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To the faculty and staff of the Graduate Department of Architecture at Virginia Tech, I offer my sincere gratitude. To Professors Bill Galloway, Hunter Pittman, Jim Jones, and especially to my thesis committee: Professors Hans Rott, Michael O'Brien and my Chairman, Bill Brown, I offer a special Thank-You. Each of you offered of your talents, skills and passions in contributing to my education.

To my good friends and colleagues: Carl Bolton, Jon Foote and Drew Queen, who constantly challenged me and made the journey all the more special.

And most especially to my wife, Dale, without whose love and tremendous support this dream would never have been possible—Thank-You.

I'm comfortable with it, however, for in a way it's my architecture imagination, are personal reflections on the architect's role in the world and the highest aims and aspirations of the art and practice of architecture.

One of the more interesting areas for me during my years of architecture study was proportion. And indeed, proportional theory played a significant role in the development of this design project—so much so that I felt it deserved its own section in this book. The section: Proportion—Empathy and Abstraction is an essay built around several photographs which I'd taken during my summers of graduate architecture study at Virginia Tech. Alongside the photographs, which hopefully offer a glimpse into what stimulates my architectural imagination, are personal reflections on the architect's role in the world and the highest aims and aspirations of the art and practice of architecture.

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“Architecture arouses sentiments in man. The architect’s task therefore, is to make these sentiments more precise.”

Adolf Loos

Vita Beata
CONFESSIONS OF AN EPICUREAN
The photograph is an honest commentary of sublime architectural feeling, unclouded by intellectual theory. I’ve come to regard the photograph in general, and these photographs in particular, *as Adolph Loos put it*. An unabashed hedonist, my camera seeks pleasure and shoots whatever feels good. It is impetuous, unreflective, unreasoning—all the things my intellect is not. It’s an appendage of my senses, connected to the world by way of my eyes.

“The purpose of construction is to make things hold together, the purpose of architecture is to move us.”

— Le Corbusier

In recent years the camera has become a valued tool for capturing the evocative nature of architecture—to “make the emotions more precise,” as Adolph Loos put it. An unabashed hedonist, my camera seeks pleasure and shoots whatever feels good. It is impetuous, unreflective, unreasoning—all the things my intellect is not. It’s an appendage of my senses, connected to the world by way of my eyes.

The photograph is an honest commentary of sublime architectural feeling, unclouded by intellectual theory. I’ve come to regard the photograph in general, and these photographs in particular, with a degree of importance—not for any artistic merit (which is for others to judge), but because the feelings embodied in these photographs nourish my architectural imagination—the imagination in turn shapes the intuition; intuition guides and informs judgment.
As an architect I’ve lost my innocence. I can no longer walk into a courtyard, or down a beautiful street, and simply enjoy their beauty. Having tasted the fruit of intellectual inquiry, I’m now and forever compelled to ask the question: “What makes this place so good?” Yet my camera helps me reclaim some of that lost innocence, if only for a fleeting moment.

“As everyone knows, few observations and much discussion are conducive to error, much observation and little discussion to truth.”

ALEXIS CARREL
My senses know a good thing when they encounter it. My nose and eyes inform me of the rose’s wonder. My tongue knows that this or that Cabernet is good. My ears proclaim that Bach is delightful. I fully accept their conclusions—with curiosity, but without argument.

My senses likewise come alive to inform me of exceptional architectural moments. But the human being doesn’t rest for long in the delight of the senses, for the intellect demands to understand (even if it often can’t) why Bach is delightful—what motifs, patterns and themes are rationally invoked in order to empirically evoke such sublime pleasure. We want to know the chemical composition, the balance of tannins and sugars, the method of aging, that make the Cabernet good. We want a method for making beauty, so that through the act of creation the sublime experience might be propagated.

“By the use of inert materials and starting from conditions more or less utilitarian, you have established certain relationships which have aroused my emotions. This is Architecture.”

Le Corbusier
For the human intellect is generative by nature, it desires to create. But why? What compels the architect to build, the poet to write, the painter to paint? Is it not expression? Meaning simply, the fundamental human urge to convey to others what we have felt. It is the conveyance and expression of feeling that is at the very heart of art.

Tolstoy said that “to evoke in oneself a feeling one has experienced, and having evoked it in oneself, then by means of movements, lines, colors, sounds, or forms expressed in words, so to transmit that feeling that others experience the same feeling—this is the activity of art.”

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I’ve often wrestled with this question of whether architecture is truly art. At times, I’ve sided with Adolph Loos, who believed that precious little of architecture was, or should be, considered art (he made exception for the monument and the tomb).

However, I’m coming to understand that this conveyance and expression of feeling, which I believe to be the very essence of art, is precisely what I am pursuing in architecture.

Feeling—the word alone gives pause, eliciting notions of vague, fuzzy and ephemeral things, impossible to distill or rationally comprehend, that which springs forth from the immeasurable, yet is undeniably real.

Like light, which the world’s greatest intellects cannot fully comprehend—at times understood as particulate, at other times as electromagnetic. Yet, every time we awaken to its splendor, we’re compelled to accept its reality and enjoy its beauty, though it defies our rational understanding.
Like the poet, I believe the architect is a translator. The poet feels, and translates these feelings into the rational realm of language, that others might in turn feel. The architect feels ... place, and ultimately the feelings which inspired the creative act are reciprocally understood and magnified in others.

This is a rather Epicurean view of art and architecture, that the intellect is chiefly employed to create that which transmits sublime feeling. Marco Frascari has said that “the main role of the art of building is to make our life pleasant and happy, an invaluable vita beata.” Vita Beata. Blessed Life. Good Life. This, I believe, is the pure essence of architectural feeling.

“...there is nothing about man that is really measurable. He is completely unmeasurable. He is the seat of the immeasurable, and he employs the measurable to make it possible for him to express something.”

LOUIS KAHN

“A great building, in my opinion, must begin with the unmeasurable, must go through measurable means when it is being designed, and in the end must be immeasurable.”

LOUIS KAHN

L...
This view, however, suggests, at least indirectly, that the architect is not autonomous, but operates under the heteronomy of feeling. A language translator, for example, is not free to interject as he wishes, but is subordinate to the party for which he translates.

I believe that good architecture begins with a very focused and careful attention to the ‘vita.beata’, the good life, which the architect seeks to translate into brick and mortar. This requires, at times, a determined restraint of intellectual willfulness. Indeed, the intellect, in it’s ardent pursuit of that which is clever and novel, often must subordinate it’s will in deference to the sensual realm.

Of course there’s a philosophical chasm between such sensual architects (Kahn, Wright, Barragan, Scarpa, Ando, Loos, Le Corbusier, to name a very few) and the intellectual architects, those who favor the theoretical intrigues of the building—i.e. how we might “read” the building, as opposed to how we feel it.

“These architect the innately human response to our need for a place of our own to dwell in. Which is fundamentally leading a good life. To lead a good life we must be at peace with ourselves or at least believe in the possibility of such a peace. Which means we must be able to think, freely and clearly to gain knowledge of ourselves and our existence. Architecture is the provider of places in which this aspiration can be fulfilled and honored, individually and collectively. This purpose of mankind is the limitation which we place on the imagination of the architect through this limitation the architect gains the freedom to celebrate the great objects of his art.”

Hans C. Rott

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Peter Eisenman, as one example, has said that he doesn’t care much for buildings which evoke emotional responses, but wishes to feel “high in my mind, not in my gut”. “High minded” architects are really no more intellectual than their sensual counterparts; the intellect simply serves a different master. They employ the intellect to serve the intellect, rather than to express and ultimately promulgate feeling.

Among themselves, their self-referential work is judged by whichever pedantic standards are currently in fashion. The phenomenal realm of perception and feeling is often disregarded as a quaint anachronism—a romantic sentimentality not worthy of truly “high minded” architects.
It’s been my experience however, that satisfying intellectual hubris is considerably easier than making something beautiful. No translation is necessary—the intellect makes for the intellect. To make something truly evocative, however, the intellect must interpret, translate and convey feeling to be reciprocally understood, felt and appreciated by the much harsher critic of phenomenal experience.

Clever, novel, bombastic, interesting, curious, consistent, complex, contradictory—these are the judgments of the intellect. And as difficult as they may be to achieve, they are considerably easier to come by than sublime, beautiful, whole—the judgments of the senses.

all photographs by author:

1. Farm building—near Vals, Switzerland
2. Farm building—near Mogno, Switzerland
3. Water building—Shaker community, Pleasant Hill Kentucky
4. Street—Sienna, Italy
5-7 Founding Hospital, Filippo Brunelleschi—Florence, Italy
8-10 Widow—Florence, Italy
11-13 Widow—Venice, Italy
14-15 Widow—Venice, Italy
21-23 Widow—Venice, Italy

30, 31 Canal—Venice, Italy
32-35 Street—Florence, Italy
To understand the following design project in its proper context, a brief consideration of the phenomenon known as urban sprawl is necessary. Much has been written in recent years describing, analyzing and pontificating about this very unfortunate practice in contemporary culture, so it’s not my intent here to in any way add to, or rehearse the voluminous diatribes aimed at sprawl. Many have already done a very fine job of putting sprawl in its rightful place. Yet to accurately frame the thoughts and intents which initiated this project, at least a cursory glance at sprawl is necessary, because it was the observation of sprawl’s excesses and deficiencies which unquestionably led me to undertake this particular type of design project.

Observing just a few of sprawl’s more dysfunctional relationships compelled me toward this project, and it’s in response to these several relationships, in a search for a better way, that much of this design project takes its form.

My intent in this section is to briefly describe the phenomenon of sprawl, and to describe the nature of a few vital relationships, which have been damaged or completely severed by the paradigms of the house built by sprawl. In the section following FCL consider several architectural precedents which illustrate vitality and health in these important relationships damaged by sprawl.

The vision of the suburb goes back centuries, at least to medieval times, with the Medici’s and other wealthy Florentines building villas outside of Florence to escape the plague and pestilence of the city. Today’s explosive suburban sprawl, however, is traced to a much more recent phenomenon—the possibilities inherent in the universally available automobile.

Like an opiate, the great promise of the automobile lulled us into a seductive dream; we’d wake to the rooster by morning, turn the gritty wheels of industry by day, and enjoy the comforts of civilization by night, all brought to us by the industrial age. The reality was that each car added to the nation’s developing sprawl, and sprawl increased our dependence on oil. All of which will necessitate a great deal of work—enough for all.

LE CORBUSIER


2. There was a time when Corbusier’s vision was being enjoyed by people here in this country. The time was brief, the people were wealthy, and by and large, the automobile was the harbinger of doom, rather than utopia, as Le Corbusier envisioned it. "The cities will be part of the country..." Le Corbusier’s vision was being enjoyed by people here in this country. The time was brief, the people were wealthy, and by and large, the automobile was the harbinger of doom, rather than utopia, as Le Corbusier envisioned it. The time was brief, the people were wealthy, and by and large, the automobile was the harbinger of doom, rather than utopia, as Le Corbusier envisioned it. The time was brief, the people were wealthy, and by and large, the automobile was the harbinger of doom, rather than utopia, as Le Corbusier envisioned it. The time was brief, the people were wealthy, and by and large, the automobile was the harbinger of doom, rather than utopia, as Le Corbusier envisioned it. Today’s explosive suburban sprawl, however, is traced to a much more recent phenomenon—the possibilities inherent in the universally available automobile.

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wildest dreams, could not have envisioned modern day Los Angeles, Atlanta or Houston, and the toll paid by human beings for the sake of the automobile’s privileges—there’s a fine line indeed between utopia and hell on earth.

To be fair to Corbusier and the early auto ideologues who believed the automobile to be the harbinger of peace, tranquility and unending prosperity, no one could have anticipated the负面影响 of the automobile on our urban environments. With the confluence of internal combustion technology and the manufacturing genius of Henry Ford—pioneering the use of standardization, interchangeable parts and assembly-line techniques—the automobile proliferated at a dizzying rate. Between 1908 and 1927, the reign of Ford’s Model T, over 15 million automobiles were sold by the Ford Motor Company alone. By 1930 there were more automobiles in New York City alone than on the entire continent of Europe.

Biologists have long recognized the intricate and highly evolved relationships that exist in the ecosystems around us. They’ve discovered how the disruption of one element in this complex web can have a deleterious ripple effect throughout the entire system. The urban fabric, I would contend, is a similarly delicate system of relationships, intricately evolved over millennia. Through trial and error, and the constant minor tweaking of generation upon generation (and without the exceptional assistance from the car to be discovered by the automobile’s planners), I might add: human beings evolved highly intricate ways of building and dwelling together in communities. We discovered denseness and space and places of interaction and building which fit human needs, and in general were satisfying and pleasing.

Yet overnight, in historical terms, this sensitive urban ecosystem, intricately evolved over millennia, was invaded by tens of millions of multiton steel projectiles, traveling at hitherto unfathomable speeds. The industrialized world was caught completely unaware and totally unprepared to deal with the magnitude of the automobile’s challenge.

Enter the urban planner and traffic engineer, specialists uniquely charged to bring about a peaceful coexistence of man and automobile.

Under the guise of public safety and efficiency, urban planners, with officious cooperation from traffic engineers, completely undermined the delicate and vital relationships urban dwellers once enjoyed with their communities. In the mad rush to accommodate the automobile’s insatiable demands, a new hierarchy (limited access highway, arterial road, collector road and minor street) was cavalierly imposed upon previously content urban forms. The magnitude and scales of these new forms were designed to appease the automobile, not the human being.

With the advent of modern planning’s idiosyncratic regionalization, urban design is an exception. Rather than broadly educated generalists, today planners are trained with little or no exposure to the arts or fine arts. They are technicians specialized in a narrow area of their expertise. Though the human judgment of a broadly educated generalist has been supplanted by the rigid code of a narrowly educated bureaucrat.

Subsequent subdivision plans show a new hierarchy where minor streets empty out to collector streets which themselves empty onto arterial streets. One can’t go from one neighborhood to another without being channeled into the homes which line the street. This is quintessential modern residential planning. Boca Raton, Florida. Image from A Better Place to Live—Reshaping the American Suburb, Philip Langdon, University of Massachusetts Press, p64.
accommodate the automobile, we’ve effectively exchanged the wisdom acquired by generations of builders, and the exper- ientiation, for the expedience of getting from here to there as quickly as possible in our auto mobiles.

Over the past half century the urban form has been the victim of a hit-and-run accident with the urban planners and traffic engineers behind the wheel. Thread maps are now indelibly etched upon our soft and delicate urban fabric. We’ve now reared generations who have never known the vitality of a good neighborhood or urban life. The children of sprawl are now our urban planners, architects, developers and social visionaries. “Sprawl is our lifeblood. It is as essential to us as farm and pasture land, easily convincing zoning officials that such sprawl is tantamount to progress and economic vitality. ... It is the only way it could work,” says the developer, with a straight face, “to build the same homogenous and monotonous houses which could just as easily be in Charlotte, Atlanta or Washington, DC.

The insidious nature of sprawl evolved largely from its relative ease and inexpensiveness of development, as economics of scale would make to the large housing development much more practical to build, per unit, than most modest projects. Such large projects, however, require vast amounts of land, often dozens, hundreds, or even thousands of acres at a time. Such quantities of land were only found at the outer periphery of the urban envelope. As a nation, we’ve been in this cycle now for well over half a century, and while the scope of the blight is almost beyond imagination, there’s no let up in sight. While some locales are geographically limited in terms of how far they can sprawl, many others, such as Charlotte, Dallas, Houston, Phoenix, Las Vegas, and dozens more like them, seem to have no limit to how far they can ooze outward.

Most tragically, this method of development has now become the norm, not just in rapidly growing urban areas, but in small communities all across the country as well. In Blacksburg, a small town in Appalachian Virginia, and the site for this project, dozens of parcels of land are being devoted at the urban periphery to build the same homogenous and monotonous houses which could just as easily be in Charlotte, Adams and Washington, DC. There are, essentially, two contemporary responses opposing this sprawl paradigm. The “new town” model, squarely in the camp of the New Urbanists, seeks to establish healthy residential enclaves through the establishment of new communities. The mindset here is “if we build it, they will come.”

As a nation, the New Urbanists’ desire for viable, self-sustaining economies has not panned out. The commercially "if we build it they will come” famous Mission Inn in Riverside left a blight in the town. This development of residential, commercial and retail was incorporated over the parking structure to “fix” a previous planning mistake.

The model - the detached, single family dwelling, amassed in homogenous multitudes outside of the urban envelope, joined indelibly to develop, commerce, and function. The automobile provided the transportation means by which we could move from one to the other. The housing development was made to accommodate the automobile, to accommodate the essence of a viable neighborhood. The children of sprawl are now our urban planners, architects, developers and social visionaries. The New Urbanist’s desire for viable, self-sustaining economies has not panned out. The commercially "if we build it they will come” famous Mission Inn in Riverside left a blight in the town. This development of residential, commercial and retail was incorporated over the parking structure to “fix” a previous planning mistake. The municipality of Levittown, Long Island, has not worked nearly so well. While some locales are geographically limited in terms of how far they can sprawl, many others, such as Charlotte, Dallas, Houston, Phoenix, Las Vegas, and dozens more like them, seem to have no limit to how far they can ooze outward.

The New Urbanists accept this development require- ment as a pragmatic constraint, and then turn about and consider these huge projects from home. A second response to sprawl is the urban infill paradigm. Here, the mindset is more: “if it’s broke, let’s fix it.”

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With regard to urban infill, many locales across the country are beginning to see this as a method of “smart growth.” With a consistently growing population, even the most strident anti-growth ideologue must concede that growth cannot be stopped (at least not for long and certainly not without economic and political consequences). Accepting this fact, and considering the scope of higher densities resulting from half a century of sprawl, the idea of “filling in” or “fixing” the existing urban envelope, much of which has been damaged by sprawl, is a thought many find very reasonable.

This notion of using architecture and development as a means to improve and repair what we’ve already ruined exists nowhere else in the world. The urban infill paradigm as my method of choice for this project.

Within the existing urban periphery of Blacksburg, there are several opportunities for modest multiunit projects where the surrounding urban context might benefit from thoughtful development and increased density.

Levittown, Long Island - one of the first planned housing suburbs. Its housing form was constructed for large development and has now leaked into the fabric of the community. The New Urbanists more recently joined forces by promoting the concept of “new town” - a community of large single family houses, perhaps, is more than ever a model under which we cannot succeed, at least not to anyone's conceptual satisfaction.

1. The Geography of Nowhere. 2. Planning for the 21st Century. 3. Christopher Alexander, A Pattern Language, Oxford Press, 1977, pp. 508-512. 4. Urban infill model: "Four Corners." 5. The "four corners" idea is advocated by the New Urbanists. The Village of Willits, is a small development in Novato, CA that many see as an example of what could be done.

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With regard to urban infill, many locales across the country are beginning to see this as a method of “smart growth.” With a consistently growing population, even the most strident anti-growth ideologue must concede that growth cannot be stopped (at least not for long and certainly not without economic and political consequences). Accepting this fact, and considering the scope of higher densities resulting from half a century of sprawl, the idea of “filling in” or “fixing” the existing urban envelope, much of which has been damaged by sprawl, is a thought many find very reasonable.

This notion of using architecture and development as a means to improve and repair what we’ve already ruined exists nowhere else in the world. The urban infill paradigm as my method of choice for this project.

Within the existing urban periphery of Blacksburg, there are several opportunities for modest multiunit projects where the surrounding urban context might benefit from thoughtful development and increased density.
This relationship between houses in the American sprawl is very tenuous at best, and completely dysfunctional as a general rule. Given the sizes of the lot and house and the relationship between a house and its site and the relationship between the indoor and outdoor realms, how can throw away spaces like sideyards and front yards be somehow reclaimed for real use and enjoyment of the dwellers?

### Relationship Between Houses

Houses are becoming larger; lots are becoming smaller.

1. **Big houses are thoughtlessly “dropped” on small sites with little or no regard for what is next to it.** This presents sprawl with some of its more serious problems. First is a lack of privacy, which is only exacerbated by the fact that most of today’s sprawl houses are multi-level, no upper floors overlook patios ten feet off side yards and provide an especially advantageous view of the neighbors’ lives. Additionally, with lots so small and insufficiently skinny, the neighbor’s house has become the dominant element of its storefront. As each and every square foot of space has become more precious, the waste of space resulting from unutilizable side and front yards is all the more striking. Front yards are exposed to neighboring houses and, of course, to cars passing by on the street. Side yards are exposed to neighbor’s windows and are often so skinny as to gate their use for anything but storing an RV or boat (not always an architectural asset for one’s neighbor).

2. **Status quo sprawl, Blacksburg, VA.** photo: author.
3. **The side yard - suburbia’s DMZ.** Blacksburg, Virginia. photos: author.

While the nature of sprawl can be considered and analyzed at various levels and from many different perspectives, my primary interest in this design project is investigating the nature of just three vital relationships: 1. the relationship which exists between a house and neighboring houses; 2. the relationship between a house and its site; and 3. the relationship between the indoor and outdoor realms. I’ve become particularly interested in these relationships by observing how much of the discontents and absurdities in today’s sprawl are in fact products of our way or another linked to these simple relationships.

As sprawl has evolved, it has fostered a tacit understanding among its perpetrators that “this is the way you make a house”—sprawl has become standard practice. Building tradesmen are tradition-oriented people—they do what they know. This is Ok when working with healthy patterns and traditions, but now they’re working with very unhealthy ones. Critical questions are no longer being asked. The house-building industry is on autopilot and the plane is in a spiral dive.

### Relationship Between the Indoor and Outdoor Realms

Even the language we use to describe our outdoor spaces gives evidence of the severed relationship we have with the garden. Terms like “garden” and “court” have been largely supplanted by utilitarian terms like “frontyard” and “backyard” (as in shipyard, lumberyard or stockyard). The outdoor room (once conceived as an important and integral part of the overall plan of the house) in today’s sprawl is left unimproved by builders and developers, and often underdeveloped, or entirely ignored by architects. The once romantic vision of the garden, with its careful integration and coexistence with the indoor realm, has all but disappeared from the architectural imaginations of the designers and dwellers of sprawl.

In ignoring these outdoor spaces, I believe we’ve severed an archetypal relationship that has existed with people and their cultivated landscape for millenia, and we’ve robbed architecture of its full power and influence in our lives. We’ve minimized its potential. In effect, we’ve eliminated the very thing which signifies the good life for nearly every culture in the world; the garden is a recurrent theme, evoking tranquility and sublimity for all cultures, East and West.

### Relationships Between Houses

1. **Quintessential sprawl.** Blacksburg, Virginia - big houses dropped on small lots with little or no regard for what is next to it. photos: author, 2001.
2. **Median house size has increased 17% from 1987 to 2000, while median lot size has decreased by 8% during the same time frame.** NAHB statistics from their web page.
The relationship with the site gets off to a very shaky start in today’s sprawlscapes, as the site is treated as a malevolent force to be “neutralized.” Trees are not assets, but obstacles to be sanitized with earthmover and backhoe. The site must be a “tabula rasa” before construction can begin.

The elimination of good trees is a cruel and selfish act toward the future dwellers, perpetrated by designers and builders. It will take generations for trees (if they are replanted) to re-establish themselves as the evocative presence they were before being “neutralized” for expediency’s sake.

The way houses typically relate to the slope of the site in today’s sprawl developments, create very dysfunctional living patterns which harass people’s daily existence. The site is reimagined as a level, flat area from which to build on. Pragmatic, to be sure, but often with very unfortunate results. The garden afforded hard and austere architectural materials a softness and gentility from which they benefit. The two are complementary partners in the creation of architectural space. They must not be considered separate and unrelated entities.

Again, given the modest size of today’s building site as a design constraint, how can the house be designed so as to maximize this synergy between the indoor and outdoor realms? How can the transition from indoors to outdoors, and vice versa, be natural and effortless? How can the juxtaposition of houses in close proximity be negated such that outdoor rooms are shielded and private?

What if the site was viewed as a benevolent partner with the house rather than a malevolent force which must be neutralized? What if existing trees were seen as assets that can be preserved and adapted? What if the outdoor rooms were created to be entreating to the senses, or at best simulated with a few terracotta planters? To get to the real garden (if there is one), one has to work for it. There is not an effortless transition between house and garden, between the indoor and outdoor realm, but a forced and labored one. The garden will most likely either not exist, or not be used and enjoyed.

What if the site was viewed as a benevolent partner with the house rather than a malevolent force which must be neutralized? What if existing trees were seen as assets rather than liabilities? What if the house could be integrated with the slopes in such a way that the relationship we have with our outdoor spaces is heightened, and the transition from the indoor to the outdoor realm is effortless, natural and desirable?

INTEGRATING SITE, STRUCTURE AND SPACE

In this section I’ll consider how some very accomplished architects have achieved strikingly better results with regard to the previously described relationships. In particular I’ll consider how these relationships, when thoughtfully considered, serve to integrate indoor and outdoor spaces.

The seamless integration of indoor and outdoor living areas begins with a careful consideration of the spaces in plan. The massing of the house and outbuildings must be used as a means to frame and shelter outdoor rooms, giving them distinct architectural boundaries, just as an indoor room. This feeling of shelter and privacy evoked by the thoughtful plan and massing of the house, is a critical aspect of evocative and truly usable outdoor spaces.

The L-plan is one simple and common way to use the mass of the house to frame a private court. Frank Lloyd Wright employed this to great advantage with many of his usonian houses. The houses invariably turned their backs to the street, with all their visual energy directed toward the private, sheltered court at the rear of the house.
The most radical example of Wright's integration of the indoors and outdoors is the Jesterhouse, which unfortunately was never built. Here the terrace and garden are the circulation space, the "hallways" for the house. Living areas are arranged in a grid that is partially open to the outdoors. The two are one, completely inseparable.

Mies too, like Wright, used the plan of the house to carefully articulate and envelope outdoor spaces. The House With Three Courts has three well-defined outdoor rooms which are created with the mass of the house and a masonry wall. The Karl Lemke house uses a simple L plan to define a sunny, south-facing rear courtyard.

Wright typically created the L with the bedroom wing meeting the living/dining wing at a right angle. The living room would open to a private terrace with the garden brought right to the door with planting beds. Wright typically made sure that one exited onto this terrace at grade, even if that often meant bringing the grade up to the house with retaining walls, as in the Hanna house.

There are few usonians where Wright allowed living areas to exit to a terrace condition suspended above grade. The Sturges house, built on a shelf, is one example where Wright did allow this, due to the pragmatic constraints of the site. Existing living areas at grade, rather than above grade, when possible, I believe is one important element in making the outdoor room a more inviting place to go.

The proximity of the garden to the house is another important consideration. Wright always brought the garden right to the house with carefully conceived planting beds. The Zimmerman house is a nice example of this. Here the planting bed seems to permeate the house, passing from outdoor garden to indoor garden, separated only by a pane of glass. So close did Wright see this garden connection that for the Zimmerman house he renamed the living room the "garden room".

Wright, in a 1956 "House and Home" article featuring the Zimmerman house, revealed some of the "tricks of the trade" he used to make a strong connection between the indoor and outdoor realms. "Make the terrace a part of the living room. For example, carry your planting through the glass; carry your floor line through the wall; use ceiling high glass to let people see your ceiling run right past the wall; continue the ceiling pattern out onto the overhang." Wright considered the terrace a part of the house and had honed several design techniques to evoke that feeling.

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In addition to the thoughtful use of massing to articulate outdoor spaces, the way in which a house engages its site is equally important in determining the degree of integration that exists between the indoors and outdoors. Frank Lloyd Wright was particularly masterful in integrating the house with the landscape. There is a very clear relationship between earth and structure, as structure takes its cues from the site, rather than imposing its will on the site. The Kaufman house at Falling Water is one of the finest examples of integrating a structure to a site.

The Austrian architect, Rudolph Schindler, a disciple of Wright’s (by way of Adolph Loos) established himself in Southern California, and

Tony Garnier, in his proposal for the “Cité Industrielle” used the massing of the simple, cubic housing units as the mass and structure for vertical gardens created in the courtyards between buildings. Jørn Utzon in his Fredensborg housing project took the notion of using building mass to articulate garden space to another level, by first using an L plan for the main house, then designing the garage (in this case actually a bowerhouse) to slope the corner of the tiny lot. A very shallow and private garden courtyard room is created. Not an inch of lot space is wasted to “sliver” sidewalks or unused front yards. Whatever is not used by the building is part of the private garden courtyard.

Irving Gill, in the Horatio West Apartments of Santa Monica, provides a nice example of multi-unit massing conceived to frame and contain courtyard gardens in the interspatial spaces between apartment units. The resulting central courtyard becomes an inviting common entry space.

The preceding sections described some of the influences, both positive and negative, which helped shape this project.

In describing this project it is not my desire, nor intention, to exhaustively detail the project’s “process”... with vignettes into the myriad iterations the project passed through during development. Rather, I’ll focus primarily on key thoughts and principals that informed the project and guided it through development, and present the project, for the most part, in its fullest stage of development.

**SITE SELECTION**

As mentioned previously, the urban infill paradigm is my preferred model for residential development in Blacksburg. It has several advantages. First, for such a small town (less than 40,000 people), Blacksburg has a tremendous amount of traffic. Proximity to the urban core and the town’s major employers (Virginia Tech University and the affiliated Corporate Research and Development Center) would afford dwellers the advantage of walking, biking or taking public transit to work, should they choose. Furthermore, it would offer close proximity to a pedestrian friendly downtown section, with shops, restaurants, pubs, farmer’s market, library, street festivals and parades. These intangible urban benefits quickly dissipate as development sprawls out and away from the urban core, which is rapidly occurring in Blacksburg.

In addition, urban infill affords the value of greater diversity for the neighborhood in terms of building ages and styles. Jane Jacobs writes compellingly about the importance of this diversity in the urban environment. One significant problem with sprawl is that all the buildings are of a similar age and style. It is homogenous by definition. Urban infill allows the newer buildings to share in the grace and charm of the mature neighborhood, with its grand trees and older homes. It allows the older buildings to share in the vitality and energy of the newer buildings. The new and old complement one another, making each better by the other’s presence.

The site chosen for this project is quite close to the downtown section, within five to ten blocks of the town’s core. It is located in a mature, mixed density, residential neighborhood with several rather nice 50 to 75 year old bungalow and farmhouse style homes, along with some less inspiring brick ranches of the 70’s.

opposite page - area map showing project site with surrounding area of Blacksburg. 1. Photograph of site from the corner of Airport and Main (red camera on site map above). 2. Site map. Site is highlighted in yellow. Topography slopes down from right to left. 3. Site map. Site is highlighted in yellow. Topography slopes down from right to left.
SITE DEVELOPMENT
The topography and tree inventory of the site prompt me to divide it into two building zones, bisected by an undeveloped zone, with a mature stand of maples and oaks. This low zone is the collecting area for the site’s rainwater and runoff (see site section below). The trees are a very valuable asset to the site. They have a significant and beautiful presence from Main Street; they will provide a valuable privacy screen and buffer for new houses, and of course they offer the charm and grace that can only come from mature trees. Retaining as many of these trees as possible is an important site development consideration.

This wooded buffer zone would be an ideal spot for a small community park with benches, shade plantings, and perhaps a small play area. The idealist in me believes that such a park would be a valuable goodwill offering to the neighborhood and community, one small way for the urban infill project to make the overall urban condition better than before. The pragmatist in me thinks that the office of a small public park to town planners might make the permitting process go much smoother, allowing for generous variances, should they be required.
MASSING SCHEMES

Experimenting with myriad massing configurations at the rather high densities I’ve described, one rather paradoxical principal becomes readily apparent: the closer the houses are to one another, the more visually exposed they become. This problem compelled me to look for a massing configuration which would provide the required density, but would simultaneously create much more privacy between houses.

Jorn Utzon had several housing developments from the 1950’s and 60’s which experimented with high density housing utilizing an L-plan, which as I mentioned previously, was a favorite for Wright and Mies in many of their house plans as well. Being a long time usonian, I was very interested in Utzon’s work. Utzon’s projects persuaded me, though, that perhaps a high density, multi level L-plan might create the private courtyard gardens between units, and afford the quantity of space demanded by the contemporary American family’s standards.

MASSING AND SOLAR ORIENTATION

In these various close-packed massing configurations, one noticed an important issue: the orientation of the houses. The layout of the houses on the site could not produce healthy house to house, or house to street relationships. The first order of business, then, is to establish a development paradigm which provides for the required density, but also affords much more privacy between houses.
As the plan evolved, two fundamental massing changes were introduced. First, each unit would stagger 14’ to the north, allowing greater penetration of morning sun. The secondary entrance to the garage would be detached from the main mass of the house, serving to further the privacy of the entry and front gardens.

Technically, with a courtyard separating the units, they aren’t true rowhouses, but the verticality and close proximity of the massings do seem to evoke that typology.

BUILDING DEVELOPMENT

These important principles of privacy, garden courtyards and optimum solar orientation guided me toward the massing strategy and development paradigm which would ultimately define this project—one that I’d characterize as a “rowhouse with a twist”. A tight packed, L-plan (a la Union) would ensure private courtyard spaces between units; a multilevel plan would provide enough space for the American family (2,000 s.f. was the ballpark figure I was working with); and houses lined up in a row, oriented to the southeast, would give everyone the same benefits of optimum solar orientation.

As for the year 2000, the average square footage for an American home was 2,273 s.f.; the median was 2,059 s.f. Size increased by over 8% in the decade between 1990 and 2000. There are several social and economic factors at work. The following statistics were compiled by the NAHB. Source of figures: NAHB web page.

1. For the year 2000, the average square footage for an American home was 2,273 s.f.; the median was 2,059 s.f. Size increased by over 8% in the decade between 1990 and 2000. There are several social and economic factors at work. The following statistics were compiled by the NAHB. Source of figures: NAHB web page.

2. Building plan scheme inspired in large part by Utzon’s housing projects of the 50’s and 60’s.
3. Early conceptual sketch - multi level L-plan with private court.
4. Southeast elevation study suggests “rowhouse”.

Technically, with a courtyard separating the units, they aren’t true rowhouses, but the verticality and close proximity of the massings do seem to evoke that typology.

1. sketch - front entry court and pergola
2. Building plan. Yellow areas: building footprints; brown areas: courts and terraces, green areas: planting beds.
3. Early site plan scheme inspired in large part by Utzon’s housing projects of the 50’s and 60’s.
4. Early conceptual sketch - multi level L-plan with private court.
5. Southeast elevation study suggests “rowhouse”.

REYNOLDS STREET ROWHOUSES
Reynolds Street will be extended to service all six driveways. A gravel walking path will circle the project. Graves Street will be cut in to provide off-street parking for the project and community park.
The primary aim of the plan is to frame beautiful outdoor garden rooms, then thoughtfully integrate these spaces with the indoor realm.

First, to create well defined and well scaled outdoor spaces through the careful disposition of building mass.

Second, to integrate these outdoor rooms with indoor spaces, making them easily and naturally accessible, to bring the garden to the house and the house to the garden.

Third, to orient the plan in such a way as to maximize morning sun in morning areas, to give courtyard spaces southern exposure, and to mitigate the harshness of late-afternoon light.
The rear courtyard gardens and their close relationship with the indoor living areas are, in many ways, the heart and soul of this project.

1. Camera #2 (see plan—pg. 50). Rear courts in afternoon light. Shaded dining terrace to left. Large wall on right side of photo is neighbor’s house, with glass block windows to provide light into house but total privacy for the courtyards.

2. Camera #7 (see plan—pg. 50). Rear courts looking out from the kitchen. Dining terrace on right, garden courts on left. Glazing on dining terrace wall is mullionless at ceiling, wall and floor. This thought is inspired by Wright’s advice which he gave in an article describing the Zimmerman House. “carry your floor line through the wall; use ceiling high glass to let people see your ceiling run right past the wall; continue the ceiling pattern out onto the overhang.”

Being able to see the ceiling, floor and wall pass from inside to outside greatly enhances the close relationship between the outdoor and indoor rooms.
The potentials for the entryway and the outdoor realm at the front of the house were greatly enhanced by detaching the garage and establishing it as a separate outbuilding. The garage now serves a much higher purpose than that of automobile container. The tectonic mass of the garage frames both a very private entryway as well as a hidden shade garden between the living room and garage.
The ground floor plan is conceived wholly in the idea of integrating the courtyard gardens and the indoor living spaces. Every room has direct access to one or two courtyards which bring the garden to the house with planting beds. The slab on grade foundation is a key element in this close integration of indoors and outdoors. Dwellers transition from house to courtyard at grade, with a minimum step down (about 1”).

1. camera #6 (see plan—pg. 50) In the dining area looking through kitchen to front door. Garden courtyard is out the window to the right. There is a 2’ transition from the entry hall to kitchen as the house responds to the slope of the site.

2. camera #19 (see plan—pg. 50) Entry hall transitions to living room. Hidden shade garden through window at right, entry court through window before.
The second floor is the children’s realm, with two bedrooms, a bath, a laundry area and a small family room adjoining the second floor terrace. This terrace makes the children’s area accessible to the gardens and courtyards, without having to pass downstairs through the living area. The larger bedroom has its own outdoor terrace room as well.

The third floor is the couple’s realm. At the top of the stairs is an office and library area designed for two people. A skylight above the stair volume brings natural light down into the stairwell. The Master bedroom has a southeast facing terrace which will capture the morning sun yet mitigate the afternoon sun.
INTEGRATION OF HOUSES WITH SITE

Closely related to the integration of indoor and outdoor spaces, which was the primary intent of the plan, is the integration of the buildings with their site. The principal employed here is that of allowing the structures to reflect changes in topography, rather than neutralizing the topography. The result is a gently terraced feel to the project as the units follow the slope down the site.

It was previously mentioned that the proclivity of today's sprawl developers and builders is to neutralize the slope with deep cut basements and the reactionary wooden deck hanging off the back of the house. This alienates the dwellers from the site on which they live.

In this project the units terrace down the hill, each unit dropping about two feet in elevation. Combine this with the fact that the foundations are slab on grade, sans basement, and the resulting excavations are much shallower than typical in much of today's construction. Since sparing as many of the site's trees is one of the site development objectives, shallow excavations will further that goal.
WALL
I believe the wall is the most fundamental and powerful element in architecture; and its clear expression and dominant role is critical toward an evocative architecture.

In this project, the wall separating the houses took on special significance for a variety of reasons, both aesthetic and practical.
Aesthetically, I felt the wall separating the houses must express a very strong presence. With the houses so close together—essentially sharing the wall—a clear conveyance of separation, privacy and shelter became important considerations for this wall. Proportionally, the wall must not appear thin or spindly, but must present itself as quite substantial. Pragmatically, of course, with modern building methods, the wall can be thin, but in this case it is important that it not appear thin. The sum of these concerns led to the notion of a wall element which presents itself as rather monolithic from the exterior, yet is an inhabitable volume on the interior. The result of this study was a six foot wide concrete masonry volume which visually conveys a very strong separation between houses, and pragmatically becomes the “servant” space for the house.
Louis Kahn often spoke of “servant” spaces and “served” spaces—servant spaces being those which contain elements that serve the rest of the building: mechanical systems, electrical systems, plumbing, stairways, elevators, etc. In this proposal, this inhabitable “wall” becomes, in effect, the servant space for the house. It contains the stair volume, a mechanical room, all vertical distribution of HVAC, electrical and plumbing, a water closet, bedroom closets, hall closets, laundry area, and kitchen cabinets. It frees the living space up from most of the service and mechanical demands required of the modern house.

As a practical matter, since this is a shared wall, it assumes a heightened responsibility for acoustic privacy and fire protection. The concrete masonry construction lends itself well to both of these concerns.
Entrée

Architecture can often be appreciated at a deeper level when conceived of as a verb rather than a noun, i.e. something which happens, a series of events, a choreographed scene of connected moments that carefully unfold to reveal or express something. Nowhere is this more true than with the notion of entry.

As a thing, a noun, “entry” represents a set of elements, together signalling the place at which we enter the building: a step, a door, a porch, an overhang. As a happening however (a verb), entry is our sensory experience (visual, auditory and kinesthetic) as we enter the realm of architecture.

As a verb, “entry” can often be appreciated at a deeper level when conceived of as a verb rather than a noun, i.e. something which happens, a series of events, a choreographed scene of connected moments that carefully unfold to reveal or express something. Nowhere is this more true than with the notion of entry.

Entry

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Too often, the homecoming experience is lessened by the failure of designers to recognize that the garage/carport is an important part of the homecoming sequence. It’s my intention to treat the garage as the key starting point for the unfolding series of architectural moments that occur as the dweller returns home.

Materially, the garage is very spartan, as a garage should be. This does not mean, however, that the experience must be spartan.

1. Camera #13 (see plan—pg. 50) Upon entering the garage. Light spills in through openings at the front of the garage. A glimpse of the hidden shade garden is revealed; plants spill into the garage from the garden’s planting beds.

2. Camera #14 (see plan—pg. 50) Stepping out of the car and looking toward the entry court. A recess in the far garden wall is framed in the courtyard doorway, a simple acknowledgment of the homecoming.

3. Camera #15 (see plan—pg. 50) Looking through the shade garden one can see all the way through the house to the rear courtyards.
CONSTRUCTION

The construction method used on these houses is very similar to old-fashioned "mill" construction, with two primary load bearing masonry walls supporting the secondary floor and ceiling structure. The bearing walls are cavity walls constructed of split face CMUs, with a 12-inch bearing course for the interior wall and a 4-inch face course for the exterior. Having the same masonry surface on the inside and outside surfaces of the wall further reinforces the feeling of a monolithic wall.

Lintels are precast concrete. The articulated window and door frames are achieved with 4" CMU blocks cut in 4" intervals.

Floors are supported with simple wall to wall spans of 12" TJI floor joists, supporting wood flooring above and drywall below.

The foundation is slab on grade concrete, slightly polished for the finished floor treatment.

South walls are all glassed, north walls are 2x6 stud frame with 4" cedar beveled siding on the exterior and drywall on the interior.

1. wall section cut through window revealing cavity wall and precast lintels and sills.
2. Horizontal section cut through floor showing two CMU walls supporting the secondary floor and ceiling structure.
3. Transverse section showing "mill" type construction with main support via two primary load bearing masonry walls. South glazed wall shown in elevation.
opposite page - stair details for a stringer-less and riser-less stair. The purpose of the rather open and airy stair design is to allow natural light to filter down through the stairwell from the skylight above.

1. Longitudinal section through living room and rear courtyards with exterior East wall in elevation.
2. Longitudinal section through kitchen and entry with interior East wall in elevation.

REYNOLDS STREET ROWHOUSES
On the interior there are many lines where two planes of rather divergent materials meet. Drywall ceiling meets CMU wall; CMU wall meets concrete floor; Drywall meets concrete floor. These all represent small opportunities for elegance, or as it too often the case, they are potential risks for material “train-wrecks”, requiring copious amounts of sealant and moldings to conceal the collision.

There’s no question that increasing the number of materials needing careful reconciliation at the joint has a direct reflection on the cost and complexity of construction. Most of today’s residential construction gets around this complexity by using drywall to surface just about everything. This eliminates most joint problems, as drywall joints are simply taped and textured - baseboards and such moldings are slapped up at the end to reconcile where wall meets floor and where wall meets fenestration. What this status-quo treatment lacks in complexity, it usually lacks in material richness, warmth and character as well. The pervasive monotony of “off-white” drywall is yet another testament to the status quo building methods of the sprawl builders.

In this project, the textures of the masonry walls and concrete floors figure so prominently in how I envisioned the character of the interior realm that I felt this added material complexity was warranted and important.

The shadow line is the simple principal used to reconcile divergent materials. The shadow line creates a forgiving buffer zone where two planes meet in a line. Depending on the width and depth of the shadow, it “forgives”, in varying degrees, imperfections in the adjoining planes. I like to think of the shadow line as a “moulding of shadow”, for it really serves the same purpose as an applied moulding, yet there’s an elegance and austere beauty to the shadow line that, for me, is lacking in applied mouldings.
The thoughts of Dom Hans van der Laan played a significant role in the evolution of this design project, so it's important to elaborate a bit on this rather enigmatic figure, and explain how his theories regarding architectonic perception and proportion influenced this project.

My initial interest in van der Laan began with my eyes, to be followed some months later by my inquiring intellect. I was having a conversation with a professor, when something said sparked a memory, and off he went to the library, returning moments later with a book by Richard Padovan, entitled: *Hans van der Laan—Modern Primitive*. 1 In the book were strikingly beautiful black and white photographs of spaces designed by this Dutch architecture school … of masonry and concrete. These were, to my eyes, some of the most evocative images that I had yet encountered. My immediate reaction was to think that his words might be of significance. Contrast this with today’s endless parade of architects who seek to persuade me with their words that what they’ve made is significant.

Unfortunately, van der Laan was not an engaging writer. He was not given to spinning aphorisms like Le Corbusier or Ruskin, nor was he possessed with the alluring … They were, to my eyes, some of the most evocative images that I had yet encountered.

In his book, *Hans van der Laan—Modern Primitive*, Padovan makes his first attempt, with some success, of bringing van der Laan down to earth. However, it’s in his following book: *Proportion*, 2 where that success is magnified, and van der Laan, and other architectural thinkers, from Pythagoras and Plato, through Vitruvius, Alberti and Le Corbusier, are scrutinized in their proper historical and philosophical context.


As I read them, the derivations of his theories. While his concepts are not that intellectually difficult, in fact most are quite common sense, they are presented more in the manner of one professing a systematic philosophy or mathematical proof, than an architectural manifestos. The unfortunate result of this, I believe, is that a truly significant thinker has been largely overlooked, due to the rather poor way in which his ideas are presented. Fortunately, Richard Padovan has stepped up to decipher the difficult theories to a level of intricacy of which his spiritual forefather, St. Thomas of Aquinas, might have been justly proud.

In his book, *Hans van der Laan—Modern Primitive*, Padovan makes his first attempt, with some success, of bringing van der Laan down to earth. However, it’s in his following book: *Proportion*, 2 where that success is magnified, and van der Laan, and other architectural thinkers, from Pythagoras and Plato, through Vitruvius, Alberti and Le Corbusier, are scrutinized in their proper historical and philosophical context.


In his book, *Hans van der Laan—Modern Primitive*, Padovan makes his first attempt, with some success, of bringing van der Laan down to earth. However, it’s in his following book: *Proportion*, 2 where that success is magnified, and van der Laan, and other architectural thinkers, from Pythagoras and Plato, through Vitruvius, Alberti and Le Corbusier, are scrutinized in their proper historical and philosophical context.


Fluent, yet intellectual- ly inspired by the philosophical end of humankind's skepticism, Kant's rationality (at least in the good sense) became the cornerstone of his first critique, the Critique of Pure Reason. Considering its residual impact on philosophy and science, it is arguably the most influential philosophical portion of modern Enlightenment times.

Karl Popper, elaborating on this Kantian paradigm, and its importance on scientific advancement said —

"We must give up the idea that we are passive observers, waiting for nature to impress its regularities on us. Instead we must adopt the view that in generating our sensations, we actually create the objects we experience by our own actions."

Kant's postulates,—which Popper argues enabled our most dramatic scientific advances and shaped much of modern thought—were the imprint of our intellect upon them.

"It has hitherto been assumed that our cognition must conform to the objects. Let us then argue that the objects must conform to our cognition."

"The understanding does not derive its laws (a priori) (nor van der Laan's, I would add). Popper continues—"

"...We propose to do the opposite: the understanding does not derive its laws from the objects, but the objects must conform to the understanding."

"Trying to explain our propensity to expect regularities in the world, Popper defined 'empirical regularity' as the result of repeated and expected observations. But instead of explaining our propensity to expect regularities in the world, we actively try to impose regularities upon the world."

Karl Popper, elaborating on this Kantian paradigm, and its importance on scientific advancement said —

"The mind may be regarded as regaining from nature that which the mind has put into nature."

Popper, like Kant, viewed the human intellect as a searchlight, venturing out to illuminate nature, rather than a bucket, passively waiting for nature to fill it.

And Sir Arthur Eddington, the physicist who demonstrated the expansion of the universe in the 1920s, weighed in on this Kantian postulate, stating that —

"We must give up the idea that we are passive observers, waiting for nature to impress its regularities on us. Instead we must adopt the view that in generating our sensations, we actually create the objects we experience by our own actions."

Eddington, like Kant, viewed the human intellect as a searchlight, venturing out to illuminate nature, rather than a bucket, passively waiting for nature to fill it.

So the fourth, sixth and fifth, and harmonic (closely referred to as the 'comma', 'sub-comma', and 'relativum', respectively) musical intervals, which have been called the most influential harmonies in Western music, especially in simple folk music where harmonic experimentation has been least, have an even more significant and even more specifically harmonically referred to as the 'comma', 'sub-comma', and 'relativum', respectively. These fourth, fifth and octave (harmonically referred to as the 'comma', 'sub-comma', and 'relativum', respectively) musical intervals just happened to be the most important intervals in their musical scale. When the open string (1:1 ratio) was shortened by one fourth (resulting in a 3:4 ratio) to match the original open string, the harmonic mean representing the musical fourth, the harmonic mean representing the musical fifth, this 'sensa' table created by Plato, was millennia before the Renaissance, an extension and elaboration of the Pythagorean's more simple model. Based on the musical fourth and fifth, became the foundation for Renaissance proportion (see book II of Alberti's Ten Books on Architecture)."
EMPIRICISM AND ABSTRACTION

Richard Padovan, in his book *Proportion*, profiles that these proportion systems stem from, and have been practiced, from what he calls an a priori point of view. He credits the term empirically, as used in this context, to the art historian, William Worringer, who used that term, and it’s opposite, abstraction, to describe two opposing epistemological viewpoints in art. In many ways the terms empiricism and abstraction are philosophies of naturalism/empiricism (or realism/nominalism). Padovan says —

“From the viewpoint of empiricism, nothing is to be known in art but what can be learned and understood about nature in art; whereas according to the abstract viewpoint, nature is the key to understanding why nature is essentially mathematical. But from the viewpoint of abstraction, to look at something as a whole is to make it knowledge: we cannot know nature because we do not read it; we can interpret it through mathematics because mathematics is in our own creation.”

“The presumption that proportion in art proceeds from, and is validated by, the mathematical harmony of nature is characteristic of empiricism, and can be described as essentially naturalistic. It is based on an attitude to the external world that assumes and relies on the possibility of a perfect accord between the human mind and the perceived world.”

While Aristotelus shared the mystical Pythagorean associations of proportion, he nevertheless saw nature as the quantitative example of design —

“From the point of view of abstraction, architectural proportion is an artificial and abstract mathematical ordering, an ordering that is our response to a universe that conforms to us as mystic or unknowable.”

To paraphrase this in Kant’s words, empirically is to “assume that our cognition must conform to the object” (that is, nature). Abstraction is to “assume that the object must conform to our cognition.”

The proponents of these proportion theories were all ancient Greeks. The Pythagoreans, Plato, Euclid—all believed that the universe conveyed to man its secrets through numbers and mathematics. Man needed nature’s mathematical revelation to be informed. Aristotelus, commenting tongue-in-cheek on his Pythagorean forerunners said—

“They considered the principles of numbers as the foundations of science and the measure of the whole universe, and a number and a number, if anything, was lacking to complete their theory, they quickly supplied.”

It is obvious from all that is fashioned, produced, or received from nature, imposed upon the receptive human mind. It is founded on an attitude to the external world that assumes and relies on the possibility of a perfect accord between the human mind and the perceived world.”

In the works of nature, above all, that design, in which one finds all the order and beauty, which is the achievement of the human intellect. The Italian Renaissance was likewise empathic in its outlook. Alberti, in typical Renaissance fashion, said—

“The presumption that proportion in art proceeds from, and is validated by, the mathematical harmony of nature is characteristic of empiricism, and can be described as essentially naturalistic. It is based on an attitude to the external world that assumes and relies on the possibility of a perfect accord between the human mind and the perceived world.”

Just as Kant, “roused from his dogmatic slumber”, turned the Skepticism of Hume upside down, so the architectonic proportions of nature proceeded from man, not nature. The proven force of proportional theory with his audacious claim that man did not receive proportion from nature, man imposed proportion upon nature.

**The Quantum Human Mind—“How Man Measures”**

Van der Laan believed there to be an inherent (a priori) nature to the human intellect, actively engaged in quantifying and relating objects of perception as to their magnitudes (seemingly also a priori categories of cognition, namely the categories under quantity and quality). Borrowing from the invention of the metric system, and the systems of measurement of the great French engineer, Charles de la Flèche, van der Laan argued that the intellect is predisposed to assign a discrete “how many” (unit) to a perceptual world which manifests itself in infinitely divisible degrees of “how muchness” —

“The quantity of things, in terms of either how large or how many, cannot be experienced directly. Quality is accessible to the mind only through number—in other words, by its relation to a known set. The least for discrete quantity, ‘how many’, is given by the nature of number itself in the individual essence of things that we see. But the quantity of spatial detail is not discrete but continuous: it is not a matter of counting how many but of measuring how much.”

**For it is in the works of art, above all, that design, in which one finds all the order and beauty, which is the achievement of the human intellect...**

Just as Kant, “roused from his dogmatic slumber”, turned the Skepticism of Hume upside down, so the architectonic proportions of nature proceeded from man, not nature. The proven force of proportional theory with his audacious claim that man did not receive proportion from nature, man imposed proportion upon nature...
Aristotle’s Metaphysics (first chapter of the tenth book) refered ibid., p. 96.  


Hans van der Laan, Architectonic Space, p.47. See chapter 5, pp.45-59 and chapter 7, pp.70-83. 

Benedictine Abbey at Vaals, H.van der Laan. Image: Image 76x478 to 302x537. 

Van der Laan considers the metaphor of a pile of gravel—

“If we look at a heap of gravel we see that the individual gravels are all of different sizes, but each actual size class, or type, can have as great a variety of sizes within the limits of this margin answer to the selfsame image that we form of the size: they are all of the same type of size. 

This notion is absolutely crucial to Van der Laan’s entire system of thought. Speaking on architectonic perception, Van der Laan said —

“Precisely because of our inability to penetrate directly into the concrete size of things, we establish a range within which objects are given their own size, even though we never give things of precisely the same size, but we can form an image of each of these sizes.”

Van der Laan’s understanding of this quantizing intellect is the crucial concept of the zone system. This is where Aristotle’s influence is most evident. In his discussion of size, van der Laan quotes Aristotle from the Metaphyscio — for everyday we see a quantity something and nothing — where it is thought impossible to take away or add to a measure. The zone is exact. Hence that of number is most exact that we posit the unit as absolutely indivisible, and in all other cases we imitate this sort of quantity when it is thought impossible to take away or add, all men make the measure…; and they think they know the quantity when they know it by means of this measure”.

“for everywhere we seek as...a size, a type, a magnitude into “types” of size, separated by “margins” of size. Image: Image 319x319 to 332x332. 

This metaphor of the sieved gravel becomes a foundational principle for van der Laan’s plastic number ratios. Closely related to the concept of types of size, this is where the inexactness of our perceptual capacity to identify that “this size is totally distinguishable, and clearly different, from that size”. It is still meaningful, however, to use a threshold, yet it is meaning it, for most people. For example, as an already mentioned, A is not, by supposition, 440 Hz. Yet, if the ceil plays a tone of 439 Hz, or 441 Hz, it is still, for all practical purposes, the same tone of A—natural—finished photographic print, then he would need to quantify the tonal range in a way that his intellect was capable of working with. This is one way to become Adam’s method of manipulating exposure, filtering and development variables, in order to resolve the distance between A-natural and A-flat—fore instance—are the building blocks, the fundamental units by which the entirety of our music is written and performed. How? 

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Perception

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How much must a tone change before the intellect considers it a different type of tone? (i.e. a different note).

Key to van der Laan’s understanding of this quantizing intellect is the crucial concept of the zone system. This is where Aristotle’s influence is most evident. In his discussion of size, van der Laan quotes Aristotle from the Metaphyscio — for everyday we see a quantity something and nothing — where it is thought impossible to take away or add to a measure. The zone is exact. Hence that of number is most exact that we posit the unit as absolutely indivisible, and in all other cases we imitate this sort of quantity when it is thought impossible to take away or add, all men make the measure…; and they think they know the quantity when they know it by means of this measure”.

2. Ibid, p.54 

3. Ibid, p.47-48 

4. Ibid, p.79-80 

5. Ibid, p.66-67
The inherent nature of the human intellect to ascribe “how manyness”—through number—to a universe of natural phenomena manifests a universal perception of the simultaneous presence of two dimensions: the physical (length) and the spiritual (quality). This dualistic perspective, which is a fundamental characteristic of human thought, is evident in the work of ancient philosophers and architects such as Vitruvius and Palladio.

**Vernon Lee and Vitruvius**

Vernon Lee believed that the confusion over Vitruvius’s definitions was not because Vitruvius was a particularly sloppy writer, or that Vitruvius didn’t know what he was talking about. Rather, the problem was that our modern understanding of proportional concepts is much less than the ancients, such that—particularly concerning the concepts of Symmetry and Eurythmy—a human intellect that has not been trained in these concepts will find it difficult to make the connection between the two dimensions.

**Symmetry**

Symmetry is a proper relation between the members of an entire structure and the whole. It is not a question of the parts’ own size; but eurythmic proportions give us an insight, not into the quantity of form, but into its qualitative properties.

**Eurythmy**

Eurythmy is the comparison of corresponding means. If two elements, or members of an edifice, are too far apart in their size, the mind will have difficulty relating them, one to the other. If two elements are so close together, the mind will have difficulty relating them to the whole.

**Architectonic Space**

Architectonic space is the range within which the parts of an edifice must be related—not only to themselves and to one another—but to the whole. In Vitruvius’s description of Symmetry and Eurythmy in Ten Books on Architecture, the words ordonnance, symmetry, rhythm, etc., are subcategories of the main category of Architectonic Space. Van der Laan believed that the confusion over Vitruvius’s definitions was not because Vitruvius was a particularly sloppy writer, or that Vitruvius didn’t know what he was talking about. Rather, the problem was that our modern understanding of proportional concepts is much less than the ancients, such that—particularly concerning the concepts of Symmetry and Eurythmy—a human intellect that has not been trained in these concepts will find it difficult to make the connection between the two dimensions.

**Eurythmic (Symmetrical) Units**

Eurythmic (Symmetrical) Units are subcategories of the main categories of Architectonic Space, namely ordonnance, symmetry, rhythm, etc. They are subcategories of the main category of Architectonic Space. Van der Laan believed that the confusion over Vitruvius’s definitions was not because Vitruvius was a particularly sloppy writer, or that Vitruvius didn’t know what he was talking about. Rather, the problem was that our modern understanding of proportional concepts is much less than the ancients, such that—particularly concerning the concepts of Symmetry and Eurythmy—a human intellect that has not been trained in these concepts will find it difficult to make the connection between the two dimensions.
Van der Laan’s thinking is characterized, first, by a Kantian epistemological framework—the intellect is endowed with a priori cognitive powers, framing our perception of natural phenomena, not an empty bucket passively waiting to be filled by nature. Secondly, is Aristotle’s concept of the unit—the quantizing nature of the human intellect, seeking to ascribe “how manyness” to a phenomenal world manifested in infinite degrees of “how muchness”. And third are the Vitruvian notions of ordonnance, eurythmy and symmetry—all architectonic elements must be in careful relation to themselves, to each other and to the whole. These fundamental principles are the foundation on which van der Laan builds the entirety of his theories, and his proportional system known as the plastic number.

Van der Laan takes great pains in his writings to examine the derivation of the plastic number (as represented by the top table on the opposite page), and to validate its efficacy. For an exhaustive (literally) description of the system, and its derivation, I’ll refer the reader to the source.

It is sufficient for my purposes to present the system in its historic and philosophic contexts—in the light of the fundamental principles on which it is based—and to illustrate its influence on my design project.

Architectonic Space - Fifteen Lessons on the Disposition of the Human Habitat, by Hans van der Laan. Leiden Press, 1983. This is the most exhaustive account of van der Laan’s theories as presented by himself. Very helpful companions, however, are Richard Padovan’s: Hans van der Laan—Modern Primitive, and Proportion—Science, Philosophy, Architecture.

The rectangles formed by the intersecting grid of lines, shapes, represented the “form bank”, generated by one octave of plastic number ratios.

The squares below illustrate the highly additive nature of the plastic number system. Every measure is related to every other measure in the system. The largest of any four consecutive measures is the sum of the smallest two. This is similar to the golden section system, where the largest of any three consecutive measures is the sum of the smaller two. Algebraically, then, the golden section, φ, can be represented by the formula (φ^2 = 1 + φ). Similarly, as i is approximately 1.518, whereas the Plastic Number, ψ, is approximately 1.325.

The plastic number, call it ψ, can be represented by the formula (ψ^3 = 1 + ψ). Numerically, φ is approximately 1.618, whereas the Plastic Number, ψ, is approximately 1.325.

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CMU block, because the 8” grid that creates even vertical courtings, also creates horizontal measurements that don’t require cutting block. In effect, then, the bottom half rectangle is a system of proportions for 8” block, where all courses lay out even, and no blocks ever require cutting. The graphic with the colored squares (pg.88) shows one plastic number occurs, with the matching shapes created from the implementation of these measures. The rectangles formed by the intersecting lines Van der Laan called the form bank—as if this is where he goes to “withdraw” a needed form. In his book, Architectonic Space, he logically extends the concept of the form bank into three dimensional space, by extruding each shape into the z-axis, by plastic number measures.

With the plastic number ratios, van der Laan created an “inventory” of discernible shapes (like musical notes), that the perceiver of architecture could see—and conclude that: “this shape is of a different type than that shape.” Considering the grid of rectangles created in the graphic on page 88, I believe he was quite successful. Each shape, while similar to ones composed of it, is readily discernible. Van der Laan saw this as crucial to creating a visually pleasing architecture. In van der Laan’s view, to make architecture from measures not thoughtfully quantized for the perceiver, would be tantamount to making music from the continuous tones of a whistling siren.

In this design project, one of the most significant and obvious results of my dalliance with van der Laan’s theories, came in the size of the wall volume which separates units. Van der Laan’s notion of order of size requires that two measures must be within a certain range of magnitude to one another for the mind to make a meaningful relation between them. He ultimately concluded that the outer limit for this relation was about a 1:7 ratio. In his writings he goes to great lengths to demonstrate this derivation—which I shall not do here. Hence, the range of each of his “systems” (what I call octaves), is a 1:7 ratio.

Van der Laan used the phrase: “counts for,” to describe his concept of order of size. He’d say that in order for one magnitude to “count for” another, they must be within this 1:7 order of size. A pebble does not count for a boulder—but it does count for another pebble. So, in considering this separation which I desired between units, I took van der Laan at his word, and made a wall width that would “count for” the space which it was separating. I knew, based on approximate room sizes, and the base L-plan I had chosen, that the measure between units would be in the neighborhood of 33 to 40 feet. In order for the wall separating this space to “count for” the overall measures of 35 to 40 feet, it must be no less than 1/7 of that measure, or 5 to 6 feet.

I experimented with the notion of a five to six foot wide masonry volume to separate these spaces (initially, a thought which, frankly, struck me as odd). However, my eyes were generally pleased with the results produced—there was indeed something nice about the relation. The proposition that such a “servant” space could play, the thick wall volume became an essential element. For the minor wall, I considered the width of the house as the measure for which the thickness of the wall must “count for.” With rooms approximately 14’ wide, a 2’ thick wall would be 1/7 of that.
aspects of his architecture he never mentions in his writings. He was either unaware of his architect’s strength in these regards, or just assumed such matters were tacitly understood by architects and thereby not requiring comment (he may have overestimated us).

Dom Hans van der Laan is a unique and valuable voice in architectural theory—one that’s unfortunately been largely overlooked. He liberates the architect to use and enjoy proportional tools—free from the classical/Renaissance baggage of naturalism. He exhorts the architect to look to his own mind, to his own concepts, to his own order, and to unabashedly impose that order onto the created object. And in so doing, to participate in what, van der Laan believed, was man’s offering toward the completion of nature.

There’s nothing magical about the plastic number or any system of proportion for that matter. Many architects, working only with judgment and intuition, create beautiful objects. But intuition alone is not enough. To use any system, however (be it proportional, philosophic or syntactic) as dictator, is to miss the true relative essence of what proportion is.

Secondly, is van der Laan’s compelling apologia for his concepts—arguably the best of the three. With these concepts—evolved from his strong belief in an a priori, ordering human intellect—he efficaciously brings Kant to a world of proportional theory, steeped for centuries in Pythagorean, Plato and Alberti. He unabashedly imposes the human intellect onto nature—compelling the created object to conform to the human intellect, not to nature. This is diametrically opposite Le Corbusier’s view (and all classicists), who looked to nature, to discover that which must be imposed onto the human intellect.

The main weaknesses in van der Laan’s theories are sins of omission. His architecture is particularly powerful and evocative in its use of light and shadow, and in material richness. Yet, these

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These are nice illustrations of the flexibility, and scalability, with which van der Laan’s system can be employed. The major wall was scaled according to the order of the house to house relationship—the minor wall was scaled according to the order of the much smaller room to room relationship. Yet all the measures are intimately related by the additive and geometric properties of the system.

The system is used in many more places in the project—the sizing of rooms, fenestrations, elevations, kitchen counters, fireplaces, planter beds, etc. Nearly every detail of this project, in plan, section and elevation, was informed by the system—but only as a guide, not as an autocratic denator. There were many times when intuition, or pragmatism, compelled me to change a measure from what the system suggested. In fact, intuition is a nice word to describe the benefits of working with an architectural proportioning system. The system offers helpful as to the measure of this or that element. To use any system, however (be it proportional, philosophic or syntactic) as dictator, is to miss the true relative essence of what proportion is.

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"Dunn anupis, life is better than utopia!"—Such were the sentiments of Lewis Mumford, to his good friend and colleague, Catherine Bauer, this after spending much of his long career studying utopian thought.

Mumford described utopias as the perfect place, yet the non-existent place. Like his mentor, Patrick Geddes, Mumford invoked the archaic term eutopia to describe the "good place"—admittedly not perfect—but nevertheless good, and moreover, attainable in the imperfect here and now.

Europeans choose to accept certain things as they are, resolved to work under certain pragmatic constraints—a condition they call reality—even if reality is, admittedly imperfect and a bit untidy at times. Utopians, on the other hand, reject outright (or at least overlook), certain intrinsic principles of human nature; or deep seated cultural mores—things that sully the purity of their vision. Utopians avoid reality were diffluent—often construct their theories as if it indeed were.

The most well known architectural utopias to modern architects and planners are Frank Lloyd Wright's Broadacre City and Le Corbusier's Radiant City, both conceived in the early 1930s. Corbusier's in Europe, Wright's in America. Like the socio/political utopias in fashion at the time (on both sides of the Atlantic, but much more firmly entrenched in Europe), these architectural utopias were wholly conceived in egalitarian notions of land redistribution—taking from large landholders, giving to the common man.

Le Corbusier, in his opening salvo of The Radiant City, said: "We must undertake the redistribution of the land in the country... mobilization of the land for the common good." Mumford and Engels, of course, had their own redistribution plan for the common good—"from each according to his ability—to each according to his need." Wright, with Broadacre City, had a redistribution plan as well—take just large landowners, give an acre to each citizen upon birth.

Le Corbusier's redistributionist sentiments were widely shared by his European contemporaries (to be a Bohemian in Paris during Corbusier's time—Marxist sympathies were to be expected). Wright, however, didn't enjoy such a receptive audience in America; his redistributionist visions were an affront to very powerful, deeply held values of the American ethos—values not nearly so strong in Europe.

Context TOWARD A PRAGMATIC IDEALISM

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Context TOWARD A PRAGMATIC IDEALISM

1. Mumford—public and architectural critic of the 20th century, wrote extensively on utopian thought, architecture, and utopianism. Mumford's American utopianism is further elaborated in Robert J. Weyrauch's From Utopia to Modernity: 1941 as an excellent overview of the life, times and writings of the great American cultural
Toward a Pragmatic Idealism: Context

Wright's personal rejection of many aspects of the American ethos: private property rights, individual liberty, freedom from overly intrusive government—all well and good as personal convictions—but this is where utopists are apt to make their biggest mistakes. Their personal disdain for reality does not alter reality—as much as they may wish otherwise. Indeed, most decent people sincerely wish and hope for world peace—but the prudent leader does not plan on it. Utopians wish reality were different, they hope people will change—they then proceed to construct their plans as if their hopes and dreams have come true.

Utopian thought is quite prevalent in architectural circles today, especially among the academic intelligentsia and those who write about architecture. In fact, architects as a group probably tend toward utopianism. This seems important to address because we live in a culture that desperately needs relevant proposals and solutions from architects for the built environment. While Utopia is an intriguing and thrilling, it’s rarely relevant. As a notoriety as Broadacre City was, it was largely irrelevant as a serious proposal for its American audiences because it rejected deeply entrenched elements of American context. It was visionary, but not contextual.

And it’s this notion of contextualism which I’d like to address in this section. Mumford invoked the archaic term eutopian to describe a mindset which rejects utopia (the perfect place) because it is unattainable. It seeks, rather, eutopia (the good place) because it is attainable in the imperfect here and now. Eutopian is a word little used or understood anymore, but contextualism is a term very much in vogue today in architectural circles. Eutopia accepts certain contextual constraints and moves forward toward a better place, a good place, even amidst difficult contextual obstacles. Utopia rejects the obstacles—but unfortunately, rejecting the obstacles doesn’t make them go away.

Against this introductory backdrop of utopia and eutopia, and in the spirit of contextualism, I’d like to consider two architectural movements that strike me as highly eutopian, that is contextual: Frank Lloyd Wright’s Usonian house experiment, a product of the 1930’s, and the New Urbanism, a movement begun in the late 1980’s and still very prevalent today.

Curiously enough, from the same mind that gave birth to the utopian vision of Broadacre City, came what I believe is one of the most contextual proposals for architects to consider—the Usonian house.

Prior to the great depression, Wright was primarily an architect of the wealthy. His prairie houses, civic works and commercial projects were for the rich. He was a very successful architect in this arena. But the depression changed all that.

Wright soon found himself in the unenviable position of having more time on his hands than commissions in contract. This respite from his former practice, however difficult the financial pressures it imposed, did give him the opportunity to address a concern which had been on his mind for some time—middle and lower middle income home owners were increasingly squeezed by the escalating costs of building a house. Wright obsessed for years over this dilemma: how can a beautiful dwelling be constructed which might afford a middle class home owner the same dignity in his home that was, more and more, only being enjoyed by his wealthier clients?

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2. Wright’s first Usonian—the Jacob’s house of 1936, in Madison, WI—indeed came in at the budget of $5,500. Wright waived part of his fee and pirated “reject” bricks from the Johnson Wax headquarters job (which was being built concurrently in nearby Racine, WI), in order to make the budget.

He likewise reacted to social and cultural context—in particular his own personal conviction that middle and lower income families deserve dignity and beauty in their homes, just as his wealthier clients. Lacking such a home environment, Wright believed, society would ultimately suffer. He carefully considered technological context—looking for ways that new building products might be used to better serve beauty, utility and economy. Of particular note in the Usonians is Wright’s embrace of plywood, a new building product at the time which Wright saw held great promise.

He wrestled a great deal within the context of typical and accepted building practices—carefully studying every minute detail of how a house is constructed—weighing in favor of the traditional precast concrete slab on grade foundation. He rejected the traditional high pitch roof, with an attic, in favor of the flat roof (as in Jacobs), or the asymmetrical low pitch roof (as in Zimmerman). He rejected traditional heating systems in favor of a radical new radiant heated slab. Whatever traditional practices did not serve his vision for economy, beauty and utility, were rejected. In this regard, Wright reveals himself the quintessential modern architect.

Confronting, head on, difficult contextual issues, such as economic viability and constructability, Wright guaranteed the relevance and ultimate acceptance of his idea. Ignoring any of these important contextual issues may have doomed his experiment to failure. But he viewed the Usonian idea as a holistic proposal, one which must succeed on every contextual front if it’s to succeed at all. Ultimately, this deep understanding of contextual issues (not to mention a prodigious design talent) earned Wright the gratitude, respect and admiration of dwellers and builders alike. It also produced a huge legacy of built Usonian works.

Beyond the wealth of wonderful spatial characteristics found in these dignified little houses, I believe Wright’s embrace of context in such a broad and all–inclusive manner, is one of the most important lessons an architect might take away from this tremendously successful experiment in housing.

Wright’s success was that he viewed context in a very broad way—as the sum total of all the forces acting upon his project—economic, social, cultural, legal, aesthetic, constructional, financial, technological, etc. Wright sought, and achieved, relevance in as many of these contextual arenas as possible.

It’s curious to consider Wright’s highly contextual response to middle class housing against his anti–contextual proposal for the city of the future. Both were conceived at the approximate same time, yet at the scale of the house Wright is focused and pragmatic, at the scale of the city he allowed himself to dream and fantasize that harsh realities don’t exist, that people’s very nature and ethos would change to accommodate his vision.

1. This question of financing was a continual problem for Wright. Mrs. Lusk, whom Wright designed a Usonian house for, wrote: “Government loans were about the only source of building funds in those days, and we couldn’t build without one. The FHA declared that because our house was ‘different’, that it had been designed specifically for us and our personal requirements and way of life, that its resale value was nil.” From John Sergeant’s book: Frank Lloyd Wright’s Usonian Houses, Whitney, 1976 p.172. Apparently this obsession over resale value is not a new phenomenon. The Lusk’s ultimately overcame this snag, and indeed got their house built—but Wright’s inventiveness continued to challenge the financial and regulatory framework of his day. If only those FHA bankers could see the resale value of the Usonians today.

2. Photos showing the construction of the Haslett house in Hillsborough, California. From Frank Lloyd Wright: The Masterworks. Bruce Brooks Pfeiffer, Rizzoli. Top left photo shows the radical nature of Wright’s wall system—a plywood core with horizontal cypress siding inside and out—no studs, no insulation. Bottom right photo shows the radiant heated slab on grade foundation, and the need for mechanical ductwork and provided what Wright, and many today, consider a more comfortable way to heat a house.
Where Wright’s urbanism was decidedly utopian, a new and emerging school of thought is very culturally focused and contextual. Where Wright essentially discarded reality, the “New Urbanism” embraces it, taking much more pragmatic approach to changing the way we think about development. Wherever one’s criticism of the New Urbanism (and architects, as a group, are quite critical of this movement), they cannot be accused of being utopian thinkers. They are decidedly utopian. They firmly believe in incremental change in the important here and now. They believe their principles, if employed faithfully, will create healthier and more vital neighborhoods, towns and cities, even in the midst of dealing with profit-hungry developers, kitschy public tastes and a regulatory framework badly in need of renewal and fresh thought. Whatever architects and urbanists may think, they must not make proposals which alienate the developer or the “consuming” public. Their vision for a good place is manifest in several principles which they’ve distilled from studying successful and time tested “traditional” cities, towns and neighborhoods, places which are still vital and compelling places to be after many, many years. This willingness to look back in time and search for lessons from history has earned them the title of “neotraditionalists” among many. Geddes, Howard, Unwin, Mumford, Frank Lloyd Wright et al., were passionately anti-city. The New Urbanists are decidedly anti-suburbia, at least with regard to how the American suburb has evolved over the better part of the twentieth century. New Urbanists see the devil in rigid planning codes that perpetuate bad suburban development patterns. They see problems not only with the content of the code, but with the prescriptive nature of the code. They have embarked, not only, to change the rules, but to change the timbre of the code, to offer a prescriptive paradigm as opposed to the existing prescriptive codes. A New Urbanist code, then, stores examples (with illustrations) of how things can be done, as opposed to the existing codes which tell (with words) what can’t be done (see illustrations on next page). This slight and subtle deviation in tone is actually quite significant, for in acting prescriptively, the New Urbanists, in effect, proclaim what is good. This is the antithesis of the current planning paradigms which go to great lengths to declare what is bad but would not dare suggest what might actually be good.
New Urbanists, then, have carefully picked their battle. It is not with the developer; it is not with the traditional (critics would say ‘ Kitschy’) tastes of the general public. Their fight is with urban planners, traffic engineers, and the harmful and voluminous codes which they have written and enforce with bureaucratic zeal.

This is not to say that their proposals don’t often stretch developers, because they do. A developer is asked to deviate from a “slam dunk” development that made him a gold mine last year, he is going to be skeptical. But the New Urbanists have embraced the developer and brought him into the fold. They assure him that good urban design and planning will bring him more money and profit, an argument which resonates understandably well among developers.

The New Urbanists likewise see the rather traditional tastes of the American public as a kind of aesthetic sensus communis, one which they regard with a degree of respect, rather than the highbrow contempt commonly afforded such sentiments by many in the architectural community. They enjoy a careful study of the traditional, vernacular forms of a region, distilling, clarifying and articulating the best conditions they feel the tradition offers. For example, if they invoke a New England motif for a New England development (an idea which horrifies many architects), they will at least attempt to ensure that the houses proposed are well proportioned, well scaled to the street and well related to one another. These are design issues which, they would contend, transcend stylistic muse.

The New Urbanists attribute many of suburbia’s ills to the urban planner’s officious attention to the automobile over the past 50 to 75 years. They argue that this favoring over the automobile is revealed in streets that are too wide, set back that are too large, and streets that lead nowhere. In other words, the typical suburban development fall of fat cul-de-sacs. Much of the New Urbanist’s attention, then, is given to reorienting the sense of proportion to the elements of the street, the proper scale between the building and street, and a more traditional grid-like network of streets, allowing traffic to be dispersed, rather than concentrated on heavy use arterial roads.

Single use zoning, another proclivity of modern planners, the New Urbanists eschew with similar zeal. Urban planners of the past half century would much prefer to see buildings situated only next to other similar houses, commercial property with commercial property, office with offices, industry with industry, etc. The New Urbanists look fondly upon pre-modern planning neighborhoods where apartments or townhomes might be located above shops and offices, when a corner grocery store might be set among a mostly residential neighborhood, where areas of work or mass transit might be located within easy walking distance of homes. These conditions now violate codes in most municipalities and so the New Urbanists typically have to wage battle with county planners to bring these ideas to fruition.

Expository page - Examples of the graphic planning codes developed by New Urbanists to replace the text codes of the conventional bureaucrat planner. Careful attention is given to building use. New Urbanists believe that retail, office and residential should be thoughtfully integrated. Furthermore, the belief that it is unwise to reserve the retail to the near neighborhood at commerce. In this plan, housing forms the first instinctive triplication between the buildings to the street. It’s obvious from this proposal that New Urbanists favor narrower streets and much smaller building setbacks. Also, they are firm believers in carefully conceived tree plantings to affect the character and texture of the building. Source same as above.

1. Seaside, Florida. Roof lines indicate the type of higher density conditions many New Urbanists favor over typical suburban development with comparatively large lot and street setbacks. Source same as above.

2. Seaside, Florida. Office, retail, and residential building designed by Steven Holl. Source same as above.

TOWARD A PRAGMATIC IDEALISM CONTEXT
One can see sympathies in the New Urbanism with the Garden City movement of Ebenezer Howard and his decentralist principles, as well as a certain fondness for the planning which came out of the Garden City movement. The New Urbanists, however, have distanced themselves from the Garden Cities in many ways. More than their predecessors, the New Urbanists have sought to stress the importance of new urban form. They believe that the Garden City movement’s approach to urban planning, with its emphasis on greenbelts and decentralized growth, was too idealistic and too utopian. Consequently, the New Urbanists have sought to create a more practical and pragmatic approach to urban planning, one that is grounded in the realities of urban development.

The New Urbanists believe that their approach to urban planning is more realistic and more achievable than the Garden City movement’s. They argue that the Garden City movement’s approach to urban planning was too utopian and too idealistic. They believe that the New Urbanists are more grounded in the realities of urban development, and that their approach to urban planning is more practical and more achievable than the Garden City movement’s.

The New Urbanists also believe that their approach to urban planning is more flexible and more adaptable than the Garden City movement’s. They argue that the Garden City movement’s approach to urban planning was too rigid and too inflexible. They believe that the New Urbanists are more flexible and more adaptable, and that their approach to urban planning is more capable of responding to the needs of different communities.

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The New Urbanists also believe that their approach to urban planning is more sustainable and more environmentally friendly than the Garden City movement’s. They argue that the Garden City movement’s approach to urban planning was too unsustainable and too environmentally unfriendly. They believe that the New Urbanists are more sustainable and more environmentally friendly, and that their approach to urban planning is more capable of responding to the needs of different communities.

In conclusion, the New Urbanists believe that their approach to urban planning is more realistic, more flexible, more inclusive, more democratic, more sustainable, and more environmentally friendly than the Garden City movement’s. They argue that the New Urbanists are more grounded in the realities of urban development, more capable of responding to the needs of different communities, and more capable of addressing the challenges of the twenty-first century.
If there’s a common theme connecting the thoughts in this section, it’s the notion that idealism must be thoughtfully forged into a middle ground that is neither too utopian nor to pragmatic in order to be truly relevant. The hard-core idealists often focus too closely on the purity of their vision, finding fault with the pragmatist’s impure and world-scaled ways, and end up proposing utopias. The unabashed pragmatist, in turn, scoffs at the idealist’s “living tower” inefficiencies and irrelevance. Yet, nothing truly important is ever achieved without a degree of idealism, and nothing truly possible ever gets done without a degree of pragmatism.

Today’s idealistic (ideological) forces are found in the architectural press and throughout much of academia. The press is replete with glossy computer images of projects with little or no hope of ever being built, or with the iconoclastic works of the “rock-star” architect, with little meaning or relevance for those outside of the avant garde design community. The academic community often values the “purity” of an idea, or the adherence to a rigorous theoretical syntax, over the practical contributions, or palpable benefits to a client or community.

At the other extreme are the unabashed, hard-core pragmatists, those folks in professional practice who quake upon a hillside to win their next subdivision mall, strip-center or business park commission.

However, it’s those who have carefully and thoughtfully forged a middle ground which intrigue me most. Their work is conceived in idealism, yet refined in the fire of reality, achieving relevance for a society desperately in need of material fruition through pragmatic, contextual analysis and common sense, then relevance will indeed be strained.

It’s in this spirit of dialectic tension which I began entering the field of architecture. However, it was not pragmatism which led me to architecture, it was clearly an idealism about the potentiality of the built environment to affect peoples’ lives in a meaningful way—an idealism which grew significantly and flourished all the more with my studies. Synthesizing these tendencies toward a pragmatic idealism is my aim. The nature of this synthesis, over time and through the medium of architecture, I believe will in large part, determine my relevance as an architect. There will always be a dialectic tension between these pragmatic and idealistic tendencies, as there should be—indeed as there must be. For if this tension ever dissipates, if I ever stop dreaming of architecture’s potential to fulfill fundamental human longings, or if I ever stop laboring to bring those dreams to manufature through pragmatic, contextual analysis and common sense, then relevance will indeed be threatened.

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Bibliographic References

To assist the reader in quickly finding key sources, all important bibliographic references are footnoted on the page in which they occur in the book.

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