win in a contest, and to rank the houses from most desirable to least desirable.

In order to evaluate perceived friendliness of the housing styles, people were asked to imagine having a flat tire on a road, with each of the six housing styles on it. The homes were ranked in terms of which they felt most comfortable approaching to ask for help.

The perceived status of the imaginary homeowners was evaluated by having respondents rank the houses in terms of who they believed would be the leaders of the group, given that the homeowners worked together.

The people interviewed were constantly reminded that the size, cost, layout, and location were all equal. In an attempt to achieve the most accurate data, the order of questions and houses shown was constantly randomized. This was an attempt to eliminate the effects of order or sequence on a person’s response.

In general, demographics did not matter in terms of the results. The only difference between responses in Columbus and Los Angeles were that people in LA rated Saltbox lower and Contemporary higher than people in Columbus in terms of friendliness. This may be because people in Columbus are more familiar with
Saltbox style homes and those in LA are more familiar with Contemporary style homes. This would then cause them to feel more comfortable with the style than those who are not as familiar with the styles.

Overall, people preferred Tudor and Farm style houses the most, and Mediterranean and Saltbox the least. People responded to Colonial style homes differently depending upon the question asked about the style. Colonial ranked highest in terms of perceived status, neutral in terms of its desirability, and it ranked lowest in terms of friendliness. Thus people tend to perceive the Colonial style house as being owned by someone with high status, yet that is not friendly. This may say something about how people perceive those who are of high class just as much as it does about the housing style. This may be due to the experiences of those who took the survey, but it is likely due to a general stereotype of people that are of a higher social class.

In terms of the socio-demographics there were significant differences in certain instances. In Columbus, Ohio for example, the desirability of Colonial houses decreased as education and occupation levels increased. This shows that those who are of a higher class tend to prefer to be perceived as less wealthy in order to satisfy their esteem needs. A possible reason for this may be because one doesn’t want to be seen as unfriendly. Yet if one were of a lower class one would like to be perceived as being of a higher class to satisfy esteem needs.
In contrast, Contemporary style houses became more desirable as the education and occupation levels increased. People of higher education levels and class often feel that a Contemporary style house gives them a higher perceived status, yet does not have the implication of being unfriendly. If one is uneducated then the higher perceived status may not be realized.

Also, Contemporary style houses are more desirable the younger someone is. Younger people typically feel it is important to be current with trends, and enjoy the styles that are created by their peers. Older people do not tend to enjoy the styles of the younger generations.

Farm style houses were more desirable for females, and people older than fifty. Though this may be because females and elderly people are more familiar with this style house, other possible reasons are likely. For instance, they may enjoy the lifestyle that is associated with this style house more. They may possibly enjoy the porches, and other physical attributes that set it apart from the other house styles as well.

In Los Angeles, however, there were fewer socio-demographic differences except in terms of perceived status. Younger respondents thought that people living in Farm style houses were of higher status and those living in Mediterranean style houses were of lower status. Those who partook in the study from Columbus felt the opposite from this.
In general, people found Farm style houses as the most friendly, and Tudor style houses as highest in status. Farm style houses may be perceived as such due to the friendliness associated with having a front porch on a house. A front porch gives the sense that the homeowners care about their neighborhood surroundings so much that they need a designated space to allow them to observe their surroundings and interact with neighbors. Other ways of achieving this sense may be to provide large windows to give a connection between the private interior and the public exterior.

Further, Tudor style houses may be perceived as high in terms of the status of the inhabitants because of the culture that is associated with the style. The Tudor style refers to European, specifically British country houses of the land-owning aristocracy. High status is also associated with British people partially due to their dialect that gives the perception that they are well educated and of a society still valuing class distinctions.

These findings can affect future residential design, not simply because of the style, but because of the attributes associated with the style. For instance, as with a Farm style house, a Contemporary design can incorporate things such as an inviting front porch and thus satisfy the preference of friendliness in residential design. Thus a study of the attributes that prove the results of this research may help to develop future designs.
3. **House and Suburbs - Past**

3.1 History of Suburbs

Beyond the individual house, it is important to understand the greater community as a whole. This too relates to human needs, values, and lifestyles. It relates to human needs by satisfying physiological, safety, and belongingness needs as discussed earlier. Also, it relates to people’s values and lifestyles by providing what people want as can be seen by its growth over time. If someone buys a house in a certain community, it not only demonstrates how they value the house, but also how they value the overall community that it is a part of as well. Therefore, a study of the history of suburbia is vital to designing something that homebuyers will value more.

Many famous scholars including Ebenezer Howard, Frank Lloyd Wright, and Andres Duany have studied the history of the suburbs and their evolution in depth. The suburbs may be explained as an instinctive response to one’s environment in an attempt to become closer to nature rather than crowding into towns close to markets and transportation centers. Other researchers see the suburbs as an answer for better living conditions compared to the slums of the industrial age. However, whatever the cause of suburban growth, most people agree that the success of the suburb results mainly from one single invention, the automobile.

In terms of how the automobile has shaped our lives, “the expressways greatly accelerated the movement to the suburbs.”

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shipping centers sprang up at the intersection of major highways to provide easier transportation of goods via trucks to the region, and beyond.

According to many scholars there are numerous reasons that suburban migration grew: abhorrence for the congestion and confusion of the central city; a fear of violence; the attractions of much lower land prices and property taxes; a yearning for more living space and clean air.\textsuperscript{53} Despite the efforts of many visionaries, such as New Urbanism movement and the Garden Cities, the automobile has become a necessity to daily suburban life. It will take a lot in order to change this dependency and desire for a sense of freedom, and to transform the current American lifestyle. Many believe the suburbs were designed for the automobile. Everything from churches, schools, and stores were usually zoned beyond walking distances, as were the places of employment. In fact, the active suburban family found at least two cars a virtual necessity for daily routines, thereby increasing traffic problems.\textsuperscript{54} Thus, the automobile not only spurred the growth of suburbs, but also became a vital necessity to existing within its realm.

As suburbs have progressed, they have become increasingly self-sustaining small towns. There have been a few studies that show many employers prefer to hire labor residing near its workplace, because they believe that such employees are happier and therefore better.\textsuperscript{55} Employees who are not forced to fight with a growing number of commuters on busy highways across the country are happier and more productive. They can spend more time with their families, relaxing, or concentrating on their jobs because not as much time is consumed by weaving through traffic or waiting at stoplights.

Furthermore, if workers reside further away from their workplace, then they demand higher wages than those that are prevailing in the general area.\textsuperscript{56}

\textsuperscript{53} Davies, Richard O. \textit{The Age of Asphalt}. New York, 1975. p. 29
\textsuperscript{54} Ibid. p. 29
This is partly due to the added inconvenience associated with commuting and as such the workers demand greater compensation for their inconvenience. Thus, one would believe that people who move to the suburbs would be forced to move back to where the work is, in the city. However, in most cases in the recent history of the suburbs, jobs have followed the higher skilled workers who have been able to afford to move out of the city.

In contrast, others believe that a major driving factor in the development of the suburbs as individual small towns comes from a change in the nature of work. People do not need to come to a central place in order to do business. Work can be done closer to home or even in the home because technology allows people to share information virtually anywhere. The reasons for traveling to a major metropolitan center are overshadowed by problems such as parking, and high land costs.

Many scholars now believe that the suburbs not only contribute to traffic jams and the problems associated with them, but are generally harmful to society. Barbara Flanagan, in “Building the New Hometown"\textsuperscript{57}, criticizes the current conditions of the average suburban home and community. However, she also gives examples of positive improvements that are being attempted in various regions throughout the country. The overall notion of the article deals with suburban sprawl and its isolating effects. However, the article also deals with various revolutionary innovations used in the forefront of residential construction. Most of these innovations are spawned by the green building movement, and range from passive and active solar design, and green materials and methods, to a lifestyle change which is conducive to a healthier environment and even an overall healthier population. According to Flanagan, the unhealthy American real estate dream involves having the biggest house on the best lot for the lowest price with the highest resale. She believes these new designs offer

even more through their design in that they provide lasting values. However, one may argue that the current state of the suburbs is a result of people’s choices, including the choice to live more isolated lives than they would in the city, neither knowing nor caring that it is unhealthy.

According to “Building the New Hometown”, the current residential designs are based upon an outdated model. The current model suburbs and homes were designed for United States servicemen and women returning from World War II when a massive number of people decided to settle down all at once. Therefore, builders financed by short-term loans, threw up tens of thousands of homes on cornfields in the middle of nowhere and built malls surrounded by seas of asphalt. Thus began the drift away from communities and homes to an isolated, mass-produced habitat.

The suburban sprawl was also further fueled through the growing popularity of the automobile. The federal government laid out highways; and although cities scrapped trolleys to provide the pathways for automobile traffic through the old streets, they couldn’t stop the mass exodus of commerce and industry relocating to where the workers were now settling. People thought they could find their own green lawns with white picket fences, although with all of the added asphalt one may wonder just how much better the rising suburbs were. Also, the mass consumption of cars eventually spread to the housing industry where people changed houses and jobs more and more frequently. However, the best architects and planners at the time when this trend was beginning were trained as modernists and sequestered in cities, and thus ignored the issue.

Problems associated with suburban sprawl have become more and more evident over time. A growing number of commuters sit immobilized on freeways, suburban housewives drive endless errands, and teens are stranded in front of computers and televisions. However, people are still being drawn to the suburbs where they believe that they are freer to go wherever they want simply by hopping into their car. Yet the only places to go are malls and superstores;
the only thing that families do together is watch TV. People are able to lead more private lives due to growing technology and the popularity of delivery services so that some people don’t even have to leave their house to buy medicine or groceries. And the housing industry continues to meet the demand of the suburban consumers by churning out product after product.

Now educated architects and planners are responding to these issues. The most notable organized effort is that of the New Urbanist movement. The distinguishing feature of their ideals, according to co-founder o Andres Duany is, “Your house is part of a neighborhood as opposed to a subdivision.”58 The most notable change in lifestyle is the reduced reliance on the car and greater emphasis on walking. According to Rob Steuteville, publisher of New Urban News, the house designs are not just replicas of old houses, but they’re not “McMansions” with gables all over either, rather they attempt to respond to the vernacular style of the region in which they are built. And most importantly, they are, according to New Urbanist principles, placed closer together, in proximity to various types of housing and commerce, and are accessible along pedestrian friendly streets.

Each house design features the latest innovations as well as utilizes old wisdom to make the architecture adaptable to the seasons and climates of the region. The designs also are driven by green design through the use of construction methods, materials, and utilities that limit waste and pollution to both the outdoor and indoor environment. According to Flanagan, the overall goal is to build better places serving the future inhabitants. These are all important issues when studying methods of improving current residential design and are all issues that many scholars and designers have attempted to solve.

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Economic Aspects of Suburbanization

Another aspect of the suburbs that drives what it has become is its economics. Since the creation of suburbs, their sheer size and number have grown astronomically. Between 1910 and 1950, suburban communities more than doubled, while the national population grew by 64 per cent. “In the New York area, 85 percent of the population growth since 1950 has occurred in counties outside the five boroughs of New York City.” 59 This trend has become increasingly commonplace across the country as people flee the cities for safer, healthier, more tranquil lifestyles.

Houses in these early suburbs took on the same relative size of the single-family farmhouse, yet developers placed them in a relatively dense area. In terms of housing construction in the United States between 1944 and 1957, “...85.2 per cent, were single family units.” 60 This signifies the strong shift towards sub-urbanization through the spreading out of dwelling units from apartments in the slums of the industrial era to the detached buildings of suburbia.

The economic conditions of American society have helped to fuel this trend. Even in the early years, suburbia was a place that people strove to belong.

“Fundamental to the post-war mushrooming of suburbs is the spectacular growth in real disposable income, which rose from $576 per person in 1940 to $1708 in 1956. In the latter year, family income stood at $4250 in the country as a whole, but was estimated at $4900 in the suburbs, fully 15 per cent above the national average.” 61

The American families earned more money and worked fewer hours than in previous decades. People who were better off enjoyed a lifestyle in the suburbs

60 Ibid. p. 183-184.
61 Ibid. p. 182-183.
that allowed them to be able to afford more homes, cars, and everything that goes along with having a family. The suburb was chosen as the place to enjoy these privileges of new, relatively wealthy living. It was seen as the place that only the elite went because it was better than anywhere else. As seems to be the American way, the average person soon wanted what successful people had.

Developers and builders realized this and took advantage of it by finding ways to provide a façade of a better place to live. The key was to do it in an economical way that the average American could afford. One of the most common methods for doing this was by acquiring large farms on the fringes of the city where hundreds of homes could be erected simultaneously. Economies of scale were achieved because labor and equipment could be efficiently utilized to build massive quantities in a short amount of time. They also achieved economies of scale through the purchasing of materials and furnishings for the high volume of building construction.

Some of these converted farms, however, were more successful than others as can be seen by the differences in property value over time. Shopping centers in close proximity usually boosted land values in residential areas, whereas industry located close to houses depressed land values.62 Though people desire to live close to their workplace, they do not want to deal with the noise and air pollution that is associated with industry. However, converted farmland was often near industrial areas that also needed large expanses of land, and these subdivisions were not as effective as those that were more secluded. In contrast, homeowners typically desire the close proximity of retail that is offered by the big city even though suburban land use is very low density.

On the other hand, as land was converted to residential further from the city and from workplaces such as industrial areas, it was not as desirable due to the time and distance required to get to and from work. Thus, there were two factors: one was to move further out so that scenic and other environmental

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qualities would enhance the price of residential property, and the second opposing factor was to minimize the commute for work. However, one growing factor drove the location of suburban growth. When the Interstate highway system was created, access to arterial highways became crucial. That is, transportation cost still determined land values. The private automobile and use of highways made the migration to more and more distant suburbs possible. However, society is still changing. No longer do people need to drive downtown to work in many metropolitan areas. Work has moved to suburban office parks, strip malls, and even into people’s houses.

In conclusion, builders and developers found methods of providing increasingly affordable housing in desirable areas fueled by the use of the automobile. The freedom and ability to see natural scenery provided by the automobile have allowed suburbia to continue to thrive. Initially, the high land costs in the central city combined with the availability of less expensive land in outlying areas fueled suburban growth, and this still is the case in some instances such as in areas surrounding New York, and Washington, D.C.

Levittown: A Suburban Community

The high prices such as Levittown housing in New York aided in the success of some early suburban communities. The average commute from Levittown to Brooklyn or Manhattan, was, in 1958, “…almost 1 ½ hours per home-to-office trip, or about 15 hours per week.”64 This was a significant amount of time that many people were not willing to sacrifice and is one reason that some communities were more affordable than many others. This is also why planned communities with their own commercial centers often became more successful than those without.

Despite the long commute, Levittown became a successful community. In 1958, according to Harold Wattel, “…48 per cent of the present Levittown population indicated…that they sought a ‘good place to raise children…”65 There are also many other reasons that Levittown is a successful example of a suburban community.

When first built out in 1947, Levittown had many unique aspects. For instance, its curvilinear streets were unique in its time. According to Wattel, the curvilinear street layouts were far superior to the typical gridiron pattern of other neighborhoods in terms of safety and beauty.66 He also claimed that four-way intersections were kept to a minimum for safety. The curvilinear streets reduced the likelihood of cars going fast because the curved streets forced drivers to be more cautious around the turns. Also, the reduction of intersections, especially four-way intersections, helped to limit the confusion many drivers have upon reaching an intersection in terms of when it is their turn to proceed.

Another unique aspect of Levittown is that besides having varied housing facades, homes had different set back distances from the curbs in a staggered

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65 Ibid. p. 290.
66 Ibid. p. 290-291.
pattern that helped to break up the street scene and made them more attractive. In the original plan, many open public spaces provided space for recreation and relaxation. Also, each home was thoroughly landscaped with grass, shrubs, and fruit and shade trees. These made the streets seem naturally appealing. The trees also provided solar shading to reduce heat gains in the summer, yet the deciduous trees allowed solar gains in the winter.

The first designs allowed buyers to choose between four different ‘Cape Cod’ style facades and assorted colors. However, all interiors were exactly the same. Thus one of the houses across the street or a few houses down most likely was the exact same besides the color of its exterior. This does not provide much of a sense of personality and uniqueness to a new homeowner compared to houses that are custom designed for each client.

Specifically, each identical interior had 720 square feet of space on the first floor. The ground floor housed radiant heating coils in a concrete slab; there was no cellar. The oil-heating unit was located in the kitchen along with a refrigerator, an electric stove, and an automatic washing machine, all selected from national brands. This appealed to many clients who would go out of their way to support equipment that was made in the U.S.A. Besides the kitchen, the first floor had two bedrooms, a bath, numerous closets, a living room, and a stairway, which led to the unfinished attic. The attic could be finished later in order to allow for expansion, which was another successful attribute introduced in the house designs. The plots that the homes were situated on were 6,000 square feet or slightly larger.67

The original “Capes” were followed in 1949, 1950, and 1951 by “Ranch” style houses that were slightly larger (800 square feet). The interior of the model was rearranged into four rooms, but the concrete heating slab was retained. For additional heating, a brick fireplace opened into the kitchen on one side and the living room on the other. There were many other innovations, for

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instance, “The living room featured a sixteen-foot thermo-pane (double glass with intervening air pocket) picture window opening to the back yard. (Placing the kitchen in the front of the house and the living room in the rear is considered a Levitt innovation.)”68 The living room allowed clients to have views into their relatively private yard. Even though the window was large and expansive, its design showed early concerns for thermal efficiency.

The “Ranch” style houses had slight improvements over their three-year span. In 1950, slight modifications were made when a television set was built into one of the living room walls and a carport was added to the exterior in order to accommodate the newest inventions of the time. The last model in 1951 eliminated the built-in television set and finished the room in the attic as a standard feature in order to further increase the size instead of leaving it to be finished later by the clients.

Despite being a cutting-edge design, people believed that if a family could afford an $18,000 house, they could also afford a “better” place to live than Levittown.69 The public perception of the town was that it was not high-class and did not provide enough innovations as reasons to justify the higher costs. However, people who did not share this view were pleased by the presence of a highly competitive retail market, which helped to drive down the prices despite the high costs associated with the cutting-edge designs.70

There were sixteen different Levitt housing models, but the community was not limited to sixteen family types. “The individuality that each family brought to Levittown continues to show through in many ways; namely, the paint on the house exterior, the maintenance and arrangements of grounds, the design of house alterations, the home interiors...”71 Each family also brought their own personal characteristics such as hobbies, clothing, and friends. It is

69 Ibid. p. 292.
70 Ibid. p. 295.
71 Ibid. p. 297.
the opinion of some that such individuality that is eventually brought to the
houses by the users should be incorporated in the original housing design.
There is no reason why the paint on the exterior, and possibly even the
landscaping could not take into consideration the client’s desires in the original
house construction. This would cost virtually the same because the houses are
painted different colors in the first place, and allowing the client to choose it
would bring far greater value than cost.

Levittown houses were built with cost, quantity, and speed in mind and
were built with cheaper building materials. This aided in the ability of the houses
to be modified over time. For many reasons including growing families, and
increases in wealth, besides the general attempt to create a more unique house.
According to Clare Cooper Marcus, originality is at a premium, as well as having
a house that is unique from the others on the street, because the inhabitants
who identify themselves with these houses are struggling to maintain some
sense of uniqueness.\footnote{Marcus, Clare Cooper. \textit{House as Mirror of Self: Exploring the Deeper Meaning of Home}. Conari Press, Berkeley, CA, 1995. p. 437.} This uniqueness gives the house character and
personality, similar to the way human beings define themselves and each other
by their uniqueness of appearance, mannerisms, and dress. This gives the
house much greater value as it becomes more “one-of-a-kind”. This is simply
due to the fact that if more than one person wants it then the person who values
it more will be the one to get it, and the rest will be forced to find something
that is similar, but not exactly what they want.

Furthermore, for any particular model, Levittown homes are identical on
the interior until owners alter them. Similar to the colors and styles of the
exterior, the interior could better reflect the user’s tastes in the original building
design. The walls, doorways, and electrical fixtures are also identical. However,
their physical location has not prevented families from decorating their homes in
contemporary, Chinese modern, early American Colonial, overstuffed borax, and
other makeshift styles. “Some floors are uncovered; others are covered with
circular braided or other types of rugs, or carpeted from wall to wall in wool, cotton, nylon, or rayon... In other words, individuality fed by market media and product-variety transcends the physical setting of the project builder."73 These interiors also contain examples of virtually the entire color wheel. Thus, the interior is easier for the average layperson to customize post-construction than the style or even color of the exterior.

Another example of an improvement to the original design that would have better suited different needs is the allowance for expansion. Families tend to grow over time from couples to three or more people. Thus, they have been forced to finish the optional attic or even add space on the ground level (as can be seen in figure 3.1). Homeowners have also improvised methods of expanding their homes themselves. “Improvements have not been limited, however, to the bedrooms and attic dormers; construction of garages, dining rooms, dens, expanded living rooms, cellars, and porches have provided a basis for a growing home improvement industry in Levittown.”74 Thus, a more flexible floor plan as well as optional space for expansion may have improved the original design.

However, these changes may not be the highest priority for all potential homeowners. For instance, Peter Bacon Hales, who is an art history professor at the University of Illinois, Chicago, describes one particular house that is a more modern model designed after a California style “ranch”. According to him, the homeowner of this house decided to spend their money on a swimming pool and

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74 Ibid. p. 300.
tennis court.\textsuperscript{75} This is representative of their values system. They found it more important to build such outdoor amenities rather than redesign their home. This is the case throughout Levittown as innumerable individuals display their personalities through the landscaping of their yard (compare the old image, fig. 3.2, to the new image, fig. 3.3).

Despite the numerable ways which Levittown could be improved, it was considered by many to be a successful design. According to a survey of the original residents of the community in 1951, “...94 per cent of the present residents would recommend the community to others. It was also discovered that 74 per cent of the families intended to stay in Levittown indefinitely...”\textsuperscript{76} This is the best method of discovering the success of a community because the residents who spend most of their lives there appreciate and understand virtually every nuance of it.

Overall, the community was successful not only because those living there loved it, but also because it pushed the boundaries of residential design of its time. The optional expansion attic was a valiant attempt at providing flexibility to a market group that needed room for expansion, but who could not afford a larger home initially. Also, not only was there innovation in the building construction, but in the layout as well. Varying the setbacks and curving the streets throughout the community provided aesthetically interesting views as one


passes through, rather than a seemingly endless grid with little variation. There are many aspects of Levittown, therefore, that can be adapted in order to create successful communities today.
3.2 Alternative Housing Visions

Throughout the history of suburbia, there have been many scholars who believe that there are problems in the quality of housing provided to society. Though these scholars came from different eras, many of their beliefs are similar. Therefore these beliefs are more universal than others, and thus are more likely able to be applied to virtually any situation. Studying the work of these visionaries may lead to the creation of a better solution to the housing that society is offered today.

For instance, Ebenezer Howard realized at the turn of the twentieth century that there was a solution to the poor conditions of the slums during the Industrial Revolution. His vision was to create separate rings, an inner, outer, and exurban, each satisfying certain specific needs of the time. He called these relatively self-sufficient groupings of rings “Garden Cities”. These ideas were innovative for the time and are related to housing today, even if utopian in nature. Mariemont, Ohio, and Celebration, Florida, are examples, which will be discussed later.

The inner rings contained houses and gardens, as well as publicly owned and planned buildings. This provided a place for recreation due to the parks, and a place to live near jobs. Today, this design could be used in the same way by providing centralized parks and gardens that everyone could share. This

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77 Howard, Ebenezer. Garden Cities of To-morrow. London, Faber & Faber, 1902.
would allow for the benefits as well as the costs to be shared, which may be better than private gardens, because it dissipates the cost among many people, yet not everyone would be in the space at the same time so it should not feel overcrowded. Private gardens may still be desirable to some, however, due to the benefits they provide of things such as privacy and personalization, despite the higher cost per person.

The outer ring of the city contained factories near the circular railway. This provides a place for employment that is near the employees. Providing this could also be useful today. Studies have shown that employers prefer to hire people who live near their workplace, because they tend to be happier and better workers.\textsuperscript{78} The factors in this such as the often stressful commuting have already been discussed.

Finally, the “exurban” area contained pastures and farms, as well as a place where nature and beauty flourished. There were meadows and forests, and maybe more importantly fresh air, which was important to the people of the industrial revolution due to the rampant pollution. People give high value to being exposed to sunlight, fresh air and the beauties of nature.

3.3 Mariemont, Ohio.

One of the reasons Ebenezer Howard’s ideas about community can be applied to modern designs is that they have already been proven to withstand the test of time in many other instances. His garden city model’s influence can be seen over most of the world.79 In addition, the Resettlement Association of America as well as other government initiatives modeled sixteen towns and suburbs after his concept.80 One could argue this is a significant reason that Howard has been and should be used as a basis for community planning.

One example of a community that was strongly based upon his ideals is the design of a town named Mariemont, near Cincinnati, Ohio. Mariemont’s town planner, John Nolan, adored Ebenezer Howard’s garden city ideal and demonstrated this through the design. Howard’s garden city had many elements that were incorporated by Mariemont’s plan, including his concern that "unity of design and purpose"81 should be key elements clearly articulated throughout.82

The original proprietor of Mariemont, the Emorys, had the idea that the community would provide a place for people to live near commercial shopping areas as well as places of employment, as well as open spaces for the recreation of everyone.\textsuperscript{83} After Mr. Emory passed away, Mrs. Emory hired Charles Livingood to fulfill their dream. Mr. Livingood traveled the world, but was most inspired by what he found in England. The examples of garden cities left an impression on him, and he realized that these ideas should be implemented into America.\textsuperscript{84}

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\textsuperscript{82} Rogers, Millard F. \textit{John Nolan and Mariemont}. Johns Hopkins University Press, Baltimore, 2001, p. 11.  \\
\textsuperscript{84} Ibid.  
\end{flushleft}
Similar to Ebenezer Howard’s inner ring of his Garden City ideal, the town center is the main focal point of Mariemont. It contains the main commercial center where people could and still can purchase many of the goods and services that they may need in their daily life. Adjacent to this are low-density, single family units allowing residents to easily walk where they need to go. This may facilitate enhancing a sense of community, which is an ideal of New Urbanism as is discussed elsewhere. Near this low-density area is a medium-density area that has its own small commercial center. Overall, the entire town is not more than one mile wide in any one direction. This ensures that people in the community will not be forced to walk great distances, and thus are less likely to use the impersonal automobile.

Furthermore, the garden city ideals where carried out through large interconnected green spaces that dotted the community.

The ideas of Ebenezer Howard transcend time and location. The ideals laid out by him as displayed in many towns throughout the world including Mariemont, should be used in the design of communities today. Many of the needs of his time that were fulfilled by his designs still need to be satisfied now and in the future. Most people want to belong to a community, and live near shopping areas and green spaces. The many planned communities that have attempted to follow these ideals throughout history and around the world explain this.
3.4 Celebration, Florida.

There are also many recent examples of planned communities that share Ebenezer Howard’s ideals for a better community through design. Many planners strive to provide this through the community nurturing designs that encourage interaction. Similar to Howard’s plans, many try to accomplish this by providing spaces that would facilitate interaction, such as at centralized commercial areas, as well as numerous green spaces scattered throughout. One example of this is Celebration, Florida.

The Walt Disney Company commissioned planning for Celebration on 10,000 unused acres south of Disney World in 1986. The goals and master planning guidelines were developed by Robert A.M. Stern, Gwathmey-Siegel, and Duany Plater-Zyberk. Eventually, two architecture firms carried out these ideas into the current manifestation of the city: Robert A.M. Stern of S.O.M., and Cooper-Robertson.

The idea of Celebration sought to encourage community in much the same way that the Garden City plan did. According to the New Urbanist, Andres Duany, “…Celebration can be seen as a reflection of the communitarian economic model of urban planning pioneer Ebenezer Howard.” Celebration has a foundation that attempts to maintain a sense of community. For example, the foundation has set up guidelines to limit the use of the buildings as merely vacation homes, and encourages people to live there year-round unlike many communities nearby where people only take advantage of the good weather in winter months. This encourages community by allowing people to get to know their neighbors more than just a few months out of the year.

Besides these administrative efforts, Celebration also encourages a sense of community through the implementation of certain New Urbanist design ideals. The New Urbanist Movement is a group of designers, architects, and planners

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that have a set of ideals with the goal of improving numerous aspects of the current conditions in the suburbs. New Urbanists are attempting to halt the recent trend of sprawl by changing the way society views its communities. According to co-founder Andres Duany, “Your house is part of a neighborhood as opposed to a subdivision.”  The affects of New Urbanism in Celebration can be understood by looking at how it attempts to encourage community rather than the sprawl and isolation that characterize most suburbs throughout the country.

Specifically, one of the major ways this is incorporated is through a greater emphasis on walking as opposed to relying on the automobile. As in Ebenezer Howard’s Garden Cities, and many other New Urbanist planned communities, Celebration has a commercial center that allows people to purchase goods and services without being forced to walk a long distance from their home.

Celebration further emphasizes walking in many other ways including the execution of the idea to separate pedestrian and vehicular traffic, similar to that of Mariemont. This is done through the design of a series of alleys behind the houses where people may store their cars in garages. Also in the rear of the houses are private backyards. Although relatively small compared to the average suburban house, these private outdoor spaces satisfy people’s desire for privacy, security, and belonging similar to the typical

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suburban backyards.

Beyond this planned separation, people are encouraged to nurture their sense of community by sitting on their front porches designed to facilitate interaction among neighbors and general passersby in the community. The front of the houses have large windows as a gesture to people in the neighborhood that people live in the houses and care about keeping their community safe and secure.\(^{88}\) Also, often on the front side of house are shared green spaces that provide a place for recreation and further cultivate their sense of community.

The housing in Celebration reflects the New Urbanist idea of mixing housing types and values throughout. The different housing types include: estates, village homes, cottage homes, garden homes, bungalow homes, and even condominiums, townhouses, and apartments.\(^{89}\) On the same street there may be million dollar estates as well as two hundred thousand dollar cottages, or even townhouses or apartments.

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Furthermore, the houses in Celebration blend the past with modernity.\textsuperscript{90} The exterior designs display past housing styles, yet the interiors provide modern amenities. They were designed to appeal to people’s desire for traditional style housing façades, as many researches have found, including Jack Nasar as cited earlier.

Celebration’s numerous design and planning innovations did come with a premium price, however. That premium turned out to be ten to twenty percent above prices in similar subdivisions in the region.\textsuperscript{91} Despite this, however, most of the residential units have been occupied. Furthermore, Celebration has been a wonderful success economically. Property there appreciated by approximately fifteen percent the first few years.\textsuperscript{92} Thus people must value what Celebration has to offer much more than what is offered elsewhere, and thus the innovations implemented there must be a step in the direction of improving residential design.

However, not everyone has been completely satisfied with what Celebration has done. Andrew Ross has documented many complaints people have had about the quality of construction that the housing offers.\textsuperscript{93} Some believe that the contractors attempted to lower the price of the already over budget housing development by lowering construction costs. However, doing so has resulted in many problems that homeowners have been forced to deal with after already paying a premium for their buildings. Therefore, despite the many successful innovations Celebration brought forth, it was not without problems and thus its innovations should be used but improved upon for future designs.

3.5 The Usonian House

Another visionary who developed a solution to housing issues of his time was Frank Lloyd Wright. He forecast today’s suburbia in his book, The Disappearing City, published in 1932, where he illustrated a time when the urban centers were not simply “disappearing”; they had already ceased to exist. He believed this was inevitable. Wright predicted that the great cities would be seen as “no longer modern”. \(^{94}\) He believed that the cities were doomed in the age of the automobile and the telephone.

Wright’s designs accommodated cars in novel ways. The automobile enthralled him, like so many other people of his time, because he was convinced of its potential to revolutionize modern life.\(^ {95}\) He felt that the car allowed for a new understanding of an American design. Frank Lloyd Wright’s designs were innovative in nearly every aspect of residential architecture from the community to the individual house. One design for the single-family house was of an innovative typology that was conjured up by Mr. Wright in response to the necessity for moderately priced housing. He called it the Usonian house, which was an ideological design for a low-cost house that was more than a small imitation of a typical large house. The first built Usonian house was the Herbert and Katherine Jacobs residence.\(^ {96}\)

As with virtually all of Frank Lloyd Wright’s homes, this design utilized dominating horizontal lines to delineate his fundamental desire for the design to respond to the building’s environment, as well as give it a human scale. The building used the site to create a private side and an open side. Wright strongly believed in the privacy of the home and thus concealed the entrance in most of his designs,

\(^{95}\) Ibid. p. 123
including this one. The closed side of the L-shaped house faced the street while the other side opened to a private garden.

The Jacobs house used three major construction features to reduce the cost of building a home: board and batten walls, a planning grid, and underfloor heating. The main building materials were brick, glass, and wood boards. The detailing of the board and batten walls eliminated the need for painting. The horizontal design provided by the construction also created an aesthetic in keeping well with his ideals of nature and materials.

A planning grid was used as well, which simplified construction by reducing its complexity. The rectangular module of the grid was reflected in scoring in the concrete floor. The module was the foundation for design decisions throughout. There were three primary zones: a living space, a kitchen/dining space, and two bedroom spaces. The living space and bedrooms had large windows and doors, which opened out into the private garden. The kitchen/dining area was at the junction of the living room and bedroom wings.

A hot water pipe under the concrete floor slab distributed heat evenly throughout the house. This eliminated the need for radiators and elaborate millwork to conceal them. The use of this heating system provided warmth to an otherwise cool ground, and allowed the heat to rise up through the space to where it was needed.

Wright also had other innovative ways to keep the cost of the home relatively low compared to his other highly detailed designs. He used less expensive materials that were very natural and required as little custom labor as possible. The only colors in the house were natural materials, besides Frank Lloyd Wright’s favorite, “Cherokee Red”. He also used a system of walls, which were standardized and did not differentiate between interior and exterior walls.

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This decreased the short-term labor costs, however increased the long-term thermal quality control costs throughout the life of the building, mostly due to a lack of insulation. He also used modular expansive windows, which also decreased the initial labor costs but might have increased the costs of thermal control for the building over time. This is due to heat loss in the winter and excessive heat gain in the summer, although it would have been successful if he had used a well-insulated window system. His idea of using an overhang that reduced solar gains in the summer, while allowing for greater solar gains in the winter would be successful in many buildings constructed by today’s standards. Also, the use of a concrete floor to store the desired solar heat gains in the winter would further increase the thermal efficiency of the design. Thus, Wright had a very good idea about how to improve the thermal quality, however the technology of the time did not allow its benefits to be fully realized.

The design of the spaces was integrated using materials in this house even more so than some of his other designs. In that, the scoring of the brick, the orientation of the wood paneling, and the mullions of the windows, all emphasized horizontality in the space. Shelves running along one side of the family room inset into the joints of the board and batten walls further emphasized this design principle. Furthermore, sofas and tables were integrated into the design by wrapping around walls, or occupying a niche in the rooms, and were of the same grammar as the rest of the space. This also lowered the cost of furniture for the homeowner.

Instead of Wright’s usual use of concealed indirect lighting, he used much simpler and primitive light fixtures in an early form of track lighting along the ceiling. Wright still incorporated a fireplace to anchor the spaces in the Usonian design. The fireplace was the foundation of the family in a home, a place of reflection and bonding among the dwellers of the house.
The Jacobs house was 1340 square feet. It was completed for a mere $5500 in 1936. Wright closely monitored the construction and cost of this small house because of its significance to his Usonian principles of a modest American home. The fieldwork was limited, and certain building systems were simplified, such as the use of a primitive track lighting system.

At a relatively minimum cost the Jacobs received a home that ensured their privacy from the street, and gave them a spacious interior. The L-shaped floor plan maximized a private garden on a small suburban lot. This design rejected the American tradition of “plopping” a miniaturized plantation home on a small lot, leaving an unusable lawn. Wright also eliminated the formal dining room and opened the kitchen to the adjacent spaces, anticipating the open floor plan trend of today. The whole living space was designed to encourage a more informal lifestyle, which anticipated the decreasing formality of society. Dressing down at work from a tie to a polo, and watching TV while eating dinner are examples of the trend today, but in Wright’s era, the effect was to bring the family closer together.

This building provides ways to improve current building practices through design, construction methods, and materials. It improved the current best

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practices of the time through innovative ideas in terms of the design and construction of the free standing single-family homes. This design began to solve the ongoing problems of the moderately priced house in suburban America, and the lessons learned through it are an excellent foundation for further research. Through this, Wright created environments that could be universally understood, and therefore people value them far more.
4. **House and Suburb - Present**

4.1 Today’s Market

Evolving from the initial suburbs such as Levittown, are the typical suburbs of today. Unlike Garden Cities, or New Urbanist planned communities, these suburbs typically do not take into consideration people’s needs and desires for communities or houses. However, many of these suburbs are economically successful, and the companies that build them have been in business for many years.

One example of a typical suburban developer is Drees Homes. Drees is one of the Cincinnati region’s leading homebuilders. They are a good representation of current best practices in single-family home building. According to their website, the Drees Homes’ mission statement is: “to create superior homes and communities that provide our customers with choice, value, and satisfaction. To conduct all activities with value, integrity, and fairness. To keep a long-term perspective emphasizing business opportunities that provide personal pride and corporate growth. To demand continual improvement of ourselves and our processes.”

This is a very strong mission statement and it appears that they do well at following it. According to Drees they have a 98% customer approval rating which is excellent in any business, but especially one in which people use the product extensively every day. Despite this success, it is the opinion of some people that the developer’s practices can

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still be improved. Some believe that the options offered are superficial in nature, and do not give the consumer something that responds to their needs, values, and lifestyle preferences. Understanding what people desire more fully and how it can be provided through more innovative designs will foster a product that will increase future homeowners’ value of it.

Another major suburban developer in the Cincinnati area is Fischer Homes who began in 1980. Similar to Drees, they understand that people value a sense of community. According to Jamie Bowling of Fischer Homes, they “...build communities, not just a street to live on.”\(^{101}\) They attempt to do this by providing a few shared green spaces, though these are relatively small compared to most New Urbanist and Garden City designs. However, similar to many of these designs, Fischer offers curved roads, which enhance one’s experience while traveling through. They do not separate pedestrian and vehicular traffic nor provide pedestrian friendly, centrally located commercial areas. Fischer Home’s developments have tradition-based design themes similar to some New Urbanist developments, and carry out those themes through everything from mailboxes, to landscaping, and to entry monuments. Another similar aspect in many Fischer Homes developments is the integration of different housing types from condominiums and town houses to large single-family houses.\(^{102}\)

In terms of the individual residential units, people that are interested in purchasing a house from Fischer Homes

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first choose a subdivision from a list of approximately twenty-five in the Greater Cincinnati area. Then they speak with a sales counselor who helps them choose a house plan that is offered in that community. Then the customer is given options and the corresponding cost to customize the house. This begins to take the form of a design that is specific to one’s lifestyle, however the options are severely limited to changes in window schemes, storage space, bathroom layouts, and a few other alterations.

Following this selection the customer chooses materials, colors, and fixtures. Fischer Homes operates a “Lifestyle Design Center”, similar to Drees, where they send clients to choose these finishing options for their new house. At this center each consumer is teamed up with a designer who aids in the selection process. The buyer is then given a survey to establish their values and lifestyle to aid the designer in guiding the selection process. The survey asks questions pertaining to people’s needs, values, and lifestyles. For instance, there are questions that refer to how much and what types of entertainment the family does, whether an office is needed, the number of pets and/or children that are going to be in the household, and many others. These questions are relatively superficial and do not get at the core of what makes the family unique from most others. This may be accomplished by asking more pertinent questions, such as “which room in your current house are you the most happy with, and which do you use the most”. The Fischer Homes designer attempts to discover this information by suggesting people bring in examples of finishes, and images of what the client would consider being their ideal rooms.
Subsequently, the designer gives trained insight into what goes well together and gives pricing differences between items. Thus, the end user is able to personally customize their home to meet their needs, values, and lifestyle. However, according to Andy Hupp of Fischer Homes, they discourage customization beyond the few plans and material options that they offer because of the added costs, so the house may not completely be what the homebuyer might consider their “dream home”.¹⁰³

Fischer Homes changes their housing designs in an attempt to keep ahead of trends. They do this by experimenting with new designs for at least one year to determine if they will sell in a given market, and they look at outside regions in an attempt to find out where the housing market may be headed. Thus, the options that are offered, and the community and housing designs that are offered, still can be improved upon, as can be seen by their attempt to constantly upgrade what they already provide. Thus, a gap between what people want and what is currently offered still exists. Therefore, further study may reveal a model that more closely represents the needs and wishes of society.

4.2 Examples Outside of Architecture

**Automobile Industry**

Meeting people’s needs and designing to their lifestyle preferences should be the goal of not only architecture, but also anything that people buy. Customizing products gives greater value to the consumer because they feel as though it is closer to what they want. Besides building design, most consumer products are designed with this in mind. One such product that is relatively closer in price to a house than most items a person may buy in their lifetime is the automobile.

An automotive designer in the Netherlands took the idea of automotive customization to an extreme. Marijn van der Poll created a modular car that anyone can design for himself or herself, with the idea that there are few ways of personalizing vehicles today. Personalization through the design of a vehicle is important because many people forge such strong relationships with their vehicles. Even if someone does not feel this way about their automobile, other people will most likely see it as a major status symbol. This design goes beyond the customization using bumper stickers or the increasingly popular wheel accessories, such as the “spinner” wheels being advertised in many automobile magazines and through popular music.

The concept for Marijn van der Poll’s design is to create a blank canvas (box on wheels) that people can customize. Besides the standard engine, chassis, and other essential components, the body is made out of polyurethane foam that people can cut and sand to create their desired shape. Thus, people have the ultimate ability to actually create something themselves, and therefore increase the value of what they drive. Though this design is far

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105 Ibid. p. 36.
106 Ibid. p. 38.
from new car lots, automotive designers understand that people value customization.

Automotive manufacturers have virtually perfected the balance between customization and cost to create something that the maximum number of people will value enough to buy, based on its price and how it satisfies what they are looking for. The first mass-produced automobile, though significantly lower in cost, did not offer any customization. Even Henry Ford understood that people wanted customization, however, as his common saying went, “you can have any color you want, as long as it’s black.” Today however, the color options offered have evolved. The standard colors of black and white are offered on most car models, however designers have utilized years of research to find exactly what colors people prefer depending on the model and current trends. For instance, since the sports car was invented it has usually been offered in red. Also, the current trend is to offer silver, besides the standard black and white, on many models.

Specifically, the 2005 Ford Mustang has an available instrument panel that one can choose among 125 different color backgrounds that allows someone to coordinate it with the weather or their mood.\(^{107}\) According to Marques McCammon, consumers “... want the car to be a reflection of who they are...”\(^{108}\) A new brand has recently been created by Toyota with this in mind called the Scion. Besides offering eight different colors, Scion offers forty accessories for nearly each model. They are trying to tap into the idea that people want a vehicle that is their own, because they realize it is what people want.


\(^{108}\) Ibid.
Parts and accessory manufacturers are also catching on to the idea of providing people something that responds to their specific needs and lifestyles. For instance, the auto parts supplier Johnson Controls has come out with an innovation that allows people to add electronic equipment and other gadgets easier by installing their “Railport”. It is essentially two metal rails that one can attach and plug things into. At the Detroit International Auto show, they also featured a concept car that responds to various specific needs one may have, which have not yet been satisfied by available vehicles. Examples of this include a convenient storage space for a briefcase, and a place to hang dry-cleaning without it getting wrinkled. Also, it included a cargo net to store fragile groceries such as eggs and bread without allowing them to be smashed by heavier items, such as a gallon of milk, which is important for parents with cars already packed full of kids. The automotive industry is catching on to how much people value something that responds to their specific lifestyles and preferences, and residential design should as well.

There are a growing number of instances that show an increasing desire for well-designed products. Society is increasingly interested in having the things in their lives function well and be visually pleasing. This is not only the case in the automobiles people own, but in their home environments as well. One of the strongest examples of this is the company, IKEA.

Ingvar Kamprad founded IKEA in 1943. The name is an acronym for his initials, and the first letter in the name of the farm and village where he grew up, Elmtaryd and Agunnaryd. IKEA focused its product line on furniture from 1951 onwards, and in 1953 it opened its first furniture showroom to display the difference between it and its competitors. Doing this allowed people to see the quality, function, and low price offered.

A couple of years later IKEA began designing its own furniture, when ironically, its suppliers boycotted the company due to pressure from competitors. Then IKEA began to design specifically for quality, function, and value, turning a problem into an opportunity. A key was IKEA’s success in self-assembly. Specifically, the company designed products so that they could be packaged in a flat box, which has reduced costs significantly due to reduced storage size, and ease in transportation. The reduced costs allow IKEA to provide functional, higher quality products for a competitive price.

Ten years later, in 1965, the first IKEA store was opened. The open warehouse concept allowed consumers to help themselves when buying their furniture. This also further reduced costs by reducing labor because people picked out and retrieved the products they desired themselves.

In 1985 IKEA expanded to the United States. According to IKEA, they discovered that everyone needs functional, high quality furnishings that fit every
budget.\textsuperscript{110} This is the case everywhere in the world, even in a country driven by low prices, as is shown by the success of Wal-Mart. Further, the success of Target shows that society appreciates a balance of design and low prices.

Traditionally beautiful pieces of furniture are made for a small segment of the population, those that can afford it. However, the fundamental vision of IKEA is good design and function at a low price. They strive to provide an affordable alternative that responds to the various needs, tastes, and dreams of people from every background. Quality furniture is not difficult to make if the cost is not an issue, however it is a big issue for IKEA. They claim to do this by finding simple solutions to problems and saving in every area, except ideas.\textsuperscript{111}

Specifically, the designers work with manufacturing companies to use existing production processes to find the best way to make the furniture. Also, the most suitable materials are sought from all over the world. Then those materials are bought in bulk to reduce the costs as much as possible.

IKEA has three main principles in their idea for success: wide range of products, good design and function, and low prices. First, there is a diversified product line in many ways. There are many different functional possibilities available through the products that would normally be solely available in specialty shops such as furniture, kitchen equipment, toys, storage units, and other categories. Also there is a wide range of design styles available from romantic to minimalist. However, along with the diversity, there is also always something that matches the styles of every product.

Second, good design and function are strong contributors to the company’s success. Designers and manufacturers work together to combine quality design and function with affordability to create something that has low cost, yet maintains the original design idea. In the end, clever solutions are created that are the most efficient possible.

Third, low price is the most important part of the equation. This goes back to the idea that affordability is what separates them from other high-design furniture manufacturers. Their goal is to give people the opportunity to have a better everyday life, without having to make large sacrifices.

IKEA realizes though, that without the consumer it would not be possible. Consumers keep the prices low not only by shopping there, but by doing a lot of what goes into the process of providing furniture themselves. When one buys something at IKEA, transports it from the warehouse, and assembles it themselves it saves time and money. Therefore, their great success depends not only on quality, functionality, and low cost, but also on the ability for consumers to take part in the process.
Analysis

5.1 Conclusions

Fulfilling the human need for a home begins with providing shelter, but ends when a house is infused with memories more than anything. It is the latter which provides the elusive definition of home. It is far more than mere shelter or even a physical object. Rather, an emotional state arises out of the symbolic representation that the built form takes on through its evolution. In a sense, it parallels the development of those who dwell within.

In order to enable this, a designer must understand the underlying factors that drive people’s image of their home. For instance, one’s image of home may be based upon a memory of the place where a major event occurred in one’s life. Whether it is the house where a child had their first steps on the family room floor, or simply the house in which someone was standing when they had an idea that changed their life, is based upon the emotions tied with these memories that one can begin to express most clearly the notion of home through design. These also become more generalized within shared experiences of cultural groups.

Given the enormity of the types of memories and emotions that people within society might associate with their notion of home, it is imperative to study them in an organized way. This has been accomplished through the examination of numerous theories and the research of many scholars. These sources have given insight into human psychology and behavior through research and design.

Specifically, three areas have been studied as a foundation to the study: human needs, values, and lifestyles. They each provide insight into the subject in different ways. However, they all subdivide the population based upon specific factors in order to more easily comprehend what drives human
motivation. First, Abraham Maslow’s hierarchy of needs divides people by their satisfaction of needs and their corresponding place along the hierarchy. Second, the VALS market segmentation system divides people into various categories based upon their values systems. Third, the lifestyle cluster system divides people into numerous categories in terms of their lifestyles. All of these methods of studying human behavior help to determine the best possible way to design for specific groups of people within society. Each of the methods is unique and results in different implications for design. Together, they comprise a comprehensive method of understanding what people want, and how to design for their differences.
5.2 Project Site

The research portion of this thesis will be implemented through a design analysis using an existing site, in order to demonstrate a prototypical subdivision layout and house designs. Information gained from past studies will be utilized to create a new method of designing a suburban development that can be used almost anywhere in the Greater Cincinnati region. Specifically, the following projects will be used as precedents for the design: one of the early Levittown developments, Ebenezer Howard’s Garden Cities of Tomorrow, John Nolan’s Mariemont, and the New Urbanist community of Celebration.

Similar to the prototypical house design (discussed elsewhere), research in the area of human psychology will be utilized in determining the aspects of these historical projects as well as current ones, which can result in a design that will be more valuable to the average homebuyer. Specifically, research of Abraham Maslow’s Hierarchy of Needs, SRI International’s VALS system, and Claritas’ Lifestyle Cluster system will aid in designing a development that most people would prefer.

The site chosen to represent this method of design is located on Winton Ridge Lane to the East of Winton Road. It is twenty-one acres of wooded, hilly terrain. The site was chosen because it demonstrates how the development design can be implemented on difficult terrain.

Surrounding the site are apartment complexes as well as single-family housing subdivisions. The demographic that makes up the majority of the surrounding area are highly skilled blue-collar workers. They are middleclass married couples and families. Claritas may describe these people as “Gray Collars” in their Lifestyle Segmentation system. People in this cluster typically have a median household income of forty thousand dollars.\textsuperscript{112} They also typically are football and hockey fans, watch \textit{The Home Shopping Network}, and

\textsuperscript{112} Weiss, Michael J. \textit{The Clustered World}. New York, 2000: 10-11
read *Car and Driver*.\textsuperscript{113} Although the community being designed in this project may encompass people in this lifestyle cluster, it is intended to include other demographics from outside areas that are similar in nature. These outside demographics will be couples and families much like the “Gray Collars” cluster, however they differ in terms of their preferences, values, and general lifestyle. These groups are discussed further in the section describing the prototypical families.

\textsuperscript{113} Weiss, Michael J. *The Clustered World*. New York, 2000: 10-11
5.3 Program

The following project program is based upon prototypical family surveys described in Appendix B. The types of spaces required are based upon results from the surveys, which describe the desires of the families. The square footages are based upon the approximate “typical” area of those rooms and general functional requirements.

**Family “A” (a.k.a. The Joneses)**

<table>
<thead>
<tr>
<th>Room</th>
<th>Square Footage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master Bedroom</td>
<td>320 sq.ft.</td>
</tr>
<tr>
<td>Master Bathroom</td>
<td>125 sq.ft.</td>
</tr>
<tr>
<td>Children’s Bedroom 1</td>
<td>260 sq.ft.</td>
</tr>
<tr>
<td>Children’s Bedroom 2</td>
<td>260 sq.ft.</td>
</tr>
<tr>
<td>Children’s Bedroom 3</td>
<td>260 sq.ft.</td>
</tr>
<tr>
<td>Children’s Bathroom</td>
<td>100 sq.ft.</td>
</tr>
<tr>
<td>Kitchen</td>
<td>300 sq.ft.</td>
</tr>
<tr>
<td>Family Room</td>
<td>300 sq.ft.</td>
</tr>
<tr>
<td>Dining Room</td>
<td>175 sq.ft.</td>
</tr>
<tr>
<td>Entertainment</td>
<td>300 sq.ft.</td>
</tr>
<tr>
<td>Office</td>
<td>150 sq. ft.</td>
</tr>
<tr>
<td>Circulation</td>
<td>200 sq.ft.</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2750 sq.ft.</strong></td>
</tr>
</tbody>
</table>

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Family “B” (a.k.a. The Smiths)

<table>
<thead>
<tr>
<th>Space</th>
<th>Sq.Ft</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master Bedroom</td>
<td>320</td>
</tr>
<tr>
<td>Master Bathroom</td>
<td>125</td>
</tr>
<tr>
<td>Children’s Bedroom</td>
<td>260</td>
</tr>
<tr>
<td>Children’s Bedroom</td>
<td>260</td>
</tr>
<tr>
<td>Children’s Bathrooms</td>
<td>100</td>
</tr>
<tr>
<td>Kitchen</td>
<td>300</td>
</tr>
<tr>
<td>Family Room</td>
<td>300</td>
</tr>
<tr>
<td>Living Room</td>
<td>275</td>
</tr>
<tr>
<td>Entertainment</td>
<td>300</td>
</tr>
<tr>
<td>Office</td>
<td>150</td>
</tr>
<tr>
<td>Circulation</td>
<td>200</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2590</strong></td>
</tr>
</tbody>
</table>
Bibliography


Flanagan, Barbara. “Building the New Hometown.” This Old House (January/February 2000)


Ross, Andrew. "Mousetrapped." Metropolis. (October 1999)


Tribe, Carol, Profile of Three Theories, Kendall/Hunt, Dubuque, IA, 1970.

<http://tigger.uic.edu/~pbhaless/Levittown/oldindex.html>

<http://www.uic.edu/depts/arch/ah/>


Appendix “A”

DESCRIPTION OF VISUAL ATTRIBUTES (and their measurement)


The design judges were given some of the following scales and were shown half of the slides. The judges were told the definition of the scales and clarified what to judge. The reliability estimates of the study were greater than 70%.

<table>
<thead>
<tr>
<th>Category</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diversity:</td>
<td>diverse – simple</td>
</tr>
<tr>
<td>Novelty:</td>
<td>commonplace – unusual</td>
</tr>
<tr>
<td>Identity:</td>
<td>clear – ambiguous (in terms of the clarity of the use and its parts)</td>
</tr>
<tr>
<td>Mystery:</td>
<td>much – little (does scene drive one to learn more about it)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization:</td>
<td>organized – disorganized</td>
</tr>
<tr>
<td>Suitability:</td>
<td>fitting – unfitting (in terms of the buildings’ relationships to one another)</td>
</tr>
<tr>
<td>Shapes:</td>
<td>prominent – absent</td>
</tr>
<tr>
<td>Texture:</td>
<td>prominent – absent</td>
</tr>
<tr>
<td>Enclosure:</td>
<td>closed – open</td>
</tr>
<tr>
<td>Buildings:</td>
<td>prominent – absent</td>
</tr>
<tr>
<td>Verticals:</td>
<td>prominent – absent</td>
</tr>
<tr>
<td>Bricks:</td>
<td>prominent – absent</td>
</tr>
<tr>
<td>Nature:</td>
<td>prominent – absent</td>
</tr>
<tr>
<td>Dilapidation:</td>
<td>well kept – dilapidated</td>
</tr>
<tr>
<td>Automobiles:</td>
<td>prominent – hidden</td>
</tr>
<tr>
<td>Obstructions:</td>
<td>prominent – hidden</td>
</tr>
</tbody>
</table>

EVALUATION OF SCENES

The evaluators were made up of people that were diverse in terms of sex, age, race, marital status, # of children, education, and income.
The scales used to evaluate each scene included:

A. Pleasant – unpleasant
B. Interesting – boring
C. Desirable – undesirable
D. High crime – low crime

Reprint of Scenes

Fig. A
Appendix “B”

Prototypical Families

Utilizing the research aspects of this thesis, a system of parts was created that enhances one’s value of residential design by creating something that is specific to the user, yet remains affordable. This “kit of parts” consists of various extremes within the context of a house in order to provide more options than merely surface colors, yet remain economically competitive. Thus, a broader range of consumers may be interested in the designs. Examples of how this system might work are displayed through the design for two prototypical families. Two real families from typical suburban areas were surveyed and interviewed to shape what their dream homes may look like. Applying this knowledge and utilizing an efficient design and construction process creates a house that they will value much more highly.
Family “A” (a.k.a. The Jones)

PROFILE

Family “A” (referred to henceforth as the Jones family) is a middle-class family of five looking for a single-family residential unit in the suburbs. Mr. and Mrs. Jones grew up together in the same neighborhood and are married high school sweethearts. They have three children, one in high school, and two in college. The Joneses have moved to many different places during their life together, typically due to work related reasons. However, everyone in their family agrees that they have never quite found their dream home.

Mr. Jones is the director of public relations at a major machine parts manufacturer. He usually works nearly sixty hours per week. He drives a Mercury Mountaineer because it is more practical than a larger car for the gas-guzzling commute to work, yet able to cart the kids around at night and on weekends. Despite his work hours, he still makes time to cook a few meals, support his children’s athletic ambitions, and help them with their academics. Like the rest of the family, Mr. Jones is physically active, running and participating in road races when possible.

Mrs. Jones began their marriage as a nurse, but after having kids, she decided to quit because she did not want to bring any additional germs and diseases home. Now that the children are old enough to be at home alone, she has decided to begin working again, except as a sales clerk at a local department store instead of in health care. She worries about who her kids’ friends are, and who they date. She drives a Ford Explorer to cart the kids around.

The oldest daughter is near the end of her college career and is anxious to move out. She is studying to be an English teacher and is in the top of her class. She enjoys movies, and listening to Dave Matthews Band on her Ipod. She drives a Ford Contour to class from her off-campus apartment. She likes it because it is just enough to pack up to go home and it is fuel-efficient.
The middle child is also in college. She is also anxious to move out even though she has a long way to go. She has yet to choose a major, and fills her free time training for cross-country and track through which she has a scholarship. In the off-season, she enjoys partying with the girls. She enjoys the finer things in life, yet appreciates natural beauty as well.

The youngest is a boy in high school. He also runs cross-country and track, as well as plays basketball. He hopes to get a scholarship to college some day as well. He studies and trains hard to get where he is.

As a family, the Joneses enjoy watching movies in their family room in front of the fireplace. This is also the only time when their highly active miniature poodle is not yapping or running around the house. They value eating dinner together as a family, but they end up fending for themselves more often than they would like. They take turns using the family computer for school and getting on AOL. They are frugal spenders, but give their kids almost whatever they want.

Using the research described earlier, one could use Lifestyle Segmentation to better understand what people of similar lifestyles might be like. The Lifestyle Cluster that they most closely resemble is that of Kids and Cul-de-sacs. This is because there is a high concentration of people that fit this cluster in their geographic region, and their demographics are highly compatible with those in this cluster as well.

For instance, their key concerns are for family and things associated with it such as schools. They can be considered an upscale suburban family living in a single-family house. Mr. and Mrs. Jones are college graduates, and their children are striving to be as well. Also, Mr. Jones’ occupation can be considered a white-collar professional job. These traits all fit within the description of the Kids and Cul-de-sacs cluster.\textsuperscript{115}

\textsuperscript{115} Weiss, Michael J. \textit{The Clustered World}. New York, 2000: 198-199.
Value segmentation is another way one may be able to categorize this family in order to comprehend the values system of this and similar families. The Jones family most closely resembles the values of those in the Achievers group as described by the market research company VALS.\textsuperscript{116} The underlying values of this family as well as others within this group are a sense of family and one’s career. They tend to focus their lives on family, religion, and work.

Similar to others in Achievers group, the Jones family is interested in functional, time-saving products. They also have many family photographs as well as memorabilia from experiences and accomplishments. Their family unity is strained at times, however, partly due to the many hours spent apart at work or school. Therefore, though they currently do not have one, a home-office is something they strongly desire in a new house so that they may spend more time together even while they are working.

By utilizing these systems, the houses catered toward this family may also be applied to other families with similar lifestyles and values. Thus, the design could be reused, reducing the cost because many aspects could simply be replicated. Yet, it would still maintain an identity that is closely associated with the similar families’ specific traits.

\textsuperscript{116} http://www.sric-bi.com/VALS/
Family “A” (a.k.a. The Jones)

HOUSING SURVEY

Each family has been surveyed to discover concrete facts about what they are looking for in their dream house. This research provides a solid foundation for the design process through insight into their daily lives as well as specific characteristics they desire in a house. From this, an affordable house that is designed specifically for them is created.

First, each member of the family was asked which room they spend the most time in so that aspects of that room can be utilized in future designs. Aspects of the rooms chosen can be seen as successful because they already use the room more than any other in their current house and thus a similar space must be provided in the new design. The extent to which the room should be replicated is debatable, however there are certain fundamental aspects that are vital to creating a similar spatial sensation.

Nearly everyone in the Jones family spends the most time in the family room because they feel that it is the most comfortable and relaxing. This shows that the Joneses place a high value on relaxation given their stressful lifestyle. Therefore, in the design of a new house, a space for them to relax in would be one of their highest priorities. The older and younger daughters particularly enjoy watching the cable television. The oldest especially appreciates having a fireplace in this room, as well as reminiscing while looking at the numerous family photographs that are displayed on a bookshelf. The younger daughter also enjoys the family room the most, because it is where the most interaction between friends and family occurs. Aspects of the room that are conducive to relaxation and that should be incorporated in the new house include: adjustable lighting, soft leather couches, fireplace, soft white/beige colors, television, DVD player, stereo, large expanse of windows, and built-in shelves that display family pictures and other memorabilia that the family highly values.
Understanding the aspects of the room in which the family spends the most of their time is vitally important in order to design something that they will highly value. If one were to not use what is already successful it would be a mistake because it is already proven that they enjoy what they now have in that space. On the other hand, understanding what they do not like may be equally important in order to design something that is different at least to some extent than what they currently occupy. Thus discovering which spaces they utilize the least may give insight into what to avoid in a new design.

Both Mr. Jones and his younger daughter agree that they spend the least time in the living room of their current house. They feel that in contrast to the family room, there is not anything to do in that room. There is not a television, and there is little in the way of decorations either, in order to occupy one’s attention especially if one is in the room alone. The only way that the room is used is to set coats down because it is off of the front entry door to the house or to have more serious discussions in a quieter room. Therefore, in the design of a new house that is specific to the Joneses, a living room might be replaced by a function that is more suitable to their lifestyle, such as a mud room and office.

The rest of the family chose their bedrooms as the rooms they spend the least amount of time in. They often fall asleep watching television in the family room, or the kids often spend the night at “sleepovers” at their friends houses as opposed to sleeping in their bedrooms. For instance, the son only sleeps and gets dressed in his room and uses it for little else. Despite having memorabilia and even a television with cable he likes being in the other rooms in the house better. The oldest daughter dislikes her bedroom mainly because it is cramped and not well insulated compared to the rest of the house. They all feel as though they are missing something if they spend time alone in their rooms away from everyone else. This demonstrates their high value for interaction. Thus providing bedrooms that are extremely luxurious may not be as high of a value for them as it is for other families, although they do require enough space so that the room does not feel cramped. Also, the bedrooms should not be
secluded from other areas of the house, yet they should provide adequate privacy.
Family “B” (a.k.a. The Smiths)

PROFILE

Family “B” (referred to henceforth as the Smith family) is a middle-class family of four looking for a single-family residential unit in the suburbs. Mr. and Mrs. Smith have been married for over twenty-five years. They have two boys; one is in college, and the other in high school. They have lived in the same house for all but six years of their marriage. It was once their dream house, but as time has gone on, many problems have arisen with the house, and they are ready to move on.

Mr. Smith is the Vice President of Corporate Benefits for a national retail chain. He typically works fifty to sixty hours per week, but usually makes time for the family on weekends. He commutes to and from work in his BMW 3-series convertible. After a long day at work he likes to put on sweats or shorts, then eat and watch television. He loves sports, especially when his own children are involved.

Mrs. Smith is a stay-at-home mom besides working part-time at a nursery school. She tries to be at home as much as possible to take care of the family. She likes to save the family money by cooking and doing house maintenance on her own. She drives a Toyota Camry, because it is reliable and less cumbersome than a minivan or SUV. She relaxes by listening to classical radio and watching older movies.

Their oldest son, who is in college, is studying mechanical engineering. He likes to run in road races because he misses running cross-country and track as he did in high school. He is an avid sports fan, although he has never been on a team outside of running. He is actively involved in community service. He drives a Chevy Blazer, likes listening to Metallica, and watching movies.

The youngest son is in high school. He plays football and baseball, although he is not sure that he will receive a scholarship for college by playing
sports. He is very popular at school. He enjoys partying with his friends, yet maintains good study habits.

They spend money on nice furniture and other household items, but they do not flaunt their money. Mr. and Mrs. Smith prefer to spend money on their children much more so than on themselves. The Smiths enjoy taking vacation trips together, because they feel it helps to educate their children by exposing them to diverse places. They also enjoy sports because they feel it provides education for life experiences, besides being a recreational tool. They value a strong sense of family and eating dinner together nearly every night of the week.

If one were to characterize this family using the Claritas Lifestyle Segmentation System, they might be considered part of the Executive Suites cluster. Similar to other families in this cluster, they live in a wealthy neighborhood, though they do not care about their appearance. They also do not splurge on themselves. They should also be characterized in this group because they may be considered to live in an upscale, white-collar neighborhood.117

In terms of the VALS value segmentation system, this family might fall under the Believers group.118 Similar to the Achievers group, they are highly motivated by family and religion, though the good of the community and their nation also motivates them. The Smiths follow regimented routines, as do others in the Believers group. They also strictly buy items that are familiar to them and make an effort mainly buy things that are made in America. Thus in terms of residential design, they prefer traditional design styles, as their values system would suggest.

118 http://www.sric-bi.com/VALS/
Family “B” (a.k.a. The Smiths)

HOUSING SURVEY

The Smith family was surveyed in order to gain knowledge about their unique housing preferences. The specific attributes that are important to them in a new house can be deduced from their answers to the survey questions. As a result, a design for a new house can be created that will satisfy their needs and preferences, as well as be of greater value to them.

The first question that was asked was which room in their current house do they spend the most time in. This question is designed to bring forth the positive attributes of their current house, which can be utilized in the design of a new “dream house” for them. The attributes of the room in which they spend the most time are important and should be incorporated into the new design.

There were varied responses to this question, which shows the success of various attributes of their current house. Both Mr. Smith and his oldest son spend the most time in the large guest bedroom. The main reason for this is that it is the room where the computer is located. Therefore, it is where they use the Internet, and where the son does much of his homework. The room is adequate in size to accommodate both an area for the bed and for the computer. However, it is not possible to use the computer if someone is asleep in the bed. Therefore, in the new design it would be beneficial to separate the two functions in the creation of a study.

Mrs. Smith spends most of her time in the kitchen not only doing the obvious functions of cooking, washing dishes, and eating, but watching cable television and listening to the radio as well. She described it as her “home within a home”. She uses the kitchen as a retreat where she can relax during the day and evening. The successful attributes that should be reflected in the design of a new house include; an island with stools and a countertop where one can eat and watch television, a breakfast nook where the entire family can sit to eat together, as well as adequate storage. She also mentions that she particularly
enjoys the bright daylight that penetrates the space through the windows, as well as the bright white walls, beige tiled floor, natural cherry cabinets, and dark green countertop.

The youngest son utilizes the family room in the basement of the house more than any other room. He claims that the main reason for this is because the big-screen television with surround sound, and “Playstation 2” video game system are located there. Thus, he values entertainment very highly. He also says that he enjoys lying down on the couches, which demonstrates his value for relaxation. Therefore, key aspects that he would value in a new house design include space for entertainment, as well as a comfortable space for relaxation.

Possibly equally important is which rooms the Smith family spends the least amount of time in. Understanding these spaces and their attributes may help to contribute to the new design by eliminating things that are unsuccessful in the house that they live in now. For instance, the mother spends the least amount of time in the basement family room, which is the room that the youngest son uses the most. The reason that Mrs. Smith dislikes spending time in this room is that she feels that it is separated and isolated from everything else in the house. Also, she dislikes the fact that there is so little daylight that enters the space since the only windows are in two small, basement window wells. Thus, the function of the space should not be eliminated because it is highly utilized by one of the family members, however, by moving the function of the space to a more central location will greatly increase the value of the space for other members of the family. Also, by moving the space to an aboveground location, the space will be greatly enhanced due to the ability to bring far more natural lighting into the space.

In contrast, the youngest son does not like the living room located on the first floor partially because there is not much privacy due to a large arched window that faces the street. Thus controlling the lighting and privacy of the windows is valued highly, particularly if in the new design there are to be more windows in the family room.
Also, Mr. Smith and the oldest son feel as though the dining room is utilized the least out of the rooms in the house. This is partially because they do not often entertain many formal guests in the house. Also, there is a breakfast nook as well as countertop with stools where the family eats. When the entire family sits down to eat together they simply use the table and chairs located in the breakfast nook, and if they are snacking or eating alone they tend to eat at the countertop where the cable television is located. Thus, a formal dining room is not necessary in the design of the Smith’s new house.