



HOMEBUILT HOUSE

A homebuilt house is a constantly evolving house-form, shaped by a random collection of form-giving materials and tools, tentatively placed in ways that visibly demonstrates its builders's commitment to remain in a place they have already occupied as a home.

CHAPTER 5

THE HOMEBUILT HOUSE

After years studying buildings in a variety of informal settlements, it's become increasingly clear that what I initially saw as a chaotic and disordered house-form was actually a logical response to social exclusion and economic marginality.

With innately prehistoric roots, what I found in this research was an architecture that began strategically in a place that had already been occupied as a home. As shown in the case studies, these houses emerged from no more than a collection of expendable objects placed purposely to materially represent possession of invaded property. In each house, random materials shaped shelter as tokens of intent, providing protection for their builders as they evolved imperceptibly into an intuitively engineered house-form undergoing constant change. The result was a viable alternative to affordable housing, a small, simple, and sustainable approach to a self-determined and debt-free lifestyle on the margins of a very uncertain world.

An Informal Aesthetic

Elements of a Homebuilt House

1. A Sense of Place
2. Materials Negotiate Occupancy
3. Resources Shape House-form
4. A Slow Imperceptible Process
5. Three-dimensional Storage
6. Intuitively Engineered Solutions
7. Adapting to Uncertainty
8. Debt-free and Self-Reliant
9. Beyond Formalities
10. Small, Simple, Self-Sustainable

THE POINT

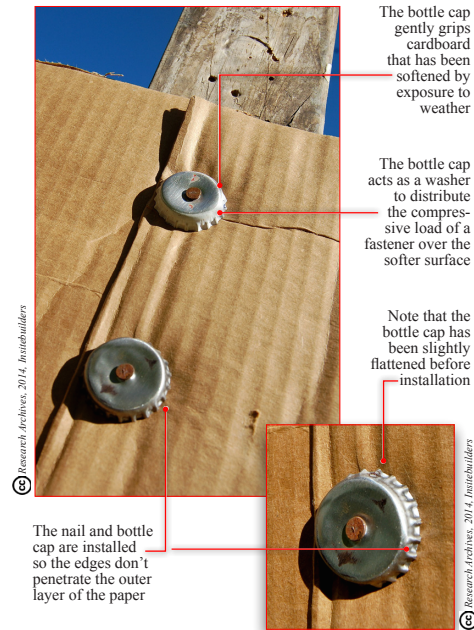
A homebuilt house is put together instinctively to occupy a place already taken as a home and close to the resources its builders need to survive.

AN INFORMAL AESTHETIC

My research into informal settlements began when I saw a bottle cap used as a washer for a nail securing cardboard to a humble shelter on the outskirts of a crowded squatter settlement.* I assumed the bottle cap was a way for a truly impoverished builder to save a few pennies on the black market. When I asked about the detail, the builder, who claimed to have invented the idea, showed me how the pleated edges of the bottle cap gently gripped the soft surface of the cardboard, distributing shearing loads to the layers of paper and reducing pressure to keep the cardboard from tearing at the nailhead.

Since there are no manufacturers producing washers to hold cardboard to an irregular frame with once bent nails and a flattened stone for a hammer, this intuitive solution could only have come from a hands-on feel for the strength of

**First used in 1346, a washer is a small flat metal, rubber, or plastic ring fixed between two joining surfaces or between a nut and a bolt to spread the pressure or act as a spacer or seal.*



The ingenuity of this seemingly insignificant detail shows a deep understanding of both the materials and methods necessary to put together an informal dwelling.

these salvaged materials. I noted also that it took a good deal of skill with a rock to pound the salvaged nails through the bottle cap and the paper layers without puncturing the well worn cardboard, bending the already bent nails, or splitting the fragile frame.

In formal construction, we're conditioned to building materials that meet industry standards that keep our engineered structures straight and level. Materials are manufactured to fit together, with surfaces literally machined to tolerances that allow pieces to be cut and trimmed with power tools that facilitate their crafted assembly. We also have codes and specifications that maintain the predictable standards of quality necessary to match market expectations and control orderly development.

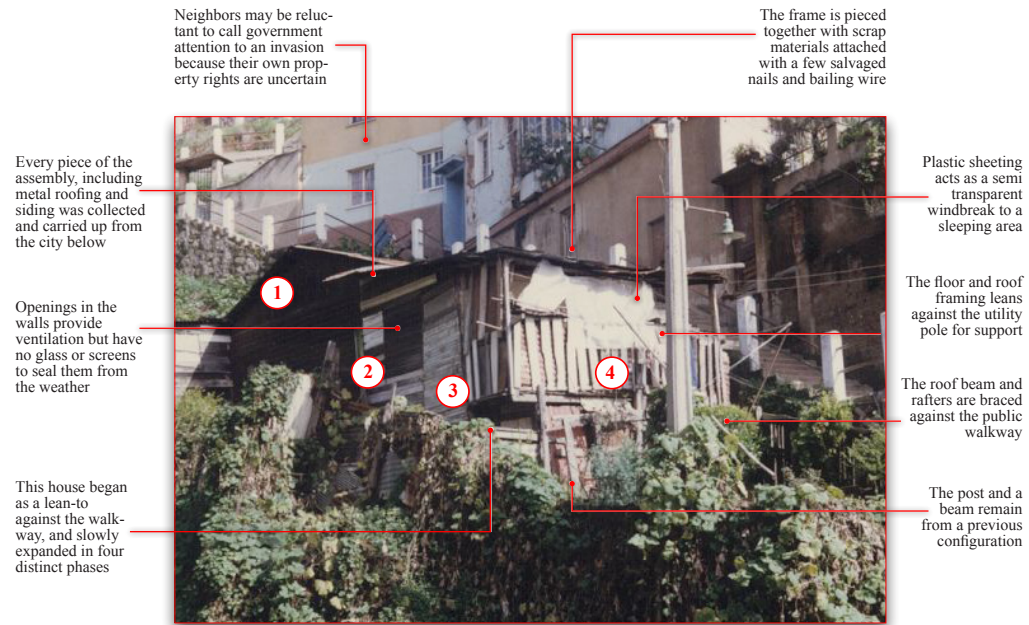
In an informal settlement, even the most established builders find it difficult to afford newly manufactured building materials. And these builders would almost never have access to adequate power or hydraulic equipment. Tools and machines

like these would be both pointless and impossible to use given the lack of power, difficult access, and marginalized conditions informal builders deal with in their constructions.

What I found in the end was a house-form, stripped of the paradoxes of a formal economy, standing well outside the control and consumptive purposes of regulated practices. At its core, any suggestion of a predictable style or design was irrelevant. Instead, informal builders avoided rules, regulations, and other formalities, adapting to unpredictable events, random materials, and well worn hand tools, in order to maintain an uncertain existence on occupied land. At the same time, it's the autonomy of these informal practices that were the key to the success of their survival.

In my opinion, it's the informality, as an underlying uncertainty, that instills the kind of operational flexibility that is necessary for informal builders to succeed. This is a "whatever" approach to construction where house-form is

shaped by uncertainty, with no obvious beginning and no predictable end. The result is an indeterminate aesthetic, put together according to an untutored logic, leaving its architecture unfinished, unpredictable, and in a constant state of change.



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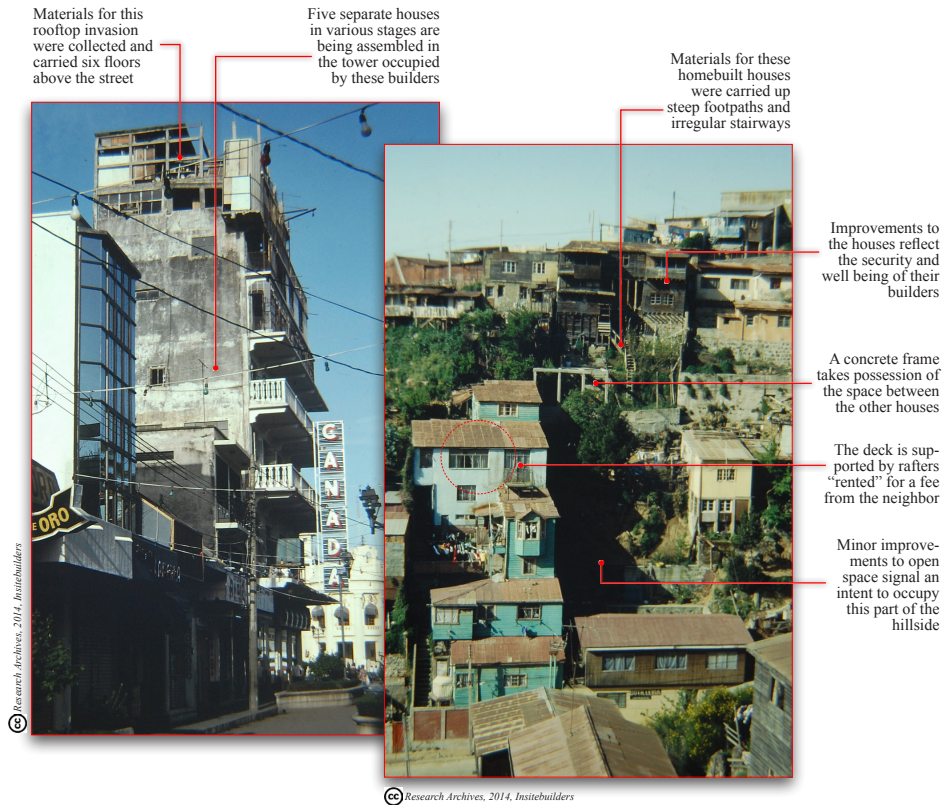
After more than ten years, efforts remain tentative because of periodic threats of eviction. What we see as a result is an innate human determination to create shelter, the antithesis of the pretense and excess of consumption, unmediated by codes, restrictions, industry standards, or the commonly held practices of marketable styles and design.

ELEMENTS OF A HOMEBUILT HOUSE

What I saw in the case studies were home-built houses, evolving unself-consciously as an architecture whose physical characteristics reflected the uncertainty of life in an informal economy. Construction started when almost any open space was purposely occupied as a place with at least some hope for the future.* Once the land was occupied, this sense of place was reinforced as materials were gathered and positioned to mark negotiable boundaries and erect a tentative shelter, testing reaction, and signaling the builder's intent to remain. If left alone, more materials were found and assembled to add privacy from neighbors and protection from the weather as the builders gradually took possession of the land.

With luck and a fading threat of immediate eviction, progress continued

**In the midst of uncertainty, the notion of home is reduced to any place on open, abandoned, or unusable land, a rooftop or corner, the shoulder of a road, alley or path, riverbed, or designated plot as part of a larger land invasion.*



A homebuilt house is put together in a place that has already been occupied as a home. It begins as a simple shelter, evolving as a house-form according to unpredictable events and its own sense of order.

For the safety of their children, tree branches were harvested and tied with wire for a guardrail

The space below the entry deck and the rooftop are used to store materials for some future improvement



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Objects are stored or pieced together in ways that can be disassembled and reconfigured when some unknown event or material discovery comes along.

unpredictably for years, with random materials slowly sculpted into a house-form that came to represent the well-being and growing confidence of the landholders. And because nothing could be wasted and everything had value, the house evolved for decades as a kind of deconstructible storage. Readily disassembled and reconfigured if and when some other object, material, or tool came along to change or add to its form.

In the end, the house was shaped by a random collection of form-giving materials, chance discoveries really, assembled tentatively to fix problems or add to a patchwork of unplanned and unpredictable improvements. The result was a deeply human form, a counterpane of impoverished solutions, self-determined, and well outside the values and controls of a formal market system.

This is a deinstitutionalized form of housing, a burden and a benefit to

both the formal and informal economy, but uniquely self sustainable.* It cost almost nothing to build and there is no rent or mortgage to pay, which leaves even the slightest income, earned or bartered, available to its builders for essentials, anything extra is cautiously invested in simple pleasures or improvements that might make life a little more comfortable.

Over generations, both the house-form and settlement respond to social and economic change, as untutored builders instinctively piece together, intuitively engineered columns and beams, reinventing furnishings like sinks, stoves, and toilets using hand-tools and very little money. In time, density increases as a settlement expands organically, boundaries are secured with irregular walls and fences, memories fade, and those in possession of the land become its rightful owners.

**Some land invasions are roughly laid out according to a grid pattern, making them easily identifiable as "planned" communities, in contrast to the more organic formed settlements, villages, and medieval and preindustrial streets of early towns and cities.*

1. A SENSE OF PLACE

Homebuilt houses are pieced together anywhere there's an open or otherwise unused space, especially when control and ownership are unknown or complicated by the long standing possession of early landholders. Keep in mind that ownership through adverse possession is a legal principle reinforced by the spoils of ancient wars, feudal systems, colonialism, legal decrees, or property held by claimants that predate current governments and political systems. The difficulties of resolving ownership according to these precedents led to modern land surveys and recorded titles with boundary descriptions, owner names, addresses, tax information, and certified plat maps with benchmarks based on surveyed monuments.

But the titles recorded by these surveyed boundaries are often difficult to identify in some jurisdictions.* This leaves a number of public and private holdings loosely defined and open to informal builders who might then move to occupy them as a home. Land

invasions like these are most prevalent where agencies are distracted by internal conflicts because of weak or politically unstable governments, leaving land laws and building codes infrequently enforced.

Recognizing the opportunity, self-determined builders look for gray areas where control is blurred or the details of ownership are lost to memory, inadequate public records, or bureaucratic inefficiency. In a regulated economy, space open to invasion includes setbacks, easements, and corners of abandoned property quietly occupied by builders who risk almost nothing to test possible possession as adverse landholders. Using scrap materials as fence lines and markers to physically stake a claim, the logic of this approach to housing is governed by each builder's commitment to remain in place over an extended period of time. The homebuilt house therefore starts as soon

**For example, property titles recorded by English Common Law in the colonies used "metes and bounds" prose like descriptions that start from a point of beginning like a stake or other man-made marker and include physical landmarks such as trees, rocks, boulders, or stream beds that have long since disappeared.*

The buildings surrounding this space maintain possession of the land with walls built over generations of occupancy

Walls and fences define the boundaries of existing landholders, leaving this unmarked space open for a strategic invasion



The open space adjacent to this public walkway might be available for occupancy. Minor sitework and expendable materials could be used to test its potential as a home.

as its builders decide to take a place as their home. Like all real estate investments, location and access to resources are important considerations in making this decision.

As outlined in each of the case studies, occupancy began with casual gestures, incidental interactions, and minor improvements that included removing debris, clearing weeds, trimming branches, and walking different paths in and out of the neighborhood. Possible boundaries were marked with posts or other objects, applying just enough time and materials to visibly reinforce possession and demonstrate an intent to remain in a place.

Also significant, to reduce the risks of their investment, improvements were started tentatively as no more than an obvious presence. With the exception of the planned invasion by an organized group of builders, construction started as no more than a campsite cautiously occupied for months, eventually spending nights, preparing food, and wash-

ing clothes while living under a simple tent or expendable shelter. The idea in each case study was to test the viability of continuing the invasion, waiting for negative reaction from neighbors or regulatory agencies and some other unknown event or material find to trigger further construction

When left alone, the builders I met made modest improvements to their living conditions as a matter of course, leveling the ground for a floor and widening a shelf on a hillside to make things a little more comfortable. While remaining humble and unobtrusive, house-form emerged as expendable objects that were pieced together, first to add privacy and protection, but more importantly to strategically represent a commitment to continue possession as long-term landholders. Over decades of occupancy, homebuilt houses gradually blend into the background as part of an existing neighborhood, firmly anchoring their builders to land they hope to hold for the generations to follow.

Expendable materials are placed tentatively to provide shelter during first stages of occupancy

Gradual improvement to the shelter further test the feasibility of remaining on the land



A crude shelter makes it possible for the builders to remain on the land and maintain possession as they test for reaction from neighbors and government regulators.

2. MATERIALS NEGOTIATE OCCUPANCY

In the settlements I studied, informal builders consistently used objects and materials as pawns to signal their intent to occupy open space. Placed strategically, these materials subtly attract attention to a possible invasion, visibly testing for a negative reaction to a new construction. If removed or disturbed, it might indicate an objection from a neighbor with some unknown prior claim, or a government agency trying to prevent a settlement from expanding.

Important in this conclusion, is that these materials were the medium of an informal exchange, at first no more than an expendable deposit, with little loss if the attempt failed, but if left undisturbed or ignored over an extended period of time, they indicated that the space might be open to further development, only time would tell. In other words, as tokens in a cat and mouse game, physical objects were used to first find abandoned or marginal property and later to informally negotiate the boundaries of occupancy.

The pace and quality of assembly was also an important discovery. If the materials remained long in a stockpile or did not evolve beyond a crude shelter after a few months, the invasion could be easily removed and the hopeful builders forced to try again in some other place. But once the materials were put together in a clearly



The idea is to use expendable materials to establish a visible presence on the land, slowly taking possession as more materials are added to a gradual invasion.

habitable space, even the most chaotic house-form indicated a deeper commitment and a challenge for local governments to take action, especially when there were few alternatives to offer. The trick of course was for the builders to carefully balance their effort, investing just enough time and resources to claim visible possession, without

moving so fast or building in such a way as to attract unwarranted attention. At the same time, moving too slowly left an opening for another builder to assume possession, or worse yet make it easier for the government to evict the builders as timid squatters. When successful, the original invasion continued as materials were discovered and added to the evolving house-form, or stockpiled close at hand for some unknown purpose in the future.

Using scaled time lines, it became increasingly obvious that random materials were gradually replaced with more ordered solutions in a kind of informal gentrification that eventually included formal construction methods, concrete frames, brick tile, plastered walls, and decorated and painted facades. This is interesting because what begins as a crude shelter, reflecting both the desperation and determination of its builders, was transformed by luck, the right opportunities, and a growing sense of security, into a viable alternative to market driven or directly subsidized housing.



Beginning slowly, a homebuilt house evolves according to the well being of its builders and a fading threat of eviction. In time, ongoing improvements reinforce open and obvious possession and strengthen a claim as adverse landholders.

3. RESOURCES SHAPE HOUSE-FORM

Where formal construction starts with engineered plans, permits, schedules, and budgets, a home-built house begins tentatively with no idea of its eventual size or final form. This means architecture emerges like sculpture, using whatever tools and materials that become available during a long and indeterminate process. In time, a house-form is serendipitously shaped by the resources that surround it, with both the discovery and application of these resources the result of random and unpredictable material events.*

I found that in order to sustain this approach, everything must be seen to have value and nothing could be wasted. Broken tools or seemingly insignificant objects opened new possibilities for informal builders. Torn plastic sheeting sealed openings, railroad ties became columns, scraps became siding, and some newly discovered tool made it possible to shape wood, cut stone, or bend metal in ways that could not be accomplished before. In this way, chance discoveries led to improvements, start tentative additions, or trigger complete reconstructions. The luxury of imagin-

**The uncertain nature of these resources are form-givers, a dull saw means fewer cuts, plastic sheeting blocks the weather but soon deteriorates, a handful of used nails only temporarily secure a few boards, and a salvage window or door brings air, light, and security that changes the lives of its builders.*



With little or no money, found objects, scraps, and materials collected from forests, riverbeds, and roadsides become form givers adding shape and structure according to their application in an evolving house-form.

ing a solution, and buying the materials needed to complete some preconceived stylistic vision, was well beyond the means of the builders I met in this research. With little control over the outcome of a disordered process, objects were tentatively aligned,

The window frame is fitted over a solid wall to look like a room but there is no opening

A single piece of plywood was added to look like a door but has no hinges or latches and doesn't open

Boards attached to a wall built from stone, used tiles, and concrete give the appearance of a mansard roof



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Materials are applied to emphasize the general shape of a house, but the door and windows do not open. What we see is a patchwork of materials that visually reinforces the builder's occupancy.

Flashing was added to this second story ridge line by builders working without scaffolding or sheet metal tools

Note the absence of tool marks from the repeated blows needed to bend the heavy metal around the roof line



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Random materials and limited tools require intuition and inventive skills that are unique to the impoverished nature of houses in an informal settlement.

awkwardly overlapped, and quickly added as vaguely transient solutions in an ongoing indeterminate process. The result was the distinctively disordered appearance of what I suggest later as a vernacular of uncertainty.

Interestingly, it also seemed to be the absence of good tools, predictable materials, and formal controls that served to push untutored builders toward more sustainable approaches to the assembly of their houses. With limited income, they came up with solutions using what little they might have had on hand. For all their variables, salvaged materials, mixed with natural vegetation and well worn hand tools may not encourage an exacting craftsmanship, but they do compel many informal builders toward imaginative installations, intuitive thinking, and inventive solutions.*

**The indeterminate events of informal construction force its builders to take a hands-on approach. With years of practice, skills and experience evolve as tools and materials are accumulated. In time, the expertise of what was once an unskilled builder works to shape the more ordered form of a homebuilt house in its later stages.*

4. A SLOW IMPERCEPTIBLE PROCESS

Conversations and anecdotal comments from informal builders revealed a kind of enduring patience that can only come from abject marginalization and poverty. What I found was a process that required a careful balance, incremental improvements, piecing together a house-form to simply remain in place long enough to take full possession of the land as their home. The goal was to move so slowly that the invasion was shrouded by other more important public and personal priorities.

For this to happen, overloaded bureaucrats and equally distracted neighbors had to share the same indifferent state of mind, leaving few to really care to know when a construction actually started, or if it should be of anyone's concern. Important was that the objective was to piece together shelter to first remain in place and materially demonstrate active possession with a viable house-form, but only at a pace that was gradually, if not reluctantly, accepted or ignored by neighbors

and authorities. This means, any single action might trigger a negative response, moving too slowly could make the house-form appear to be derelict and easily disposable, but moving too quickly could attract attention or worse yet, suspicion and resentment for the intrusion. In the meantime, people in the government move on, policies shift, and community relationships strengthen as the house continues to evolve and subsequent generations of builders take on an increasingly secure sense of ownership and control.

This makes it important for informal builders to find a pace for the construction that can be sustained over a long period of time. Keeping in mind that with little if any extra money, in an unpredictable and totally random process, informal construction must balance the poverty of immediate needs against discomfort and inconveniences. The result is a measured material approach that stretches over years of uncertainty and decades of intermittent construction.

Expendable objects are pieced together slowly as a crude shelter by a roadside squatter taking possession of open space

As the shelter takes on a more substantive form, it signals a stronger commitment by its builder to remain in place



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Crude shelters might be ignored when they appear to be easily removed. To avoid a negative response and eviction, they must evolve imperceptibly as a house-form that gradually blends into the neighborhood.

5. THREE-DIMENSIONAL STORAGE

The builders I met were keenly aware of the risks they were taking when they began what they hoped were long-term improvements. For them, the homebuilt house was a temporary space, a deconstructible house-form, readily disassembled, so that its pieces could be moved or completely reconfigured in response to some unforeseen event.

In this way, what might be taken by some as worthless scrap held real value to builders because every object or piece of material had some immediate or long term potential in some other configuration. I found that even when objects were installed, they were tentatively fastened to resolve or cover a particular problem, adding a little more comfort to an evolving house-form, but only placed temporarily by its builders. First because whatever the material was, it was almost always inadequate as a permanent solution, and second because its value in some future configuration remained even after its installation.*

This meant the latent potential of a ma-

terial made careful fitting and trimming impractical to an informal builder. All things considered, there was no need for anything to be perfect, and no reason to alter the material in ways that might diminish its promise in some unknown future application.

In other words, in at least the early stages of its assembly, a homebuilt house is no more than a three-dimensional collection of objects put together in ways that remain entirely deconstructible. Uncertainty keeps the house-form flexible, and as materials and improvements are removed and replaced, its builders adapt physical form according to informal circumstances with their own logic and indeterminate order. As such, the house is never really finished. Everything is temporary and the chaotic combinations of random objects mean every installation is resolved only to disclose a variety

**Uncertainty keeps the materials constantly shifting, removed and replaced, banked into a liveable stockpile for some unknown future configuration, slowly evolving in a place where nothing is predictable.*

of underlying problems. The resulting house-form is almost Zen-like in its simplicity, little more than the essence of what a house is in the formal economy.

Every piece in this collection, including the gutted out car, has value in some unknown future configuration

A homebuilt house is a collection of objects that can be disassembled, moved, or reconfigured in place or at another location



Eviction would be devastating to a family of builders if it meant the loss of materials they've collected and assembled over years of occupancy.

6. INTUITIVELY ENGINEERED SOLUTIONS

Look closely at a homebuilt house and you'll see an intuitively engineered building, put together by builders using a logic of trial and error. Since nothing can be planned in these constructions, building materials were reduced to a random collection of objects installed according to whatever fit together at the time. Once a piece was in place, strength could be tested by shaking, pounding, or jumping on the structure to see if additional supports might be required. In other words, the only way for these builders to know if an installation was sound was to put the materials in place and see if they actually worked. Obvious weaknesses were then resolved with temporary solutions, with no way to predict what the next material or object might be that would help permanently strengthen the intuitive construction.

In this way, an undersized beam is tentatively fitted and tested to frame a roof with only a vague notion that it would stay in place during a storm. Without the resources to buy the right materials, tools, and fasteners, heavy objects like stones or old tires were used as nails to hold down roofing, brace walls, or retain the earth. These tentative installations contributed

The floor and roof framing are cantilevered to add floor space and a drip line

The salvaged material on this room addition are arranged as a uniquely redundant framing solution

Intuitively reinforced concrete piers will eventually extend more than 40' above the ground

Weaknesses are supported with temporary braces as the builders continue to test alternatives



Working without power, scaffolding, or equipment, homebuilt houses are put together with simple hand tools and none of the mechanized methods or standards of formal construction.

This gate and fence were pieced together intuitively from an assortment of materials

The pieces were fitted into the frame like a sculpture with minimal cutting and trimming



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Builders fit random and irregular objects into assemblies in ways that accommodate the unpredictable nature of their materials.

to temporary solutions that were left in a disordered state until another form-giving material or tool came along.*

Interestingly, this feel for the strength and potential of a material developed with a hands-on trial and error experience. Sociologists see these incremental technical advances in skills as *techne* or the outcome of a practiced specialization. The methodical nature of the work, lack of proper tools, and limited resources meant informal builders gradually gained the skills needed to continue their irregular assemblies. This suggested that by being compelled to work with random objects, unpredictable materials, and limited tools, the builders I studied managed to pick up a variety of skills over the years. But until they were fortunate enough to be able to invest in manufactured materials and decent tools, there could be no planned approach or thought of finding a permanent structural solution.

** For example, there was no need to carefully frame a wall from scrap lumber when there may not be enough materials to finish the framing, or there is some hope of finding a door or window that would completely change the wall's configuration.*

TECHNE

Ancient Greeks described the separation of a hands-on craft from simple work and labor as a philosophical trait they called “*techne*.” *Techne* is a mechanical skill, as an understanding of something that brings a familiar expertise out of the act of making or doing.

Techne is seen in singular objects that were shaped or assembled with a focus on the physical act of making, not as an art, but as the result of the actions necessary to put something together with one’s hands to solve a problem and make something that wasn’t there before. The aesthetic of the result comes from a slowly acquired understanding of the tools and materials that are a manifestation of the work.

What I saw in the details of the home-built houses we studied fits the definition of *techne* as a craft shaped by its tools and materials, exposing the underlying instincts of its makers. Like the builders working in prehistoric settlements, invention and ingenuity steadily increased through experience and hands-on practice.

7. ADAPTING TO UNCERTAINTY

A house in a formal economy begins its life-cycle when it's first sold, then furnished and occupied by its new owners as a home. Once the owners are comfortably settled, the house begins a gradual decline, requiring continuous maintenance to keep it in its original condition. On the other hand, a homebuilt house starts as an expendable shelter, erected to protect its builders as they take possession of a loosely defined space in a place they hope will eventually become a permanent home.

I found that both the land and the homebuilt house adapted to these uncertain beginnings through a series of unpredictable improvements. Over decades, random materials triggered disordered changes that reflected both the security of its occupants and their current well-being as landholders. These improvements were made to make life a little more comfortable and visually strengthen a commitment to remain on the land, but most important, the final form was no more than an adjustment, accommo-

dating arbitrary materials, worn tools, and its builder's impoverished circumstances.

In other words, where occupancy meant no more than minor site work, ongoing improvements did little more than temporarily manage immediate problems. Without the luxury of a plan, materials were applied as spontaneous solutions that only took on a sense of order after decades of hardship. This meant any significant change might take generations to accomplish because any substantive improvement depended on income and access to specialized skills and higher quality materials.

In the meantime, builders could only speculate on possible investments, perhaps purchasing better tools, using money saved from low wages for new materials, and eventually paying specialists to strengthen foundations, install a better roof, or rebuild walls with lockable doors and operable windows. In the end, working with irregular materials,

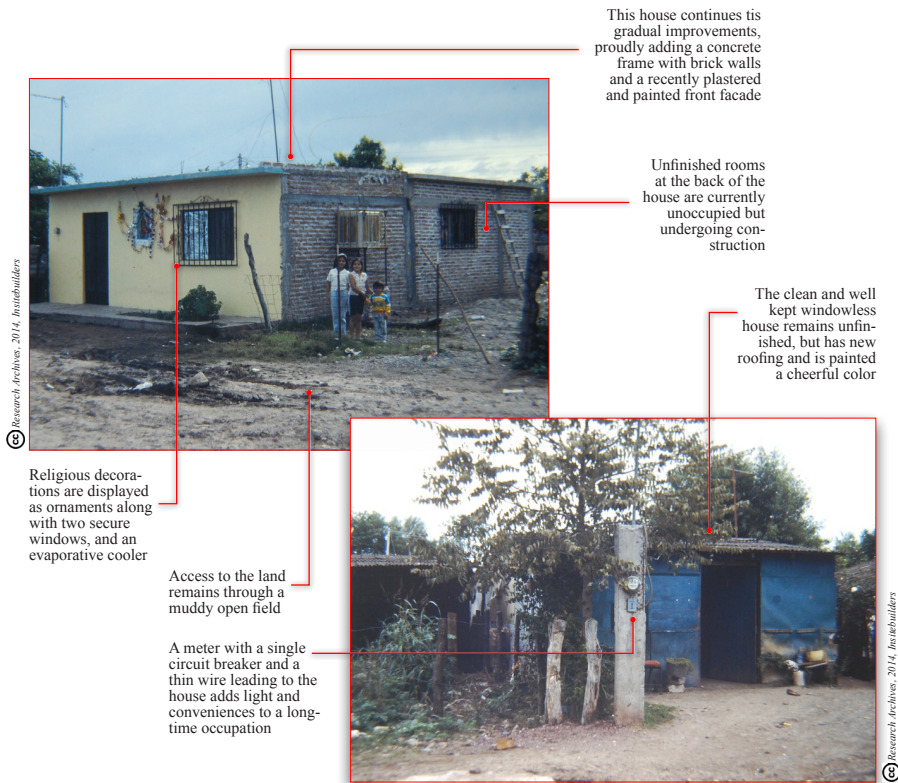
A concrete frame reflects the financial well being of the landholders as the house moves slowly toward higher quality materials and finishes

Materials stockpiled below the existing houses suggest a new invasion is being considered



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As infill invasions continue to shape a settlement, homebuilt houses evolve slowly as owners invest in structural improvements, water and power connections, and higher quality materials.



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This house continues its gradual improvements, proudly adding a concrete frame with brick walls and a recently plastered and painted front facade

Unfinished rooms at the back of the house are currently unoccupied but undergoing construction

The clean and well kept windowless house remains unfinished, but has new roofing and is painted a cheerful color

Religious decorations are displayed as ornaments along with two secure windows, and an evaporative cooler

Access to the land remains through a muddy open field

A meter with a single circuit breaker and a thin wire leading to the house adds light and conveniences to a long-time occupation

With the security of time on their land, owners are able to collect materials and save enough money to add conveniences like power and water, eventually investing in more durable materials, adding finishes that proudly reflect their general well-being.

tentative assemblies, and limited tools, builders could only invest what little they could save from uncertain income, while facing personal joys and tragedies, changing political loyalties, and the challenges of life in an unregulated economy.

The result is an architecture undergoing a constant state of gradual change.* Shaped by unpredictable events, physical form then evolved toward an ordered facade when conditions were favorable, but it was just as likely that these same events would keep the house an impoverished, disordered, and uncomfortable place to live, just barely able to hold onto its claim to the land. Until then, a homebuilt house remained the essence of intuition and invention where form and space were created out of a basic instinct for shelter and survival. With luck and the right opportunities, both place and homebuilt house might one day merge as a permanent home in a gentrified informal community. At the same time, the odds against these builders meant successful completion could only be realized after decades of struggle, modifications, and change.

* Some houses are no more than sheds, vague suggestions as house-form, while other houses take on a strong sense of personal expression and an inherent commitment to what must be a very difficult process. Both are reflections of different phases of an evolutionary practice based on the time, tools, and the fortunes of collected materials.

8. DEBT-FREE AND SELF-RELIANT

In the end, it became increasingly clear that the assembly of a homebuilt house was only possible because informal builders were able to live debt free—during its construction. Paying nothing for housing other than their labor and materials, they were able to gradually take possession of a place in an informal community. For most, the motivation came from marginality and abject poverty, but I found it also stemmed from a reluctance to spend what little they might have for rent, mortgages, taxes, fees, and the other costs of formal housing.

As a result, with neither the possibility nor the will to take on these financial burdens, informal builders turn instead to a self-determined approach to their housing and survival. By choice or chance, they endure the hardships and sacrifices necessary to occupy unused land or an open space and slowly put their lives together. Like all builders, some were clearly better at this than

others, but as long as they were able to remain debt free, even the slightest income or most inconsequential scrap of material could be used to make life a little more comfortable. In other words, what I found as a primary element of a homebuilt house was that without housing costs, any money earned by the family could be applied to the essentials of their day to day survival, including food, clothing, education, and other basic needs that would otherwise have to be sacrificed in a formal setting.

Though living conditions might appear to be superior in a formal economy, for informal builders we talked to, the cost of housing, political prejudices, bureaucratic shifts, and long hours at low wages, were simply unsustainable. As low income workers they would have had to struggle in a consumptive and market driven economy, with few opportunities and limited access to resources, any injury or sickness would eventually leave them homeless and completely

destitute. Informal builders chose instead to take a different approach. There was an alternative form of housing that came with the freedom and flexibility of a uniquely self-reliant way of life, in a very uncertain world.

With random materials and minor site improvements, a homebuilt house evolves to anchor its builders to a place they call home

The land gives these builders a place to generate at least some income and hope to improve their lives



For impoverished builders, a debt-free life in a makeshift shelter is a more dignified alternative to a substandard apartment or deteriorating unit in a public housing project.

9. BEYOND FORMALITIES

Formal builders work in a regulated industry organized to minimize uncertainties. Buildings are constructed according to plans and specifications, drawn to meet the requirements of carefully manufactured materials and built on land controlled by building and zoning codes. The higher standards of these institutionalized practices reinforce the values and economic well-being of property owners and their governments by maintaining a strong real estate market and stable tax revenues. In this way, real property in the form of land, housing, and commercial buildings are the foundation of a formal economic system that specifically promotes the expectations of social wealth and stylistic ideologies.

In the informal settlements I studied, these standards and values don't exist. Carefully crafted finishes, predictable materials, and stylistic decorations are luxuries that belong to a privileged class working in an entirely different world. Informal builders must put their houses together according to largely unspoken

indeterminate relationships that follow none of the rigors of formal construction. Marginalized by laws that govern and protect formal builders, what may seem like an independent and self-reliant process is also a frail vulnerability

Random materials are tentatively installed to enclose the space and add some protection from the weather

Consider the skills necessary to salvage, process, and attach waste materials to a fragile frame



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Despite the obvious challenges, informal architecture responds to its impoverished circumstance, shaped by its context of uncertainty, low wages, lost opportunities, and distant political forces far beyond their control.

with constant exposure to all forms of exploitation. Hopes may be high for some, but acting on those hopes with even the most determined intentions, is difficult at best, especially when the goal is to piece together a house without the resources or time to devote to its construction.

With few alternatives, informal builders then find themselves working in an economy well beyond the constraints and protection of local land laws and regulatory codes. Any chance of success depends on uncertain cultural constructs that require an open-ended and adaptable approach to shelter.* The result is less a visible consequence of exclusionary practices as the outcome of social and economic marginalization, and more a model for an alternate way of generating housing.

**By avoiding formalities, informal builders are free to adapt to unfamiliar tools, unexpected materials, and unforeseen events and its the freedom of these informal practices that hold the greatest lessons for our own survival in an equally uncertain world. In an economy where style and design are consumptive luxuries, the essence of a homebuilt house is an adaptability that can only come from an unregulated approach to its construction.*

10. SMALL, SIMPLE, SELF-SUSTAINABLE

The most important tenet of occupying land with a homebuilt house is to start small, making intuitive decisions while initially piecing together only what's absolutely necessary for privacy and protection. For most, this began with little more than a tent like covering and a place to stockpile materials. Further improvements followed a guerilla like approach to its assembly. As discussed in the case studies, the idea was to make changes that were small enough to remain imperceptible, continually testing with incremental improvements, adding just enough to maintain possession without triggering a reaction that might result in eviction.

But it was equally evident that, at least in the first few years of an invasion, informal builders were compelled to keep things simple. Ambitious and complicated solutions require more materials, time, and money to put together. For these builders, materials came slowly and unpredictably, with improvements often delayed while waiting for some

unknown material, tool, or opportunity to come along. Staying simple kept the house flexible, making it possible to adapt its shape and purpose as the homebuilt house evolved. Odd and irregular pieces could then be removed, replaced, or reconfigured to

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The skill necessary to assemble available materials with traditional methods can be seen in this simple house-form



This small house is almost invisible as it's pieced together next to a planting shed on the edge of an open field

Expendable materials are arranged as a house-form that can be disassembled and reconfigured over years of occupancy

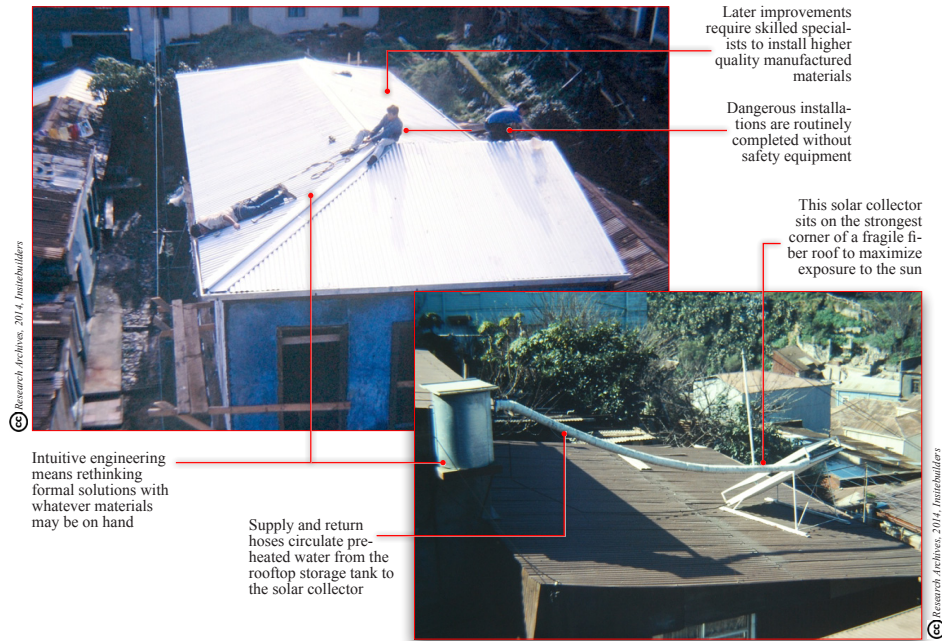
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When an invasion starts as a crude shelter, it makes any immediate threat of eviction seem unfair and unnecessary

An unassuming shelter vaguely suggests an intent to occupy. Humble beginnings inspire compassion in a shared struggle, making it likely that the initial invasion will be ignored, leaving long-term improvements as visible evidence of each builder's commitment to remain on the land.

adjust to uncertain social and economic circumstances. This was again important because it left the entire assembly, deconstructible and ready to respond to any new discovery or unforeseen event.



With luck and time on the land, improvements like reinforced concrete frames, plastered walls, and manufactured roofing are installed with the help of friends or specialists familiar with higher quality formal installations.

Another unexpected discovery was an understanding of a construction process where nothing could be accomplished if both the builder and house-form were not self-sustainable. With no outside obligations, there's no pressure on the builders to do any more than what's absolutely necessary to meet their immediate needs, but the slow and intuitive assembly of a homebuilt house, along with its constant need for repairs and improvements, became the basis for a self-determined approach to its construction. Forced by necessity, builders were required to invent solutions that could only come with the experience they gained working with a variety of random materials and limited tools.* Outside the support of formal services and suppliers, informal builders had no choice but to find their own hands-on solutions, responding to uncertain priorities, in an openended and unregulated approach to their survival.

**Informal construction may mean lower costs, but it also means poorer quality and increased risks. This leaves it up to the individual builders to avoid loss and injury by carefully considering the problems that can come with unlicensed specialists and used or discounted materials.*