THE 19TH-CENTURY AMERICAN COUNTRY HOUSE:
A PROTOTYPE FOR MULTI-FAMILY HOUSING

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Now if possibility outruns necessity, 
the self runs away from itself, so that 
it has no necessity whereto it is 
bound to return—
then this is the despair of possibility. 
The self becomes an abstract possibility 
which tries itself out with floundering 
in the possible, but does not budge from 
the spot, nor get to any spot, 
for precisely the necessary is the spot; 
to become oneself is precisely a 
movement at the spot. 
To become is a movement from the spot, 
but to become oneself is a movement 
at the spot.

Soren Kierkegaard, 
The Sickness unto Death
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract</td>
<td>3</td>
</tr>
<tr>
<td>Design Theory</td>
<td>4</td>
</tr>
<tr>
<td>I. Assumptions and Design Goals</td>
<td></td>
</tr>
<tr>
<td>II. The Prototype and the Hypothesis</td>
<td></td>
</tr>
<tr>
<td>III. Generation of the Organization and Plan</td>
<td></td>
</tr>
<tr>
<td>Schematic Illustrations of Design Prototypes</td>
<td>9</td>
</tr>
<tr>
<td>The Site</td>
<td>12</td>
</tr>
<tr>
<td>I. Site Selection</td>
<td></td>
</tr>
<tr>
<td>II. Description of Site</td>
<td></td>
</tr>
<tr>
<td>The Trial Program</td>
<td>15</td>
</tr>
<tr>
<td>Confirmation of the Hypothesis--The New Prototypical Design, Description</td>
<td>16</td>
</tr>
<tr>
<td>Epilogue</td>
<td>19</td>
</tr>
<tr>
<td>Acknowledgements</td>
<td>22</td>
</tr>
<tr>
<td>Bibliography and Sources</td>
<td>23</td>
</tr>
<tr>
<td>Illustrations and Form References</td>
<td>27</td>
</tr>
</tbody>
</table>
ABSTRACT

The 19th-Century American Country House: A Prototype for Multi-Family Housing

by Rodney D. Parker

Submitted to the Department of Architecture on May 7, 1976 in partial fulfillment of the requirements for the degree of Master of Architecture.

This thesis addresses the need to develop a more acceptable physical form for multi-family housing in the United States. It accepts as a basic assumption the idea that any popularly acceptable form of multi-family housing must be based on a form that is deeply rooted in American culture—specifically, the most popular form of housing in the United States, the detached single-family house. Of this form an historical example—the 19th-century country house—is presented and shown to be highly appropriate as a physical reference. The hypothesis is set forth that a contemporary physical form of multi-family housing could be generated, unmistakably composed of single-family houses, yet completely whole in itself, using the historical prototype of the country house. Proof of this hypothesis is offered in the form of a design for a complex of several units of housing for a site in residential Cambridge.

Thesis Supervisor: Robert J. Slattery
Professor of Architecture
Design Theory

I. Assumptions and Design Goals

- There is an increasing need for the construction of multi-family housing in the United States and a corresponding decreasing ability to continue the construction of reasonable single-family detached houses.
- The form of multi-family housing in any country must be rooted in the cultural tradition of that particular country.
- Yet the tradition of domestic architecture in the United States is overwhelmingly dominated by the detached single-family house. The standard forms of multi-family housing--row houses, multi-plexes, apartments--remain much less popular.
- If the goal is established to develop a form of multi-family housing that will be highly accepted in the United States, then it may be concluded that that form must be based on the form of a single-family detached house.

II. The Prototype and the Hypothesis

- As domestic architecture, the New England continuous farmhouse constitutes a growth form that is indigenous to América.

A. Although this form was usually owned by a
single kinship group, it was often occupied by more than one nuclear family. Thus, the farmhouse, although technically a single-family residence, was tending to operate as a multi-family dwelling. The multiple and additive quality of the physical form of the continuous farmhouse thus reflected the nature of the social group it sheltered.

B. Two smaller scale forms of housing related to the continuous farmhouse were referred to by 19th-century pattern book writers as the cottage and the country or suburban house. The cottage usually seemed to be designed for a single, large nuclear family, but the country house was usually planned to accommodate two semi-autonomous social groups: the servants and the owner's family. The accommodation of these two groups was indicated in the house plan by the inclusion of two stairwells, one in the front near the living room or parlor, and one towards the rear near the kitchen. Each staircase led up to private bedrooms. The country house can thus be viewed as a single dwelling in a state of architectural
mitosis, the two stairwells constituting the two nuclei that could potentially serve as the organizational foci of two smaller autonomous cottages. Indeed, often the physical form of the typical country house, such as W. L. B. Jenny's Blair Lodge, tended to be that of two conjoined, asymmetrically balanced cottages. And just as the country house appears to consist of two linked cottages, several cottages appear to constitute the form of the continuous farmhouse.

C. Thus it is seen that three closely interrelated forms of single-family houses exist representing three different scales: the cottage with a dimension of 30 to 40 feet; the country house with a dimension of 60 to 100 feet; and the continuous farmhouse with a dimension potentially exceeding 200 feet. Given this, and now referring to all three forms collectively as the country house, the following design hypothesis is propounded:

D. The 19th-century American country house is a prototype on which can be based a contemporary form of multi-family housing, completely whole in itself, yet in its physical form unmistakably
composed of autonomous single-family dwellings.

III. Generation of the Organization and Plan

- For this thesis two plans were used from Palliser's New Cottage Homes (1888): a suburban country house, Design 38; and a cottage, Design 152.

A. By considering these plans as additive units, a form of housing can be generated whose growth pattern parallels that of the continuous farmhouse.

B. The generation of the larger form is achieved by coupling together the vertical circulation elements (stairwells or staircase halls) of the basic units. The stairwell serves as the focus of the basic unit; each basic unit tends to be defined by its focus rather than its wall definition.

1. Because it has its own stairwell, each basic unit has the option of functioning autonomously as a single-owner house.

2. The horizontal distribution linking the stairwells allows the option of the whole "train" of units functioning as a single-owner entity, possibly occupied by a single
large group or institution. In this way the scale of the use/user group can approach the scale of use of the largest form reference, the continuous farmhouse.

3. Alternatively, each four-story basic unit, if individually owned, may be further subdivided into at least three residential units, the upper two stories possibly being occupied by the owner.

4. In order to maximize the number of exposed gables and thus maximize the identifiability of the autonomous units, two pairs of coupled basic units were linked by a lower block of apartments. This low block is associated with a built void—a stack of two veranda/decks—which serves as the horizontal distribution link between the two pairs of stairwells.

5. A collectively operated commercial greenhouse terminates the linear growth of this piece; it is built above a common underground parking garage. This greenhouse/garage section occupies a position similar to that of the barn in the continuous farmhouse.
Schematic Illustration of Design 38 from Palliser's New Cottage Homes.

Shows how a representative suburban country house plan tends to be a pair of 3-room clusters, and thus constitutes the beginning of a train of such clusters. Each cluster is focused around a stairwell, the two stairwells being coupled by a linking corridor.

Schematic Illustration of Design 152.

Shows a cottage plan which is basically a cluster of 3 rooms focused around a staircase hall. This plan can be used to generate a train of units by employing corridors to couple the staircase halls together.
Design 38

First Floor Plan

Second Floor Plan

Use Spaces

Linked Distribution
Design 152

First Floor Plan

Linked Distribution

Stairhalls Linked

Stairhalls Abutted
The Site

I. Site Selection

- Harvard University's Tree-Land/Bindery site was chosen as a location to test the design hypothesis for the following reasons.

A. A projection for housing had been done in a previous studio using a part of the site now occupied by a parking lot for Cambridge Electric Light Company. The dimensions of that lot—approximately 64 feet by 240 feet—suggested a linear growth pattern for the housing. A conventional lot size for mid-19th-century Cambridge was 63-by-100 feet; the size of the parking lot suggested that two such lots had been conjoined. Since the typical suburban country house of the 19th century was naturally able to fit the then-standard lot size, there seemed to be a good match between this part of the site and the chosen prototype, the continuous farmhouse.

B. There are presently strong, simultaneous demands to have the site developed in several seemingly conflicting ways.

1. Harvard University wants to use the site to build faculty housing or graduate student
housing.

2. The City of Cambridge wants commercial development to increase its tax base.

3. The Riverside community wants to avoid being completely cut off from the Charles River and wants to see working-class family housing built on the site.

There is a strong possibility that more than one of these uses will eventually be accommodated on the site, either sequentially or simultaneously. It is hypothesized that the form generated by the country house/continuous farmhouse prototype can accommodate all of these uses.

Thus, the Tree-Land/Bindery site is being used to test the prototype as an appropriate physical context and as a relevant social/political context. For the purposes of this thesis, economic considerations such as land costs have not been given priority.

II. Description of Site

The site, as indicated above, is in Cambridge and consists of about two and a quarter acres along Memorial Drive on the bank of the Charles River.
The river edge is about 435 feet long; this is the longest dimension and runs approximately north-south, defined by Akron Street on the northern edge and Western Avenue on the southern edge of the site. Immediately across Western Avenue is a Cambridge Electric Light Company power plant. It was built in 1901, and the elevation on Western Ave. of its largest block is 65 feet high and 100 feet long. At noon in winter it can cast a shadow over the southernmost 60 feet of the Tree-Land/Bindery site.

The eastern edge of the site is bounded by the 3- and 4-story framehouses of the Riverside community. Immediately across Akron Street is a 5-story high block of Harvard's Peabody Terrace. This housing complex for married students is dominated by three 21-floor towers.
The Trial Program

The design hypothesis was tested using the following trial program for the entire site.

A. Housing

Approximately 50 dwelling units with a total indoor and exterior private area of about 100,000 sq. ft. The overall site density should not exceed 30 du/acre.

B. Commercial

A greenhouse and commercial complex to be located along the Western Avenue edge of the site with an area of about 15,000 sq. ft. The greenhouse/retail store will re-house the present Tree-Land plant shop. A home building supply store is projected for the remaining commercial area.

C. Parking

Spaces for 10 cars using the commercial facilities. Spaces for 65 vehicles owned by site residents or their visitors; 45 of these spaces will be in the parking garage under the commercial facilities.

D. Miscellaneous communal facilities including a daycare center, laundry rooms, and meeting rooms.
Confirmation of the Hypothesis—The New Prototypical Design, Description.

The building represented in the drawings and photographs is here submitted as confirmation of the design hypothesis. It is intended to be the basic prototype for the design of all the housing on the Tree-Land/Bindery test site. It is furthermore to be considered, along with its variants, as a prototypical form of multi-family housing in general.

The building complex is situated in the south-eastern quarter of the site, now occupied by the parking lot for Cambridge Electric. Incorporated into the plan are the two Harvard-owned lots on Riverside Place. The complex consists of 18 units of housing, four of which are on Riverside Place; the greenhouse/retail store in which Tree-Land will be relocated; and part of the underground parking garage. The upper levels of the greenhouse may serve as a shared conservatory for the residents.

The first story and parts of the upper stories of the residential sections are constructed with an exterior brick cavity wall fourteen inches thick incorporating a two-inch air space. The major interior stairwells are built with solid brick walls 12" thick.
The upper-story residences are primarily of frame construction; steel columns and beams constitute the load-bearing structure. The infilling closure consists of 2"x10" wood ribs supporting 4'x8' plywood sandwich panels filled with rigid insulation. Any plywood panel can be partially or completely replaced by a window panel or door. The flooring is of steel joists and decking topped with 2 inches of concrete. Non-load-bearing interior partitions may be either of standard gypsum board and wood stud construction or of gypsum tile blocks finished with gypsum plaster. The roof is covered with asbestos-cement shingles. The structure of the greenhouse/garage section consists of concrete groundform supporting a steel frame, the frame in turn supporting double-glazed window panes.

There is a 6 to 8-foot margin that runs along the east and west edges of the residential section and which is under the extended eaves of the roof. The extended steel rafters of the roof are to be designed so that they may eventually support 6-foot extensions of the upper stories into the margins. The design and construction of the extensions are to be the
responsibility of the owners of the units. These extensions may consist of open balconies, galleries, screen porches, loggias, stairs, glazed balconies, bay windows, oriel, and glazed or paneled extensions of interior rooms (just to name a few options).
Epilogue
XIV
What cannot be seen is called evanescent;
What cannot be heard is called rarefied;
What cannot be touched is called minute.
These three cannot be fathomed
And so they are confused and looked upon as one.
Its upper part is not dazzling;
Its lower part is not obscure.
Dimly visible, it cannot be named
And returns to that which is without substance.
This is called the shape that has no shape,
The image that is without substance.
This called indistinct and shadowy.
Go up to it and you will not see its head;
Follow behind it and you will not see its rear.
Hold fast to the way of antiquity
In order to keep in control of the realm of today.
The ability to know the beginning of antiquity
Is called the tread running through the way.

Lao Tzu, Tao Te Ching
The repeating of that which is possible does not bring again something that is 'past', nor does it bind the 'Present' back to that which has already been 'outstripped'. Arising, as it does, from a resolute projection of oneself, repetition does not let itself be persuaded of something by what is 'past', just in order that this, as something which was formerly actual, may recur. Rather, the repetition makes a **reciprocative rejoinder** to the possibility of that existence which has been there. But when such a rejoinder is made to this possibility in a resolution, it is made in a **moment of vision**; and as such it is at the same time a **disavowal** of that which in the "today", is working itself out as the 'past'.

Martin Heidegger,

*Being and Time*
XVI

I do my utmost to attain emptiness;
I hold firmly to stillness.
The myriad creatures all rise together
And I watch their return.
The teeming creatures
All return to their separate roots.
Returning to one's roots is known as stillness.
This is what is meant by returning to one's destiny.
Returning to one's destiny is known as the constant.
Knowledge of the constant is known as discernment.
Woe to him who wilfully innovates
While ignorant of the constant,
But should one act from knowledge of the constant
One's action will lead to impartiality,
Impartiality to kingliness,
Kingliness to heaven,
Heaven to the way,
The way to perpetuity,
And to the end of one's days one will meet with no danger.

Lao Tzu, Tao Te Ching
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Bob Slattery, my advisor, who has been, in a word, amazing.
Bibliography


ILLUSTRATIONS AND FORM REFERENCES
Design 38.

Country House Prototype. From Source 49.
See Color Plate, rear of Book.

ELEVATIONS OF DESIGN 38.  Source 49.
Designs 152, 153 and 154.

Plate 52.

COTTAGE PROTOTYPE. FROM SOURCE 49.
Continuous Architecture

This rambling design very likely got its start in New Hampshire, when some farmer broke through the wall of his attached woodshed to make an opening into his kitchen. At any rate, the high snow was responsible for New England's continuous architecture. There are hints of connected buildings in other parts of the country—wherever a washhouse or summer kitchen is connected by a breezeway to the main house—but only in New England do you see the complex of farm buildings that can truly be called "continuous architecture."

Barns never spread out from both sides of the farmhouse; instead the buildings wandered in one direction only (or sometimes in an L shape). As a result, a whole day's chores could be done sheltered from bad weather.

In the 1600's, continuous barns were banned by some New England villages as being fire hazards, and a fine was to be levied against anyone who went against the ban, but there is no record of anyone ever having paid such a fine. In the 1700's, the ban was dropped, and it became the farmer's own business if he wished to connect his buildings and thus create a fire hazard.

Source 59. Continuous Farmhouse Prototype.
The New England Connecting Barns

Continuous Architecture in Massachusetts

Distribution of the Connecting Barn in New England

Source 59.
LINEAL RESIDENTIAL GROWTH AND COLLECTIVE SPACE. Project for the Boston waterfront by Halasz & Halasz, 1969.
feet, each jamb a solid block of stone, and the deep windows, with twenty-four panes of glass. The only change in the exterior was to project the cornice two feet on all sides, and to construct the Dormer window to light the hitherto unfinished attic. A chimney was added, and the roof entirely reshingled.

The first addition containing the dining-room was changed, by putting a spacious bay window on the

A COUNTRY HOUSE, CIRCA 1850.

Source 66.
A contemporary example of linked houses.

M.I.T.'s new house dormitory by Sert, Jackson + Associates.
BLAIR LODGE.
LAKE FOREST, ILL. LAWN FRONT.

A REPRESENTATIVE 19TH-CENTURY COUNTRY HOUSE.

Source 2.
Masonry ground story supporting framed enclosures, balconies, galleries.
Swiss frame building. Source 64.
FRAMEWORK LOFTS AND GALLERIES ON MASOHRY HOUSES. Source 9.
ITALIAN ALPINE DWELLINGS.
Swiss-Japanese style loggia/pavilions. Open frameworks against continuous surfaces.
Gamble House by Greene & Greene. Source 41.
Framed structures on masonry. Maybeck's Hearst castle.
Source 41.

NO! POSSIBLY WENTOON
SLO, Co.
III. 2 McKim, Mead and White; Charles G. Francklyn Residence, Elberon, N.J., c. 1876.

VERANDA-DECKS. Source 39.