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ICON + EXPECTATION:
Exploring the Evolution of the American Single Family Home

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By
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To propose a new conceptualization of “home”, it is necessary to explore the mechanisms that have created this revered icon. Since the industrial revolution, the commercial packaging of the home has continually reinforced its significance as a mass-produced object. From clothing to automobiles, little in our environment escapes considerations of mass-market assumptions, including the typical single-family American Home. The focus of this investigation will examine the expectations we have of “home” and how these expectations have come to inform the design generation of this particular building type. To establish a perspective on the meaning of “home” within today’s culture, this investigation will assess a number of facets that have shaped the home in the twentieth century: economic factors, cultural iconography, domestic products, and critical architecture theory.

The goal of this research is the development of interactive architectural narratives that allow a participant to explore particular contexts of domestic design and come to an understanding of how these devices have informed our American vision of the house. The dialectic of the investigation will emerge through looking at the way homes are designed and built, and the way they are used.

This project is inspired by the House_n vision of new modes of home/technology integration. The domestic program set forth by the House_n necessarily inspires a historical perspective to effectively shape the [near] future of dwelling. Where have we been? Where are we now? We are we going? By examining critical periods of home design, certain trends will surface that indicate shifts in use values. By comparing these changes in use expectation with the resulting mass-marketed form, it will be possible prescribe alternate modes of conceptualizing the design and construction of the home.

ABSTRACT

Thesis Supervisor: Kent Larson
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1) from 500 Small Houses of the Twenties, H.A. Smith
few artifacts of our late twentieth century culture carry as much emotionally charged significance as the traditional model of the American single-family home. Within its many manifestations, and across its nearly infinite formal subtleties, the home behaves as recognizable social icon. Its presence is woven inextricably into the fabric of the American psyche. The idealism of the American Dream, deeply rooted in work, success, and subsequent material reward, revolves around the solid typological imagery of the home. Personal experiences, pop-cultural depictions, and the mechanisms of the construction industry all serve to define the home as an apparently timeless icon. It is because of this ubiquity that attempts to understand its form and meaning of the home necessarily must explore its evolution as a result of external forces.

Simple use of the word "home" itself evokes a complex system of associations. Its many definitions start with the description of a physical place and move into the realm of emotion. A home is a building, and a dwelling. A home is a point of origin, and a place of destination. It embraces a metaphysical designation of belonging. The home, demonstrated to be an abstract concept as well as assembly of building materials, embodies a wide range of interrelated issues. It is simultaneously an economic indicator of wealth, a personal statement of establishment, security, and a marker of social position.

1) 1920, House, Building an American Identity, L. Smeins
Over the last century the automobile, as an archetypal icon of the new age of mass-produced products, reveals its ever-changing form. Responding to market assumption, the latest model in the showroom is simply a glimpse of what is soon to emerge. This anticipation of the 'next great thing' keeps car buyers returning the showrooms year after year, trading in their old cars for the new version. Such a deliberate evolution can be seen in homes, but through much more subtle modifications. Shifting rooms and material options change the basic form of the house into something that comfortably resembles its predecessors, yet caters to emerging values and expectations.

This investigation endeavors to uncover the wider contexts that surround the home, and illuminate new possibilities for the design of homes. "Rethinking home life involves rethinking the spatial, technological, cultural, social, and economic dimensions of sheltering, nurturing, and feeding society, activities often discussed as if they had existed unchanged from the beginning of time, unaltered by capitalist development, technological manipulation, or social pressures." [Dolores Hayden, *Redesigning the American Dream*, 1984.] The development of the home, its formal and social evolution, will be explored in an attempt to show the reader that the home is much more than a simple cliché. The reader will be able to trace their own associations and expectations of home, establish an informed sense of residential history, and reflect upon the origins of their architectural values.

While other devices of cultural identity, such as automobiles, fashion, and electronics appliances are allowed a relatively uninhibited range of design exploration, the typical single family home has developed a stylistic ossification that renders its form largely impervious to the trends that can be seen in other designed products. While cars and stereos and toasters continue an ever-forward-looking morphology and ever-radically attempt to bring the future into everyday life, the home design remains mired in an interesting stasis. Despite sweeping
changes in lifestyles, the basic shape of homes remains the same. Dramatic shifts have occurred in the ways we live and work. Our family structures have become more diverse. Our sensitivities towards our environment have become more sophisticated. Our expectations of aging, prolonged independence, and adaptability all demand better solutions incorporated into our homes. Rarely does one find support for these changes reflected in affordable single family housing. Adding to the complexity of the problem is that certain changes have occurred, yet fall short of addressing the emerging values. In short, we have moved away from values the archetypal home once suited. And yet the archetypal approach to home design still prevails. Even when these issues are addressed through architectural solutions, the balance between technological innovation and traditional expectations is difficult to achieve. Attempts to create homes based entirely on technology have consistently met with comic failure, invariably relegating such innovations to annals of kitsch futurism. Our homes remain years behind the innovations we fill them with. This investigation seeks to reconcile this imbalance by analyzing what is expected from a home, historically, and how this expectation can be coupled with new design methodology.

Regardless of varying aspirations to actually own a home, the typical American has developed some sense of how this typology should be rendered: what it should look like, what it should feel like, and what it should convey as a home. The market speculation of homebuilders and developers assumes the homebuyer will prefer a saleable, traditional-looking home to a contemporary avant-garde home. It is assumed the homebuyer will relate the pitched roof with “home” and the flat roof with “office”, and will opt for designs that, through some allusion or another, speak to a historical precedent of home. While this may be a generalized assessment, it does have an empirical basis: a stylistically modernist housing development is all but impossible to reference. Geographic location is irrelevant; everywhere in the United States, one will see the same flowing seas of roofs, the same basic color palette for siding and trim, the same sensibilities displayed in regards to aesthetic detailing. These homes, en masse, will invariably demonstrate an arrangement and designation of space that is predictable, regardless of the particular variations of location, styles, and size. Universal attention is paid to precise location of the brick trim, the ornamentation, and the brass-plated fixtures in the bathrooms and the kitchen.

The following investigation is a journey through the evolution of the twentieth century American single-family home. It is argued that the current manifestations of the home are
characteristically American in their conception and execution. The reader will be presented with the early debates about the design of homes, the visions of what homes could and should be, the position these homes fulfill as cultural icons, and an overview of select contemporary issues surround the very premise of the home. The reader will necessarily be confronted on his or her own expectations and desires of what "home" means.

To begin this exploration, the home a placed with in timeframe. Primarily, the issues addressed emerge during the twentieth century. While references are made to older residential precedents, the main concern is to understand the most recent factors that have shaped our contemporary perception. To achieve this comprehensive overview, the investigation is structured into three distinct sections, each dealing with a particular objective. Together the three sections provide insight into where the home came from, why it takes the form it does, and how its history can be used to inform the future of home design.

PERSPECTIVE looks at the house as a theoretical problem. Starting in the early twentieth century, one can observe an interesting trend within the field of architecture. The design of the small, affordable single family home becomes a concentrated preoccupation within architectural circles. Examining why this happened shows the home to be a multi-faceted object, with implications spread across the economic and social spectrum. With the prioritization of architectural concern with the home, emerges a subsequent fascination with the visionary "home of the future". The design of future homes is inspired by a nearly-fanatical obsession with the interplay between domestic patterns of existence and the depictions of life found in science fiction. This fascination with the portraiture of life found in entertainment media draws the home away from purely architectural concerns and renders it as a pop-culture icon. A parallel is drawn between the effects of popular media and its cross-fertilization of domestic expectations through an examination of critical cultural theory. To conclude this section, vignettes of contemporary issues are discussed. Concerns ranging from the significance of traditional "front porch" imagery through to sociological effects of suburban planning reveal the home’s vital role in establishing a collective cultural identity.

PROPOSAL ONE looks closer at the actual shape of the home. Style, spatial organization, and variation are presented and categorized. It is possible to see the ways the home has evolved and how our expectations of its appearance and function have changed. Images
of the home are organized to allow the reader to engage the imagery of the home through their own associations. This collection of home images is intended to be an introduction to the reader's experience with what American homes look like, how these houses perform, and how they could potentially be better suited to contemporary life. It should be evident from this evolutionary timeline, that the home is relatively limited aesthetically, yet incredibly diverse in its manifestations. Additionally, the timeline is proposed as means of organizing and placing the home within the greater social, cultural, and economic structures that determine its shape and use. This timeline of homes is fundamental to the future modes of home design explored in the next section.

PROPOSAL TWO outlines an application of the contents of the first two sections within the semi-automated design tool being developed by the House_n research consortium. House_n, MIT's Home of the Future, is an interdisciplinary research and design effort that seeks to bring participants from interested industry sponsors into a dialogue centered around improving the way homes are designed, built, and used. Part of the House_n research effort includes developing a process through which the seemingly overwhelming amount of residential design and construction information might be filtered and brought into the hands of the potential homebuyer. Through the course of refining the House_n focus research projects, it has been proposed that an interactive design program would be one method of organizing information and executing residential construction. The historical and theoretical information surrounding the home, as explored in PERSPECTIVE and PROPOSAL ONE, would be incorporated in the program to help a user assess their architectural values and preferences. Such a function within the design tool is intended to address several current construction industry issues, such as the often-unaffordable costs of quality architectural services and the persistently low quality of typical speculation built housing. The tool, and the historical background studies, are formulated to help a user, either an individual interested in building a house or representative of the construction/homebuilding industry, come to a more intimate understanding of the meaning of home, both as it has been and how it should be.
The images presented in this document are intended to reference each other, as well as supplement the text. The reader should consider the implications of the images as cultural icons, as well as architectural objects. The timeline of evolution roughly correlates with the text; when deviations occur, the images serve as a reminder of where the house has been and where it is going. Often the allusions in contemporary designs recall historical periods or trends. The reader is encouraged to cross-reference typological details and question the origins of today's American single family home.
With few exceptions, the single family home inflects on our everyday experiences of the built world. We wake up in homes, we pass by homes while conducting our business, and we associate the home with deep running sense of stability and belonging. In addition to its presence in our consciousness, the single family home also plays a major role in defining our national economy, our sense of identity, and how we use the space around us.

It is a fascinating and complex typology to examine. Few building types take on such a diverse system of usage and few hold us our attention as strongly as the home. While our civic structures, our airports, and our open spaces may convey aspects of a contemporary collective spirit, it is home that has come to symbolize how we see ourselves in society. The home, and its current state of evolution now permeates nearly every facet of everyday life. In addition to the expected use of homes, for raising families, pursuing leisure, cultivating independent interests, etc, the home is now being used for much more. With technological advances in communication, we now find ourselves using our homes as place of work. With shifts in societal convention, we are housing more diverse family structures. With advances in medicine, we expect to stay independent in our homes longer than before. The argument is made that while the idea of “home” is still as important as ever, the particular characteristics of function have changed.

1) 1727, Philadelphia House - Images of American Living, A. Gowans.
The nature of this opposition is rooted in a curious societal contradiction: we embrace both the new and the old simultaneously. We seek connections with our past, while racing headlong into the future. Caught in this divide, and compromised greatly by it, is the home. As a significant cultural icon, it represents stability of values and certainty in a fast-paced world of change. The irony is that its evolution has stopped short of the changes we ourselves have undergone.

The debate surrounding the character and shape of the house has always been a part of the architectural practice. The single family home, however, has really only emerged as an architectural priority and cultural icon in the last two hundred years. Specifically, in United States, the typology has evolved with the growth of the middle classes. The home has become a something of a signpost for middle class success, economically and socially. In the evolving form of the single family home, we can see a reflection of values and identity. When a new subdivision rises from the ground, we recognize that it is an economic venture as well as a fulfillment of a dream. The dichotomous nature of the home in today's context indicates that it is far from being only an object of architectural concern. Its design is subject to inquiry from all sides. It can be view from the perspective of architectural theory. It can be analyzed...
as a product of advanced capitalism. It can be seen within the deep recesses of our societal structures.

The origins of a specifically American concern with the home and subsequent domesticity become apparent with the introduction of home design collections and articles defining appropriate approach to domestic functions. Inherent in these prescriptions for homes and home-life are illusions to a romanticized and idyllic lifestyle. The model of the ideal home gains a picturesque rendering in stylebooks assembled by authors such as Andrew Jackson Downing, Calvert Vaux, and Gervaise Wheeler. These pre-Civil War publications captured the imagination and sensibilities of the emerging American identity and established a particular architectural protocol that has been carried through the twentieth century. The so-called Pattern Books served a duel purpose: to improve residential architecture by educating the home-dwelling public and introducing contemporary styles considered tasteful. These designs become icons for all the good things in life. Peaceful and leisurely lifestyles are regarded as proper and refined. The holistic mind-body-soul approach to living becomes embodied in discrete small house design, placed carefully in paradisiacal rural landscapes. In the Pattern Book designs one sees a sense of utopia surrounding an isolated house. Illustrations show luscious trees

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19th century domestic theory

1) 1800s, Monticello, Virginia - *The Comfortable House*, A. Gowans
2) 1825, Bowers House, Massachusetts - *The Comfortable House*, A. Gowans
3) 1842, Cottage Residence - *Victorian Cottage Residences*, A.J. Downing
and gardens enveloping the home, with the apparently relaxed and healthy inhabitants strolling about in the fresh air. This imagery helps create a formulaic and expected aesthetic for residential design. Houses with fanciful roofs, board and batten siding, feature windows, dormers, and dramatic entry porches come to represent appropriate residential design.

Published concurrently with the first Pattern Books, *A Treatise on Domestic Economy*, by Catherine E. Beecher, makes a sweeping societal statement by outlining not only the behavior of women within the home, but also the way life within the home should be conducted. By extension, these "moral" patterns of homelife are seen to reach out into society. Tremendous attention is paid to moral habits of health, exercise, clothing, cleanliness, raising children, social responsibilities, and general household maintenance. The precedents set by Beecher have evidently had an important effect on the American conception of home. Beecher's heir apparent, today's Martha Stewart, has infiltrated popular media by presenting domestic space as a fashionable accessory. Meticulous attention paid to domestic details is marketed as virtuous and rewarding. Despite the 150 years that separate the two women, many of the same principles are used. The home is the hallmark of civilization, and a preoccupation with its appear-

1) 1842, Cottage Residence - *Victorian Cottage Residences*, A.J. Downing
2) 1842, Cottage Residence - *Victorian Cottage Residences*, A.J. Downing
3) 1842, Cottage Residence - *Victorian Cottage Residences*, A.J. Downing
ance and function is far being some mundane task. Domestic concerns are the cornerstone of societal stability. Without the careful upkeep of home life, society would crumble. Such examples serve to document how the home infiltrates the psyche and shapes the deeply engrained expectations a society maintains about the meaning of home.

In addition to her descriptions of forthright domestic procedures, Beecher places the implementation of her treatise within the actual physicality of the home. "There is no point of domestic economy, which more seriously involves the health and daily comfort of American women, than the proper construction of houses." In 1848, Beecher outlined primary concerns for the residential construction industry that are still being confronted today. In the building of a house, there are five fundamental issues to be addressed: the economy of labor, financial expenses, health concerns, comfort, and good taste. Since Beecher's time, little has changed. These issues still resonate in our expectations of home. We want our homes to serve our needs, to help us get things done, to make it easy to stay healthy, to be comfortable refuges, and reflect our aesthetic preferences. The conflict arises, as Beecher noted, when the home fails to support these pursuits. When the stability of the home is undermined though careless

1) 1842, Cottage Residence - Victorian Cottage Residences, A.J. Downing
2) 1887, Typical Home - American Family Homes, C.E. Clark
3) 1891, Suburban Home - Building an American Identity, L. Smeins
design, the whole of society will suffer. While somewhat melodramatic, this emphasis on the home is significant. The following examination of the home in society reveals that many sociological and cultural discomforts can be attributed to a lack of attention paid to the home's spiritual value. It is demonstrated that when our homes reflect upstanding values, we can achieve certain contentment with our complex lives. If our home fails to reflect these values, a profound dissatisfaction can result. Since our lives have changed since the mid-nineteenth century, and since our homes are based upon models developed during this period, it is clear to see that the home's evolution is far from complete. If it anything, our current modes of housing ourselves appear well behind the life patterns we now find ourselves in.

Housing design and construction has continually been deemed substandard or, at the very least, failing to keep abreast modern ideals for living. In the early twentieth century one finds the issue of the home being approached by architects with a definitive sense of urgency. In response to advances in technology and the dramatic shifts in sociological conditions, the role of architecture in the design of affordable housing becomes a priority. A series of articles published in *Architectural Record* during the 1930s includes the single family home as a vital
component of social well being. The specific topic of the small home, given special attention in the April 1936 issue of Architectural Record, reiterates the concerns voiced in the preceding century. The primary concerns revolved around the economic situations of the period. With the global economy still reeling from the market crash of the early thirties, the provision of a basic housing stock for the general population surges to forefront of the architectural agenda. In the article “The Architect and the Small House,” William Stanley Parker raises the problem of design within such an economically depressed framework.

In Modernity and Housing, by Peter G. Rowe, this framework is demonstrated to have been influential in the formulation of new standards for housing. Investigating the cultural and economic climate of the time, Rowe shows how, despite economic hardship, the single family home was viewed to be the primary housing type. Between 1920 and 1930, approximately 7 million houses were constructed in the United States, most in the form of single family dwellings. An upsurge in construction started after World War I and peaked just before 1925. This construction boom faded to an all time low during the depression in 1933. It can be seen that with the majority of housing being built as single units, the actual form these were to take

1) 1908, Sears Farmhouse- Houses By Mail, K.C. Stevenson
2) 1910, Georgian Style- The Comfortable House, A. Gowans
3) 1912, Mr. Flagg's House- The Comfortable House, A. Gowans
4) Housing Production Diagram from Modernity and Housing, P.G. Rowe
becomes significant. For these middle-market houses, a particular design vocabulary emerges and reinforces the formulae first set forth by Downing and his contemporaries. From these first mass-produced housing designs springs the archetypal American home as a significant typological form. To sustain this new expectation of housing and lifestyle, economic systems were implemented, in the shape of special financing and legislative assistance. The Federal Housing Administration was established to help homeowners acquire the means to build, buy, keep homes, and set up a new methodology for the conception and construction of affordable housing. Details for appropriate suburban development and critical minimum standards are outlined in various FHA documents dating to the 1920s. At the same time, similar issues are also discussed by organizations abroad, such as CIAM10, the European conference of architects. Intense professional design attention was universally focused around the particulars of affordable housing, and today survives as a hallmark of the architectural community during this period. The results, found in progressive design proposals, illustrate a preoccupation with new construction materials and methods, affordability, and suburban planning.
1) 1920s, Residential Streetscape- The Comfortable House, A. Gowans
2) 1920s, Typical home- The Comfortable House, A. Gowans
3) 1920s, Large two-storey- The Comfortable House, A. Gowans
4) 1920s, Sears Colonial-Houses By Mail, K.C. Stevenson
5) 1929, Spanish one-storey- The Comfortable House, A. Gowans
6) 1927, Sears small worker's house- The Comfortable House, A. Gowans
The CHESTERFIELD

Out of homes of the Chesterfield class come men of victorious bearing whose honored names and expressions inspire confidence and trust. Such homes are a tribute, owed by men of quick decision, born persuasive families and indomitable wills. Truly the comforts of such homes as the Chesterfield should not pass with a single generation.

Character of sterling worth is invariably developed in the home.

The MILTON

As the human mind unfolds, new possibilities are seen and new strength is developed for greater tasks. Those who see in the Milton a home of exceptional advantages, comfort and convenience, and family in their hearts on its possession, can more easily develop the strength necessary to enable them to maintain the mental pictures which they hold.

The COLORADO

The recent of a thing well done is to have done it. Homes built by others can never give us the inner satisfaction which comes as the result for house and weeks spent in the careful planning of a home of our own. In creating the Colorado in accordance with our ideals, many will learn with peculiar delight the new joy of home building.

It cannot be estimated what civilization owes to pure-minded women who love their homes.

The ARDEN

Peace, power and glory come to those who have an affinity with the Forces of work for the continuous advancement of humanity. The underlying solution which promotes all human progress is love, and love is that which permits and perfects. It is in the home of today, where two hearts have but a single thought that power is generated for prosperity.
The WESTMORELAND

The life that would be complete, that would be sweet and one as well as strong must be sustained and enriched by a love of nature and all things beautiful. In no other way can man prove his accord and opened march as in the creation of beautiful homes like The Westmoreland. Such homes are civilization's guideposts on the path of progress.

The VAN BUREN

Clean men, both of hand and heart, are inevitably the product of happy home unions. It is around the hearthstone hearthstoke where the glow of mutual interest and understanding glistens the finest seeds that even moral character of working north. It would be a violation of a natural law if homes in The Van Buren class should produce other than men of clean purpose.

The COLLINGWOOD

It is appreciation that humanity really is seeking and not gold. Gold, gained honestly or dishonestly, is in turn paid for appreciation and appliance. He is most appreciated by friend and neighbor who contributes to his community a substantial home of The Collingwood design, and comfortably shares his comforts and pleasures with those of his kind.

The RICHMOND

There can be no freedom nor power in nature life for those who do not pay the price in youth. The price of freedom and peace is independence gained through sacrifice. Those who make the sacrifices necessary to enable them to own The Richmond will turn the present seeming desert into the paradise of their early dreams.
An Interesting 8-Room House in Four Exteriors

A demonstration of the adaptability of varied architecture to the same floor plan—an indication of the logical use of exterior wall materials.

home plans from 500 Small Houses of the Twenties
One particular project, the Aluminaire, designed by Frey and Kocher, captures these ambitions. The house was conceived as a prototypical solution to many contemporary housing needs, while looking forward to an anticipated vision of American living. The Aluminaire was first showcased as a 'home of the future' in 1931, and was heavily inspired by modernist forefather Le Corbusier. The design incorporated features that transcended American standards for residential construction. It was constructed entirely from aluminum for easy portability, incorporated a European-modernist criterion for abundant light and air, and was intended to be mass-produced and assembled into larger communities. As a representative proposal, it can be seen to embody not only the material advances of the age, but also the theoretical hopes of the modern architectural movement. However, like many radical departures in residential design, the Aluminaire had little direct effect upon the shape of housing. While some of its principles were incorporated into mass housing, its futuristic/modernist aesthetic was not. Successfully reacting against the current shortcomings of house design, the Aluminaire (and others like it) failed to incorporate the now longstanding expectations the home-buying public had established and maintained.
The seemingly eccentric nature of projects such as the Aluminaire is perhaps best examined through the lens of the modernist agenda. It is within this critical dialogue that one can come to see the inflection of a wide range of social, cultural, and economic issues upon the shape of housing. The modernist platform is vital because of its broad embrace of the many factors informing architecture, architectural thinking, society, culture, technology, and economy. These perspectives challenge the principles that have determined the form our homes have taken. This movement posited that to understand architectural forms, one must examine the theories and cultural contexts that rationalize the meaning behind the form. The "Fitness to Function" of the designed object and the manner to which it conforms to the needs of the Modern Being have occupied the motivations of theorist, aestheticians, historians, and financiers since the first mass-produced artifacts started rolling off the assembly line.

By the beginning of the twentieth century, cultural and architectural theorists had begun dissecting the application of emerging technologies and the effects such applications might have on every aspect of life. The general tone of both popular and academic architectural commentary indicates that the manifestations of technology in art and architecture were, for
the most part, accepted. It was a recognized fact that emerging technologies were changing the way humans relate to their products and environments. The various perspectives and approaches to the issue of integrating the fruits of technology, however, follow differing agendas. Some were concerned with the preservation of some semblance of handcrafted tradition, like William Morris and the Arts and Crafts movement. There is Frank Lloyd Wright, who fully embraced the machined mass-produced materials and yet remains excluded from the dialogue on emerging principles of appropriate mass-produced housing. And, of course, there are Gropius, Le Corbusier, Frey, Neutra, and a host of others whose designs and theories have come to represent archetypal attempts at a technologically informed architecture. The work of nineteenth century designers and thinkers must also be considered when coming to terms with the formative effects new technologies and materials had on architecture and construction. Contributions by Durand, Viollet-le-Duc, Semper, and Wagner can be seen to have had a pronounced effect upon the work that was to emerge at the beginning of the twentieth century.

A prevalent concern among the aforementioned individuals is the concept of "need." When interpreting need in terms of universality, it was determined that for every need, every

1) 1930, Typical home, Modern homes: Their Design and Construction
2) 1930, Typical home, Modern homes: Their Design and Construction
3) 1930, Typical home, Modern homes: Their Design and Construction
problem, a number of indisputable facts could be applied toward the invention of a solution. It was discerned that these facts, these products of "scientific objectivity", would yield solutions perfectly suited to the need in question. Such logic could explain the grace of steel bridged, cars and bicycles, trans-oceanic ships, accurate wrist watches, and any number of other scientifically mass produced items. Surrounding these eager inventors of architectural form were machines that would perform their intended functions flawlessly and with utmost utility. These machines, which embody the form of their function, became the inspiration for what architecture should become. A new standard for beauty is established: the beauty of Fitness to Function.

In addressing this new "principle" Hermann Muthesius, in Style-Architecture and Building-Art, outlines the fundamental variables. Beauty in these modern times is to be found in the direct correlation between the determined need and its eloquently functional solution. It is through a "scientific objectivity" devoid of all predisposed style, that one will find the appropriate embodiment of the new age. Universal solutions could be found to fulfill the indisputable needs of the populace. One could then find an architecture that appropriately serves, say for example
the "middle classes." This *juste-milieu* would avoid the extremes of wealth and poverty, encouraging ultimately a healthy middle ground. Responding to this proposed idea and venturing further, Walter Gropius suggest that "Sachlichkeit", or scientific objectivity, is reductionist and ultimately only a fragment of the solution. In *The New Architecture and the Bauhaus*, Gropius counters Muthesius: "Catch phrases like 'functionalism (die neue Sachlichkeit) and 'fitness to purpose=beauty' have had the effect of deflecting appreciation of the New Architecture into external channels or making it purely one-sided." For Gropius, the direction and ultimate goal of architecture is a synthesis of the problem, the need, with the many other aspects that affect the perception and use of designed objects. It is not enough that the object perform well; it must also inform and be informed by the cultural context in which it is used. The recognition of the beauty of the "universal" is not found only in its standardization, but also in the way this standard serves to reinforce the health of its context. The resultant design philosophy can be seen to imbibe the object with the emerging spirit of the modern era.

It is through the stoic criterion posited by Muthesius that one can begin to formulate the "one side" that is integral to design in a mechanized and industrial world. The determining
The premise of this argument is that a struggle toward any contrived style is ultimately retrogressive. "If we wish to seek a new style—the style of our time—its characteristic features are to be found much more in those modern creations that truly serve our newly established need...." The true embodiment of Sachlichkeit, or functionalism, is seen in the constructs that can be attributed to the contemporary age. Railway stations, exposition halls, large bridges, stream ships, railway cars, bicycles, and the like derive their beauty, their attractive and appealing essence, from the realization of need and the objective confrontation of the problem at hand. This premise can be seen to be a driving force in the development of prefabricated and industrialized housing system throughout the first half of the twentieth century. The intent of the construction industry players (i.e. the government, engineers and architects, and speculative builders), focused upon the establishment of housing standards that would be as efficient as the standards found most other industries.

Idealized and rationalized beauty "can henceforth be sought only in the tendency toward the strict matter-of-fact (Sachlichen), in the elimination of merely applied decorative form, and in shaping each form according to demand set by purpose," says Muthesius. Here
the dominance of need is reinforced. If need is properly assessed, a solution will necessarily be reached. The solution, in keeping with Gropius's observation of one-sidedness, must be a product of an analytical process that concerns itself only with economy. It is obvious that such a system will have shortcomings in the realm of appropriate and satisfying design, as the later experiments in prefab housing will stand to prove. One could look at Muthesius' premise illustrated with the example of modern clothing to see the obvious failure of extension. Through Sachlichkeit, Muthesius argues, we have arrived at a standard for modern design. Here we can begin to see how the rational approach to design applies to the architecture of a democratic, middle class society. The every need of every person is met through rationalization. And, because this approach is based in science, the results will naturally be egalitarian. One could venture however, that if the example of clothing were taken to its objective end, one would be looking at a suit that is far different from the suit Muthesius was wearing. One would have clothing designed to the same criterion as a bridge or an airplane; it would hide our nakedness and protect us from the elements. Nothing more. In short, we'd have clothing only to meet the requirements of efficiency.
This becomes the point of departure for Gropius as he begins to focus the intent of the Bauhaus. He reasons that the processes of functionalism and rationalism comprise only part of the equation of design. They "represent the purely material side of that formalizing process on which the practical values of the New Architecture depends. The other, the aesthetic satisfaction of the human soul, is just as important as the material." The fundamental difference between Muthesius and Gropius is the extent to which they envision the adroit object fulfilling the needs of the body, as well as the needs of the human psyche. Gropius does not fully reject Muthesius' call for purity of form. Instead he posits that the pure form can serve a range of concerns extending beyond the scope of functionality. His premise is that through forms that speak directly to our age we reflect the spirit of humanity.

Social unity is Gropius' vision of the modern age. Architecture, and all that is manufactured, should reinforce the unification of society through standardization. "Standardization is not an impediment to the development of civilization, but on the contrary, one of its immediate prerequisites. A standard may be defined as that simply practical exemplar of anything in general use which embodies a fusion of the best of its anterior forms—a fusion preceded by
the elimination of the personal content of their designer and all otherwise ungeneric or non-

essential features."^{18}

The "standard" would come to enhance all social interaction and improve the quality of

the social context. This idea of standardization, while reducing the clutter of multifarious and
capricious design, does not necessarily imply the reduction of forms to a few bland and static
archetypes. Gropius envisioned standardization as a way to improve the functioning of society
as a whole. The standard would aid in the regulation of behavior that could otherwise fall into
chaos. If there is a calm and ordered manner underlying the facets of life considered most
banal, i.e. a teacup, a chair, a lamp, etc., this order will enhance the broader arenas of living
such as business, artistic expression, recreation, and social interaction.

The recurrent themes of Muthesius and the advocacy of universal standards by Gro-
pius were to inspire housing movements through the twentieth century. They begin to ques-
tion the discrepancies of the building industry, while at the same time prescribing a remedy
for architectural design. This vision sought to elevate and unify architecture, which in the nine-
teenth century been concerned primarily with picturesque eclecticism and class-based hous-
Simultaneously Le Corbusier had been developing many of the same concerns.

Le Corbusier advocated new ways to construct a typical dwelling both literally and conceptually. Construction did not take advantage of new technologies or materials, and the philosophical motives behind its form in were failing to address advancing developments in architectural and social thought. For Le Corbusier, traditional houses with their small rooms, small windows, clutter and discord were claustrophobic disasters. A sophisticated person of the age would appreciate the machined precision of the automobile, airplane, wristwatch, silverware, and clothes, and expect the same precision of the home. However, Le Corbusier perceived a striking contradiction when he examined the housing conditions of his fellow modern beings. Le Corbusier sensed an impending revolt should the conditions not change. At some point, the dwellers would wake up and be appalled by the conditions in which they had been living and rise up to demand better architecture.

His urgent call for a change in the design of the house is nothing less that an attempt to avoid chaos and bloodshed. "Architecture or revolution; revolution can be avoided," is a foreboding ultimatum. In dramatic terms, Le Corbusier envisioned these people living in the
world of the machine taking to the streets, burning their houses, and demanding healthy mass-produced housing! To a politician it was an image meant to elicit action: Let us promote architecture in keeping with our times lest we fall into a necessary destructive recourse, Revolution... While perhaps heavy-handed, such a vision underscores the desperation being communicated by Le Corbusier and his contemporaries. The state of housing must change, or the very structures of society will collapse. Stated with different terms, this is a nearly literal rephrasing of Beecher's *Treatise on Domestic Economy*, published in the United States nearly ninety years prior. It reinforces the widely held view that human happiness and the home are inexorably related.

When Le Corbusier states that the right state of mind does not yet exist, he refers to architects. There is an indication that the state of mind is latent in the sub-consciousness of the worker, albeit lying dormant. There it sleeps... Le Corbusier sees a time when it will awaken. It is at this that the revolution will occur. The revolution, the revolt outright, can be avoided; however the revolution in architecture is inevitable. “We must create the mass-production spirit. The spirit of constructing mass-production houses. The spirit of living in mass-production

1) Appliances, from *Mechanical Brides*
2) Toaster and Matrimony, from *Mechanical Brides*
3) Blender, from *Objects of Desire*, A. Forty
To create the mass-production spirit, one must critically examine the inconsistencies present in one's life. How can one tolerate the refined quality of the mass-produced object when contrasted against one's archaic dwelling? To apply the spirit of the design, construction, and inhabitation of mass-production, we must accept that the standardization it requires in our lives will lead to a social condition devoid of contradiction.

"The mass production state of mind is hateful to architects and to the ordinary man." Perhaps this is true for the architect because, in essence, it eliminated the need for the architect. Once the formula for the living-machine, that "machine for living," is derived it can be put into the hands of assembly line workers. The architect, once he designs the prototype, is unemployed. For the ordinary man, despite his affinity for the appliances in his life, will lose that still-prized piece of memorabilia, that sentimental dwelling, that last refuge of individuality. When will the architect, or the common man, be prepared to make such a commitment?

With the universal application of the mass-produced house, we would witness a dramatic shift in the forms our world takes. "An inevitable social evolution will have transformed
the relationship between tenant and landlord, will have modified the current conception of the dwelling-house, and our towns will be ordered instead of chaotic. So with the rational ordering of the physical environment one will experience a subsequent reordering of one's whole being. With houses as tools, one can slough off the concern for the ambiguity displayed by the house because the ambiguity as a source of confusion will have ceased to exist. The house will be defined, and we will be free to commence living.

Like El Lissitzky, Le Corbusier sensed the need for architecture to supplement a collective social order. The mass-produced house would serve as the catalyst toward greater social cohesion. We will look upon our magnificently ordered lives with pride. Social reform through architecture is at last recognized. "Industry has created its tools. Business has modified its habits. Construction has found new means. Architecture finds itself confronted with new laws." The new laws include the new social consciousness in terms of interpreting the meaning of the modern age, given its context in an industrialized world. The ramifications of these new laws require the emergence of a New Architecture.

Whatever course architecture and building takes, the role of the architect will be modi-
fied (if not altogether eliminated). The concluding arguments of El Lissitzky imply a rationalization of the design process. Design becomes a science, a formula. Necessarily, the architect becomes a mathematician, an engineer. And the nature of architecture is shifted from traditional fidelity to social reformation.

At the time El Lissitzky and Le Corbusier were postulating a course for architecture, a parallel course was developing in the United States with regard to the application of new architectural possibilities. Presented in form of model 'homes for the future,' these showcase exhibition prototypes congealed the progressive trends of the European modernists with the ambitions of architects and builders and politicians in the States. The fervor and fascination inspired by the present technological innovations and the fantastic applications for the home during this period is discussed in Brian Horrigan’s article, “The Home of Tomorrow, 1927-1945.” Horrigan traces the origins and evolution of the phenomena of these ‘future homes.’

It was the promise of a better tomorrow that caught the imaginations and hopes of the general public, architects, builders, and industrialists of the time. During the period that
encompassed the optimistic euphoria of 1920s prosperity, the depths of the Depression, and the patriotic deprivation of the World War II home front, the term “home of tomorrow” was often taken very seriously. The general social climate could be seen to be ready to embrace most anything that elevate the prior twenty years of dismal economic condition and personal sacrifice. Anything that could, in one way or another, prove that things were most definitely getting better, was swallowed up by the consumer classes. Suddenly, through the exhibitions for future home living, a light could be seen at the end of the tunnel. Standards of living were at long last on the rise, housing was in critical shortage, and the possibility that all of the recent troubles were now an unfortunate situation of the past rang deep within the American psyche.

Through the phenomenon of the “Home of Tomorrow,” the optimism of the age, as recognized by the modernists, could finally find implementation through mass-market appeal. These homes represented ideals and stood in stark and purposeful contrast to contemporary reality. Their creators were architects, engineers, and businessmen who saw an opportunity to enact sweeping reform. They could be seen acting out of a convictions that the housing industry had been too long mired in the bogs of tradition; in response to the perceived aesthetic dictates of a “machine age;” and from a desire to stimulate consumption. Their collected endeavors espoused the idea of the house as a technologically perfected artifact.

During this period architects and reformers struggled to reconcile notions of a design idiom appropriate to the age with tradition-bound sentiment, and we can see their efforts to bring the house—that most recalcitrant of building types—into the mainstream of American technological development. The period provided an ideal context wherein such flamboyancy could thoroughly capture the attention of the consumer classes. A dynamic mixture of phenomena provided the catalysts for the sudden appearance of this marketing strategy. First, though housing construction boomed to unprecedented levels in the 1920s, the demand far exceeded the supply, and this frustrating disparity only deepened with the coming of the Depression and the war. The expansive economy and rising standards of living of the early 1920s had heightened the already considerable demand for durable consumer goods. Amongst the suddenly indispensable symbols of middle-class status—automobiles, radios, home appliances—was the most durable and elusive product of all, the single family home. A very real sense of crisis
1) 1932, N. Bel Geddes, *Yesterday's Tomorrows*, Joseph J. Corn

This sense of urgency inspired the feverish appearance of radical solutions to the problems now underlying the new age of prosperity.

Referencing back to modernism and its experimental agenda for housing, we can see in the United States, modernism was identified literally as a visionary style. The solutions to problems of housing shortage became very much an issue of addressing the current modes of construction. The housing futures offered during the period were ineluctably linked with machines and mass production, and many of the experimental approaches to housing revolved around devising a method of rapid, assemble line-style manufacture. Such a strategy would become the dream of the American visionaries.

Amongst the first of these visionaries to present the public with notions of the perfected housing through assembly line mass-production was R. Buckminster Fuller. His Dymaxion House was viewed as the most radical dwelling machine of the day. Reasoning the that home of the future should be lightweight and easily demountable, Fuller’s design featured a central aluminum mast, from which glass and casein walls and inflated rubber flooring were to be suspended by wires. The mast was to contain all the household services. In this core were to be two bathrooms (complete with vacuum electric hairclippers, vacuum toothbrush, and exercise bar), a self activating laundry unit that would deliver washed and dried clothes in three minute, sewage disposal tanks, an electric generator, an air compressor, a humidifier, and a kitchen with every possible appliance. The two small bedrooms were to have pneumatic beds with neither sheets nor blankets, since these would be unnecessary in the perfectly climate-controlled house. With all household drudgery eliminated, Fuller foresaw a period of intense leisure-time creation.

Above all, these Dymaxion units were to be mass-produced, assembled into towers, shipped by zeppelin, and plugged in anywhere. Since the units were to be entirely self-sustaining, attachment to public utilities would be unnecessary. The units, either singular or in towers would become the utility. The easy mobility and contained mechanical systems could provide a house for everyone, everywhere.

Concurrent to the introduction of the Dymaxion in 1927, was Lindbergh’s transatlantic flight, the first talking movie, the establishment of transatlantic radio-telephone service, the first
public demonstration of television, the opening of the Holland Tunnel in New York, and the dramatic appearance of Henry Ford's Model A. With all the fruits of the future being revealed, a sort of mass hysteria resulted.\textsuperscript{30} It would appear that the future, with all its wonders, was underway and that as early as the next day, we could see a new utopia emerging.

It was the jumping aboard this flood of optimism that the public could believe that mass production was, indeed, the harbinger of better time to come. Mass production was for Fuller and his contemporaries a powerful redemptive force, the best path to the true rationalization of the housing industry.\textsuperscript{31} In basing their rhetorical model on the automobile assembly line, the paragon of American Industrial Success, the proponents of efficient housing production were helping to create an "ethos of mass-production" \textit{The Way Out: A Forecast of Coming Change in American Business and Industry}, by Edward A. Filene, in 1925, prophesized the fulfillment of utopia through scientifically engineered production. "A Fordized America built upon mass-production and mass distribution will give us a finer and fairer future that most of us have dared to dream." Thus 'houses like fords' becomes something of a rally cry and an imperative for the future.\textsuperscript{32}

1) 1962, Liddel and Jones, "Plywood Home of Living Light", Yesterday's Homes of Tomorrow, H. Ward Jandl
2) 1932, Lescaze, Yesterday's Tomorrows, Joseph J. Corn
In the United States, however, no exemplar of the modern movement's goals was built in the United States until 1929, when architect Richard Neutra completed the Lovell House in Los Angeles. With this house, we see an insertion of the European modernist agenda into an American context. The romantic dreams built in Europe to capture the energy of the machine age found an interesting foothold in the realization of the Lovell House. An alternative to the stodgy traditions of American homebuilding could finally be perceived as reality. Set against the rugged site, and glimmering white, it at once looked completely alien and perfectly appropriate.

The 1930s had developed a dual image of the home-of-tomorrow before an expectant public. On the one hand was the luxurious “machine for living” of the modernist movement (illustrated by the Lovell House); on the other was the cheap, identical machine-made house of Fuller and other proponents of mass production. The further development of these two images would serve to help establish the 'International Style' as something quite different from the exhibition homes-of-tomorrow. One would find its place amongst the various other 'styles', while the other would forever continue to be something of a fantastic curiosity.

These curiosities would be memorably collect for exhibit at the Century of Progress.
Exposition in Chicago in 1933 and 1934. Thirteen full-scale, furnished model homes were exhibited, nine of which where intended to represent some approach to prefabrication. Amongst the most notable model homes were submissions by George and Fred Keck, William Lecaze, and General Houses, Inc.

Perhaps the most serious failing of this visionary exercises was that they tended to focus on a single, traditional building type—the free-standing single family house. It was as true in the 1930s as it is now that housing must be investigated not solely as a technological issue but as one that is intimately woven into the social fabric. The concerns that needed to be addressed could not be limited to only the construction and futuristic improbabilities of the house in and of itself. Part of the reason that the trend of 'homes of the future' is seemingly predestined to be archived as kitsch curiosities, lies in the simple fact that way people want to live and the way they expect their homes to look and feel are often in opposition. If all the unlikely technological gadgets were stripped from the house, would it still speak to the public's associations and expectations for home? Evidently, these prototypical homes best succeeded in whetting the consumers' appetites for technological gadgetry but did little to revolutionize
the broad field of housing design and construction. The failure of these houses goes further: there was simply not the adequate capital pumped into the projects to make them economically feasible, nor were the new materials, such as steel and aluminum, able to infiltrate the homebuilding industries traditional methods.

Over all there was a lingering sense of public disappointment. The phrase 'home of tomorrow' implied a promise of personal attainment; it had a hollow ring for most Americans during the Depression. The prediction of revolution in the industrial production was also a gross miscalculation. The phrase "home of tomorrow" gradually lost its connotations of prediction, prescription and solution and was indiscriminately applied to everything from new floor coverings to vacuum cleaners to 'revolutionary' plumbing fixtures. By the end of the 1930s, the phrase was merely an advertising slogan, designed to stimulate buying, to condition consumers to accelerate rates of change, and to promote expectations of newness.

Despite the failure of the futurist prototypes, one particular home design feature lives on as a highly alluring showcase: The Kitchen. During World War II the most popular "home of the future" was not a house at all but only what we might call a high-tech kitchen. The simple
popularity of the kitchen and its accoutrements illustrates an overriding value system of the consumer. They care not so much about the house itself, but rather what features they can find in it. The kitchen appears as an appropriate node where all manner of technological innovation can find a welcome application. This concern continues today, where we find showcase homes exhibiting the latest in integrated technology. The kitchen is amongst the most fawned over features. Perhaps this indicates that the real concern homebuyers have with regard to design of new homes is how these prototypes reflect and enliven traditional pastimes.

Kenneth Stowell, editor of *Architectural Record* 1943, saw the broader implications of the future trends and gave the following aphoristic prophecies:

- The house of the future will perform the same functions as the house of the past and the house of the present...
- The House of the future will have floors, walls, ceilings, partitions, and roofs...
- In appearance, the houses will reflect the desires, tastes, associations, prides and prejudices of their owners...
- Radical experiments and designs will continue to intrigue those who want to be in the van-

1) 1933, Keck and Keck, Crystal House, *Yesterday's Tomorrows*, Joseph J. Corn
4) 1956, RCA-Whirlpool Miracle Kitchen, *Yesterday's Tomorrows*, Joseph J. Corn
guard of progress. Conservative designs, reflecting the best of the past, will be built to please those who prefer the familiar...

- The house of the future will still be a house.  

In short, nothing will cause the traditional home to be abandoned in favor of a complete departure from its recognizable form. Horrigan places this realization within the period's cultural climate. "If American architects and homebuyers in the 1940s adhered to familiar images, it was understandable. In these emotionally shattering years, styles that evoked a reassuring past seemed ever more important." We can see the same issues at play in residential design today. While everything else moves at a dizzying rate of change, at the very least, we can rely upon a home that looks and behaves like a home should.

1) Mobile Television, Retrospective 1910-1970 Image Bank
2) Space Pioneer, Retrospective 1910-1970 Image Bank
3) T.V. Dinner, Retrospective 1910-1970 Image Bank
The preceding perspectives on the residential architecture have been presented to frame the breadth of contemporary issues now shaping the home and how Americans, as a nation of home dwellers have come to view their homes. It is here that the current state of housing in the United States should be examined, taking into consideration many of the influences that inform associations and expectations of the home. It is obvious that the vast fabric of suburban America is a complex tapestry, the product of well over a hundred years of systematic investigation and experimentation. The contemporary forms of homes built today represent an aggregation of historical precedents, cultural self-awareness, and ever-advancing attempts to provide a suitable form for housing. In summary form, the diverse issues surrounding the home are increasingly investigated from perspectives outside the architecture and construction industries. The subject of the home, with all of its implications, will always be viewed through filters that incorporate a context much larger than the house itself.

From the political factions, there was a steadfast resolution in keeping the trend of the single-family home a vital and growing part of the national economy. Despite the persistently optimistic tone of the 1920s, President Herbert Hoover saw the housing situation as a

1) 1940s, Park Forest Chicago, *American Family Homes*, C.E. Clark
critical problem. Although residential construction had increased dramatically since the First World War, it lay on a precarious foundation. Booms and collapses plagued the real-estate market; the residential mortgage debt had tripled in one decade; and the number of foreclosures mounted precipitously at the decade's end. In addition, the percentage of homeowners had been steadily declining; and there were reports by such housing reformers as Edith Elmer Wood that up to one third of the nation was poorly housed. Naturally, political figureheads like Hoover were concerned. For these leaders, stable homes were the bulwark of good citizenship. Private homes encouraged individuality; and residential construction, together with real estate investments, played key roles in the health of the national economy.

The new kinds of housing in the 1920s represented attempts to redress problems in the American housing system without introducing or encouraging overly radical alternatives. The few visionary prototypes were difficult to implement into the current housing mindset, which still adhered to standard precedents. In the process, two conflicting characteristics—personalized design and uniform planning—were expeditiously brought together. The picturesque ideal of the home as a fanciful cottage or Mediterranean villa evoked the mood of the decade, but the
appearance of individuality was often illusory. Most of the new homes were set in large planned communities, which were almost entirely residential and demographically homogenous.

A broad coalition of developers and realtors, architects and builders, government officials and sociologists, interior decorators and housewives, union leaders and urban reformers, engineered the residential patterns of the 1920s. Each sought ways to preserve the nuclear family, bolster the economy, provide more affordable houses, or encourage community participation. And they all believed in more tightly organized planning for residential areas. Accordingly, federal agencies, municipal zoning boards, incorporated homeowners' associations, and local art juries set building controls to regulate the production, appearance, and social composition of residential environments. The celebration of the individual home presumed that neighborhood homogeneity was necessary. This formulizing of the home and its environs in the 1920s set the stage for what would be the next 80 years of residential development in the United States. The considerations that shape communities of houses are often very broad prescriptions for an ideal that emerged well into the 1800s. There is always this hope of creating a synthetically balanced context where people, their behaviors, their homes, their cars,
and nearly every aspect of their lives are required to conform to an ideal that is justified by a romanticized picture of the past. All too often, this adherence to formula lifestyle leads to a broad range of dysfunction: segregation based on income, race, gender; environmental ruination in the form of unregulated sprawl, emotional perceptions of isolation and alienation, to name a few.

The 1920 census showed that only 46 percent of American families were homeowners. That figure was even lower in most metropolitan areas: 27 percent in New Orleans, 25 percent in Atlanta, 18 percent in Boston, and 12 percent in New York. An economic depression in 1921 aggravated the postwar housing shortage, limiting the number of new permits and increasing the price of housing that was being built. The average cost for a new dwelling rose from $3,972 in 1921 to $4,937 in 1928. It was estimated early in the decade that 500,000 new dwellings, as a minimum, were needed, yet the construction industry was sitting idle. Senator James Wadsworth, promoting a bill to finance housing cooperatives and to research cooperative efforts in the American past, proclaimed that the country had a housing shortage of dangerous proportions. Edith Elmer Wood insisted that the figure was almost always underesti-
imated, given the poor quality of housing available to the poor and working classes.

The census also noted that for the first time in the nation's history, the majority of Americans were classified as urban or suburban. The outlying or suburban areas of metropolitan regions were adding to their populations at a faster rate than the central cores. In the decade of the 1920s, the suburbs grew twice as rapidly as the center cities. Most of these new residential developments found success with real estate promotions advertising natural resources, pleasant social life, and sound economic value—all standard suburban claims; claims that are still made today by developers and builders of new neighborhoods in the suburbs.

Families who invested in the suburban way of life hoped to find both individual freedom and social stability. Many sociologists and planners considered the suburban trend the saving grace of America, embodying a combination of small-town virtues and urban amenities in a carefully planned community. The faith in the suburban trend was limited. Lewis Mumford criticized suburban selfishness and aimlessness. "Household Administrator" Christine Fredrick told readers of Outlook why she wanted to move back to a city and leave behind the "delusion of the suburbs." Looking for rest and community, she had found only "neat little toy houses on neat
meaning in mass-housing

little patches of lawn and their neat little colonial lives, to say nothing of the neat little housewives and their neat little children—all set in neat rows, for all the world like children's blocks.” Other critics discussed the self-conscious wholesomeness of the suburbs, the social and economic homogeneity, the expense, and the loneliness generated by so much privacy and so artificial a social life. Nevertheless, most popular middle-class literature, housing guides, and even architect’s manuals and government documents praised the suburbs as a haven of “normalcy.”

To introduce modes of thinking currently under consideration in the field of architectural theory, the highly strident, seemingly cynical cultural criticism of Theodor Adorno and Max Horkeheimer provides a poignant undercurrent. Their examination of culture represents a level of examination that is at once difficult to digest and yet insightfully revealing. During their exile from Germany in Hollywood during the first half of the twentieth century, the two co-authored the seminal Frankfurt School critique of modern systems of culture marketing, “The Culture Industry: Enlightenment as Mass Deception.” The systematic analysis of commodity culture, from the critical perspective of Adorno and Horkeheimer, reveals the weave that inexorably ties...
the American home to the initial formation of the consumer middle classes. Along with revered images of celebrity and product marketing, the concept of home is reinforced. The home is subject to mass-market appeal and sale.

Through the arguments of "The Culture Industry" the home can be viewed as any other product, and the architecture that informs its shape moves to the forefront in the discussions of societal self-awareness. Along with the writings of Adorno and Horkeheimer, recent observations on the nature of marketing serve to reinforce the trends found in the home-building industries.

In deciphering the position of residential development in the United States today, the role of home marketing informs the consumer's sensitivities to historical reference and stylistic allusion. While the surface texture of the typical American suburban home communicates trends in taste, the references to nostalgia and optimistic economic accessibility are used to sell the idea of home as well as the actual property. It is through an examination of the mechanics of the home marketing that we see the importance of packaging the home around lifestyle assumptions. Theodor Adorno and Max Horkheimer's *Dialectic of Enlightenment* illuminates

1) Family Recreation, Retrospective 1910-1970 Image Bank
2) T.V. Time, Retrospective 1910-1970 Image Bank
3) Car Advertisement, Retrospective 1910-1970 Image Bank
the structures of popular culture and the subsequent effect these have had on society. While they focused their attentions on the entertainment industries emerging in the early twentieth century, their arguments and conclusions are relevant to the realm of theoretical architectural debate.

The developer home is marketed an object of freedom and identity, giving the homebuyer a means of securing a material identity. The problems arising from such an approach are readily identifiable. We are beginning to see how the home is really falling short of the promises it is supposed to fulfill. The needs and desires of this type of product is intended to support have become far too disparate to be met by a single formula of design. Rather the home-as-product, and its variances, seem contrived to meet a very narrow set of criterion. These criterions are based by the willingness of the homebuyer to settle for a design that meets only very basic requirements. Such a situation results in the rather gross lumping of all potential homebuyers into very broad categories. Distinctions are primarily subject to income levels and a limited palette of options. The resulting and much hoped-for identity can hardly be seen as unique. Rather, the consumer becomes the product. The individual, as such, when viewed as
active participants in this global marketing system, is really nothing more than a commodity, and is considered simply as a particular market demographic. “Yet the city housing projects designed to perpetuate the individual as a supposedly independent unit in a small hygienic dwelling make him all the more subservient to his adversary—the absolute power of...marketing.”

From their exiled position in Los Angeles during the late 1920s, Adorno and Horkeheimer had the privilege of watching the fledgling entertainment industry of Hollywood develop. The effects of the popular media, through radio and movies, begin rippling through the character of the culture already in place. A growing unity of aesthetic expectation, stemming from popular entertainment mediums, begins inflecting on the expectation of the consumer. Through the movies of Hollywood, the audiences formulate an ideal for their own lives, an ideal based upon a fabrication intended primarily to sell a product. It is from this point forward that the burgeoning suburban sprawl of the Los Angeles cityscape takes root in the American consciousness and becomes its model. Through Mike Davis’ City of Quartz, which chronicles the development of Los Angeles, the world of Adorno and Horkeheimer is shown to be deeply

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1) 1980s, Typical Houses, Home Plans to Build, Garlinghouse Company
2) 1980s, Typical Houses, Home Design Collection, Garlinghouse Company
3) 1980s, Typical Houses, Home Design Collection, Garlinghouse Company
problematic. They witnessed the rapid expansion of the city and the social, economic and political forces that drove this growth to astounding levels of optimistic speculation. Entertainment productions and L.A. glamour aside, they "focused instead on the little single-family boxes that seemed to absorb the world-historic mission of the proletariat and into family-centered consumerism under the direction of radio jingles and Life magazine articles." It is in the houses of the masses that they found the catalyst for societal paralysis. It is within the house, and including the house, that all levels of marketing would make a most lasting impression. The greater contexts of marketed images settle in beside the family, already formulated to the mass-market criterion through television, radio, and the movies.

The home, viewed as a necessary tool for living, undergoes a transformation that allows a marketed formula deep penetration into the psyche of the homebuyer. Historically, the need to house workers in areas surrounding city centers is subject to definition according the necessities of enterprise rather than genuine concern for quality housing. While there was a push in architectural circles, the 1930s, for affordable middle class housing, these efforts were co-opted by larger corporate concerns. The ideal of radical modernism attempted a qual-

1) 1980s, Typical Houses, Home Plans to Build, Garlinghouse Company
2) 1980s, Typical Houses, Home Design Collection, Garlinghouse Company
3) 1980s, Typical Houses, Home Design Collection, Garlinghouse Company
ity solution to the exploding demand for low-cost housing. The expenses of the San Fernando Valley bungalows were preceded, in concept and in construction, by architectural prototypes conceived to set standards conducive to economic requirements and emerging techniques of industrialized construction. First driven by the economic crash of 1932, and then again with the post-war housing shortages, housing innovators sought means to rapidly produce cheap housing, while still maintaining some aesthetic sensibility of the home-form. For many such innovators, the balance would prove to be too tenuous to turn a profit. Lustron, General Houses, Kaiser Homes and General Panel Corporation all attempted to bring the pre-fabricated ideal to the home buying market and all failed miserably to effect any significant change in the way Americans wanted to see themselves living. Rather, the subtle blending of the nostalgic stylistic symbols, with varying reference to historical detailing, would become the model of mass-housing. All the exercises in material innovation and design efficiency of the time would unfortunately come secondary to the concerns of a perceived domestic ideal.

Scanning the pages of Architectural Record from 1936, the theme of the small house emerges on numerous occasions. As a perceived architectural priority, the small house is given

1) 1980s, Typical Houses, Home Plans to Build, Garlinghouse Company
2) 1980s, Typical Houses, Home Design Collection, Garlinghouse Company
over to design competitions and special features. The proposals contain hints of design principles reminiscent of modernist principles, and yet present a distinct difference. The homes are conceived almost exclusively out of consideration for the financial systems recognized to be the driving force of the home-form. In an introductory article by William Stanley Parker, "The architect and the Small House" (Architectural Record, April 1936), the concept of the affordable dwelling is primarily driven by either the builder or the banker, with "human factors" recognized secondarily. In essence, the architects participating in the series on the small house concede to the very real context of market speculation. The house designs presented experiment with the very modes of production that will ultimately serve to make the suburban model of American housing nearly ubiquitous. The thoughtfully individual styling of these prototype houses is replaced by a quaint cottage-like appliqué and marketed through every means available. The post-war construction boom stylistically demonstrates the effectiveness of selling of the domestic image as seen in the success of the Levittown-type developments.

While other visions of the American domestic future were constructed at the same time as Levittown, only this one version emerges to become model for American suburban hous-
Alternatives to affordable housing models were constructed in other parts of the country, using various approaches to the problem of incorporating single family homes within larger-scale development schemes. Two noteworthy experiments that lie in opposition to the methods exercised in the Levittown model can be found in the temporary worker housing of Vanport City, Oregon, and Baldwin Hills Village in Los Angeles, California.

Vanport City was conceived to be a temporary city of workers, designed and built in under a year. In 1943, much of the population was comprised of women and minority workers who were replacing the stock of male workers, most of whom were abroad contributing the war effort. Because of the expediency of the projects timeline and wholly new criterion it needed to serve, the chief engineer had to rethink many basic questions in very little time, especially regarding questions surrounding normal family life, about men, women, and children. The program specified designs for affordable housing for all types and sizes of households, including single people, single-parent families and nonfamily groups. The design called for low maintenance costs, for energy efficiency, and to make maximum use of scarce natural resources. The design had to incorporate public transportation by bus. The housing also had to be positioned

1) 1943, Vanport City Workers, *Redesigning the American Home*, D. Hayden
2) 1943, Vanport City day-care plan, *Redesigning the American Home*, D. Hayden

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3 mass-housing examples
in relation to several daycare centers and jobsites.  

Levittown, Long Island, NY: Each new Cape Cod house is designed to be a self-contained world, with a white picket fence, green lawn, living room with a television set built into the wall, kitchen with Bendix washing machine built into the laundry alcove. Every family is expected to consist of a male breadwinner, female housewife, and their children. Energy conservation is not a design issue, nor is low maintenance, nor is public transportation, nor is childcare. A few parks and public swimming pools are planned to provide recreation. This sort of Cape Cod house becomes the single most powerful symbol of the dream of upward mobility and homeownership for American families. Because of the mortgage subsidies and tax deductions for homeowners, it is cheaper to buy a house than rent an apartment. In opposition to the many amenities provided by Vanport City, Levittown actively engages a policy of segregation. In fact, the Federal Housing Authority does not, at this time, approve mortgage funds for integrated communities, or mortgages for female-headed families.

When comparing the two approaches to housing, it is possible to see both positive and negative results. Both of these ventures had great appeal as solutions to housing needs of
American families, and both made their developers a sizable profit. Vanport City met the needs of a wartime labor force, composed of women and men of many diverse racial and economic groups. The builders of Vanport City responded to the need for affordable housing, on-the-job training and economic development for workers. They recognized that single parents and two-earner families required extensive childcare services in order to give their best energies to production. The site design and landscaping of Vanport City were good, the economic organization was good, and the social services were efficient (down to maintenance crews who would fix leaky faucets or repair broken windows), but ultimately the housing lacked charm. It looked like a “housing project,” and the renters were not owners. Yet it was the most ambitious attempt ever made in the United States to shape space for employed women and their families.

Levittown met different needs from the ones provided for by Vanport City. Levitt’s client was the returning veteran. Women in Levittown were expected to be too busy tending to children to care about a paying job. The Cape Cod houses recalled a traditional American colonial housing. They emphasized privacy. Large-scale plans for public space and social services were sacrificed to private acreage. Although they were small, a husband could convert his attic...
and then build an addition quite easily, since the houses covered only 15 percent of the lots.
Levitt liked to think of the husband as a weekend do-it-yourself builder and gardener. His town
was as ambitious as Vanport City, but Levitt aimed to shape private space for white working
class males and their dependents. The pressures of the war and the communal style of barr-
racks living made suburban privacy attractive to many veterans, especially those with new cars
to go with their new houses.

In the same era, a third new town was launched—Baldwin Hills Village, in Los Angeles,
California. It failed miserably and its conceptually driven program did not succeed in become a
precedent for future developments. Unlike the other two projects, the construction of Baldwin
Hills Village dragged on in the early 1940s. City Engineers made complaints about the design-
ers’ refusal to cut roads through the site; the building department didn’t like the variety of apart-
ment and townhouse layouts, and the plans had to be redrawn over ten times. Budget cuts
removed three child care centers and a shopping center; land acquisition problems canceled
the second phase of the project; Clarence stein, the overall designer, discovered that his pro-
posal for community kitchens had not been funded.
Yet when the project finally opened as subsidized rental housing, several of the collaborating local architects moved into Baldwin Hills Village. As a statement of support for their values about good housing, they left elegant private homes in other parts of Los Angeles to be part of the new experiment and to make sure it worked. They felt extremely pleased that they had created low-rise, medium density housing with generous floor plans, sunlight, and lush landscaping. The cost was almost as low as that of other local public housing projects. The residents enjoyed a belt of three small parks running through the center of the site, as well as smaller landscaped courtyards, playgrounds, and private fenced outdoor spaces for each family. There were common laundries and drying yards, common garages, and a community center with a swimming pool.

Baldwin Hills Village was integrated at the start, but within ten years many of the white residents left and were replaced by nonwhite and female-headed households who were considered 'problem families' in comparison with the homeowners living on suburban quarter acre plots around them. Eventually a group that was formed to rescue the buildings turned the Village into condominiums, prohibiting children under eighteen, tore out the playgrounds, and...
installed a miniature golf course on the central green. Today the children for whom the village was designed are gone, and many of the elderly residents are still too afraid of crime to use its three parks.

Baldwin Hills Village and Vanport City are stories of planned settlements based on complex visions of the American Dream. Both sites raise the broadest issues in housing and urban design: the relationship of housing to jobs and social services, the need to design for diverse household types, the rights of female and minority workers to housing and jobs, the need for both spatial privacy and spatial community, the need for the regulation of automobiles, the problems of affordability, and the question of homeownership or tenancy as it concerns the stability of residential neighborhoods. Baldwin Hills Village and Vanport City are models of earlier struggles to come to terms with the social and economic programming for affordable housing. These projects, now largely forgotten, are reminders that the need for affordable housing is not a new problem, nor are the design problems and political questions that housing raises novel ones.

Very little of today's housing follows the Vanport City model of home as a support
for women in the industrialized work force; very little emulates Baldwin Hills Village model of the home as a part of a well thought-out neighborhood. Most American housing is based on Levitt's model of the home as a haven for the male worker's family. American's chose the Levittown model for housing in the late 1940s; we have mass-produced the home as haven and transformed our cities to fit this model and its particular social, economic, and environmental shortcoming. This choice is as the heart of the current housing problem. Americans cannot solve their housing problems without reexamining the ideal of the single-family house—that is, reexamining its history, and the ideals of family, gender, and society it embodies, as well as its design and financing.

Of the various attempts to generate a model for suburban American housing, only the Levittown model has succeeded in shaping the design of homes and suburbs for the last fifty years. Its ideal: quaint houses, nice yard, winding cozy streets, have become the textbook example of how to house Americans and make a profit on the land speculation.

Because other affordable options are not readily available, homebuyers resign themselves to the packaged housing stock. The effective marketing of this type of product eases

1) 1987, Harrison, Dream Homes, J.L. Alexrod
2) 1987, Malverene, Dream Homes, J.L. Alexrod
the potential dissatisfaction of the homeowner because every advertisement, every suggestion of domestic fulfillment, points toward this model of housing.

The pervasiveness of the ideal domestic image does little but reinforce the homeowner's resignation. The modes of production best suited for the speculation market, those of mass-production and mass-distribution, were handedly being perfected by the housing industry. The small home and its rapid construction allowed its form and implications to be spread across the land without anyone really troubling over what such a homogenizing of architecture could really indicate. Any previous methods of housing, either regionally prescribed or traditionally significant, would soon vanish. Ghosts of form and meaning might still linger, but only after the origins had been assimilated, disseminated, and dispersed without critical regard as to the social impact. Domestic architecture in America was transformed regardless of origins or cultural indications, and spread to the outskirts of every major city. With Levittown, and with every other developer-driven housing project following suit, the expectation of the domestic market place changed forever. No longer would the suitability of a particular domestic environment be based upon the local culture; instead one's inspiration for the home, both inside and
outside, could be culled from the domestic backdrops found in the movies and on television and in the weekly features of *Lady's Home Journal*. The sophisticated marketing places its seductive influence in the industrialized media of entertainment, expanding its influence beyond recreation and into the very fabric of everyday life. Housewares, fashions, familial etiquette, and the weekend do-it-yourself project all find a place within the marketing of domesticity. It would appear from this fabricated reality that everyone seems perfectly happy with his or her mode of existence.

The marketing industry's greatest triumphs lie precisely in the mechanisms that produced the evidence. Standardization, near-individuality and general uniformity creates an interrelated cycle of justifications. "It is alleged that because millions participate in it, certain reproduction processes are necessary that inevitably require identical needs in innumerable places to be satisfied with identical." The mass-production techniques that assume the possibility of individuated meaning are argued to exist because of the demand for products that everyone seems to need. From towels to throw rugs, the dispersion of products is determined through behavior presumed to occur within a domestic landscape. Since the behaviors within the home
can easily be foretold, the selling of domestic products is assumed a constant market. Through the standardization of the home-form, the domestic marketing can effectively meet every consumer desire. For example, if the average home size within a target market has four bedrooms, three bathrooms, ten rooms altogether, and a statistically-typical family demographic, then one can assume that certain pre-defined artifacts will inevitably make their way into the home. There will be so many beds, couches, televisions, stereos, computers, mixing bowls, and vacuums. And for each of these products, there is an economic hierarchy of quality. Presented in the market there will be cheaper models of a product and more expensive ones. The cheaper products will expediently serve a purpose, but lack any perception of prestige, while the more expensive products carry a degree of societal weight through their purchase.

The focus of the homebuyer revolves around discussions of arbitrary quality distinctions rather than fundamental modes of production. (AH, 123) Distinctions become superficial in actuality, but serve to differentiate class and status, and serve to distract the homebuyer from more substantial issues associated with the home. The homebuyer's distraction centers on the particulars of garage size, counter tops, and neighborhood reputation, rather than the
more fundamental concerns involving, for example, aging, transportation and environmental impact. When one compares a thousand square foot ‘starter home’ with a much larger ‘trophy home’, one can often see clearly that the distinctions have little to do with the home itself. The number of bathrooms and the application of distinctive finishes have come to denote American standards of living. While these issues still inform a homebuyer’s decisions, other issues are beginning to emerge as equally important.

Shifting to the contemporary methods of designing, building and selling homes in the United States, it becomes apparent that the home itself is simply part of a larger life-style package. Taken as a case study on careful planning and marketing, the success new community of Brookside, in Stockton, California, reveals what it takes to create an attractive product that will appeal to a specific market demographic. In Greenlaw Grupe’s article for Urban Land magazine, April 1992, “Marketing the Dream,” describes the considerations taken by developers, both before and after their product is made available to the public. Grube, an executive for The Grube Company, illustrates how his company was able to generate a scheme for a master-planned residential area, and then succeed in selling the homes placed on the land...
to an eager market. His article demonstrates how the home, as an icon, requires additional market speculation for the developer to be able to sell the proposal. It is not enough to simply buy an old farm, cover it with houses, and expect upper-end homebuyers to jump at the investment opportunity. Grube attributes Brookside's fruition as a fortuitous mixture of three elements, "Our success in spreading the word in non-traditional ways came from focusing our marketing activities around a few key factors: The Grube Company's track record, market demand for exclusivity, placement of public interest stories in area newspapers, and the company and personal civic involvement." What the Grube Company did was similar to strategies used by large scale, high-end developers around the country. The existing community is made aware of the project through the local media, which focuses on the development potential as a positive contribution to the local environs. Pledges of quality are made and visions of idyllic residential quality are vividly painted. "Long before groundbreaking, we were sending potential buyers progress reports on the community, on elegant stationary..." explains Grube on the technique of showing his potential market the quality of the Brookside project. This illustrates a trend amongst developer to reconcile their position as an outside force within an existing com-
munity. Similar strategies have now become commonplace in the selling of planned communities and exclusive golf-course leisure neighborhoods. A large, gated community near Castle Rock, Colorado, presents the same imagery as sold in Brookside, California. Castle Pines, a gated, covenant-controlled, golf course development started in 1983, presents itself as a reclusive exclusive retreat for those with the 'distinguishing sensibilities'. Their sales brochure showcases the natural beauty of the area, which is now shadowed by million dollar homes. Walking through the 'nature preserve' we see families enjoying the abundant wild flowers and roaming herds of deer. These residents enjoy innumerable opportunities for recreation and leisure, such as several swimming pools, several 18-hole golf courses, tennis courts, hiking trails, and sponsored community events. Demonstrated by these documents and other advertisements is the simple fact that the house is a marketable commodity and the particulars of design are wrapped into a carefully-produced package. Typically, these devices will feature the age-old sentiments and values that Americans have come to associate with the home: happy children playing, community interaction with adults, picturesque traditional architecture, and utility services to keep the neighborhood running smoothly.

1) 1999, Lone pine tree, Castle Pines-Colorado, sales brochure
2) 1999, Family, Castle Pines-Colorado, sales brochure
3) 1999, Representative home, Castle Pines-Colorado, sales brochure
Mitchell Rouda examines these ubiquitous methods of business found in the home building industry, in his *Architectural Record* January 1999 article, “Houses as Products.” Rouda speculates that innovation has a difficult chance of taking hold in the highly competitive housing market. Although no reliable or controlled statistical analysis has been undertaken, it is understood by homebuilders and the architects working for them, that the bigger the chances taken in the design of a production house, the more likely it is to fail. This is perhaps one of the most salient lessons learned from the mid-century fascination with the revolutionary “homes of the future.” Homebuilders are quick to recognize that buyers tend to be sheep (as realized by Adorno and Horkeheimer earlier), and will simply not take risks on a unique or innovative home unless its been proven in the market to be a good investment.

Take for example, Rouda implores, garage doors. Generally disapproved of by those in the design professions, they are often the primary frontal features and evidently buyers like them. In parts of the country that have no basements, the garage is used for storage. Rouda mentions a case of twenty homebuyers in Las Vegas, all of whom demanded a three-car garage, and who asked what they planned to do inside the three bays. None of them had
three cars. In each case at least one bay was to be used as a workshop, a hobby center, or a storage area for everything from out-of-season clothing to Christmas decorations. It was suggested to them that the third bay could be recessed behind the one of the others so that only two of the gaping doors faced the street. The buyers insisted on the three doors by explaining that they were economically in a position to have a 'three-car house.' In other words, the three doors on the front of the house have become a status symbol. Thus the shape of the house, in its continual evolution, is subject to associations that are only abstractly related with the house itself. The massive garage has meaning that transcends the idea of the house it is attached to.

With the goal being sales per month, not commodity and delight, it seems obvious that so many homebuilders are highly aware of the market's proclivities. When a particular home design sells well elsewhere, it is adopted up by builders in anticipation that their market will share the same sensibilities. When a particular home design sells so well, the reasons often come from mechanisms that lie outside both the building and architecture industry. It is rooted the complex structures that the individual homebuyer has constructed around their own

1) 1990s, Neo-Victorian Home, 200 Narrow Lot Plans, Home Planners, Inc.
2) 1999, Model Home, Castle Pines-Colorado, sales brochure
3) 1999, Private Residence, Castle Pines-Colorado, sales brochure
experiences and expectations of home. Such associations include where they grew up, their memories of home as children, their own ambitions and visions for personal fulfillment in their own eyes as well as the eyes of their neighbors and friends.

The last quarter century was a period of substantial change for the U.S. housing industry. On the demand side of the housing market, the nation witnessed the coming of age of the large baby boom generation, substantial changes in household composition and size, and a significant increase in income inequality. Concurrently, the housing construction and manufacturing industries produced roughly 48 million new housing units between 1970 and 1995, a quantity greater than the size of the entire U.S. housing stock as of 1950. Strong housing production was accompanied by remarkable growth and change in the housing finance industry, as residential debt outstanding expanded 11-fold, the secondary mortgage market experienced large growth, and mortgage companies supplanted savings and loans and the dominant type of mortgage originator. Federal involvement in the housing sector was marked by continued strong support for the housing finance system and homeownership, but beginning in the late 1970s, also showed a weakened commitment to expand rental assistance for poor households.

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1) 1999, Centex Model Home, Centex Corporation
2) 1997, Household by age of owner, Housing Statistics of the United States, P.A Simmons
3) 1997, Married couple homeowners, Housing Statistics of the United States, P.A Simmons
Household-based subsidies and the Low-Income Housing Tax Credit have been the preferred means for delivering the dwindling flow of new housing assistance.

The nation has emerged from the last 25 years with a population that is, relatively, very well-housed. By the end of the period, the national homeownership rate was 65 percent, within a percentage point of the all-time high. Over two-thirds of households lived in housing that was affordable, physically adequate, and appropriately uncrowded. Only one in nine households experienced a priority housing problem; that is, paid more than half of its income for shelter, lived in severely substandard housing, or had been involuntarily displaced.56

Despite these housing successes, the nation has yet to achieve the goal, first stated in the Housing Act of 1949, of "a decent home and suitable living environment for every American." Even though priority-housing problems affect a fairly small proportion of all households, the number of household living in acute distress exceeds 10 million. An additional one-half to three-quarters of a million people are homeless at any given time. Furthermore, housing choices continue to be constrained by persistent housing and mortgage market discrimination and by a residential landscape that is highly segregated along racial, ethnic, and economic

1) 1997, Income Inequality, Housing Statistics of the United States, PA Simmons
2) 1997, Housing Type Production, Housing Statistics of the United States, PA Simmons
3) 1999, Centex Model Home, Centex Corporation
Looking forward, the nation's housing prospects are mixed. Continued moderate household growth and the aging of baby boomers into their peak earnings and housing consumption years suggest that the housing and mortgage finance industries will remain healthy and that construction of high-quality homes will continue to upgrade the nation's housing stock. Aging of the boomers should also support additional increases to the national homeownership rate. Yet, continued growth of priority housing needs, in combination with drastic reductions in the provision of incremental low-income housing assistance, suggests that the nation will move even farther away from the goal of decent housing for all. The housing outlook for the nation's neediest households becomes even more uncertain.

The included figures demonstrate some of the demographic issues that must be taken into consideration when forecasting the future of housing needs and expectations. It becomes clear that with the dynamic shifts in family structure, aging, economic disparities, and social interactions, that housing plans for the next one hundred years will have to incorporate models which are far different from the precedents set in the century. The archetypal imagery of the
The Boomers Will Be Different In Retirement - Like They've Always Been
Compared to my parents' generation, people in my generation...

Why: Homes Are More Important
Home is...

3) 1999, Centex model home, Centex Corporation

1. Single-family home, and its functions as a cultural icon and practical device, will further be transformed to accommodate challenges.

To begin the task of reevaluating the home, it is necessary to examine the current expectations the home-buying public. It is well understood that the home typology stretches into many varied facets of contemporary life. How it will continue to evolve as a result of these pressures is a topic of heated debate. Information in "Trends Affecting the Housing Needs of Tomorrow's Mature Market," collected in March 1999 by Holly Helene, of Roper Starch Worldwide Inc., succinctly captures the anticipated needs and desires of the aging baby boom generation. While specifically focusing on a aging market, the statistics demonstrate the future of the general housing climate. It shows how American attitudes toward the revered home are changing, and how demands placed upon the performance of the home are shifting. The home will still continue to be a solid indicator of the "good life" (figure 10), but its manifestations will continue to evolve.

In the article "Debating Domesticity," by Christine Hawley [Architectural Design: vol69 no 5/6 May-June 1999], pressing issues challenging architects are examined. As an architect...
and a parent, Hawley is keenly aware of the demands placed both on the design of housing and its day-to-day use. The article’s attention is focused on the discrepancies that arise between academic approaches to residential design and the reality-based use houses are tested against. Using her own experiences as a designer, Hawley foresees many sweeping changes in the way houses are conceived, designed, and used. She argues that personal domestic experience will inevitably influence the way a homeowner thinks about their dwelling. They will see the arrangement of spaces in relation to other spaces they have encountered during their lives. These experiences are always part of the filter through which the house is approached and judged. Hawley reflects upon the changes family structures have undergone recently and how these dynamics ultimately serve to inform domestic changes in housing design. “Living within a family helps you see the ways different generations react to space, the way in which space inhibits people, particularly children, and the kinds of physical and social activities they would ideally like to have. Fairly standard Victorian houses are not flexible, and as a system don’t lend themselves to family development.” Hawley sees, as a growing trend reflecting the shifts in family interaction made manifest in architecture that is allowed to adapt
and flex according to the demands of different generations, but recognizes the difficulty of realizing this ideal within economic constraints. Additionally, overcoming the compartmentalized expectations most people have of a home layout will need to addressed in order to provide an environment that supports a dynamic intergenerational family structure while still referencing traditional qualities of "home." The entire morphology of the home needs to be re-examined: Where do the bedrooms go in relation to the more public family zones? How do we establish a dynamic arrangement of multi-use spaces that at once respects traditional notions of space and function and is economically feasible? Hawley sees the details of these problems being a matter of coming to terms with associations and expectations. The home, argues Hawley, will always be subject to historical precedent, and the solution to the problems of sensitive design may be based on careful examination of trends and personal attitudes.

To support the perspective on the roles tradition, nostalgia, and association play in the recognition of home, Dennis Alan Mann, in "Between Traditionalism and Modernism," [Journal of Architectural Education, v39, n2, w1985] shows that vernacular tradition has a powerful significance in the personal associations one has of home. The architectural elements typi-

3) 1999, Centex model home, Centex Corporation
Most Baby Boomers Today Live In Single Family Homes

<table>
<thead>
<tr>
<th>% of Baby Boomers who live in the listed type of dwelling</th>
<th>Present Home</th>
<th>Dream Home</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single family house</td>
<td>46%</td>
<td>68%</td>
</tr>
<tr>
<td>Apartment/Co-op/Condominium</td>
<td>23%</td>
<td>5%</td>
</tr>
<tr>
<td>Multi-family house</td>
<td>4%</td>
<td>1%</td>
</tr>
<tr>
<td>Trailer home</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Community of adjoining residences or town houses</td>
<td>2%</td>
<td>3%</td>
</tr>
</tbody>
</table>

But The Same “Big” Trend Applies: Urban Boomers Dream Of Space

A “Market Boomers top 10 descriptions of...

<table>
<thead>
<tr>
<th>Present Home</th>
<th>Dream Home</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comfortable</td>
<td>Comfortable (52%)</td>
</tr>
<tr>
<td>Practical</td>
<td>Brightly (44%)</td>
</tr>
<tr>
<td>Cozy</td>
<td>Modern (41%)</td>
</tr>
<tr>
<td>Traditional</td>
<td>High-Tech (27%)</td>
</tr>
<tr>
<td>Brightly</td>
<td>Luxurious (36%)</td>
</tr>
<tr>
<td>Small</td>
<td>Stylish (32%)</td>
</tr>
<tr>
<td>Modern</td>
<td>Colorful (26%)</td>
</tr>
<tr>
<td>Roomy</td>
<td>Colorful (29%)</td>
</tr>
<tr>
<td>Old-Fashioned</td>
<td>Cozy (28%)</td>
</tr>
<tr>
<td>Tuscan</td>
<td>Old-Fashioned (21%)</td>
</tr>
</tbody>
</table>

1) 1999, Centex model home, Centex Corporation

Cally found in regional architecture. "There are regional styles and different patterns of building which are and have been connected to their specific areas in America for generations. What makes a place distinct are the unique characteristics of the buildings which allow them to be identified with a place." One of the major crises of the state of single family housing in the United States today is the disappearance of geographic flavor. While some exceptions do exist, and attempt to recognize the context, for the most part, the same builders-houses can be found in ever corner of the country. This simple fact is contributing to an alienation of the homeowner from their anticipated sense of place and identity. The home falls away from being an artifact meaningful to a specific place and time, and degenerates into yet another disposable product. Mann sees the need to develop a protocol for design that is able to incorporate customary methods of building with new and innovative design. Having one without the other was one of the failing points of the modernist style when applied universally to a housing market. It simply could not resonate an aura of genuine habitation. The ways in which housing is current dealt with, that is as a universal product wherein the same basic feature are applied to broadly and with little regard to contextual or human factors has led to a disillusionment on the part of the homebuyer. Economics aside, the average homebuyer will try to incorporate the universal design to their particular requirements, often with varying degrees of success. Mann further
notes that, "Familiar shapes and traditional forms are meaningful because of their associations with cultural patterns. So when a family finally inhabits an ideal house there is often a strong sense of identity as a family becomes closely attached to the house." In other words, a generic home form is implanted with a sense of meaning through the inhabitation and life patterns of the occupants. In the hopes of progressing the ability to design for a specific occupants needs is an endearing challenge for the future of home design. For innovations to succeed at improving the construction and availability of housing for a wider range of buyers, the new architecture will need to recognize the codes of nostalgia.

The future of the American single family home is a challenging destiny to foresee. As a type it will undoubtedly continue to be the aspiration and hallmark of stability for many American. Exactly how this aspiration will be realized is yet another matter for speculation. Taking into account its incredibly complex history, its nearly infinite subtle manifestations, and its weight as a social icon, the emerging forms will continue to be heavily weighted by the past and enlivened by emerging technology. The path ahead will require a balancing of both criteria in order to address the many issues now surrounding the home. The imagery developed long ago will continue to be a marker of acceptable home design. Environmental concerns will inflect upon the particulars of orientation and construction. New technologies will change
the way homes are designed and constructed and used. Social structures will require a larger variety of solutions in order to bring the all-too-American dream of homeownership a reality for the masses, regardless of specific demographic categorization. The question surface: what can be done to address these issues? The first proposal is to allow the history of the home to be accessible to those interested in buying or building a home. All too often the home is viewed merely in economic terms, and this tendency can be responsible for the shortcoming is mass-designed housing. The house is not, in reality, an expression of identity, but rather an approximation of identity. The challenge will be to develop an understanding of the home and its cultural evolution through a personal dialogue with the home dweller. A second proposal is one that takes advantage of emerging design technologies and allows the homebuyer to generate a feasible design that best reflects their needs and desires. The investigation of both of these inquiries will contribute to a closer understanding of the home as a building typology and icon, and bring the home, in whatever form it takes, a step further.

1) 1999, Centex model home, Centex Corporation
1) 1999, Centex model home, Centex Corporation
regional breadth image collection
metropolitan boston, massachusetts
photographs by the author
regional breadth image collection
metropolitan denver, colorado
photographs by j.p.wilcox
regional breadth image collection
fairmont, minnesota
photographs by the j.p.wilcox
regional breadth image collection
state college, pennsylvania
photographs by the b.a.shirtcliff
For many of us, expectations of "home" are influenced by homes we have either lived in or aspire to live in. These expectations operate on several levels and can be best described as the "values of the homebuyer." When working with an architect, the client has the advantage of describing their needs and desires. The architect then assesses these requirements and produces a design responsive to the client's idea of "home." However, since most home design processes do not engage this critical dialogue, assumptions are made about the needs and desires of the client/homebuyer. These assumptions often allude to historical archetypes but the resulting home is typically a shadow-like allusion to the preceding styles and often fails to account for subtleties in particular homebuyer's expectations.

The research for the design values and expectations has been informed by an investigation into the many single-family home designs produced through the Twentieth Century. This research looks to the various manifestations of home design, and reveals influential trends. Certain archetypal home elements, like porches, garages, ornamentation, spatial arrangements, etc., have undergone many shifts and modifications in order to be incorporated and maintained in home design. The time line assesses these changes, based on chronology, location, and elemental/spatial arrangements, and orders these changes so that a better understanding of the roots of contemporary home design emerge. The resulting device is like a map and database of home designs, embellished by contextual facts, which can be navigated by a potential homebuilder or owner.

In *The Shape and Appearance of the Modern American Single Family Home*, by Peter G. Rowe, the basic morphology of the home is investigated and categorized. Rowe establishes seven basic housing typologies and demonstrates the ways in which these types have evolved since their inception. The timeline organizes houses, by chronology, by type, and by key features. The types described by Rowe, like the "square plan", the "rambler", the "middle ranch", et al., are but one way to navigate this resource on the changes that have occurred in American houses. If a user is looking for a particular feature, such as a window detail, they can query the database and see how the particular details has been rendered over time.

Intention of this proposal is to give the homebuying public wider access to the history of housing so that they can begin making more informed decisions about the choices they make.
The hope is that through understanding the past, the homeowner can understand the position of housing in today's society and, further, inact change of the near future of housing.

The typical user would come to a website, and be able to direct their search towards their interests. A user could be a student of architecture, an historian, a homebuilder, or developer. The navigation of the database and timeline can be customized to best suit the interests of the user, and help them achieve their goals, be it education or actual home construction.
Sample webpages illustrating the timeline and some potential features. The timeline can be searched through architectural elements, plans type, exteriors, and chronology. The user can hone in on a particular feature or review the historical context of a design.
The House Ln Research Group has been investigating the current state of housing design and construction, and how disciplines can be improved to provide a more cohesive understanding of the process of conceiving of housing and the ways houses are built. Of primary concern is the fact that intimate client/architect interaction is simply not accessible to the vast majority of potential homeowners. As a result, many people settle for housing that does not meet their needs or desires. Much of this housing is built primarily to satisfy the most rudimentary market perceptions, and is unable to provide for the mass customization of homes. The Design Tool will operate as an affordable design alternative by bridging the gap between the mass-market housing and quality architectural design.

The Design Tool recognizes dramatic charges are occurring across the entire spectrum of the construction industry:

The home-buying demographic is shifting.
- Younger people aspire to own homes that are suited to their ambitions, but are often find their choices severely limited.
- A large aging population that would like to die in their own homes, but often find they must leave for health reasons.
- Additionally, the archetypal family structure has given way to a wider variety of family definitions.

Expensive labor.
- Houses are increasingly more expensive to build. Skilled labor prices have lead to compromises in constructions that yield poorer quality.

Scarce resources
- Quality building materials are harder to find

Emerging technologies
- New design and construction technologies can radically improve mass market housing, but wide spread implementation of these technologies often takes a long time.

The Design Tool will address these issues by starting with the potential homeowner, allowing them to design a home that best suits their needs and desires. This emergent home
design is then queried through various perimeter searches to optimize the design for a specific location and construction technique. The resulting house product is better tailored to today's market place.

With the Design Tool, this information will help a user to determine precisely what they need and desire in a home. The user will be able to trace certain characteristics or elements they appreciate. If a user desires to have a large front porch on their home they preference a collection of porches and locate a porch that best represents their idea of what a porch should be and how best they can incorporate this historical precedent into their home. If a user seeks to build a home that is suited to a particular region, they are able to navigate collection of designs from, say, the Southwestern United States. Suppose the user wants to build a hybrid Southwestern home in New England, the Tool might suggest against such a home, and explain the reasons why the design vocabulary used in the Southwest is ill suited for New England.
Additionally, the user might have a historical style they would like to use as a model for their home; the tool would allow them to browse the collection and pick a home that is meaningful to their sentiments and aesthetic sensibilities. Further, they might manipulate certain features of the home's detailing to better fit their lifestyle requirements.
This user navigation results in a design profile that summarizes their preferences:
(diagrams/graphics of tool parts and use):
- User profile queries
- Architectural value preferencing.
- Construction database
- Automated design generation and/or design referral
- Synchronous design/construction applications
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2 Michael Lamb and Dave Hollis: A Century of Automotive Style: 100 years of American Car Design.
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14 Muthesius; p.79
15 Muthesius; p.79
16 ibid. p.79.
18 ibid, p.34.
20 ibid, p229.
21 ibid p232
22 ibid p237
23 ibid p283
24 from Brian Horrigan's "The Home of Tomorrow, p137
25 ibid p137.
26 ibid p138.
27 ibid p138
28 ibid p
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34 ibid p145.
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37 ibid p152
38 ibid p157.
39 ibid p157
40 ibid p157
41 ibid p159.
42 Gwendolyn Wright, Building the Dream: A Social History of Housing in America, chapter 11
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44 ibid. p192.
45 ibid. p192
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