What Happened to the Three-Decker?

by

Jacob Wegmann

B.A., Computer Science, 1997

Dartmouth College

Submitted to the Department of Urban Studies and Planning in Partial Fulfillment of the Requirements for the Degrees of Master of Science in Real Estate Development and Master in City Planning

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Signature of Author_____
Department of Urban Studies and Planning
July 31, 2006

Certified by_____
Sam B. Warner
Visiting Professor of Urban History, Department of Urban Studies and Planning
Thesis Supervisor

Accepted by_____
David Geltner
Chairman, Interdepartmental Degree Program in Real Estate Development

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ABSTRACT

This thesis examines the three-decker, a type of small apartment house ("**superposed flats"**) that is common in the Boston metropolitan region and elsewhere in New England. The three-decker is distinctive in two ways: its physical form, which is moderately dense and yet modest in scale; and its tenancy structure, which typically involves one household owning the entire building, while residing in one apartment and renting out the other two. This thesis poses three, interrelated questions: What is the origin of the three-decker? Why did it substantially disappear in the Boston area after 1920, and altogether by 1930? And what has kept it from coming back?

In order to get at these questions, the thesis both examines the three-decker in its local context, and compares and contrasts it with similar building types in three other North American cities that have a rich tradition in them: Chicago, Montreal, and New York City. Chapter 1 introduces the topic and describes the three-decker and its counterparts elsewhere. Chapter 2 is a historical analysis that addresses the questions of the origins and decline of the three-decker. Chapters 3, 4, 5 examine in turn design, economic, and regulatory factors that impinge, either negatively or positively, on the prospects for the three-decker and similar building types in the present day. Chapter 6 offers a summary of the findings, along with policy recommendations pertaining to the encouragement of superposed flat production and some final thoughts on the viability of the three-decker today.

The three-decker is found to be a building type that is problematic in all but a few limited applications in the current era. However, the broader category of superposed flats is found to offer a great deal of potential, both for urban form-giving and for affordable housing. This potential is currently being realized, to different extents and in different ways, in Chicago, Montreal and New York, but not in Boston. This thesis argues that this should change, and that furthermore the superposed flats family of buildings has a lot to offer to cities – the majority of metropolitan areas on the North American continent – where it has never been part of the palette of residential forms.

Thesis supervisor: Sam B. Warner

Title: Visiting Professor of Urban History





WHAT



HAPPENED

TO

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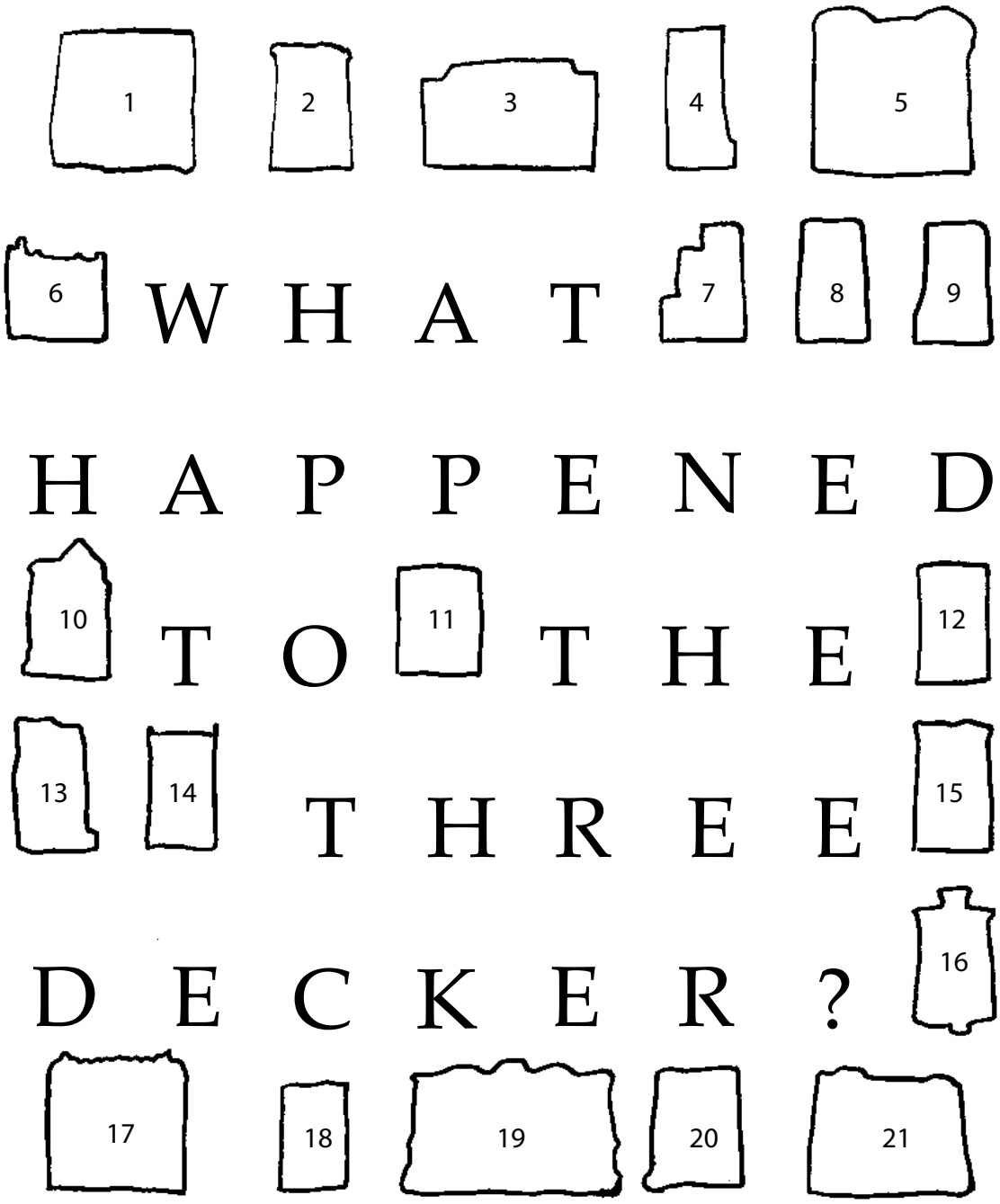

1. Two triplexes, Quebec City
2. Greystone three-flat, Rogers Park, Chicago
3. Villa Victoria rowhouse flats, South End, Boston
4. New three-flat, East Village, Chicago
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All photos and graphics are by the author unless otherwise noted.

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Because the topic of superposed flats is so thinly treated in the academic literature, this thesis would have been impoverished without the contributions of the various architects, real estate developers and investors, professors, government officials, writers, and others that I interviewed in the course of my research. Thank you all for your time and your interest in my work.

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Finally, I'd like to thank two close friends, Simon O'Byrne and Bruce Morton, who are always supportive of me no matter what happens in my life, and my beloved mother and sister, Brenda Wegmann and Jessica Wegmann Sanchez.

I dedicate this thesis to my two little nieces, Lucia and Cecilia Sanchez, who maybe someday will become interested in architecture and planning enough to want to read it -- no pressure.

J.W.
Cambridge, Massachusetts
July 29, 2006

CHAPTER 1: INTRODUCTION

Definition of "three-decker"

The subject of this thesis is a type of small multifamily apartment building that has a variety of regionally specific names. However, in deference to the region in which MIT is located, I will use the traditional New England term **three-decker** throughout this thesis to refer to a type of housing that, in its classic form, has the following **physical** characteristics:

A small walk-up apartment building, lying on its own lot, that consists of three apartments vertically stacked one above the other, each one occupying one entire floor and each one including, at the minimum, a rear covered porch. (Figures 1 and 2.)

Note that while housing types with the same essential form as three-deckers exist in other North American cities, and while some of these will be examined in considerable detail, I will nevertheless use the three-decker form prevalent in the Boston metropolitan region as the baseline in my analysis. The extensive equivalent traditions of Chicago, Montreal, and New York City will be repeatedly drawn upon because of their richness in offering comparisons and contrasts to the three-decker. The three-decker is part of a family of housing forms that, while not the direct subject of this thesis, is also highly relevant. I use the term **superposed flats** to refer to this family of residential buildings that have the following characteristics:

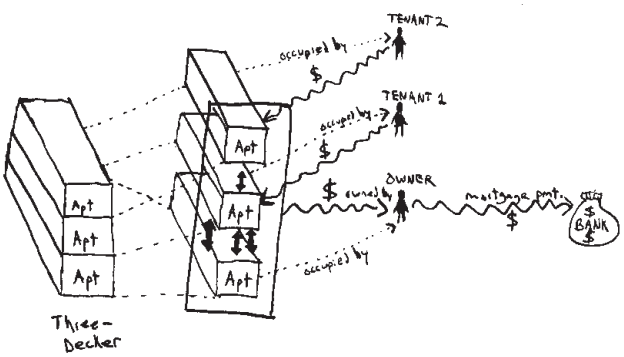


Figure 1. The three-decker's two defining characteristics, one physical and one economic, are illustrated. Its physical essence is that it is a vertical stack of three apartments, each occupying one floor. Its traditional economic arrangement is the building to be owned by one household, which lives in one of the three units and rents out the other two to tenant households. (This does not apply universally: the building can also be owned by an absentee landlord, or can be split into condominiums.

1) Each apartment receives natural light from at least two sides, the front and back.

2) Each apartment is accessed without elevators or internal corridors.

3) Each apartment shares a street entrance and stairwell with no more than five others.

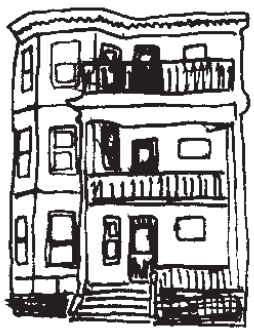


Figure 2. The three-decker.

Instances of stacked flats other than the three-decker include the **two-family,** the **four-decker** (one of which I personally reside in at Columbia and Broadway in Cambridge, Mass.), the **six-family**, and **rowhouse flats.**

In addition, the classic three-decker has an **economic**

characteristic that, while of great interest to this thesis, is not common to all of the cases, historic or contemporary, that I will examine:

The entire building is owned by one household, which occupies one of the three apartments and acts as a small landlord and property manager by renting the other two units to family members or non-related tenant households. (FIgure 1.)

As is the case with the variations to the three-decker's essential physical character, there are alterations to this classic economic characteristic: the building can be owned by an absentee landlord, or the building can, via condominium ownership, be owned by up to three different entities.

Why study three-deckers?

The housing reformer James Ford, in his exhaustive 1936 study of slum housing in America had this to say: "Between the single-family detached house and the apartment or multi-family house fall the semi-detached, group, and row types of single-family houses and of two-flat houses" (Ford, 1936, p 487). This is as close as Ford comes within the entire exhaustive two-volume book to discussing the three-family house, by then a common building type in the outer boroughs of New York City, other than within the context of a brief mention of wooden three-deckers in his comparative discussions of Boston and Jersey City. Furthermore, his 14-point proposal to reform slum housing conditions says nothing about encouraging the erection of less dense, but still affordable, housing types such as three-family houses, despite his enthusiasm for homeownership and suburban living. How could Ford, living in the New York metropolitan region, ignore such an elemental local building type?

The absence of discussion about three-deckers and other small owner-occupied apartment buildings is surprisingly prevalent amongst urbanists writing about American cities, from the 1930s forward to our current era. It is striking how little has been written about this humble type of building that, I will argue, deserves, at the minimum, greater attention and perhaps now a revival in construction to address social problems that are parallel, though not identical, to those of the era that spawned it.

Alan Knight, an architecture professor at the University of Montreal, speculates that architecture as an academic field is biased towards the study of buildings that are designed by architects (Knight, 2006). Architects leave behind plans and verbal discourse that document their work and the thought processes that have gone into it. Indeed, a typical popular guidebook to, for instance, Chicago architecture will focus either on exceptional single-family homes designed by famous architects such as Frank Lloyd Wright or Louis Sullivan, or it will focus on the city's large stock of famous office and apartment buildings and churches.

By contrast, Knight points out, vernacular architecture comprises the bulk of the building stock in a city, but it is proportionately much less examined. Architectural culture and knowledge – *savoir-*

faire, as he terms it – are transmitted in a nonwritten manner. This causes strikingly ubiquitous building types, such as the small multifamily buildings that I am concerned with in this thesis, to escape altogether the attention of academic or popular treatments of architecture and even urbanism (ibid). My personal belief is that this is an oversight, and I attempt to begin to rectify it with this thesis.

Krim has a description of three-deckers that mirrors what struck me, a newcomer to Boston, when I first saw this unfamiliar type of building type, so ubiquitous in an enormous swath of the metropolitan area:

As architecture, they are curious forms, part urban and part suburban. They look like apartments transformed into houses, or perhaps houses overgrown into apartments. They have the flat roofs of the city, but the wooden walls of the country. They appear as rowhouses transplanted into the suburbs (Krim, 1977).

Jane Holtz Kay, one of the leading advocates today of policies leading to more spatially compact urban areas in the United States, is one of the few to express appreciation for the three-decker, which, in her words "created an inviting streetscape not unlike that of its urban ancestors" (Kay, 1999, p 279). Shand-Tucci agrees: "The much-maligned three-decker for which Boston is so notorious is a fascinating building type, too long overlooked and unsun g" (Shand-Tucci, 1978, p 120). Indeed, the typical residential street lined with three-deckers can be an attractive amalgam of suburban and urban characteristics. On the one hand, when well-maintained, such streets are covered with a canopy of trees; modest front setbacks in some cases permit small yards or gardens; front porches and stoops may be present, allowing for casual interaction amongst neighbors; off-street parking is handled on pavement alongside the houses or in small garages on individual lots rather than in large parking structures; the units have natural light on all four of their sides; all apartments have access to a back yard shared with only two others; and the repetition of small buildings helps reinforce their individuality.

Figure 3. The street-shaping potential of superposed flats is much in evidence in this of a typical Montreal streetscape.

On the other hand, the resulting densities of roughly 28 units per acre are higher than those attainable in typical suburban single family houses (2 units/acre), singly-occupied rowhouses (15 units/acre), or suburban garden apartments (14 units/acre). (Figure 4.) Blair Kamin, a Chicago architectural columnist and author, remarks on the urbanistic qualities of the Chicago three-flat; to him, it is "a street-shaping, street-friendly form of architecture [that] turns the street into a room, not just a

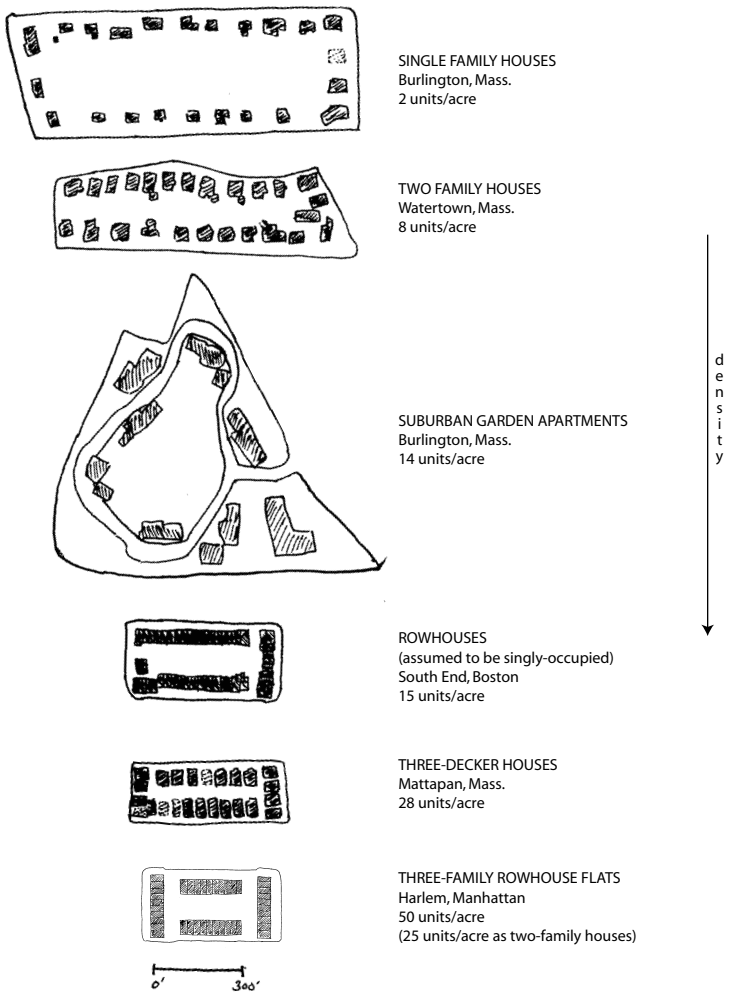


Figure 4. The three-decker is a relatively land-efficient form of housing. Three-family rowhouse flats achieve densities that approach those of midrise slab apartments.

passageway" (Kamin, 2006). (Figure 3.)

Thus, both in terms of its physical form, as well as in terms of its historical development (discussed in more detail in Chapter 2), the three-decker occupies something of a middle ground on the continuum between being a building located in an urban place based on walking and mass transit for daily transportation, and a suburban one based on the use of the automobile. In an era when various movements in urban design, architecture and landscape architecture, such as New Urbanism and Smart Growth, seek to foster more compact land-use patterns and more human-scaled design, while at the same time making necessary allowances for the continued pre-eminence of the automobile, such a middle position may well be an attractive one. In many ways, my thesis resembles in spirit that of my fellow MCP student Stephanie Groll '06, who examines a building type that occupies a similar middle ground (parking over retail), but in retail rather than in housing (Groll, 2006).

In addition to its formal qualities, the three-decker offers some intriguing possibilities from the standpoint of affordable housing, a pressing issue in our current era, particularly in large, land supply-limited coastal metropolitan areas such as Boston and the San Francisco Bay Area. This concern is especially acute for families with children, as much of the production of new units in the dense cores of metropolitan regions has centered on one and two-bedroom apartments and condominiums, therefore appealing to the demographic groups of "childless singles" and "empty-nester" households. This has given such skeptics of urban America's renaissance as Joel Kotkin cause to apply the sobriquet "ephemeral cities" to these locations, including Seattle, where fewer than 20% of the households residing in the central city include children, according to the 2000 US Census (Kotkin,

2005). While some cities, notably Vancouver and Chicago, have fostered the creation of family-friendly townhouses in close-in neighborhoods as a matter of deliberate policy, could the three-decker be another part of the arsenal in the battle to retain families in cities?

Where it is well-established, the three-decker constitutes a substantial quantity of privately-owned, non-subsidized yet modestly priced family housing, as in Boston neighborhoods such as Dorchester, Roxbury, and Mattapan, and in older close-in metro Boston cities and towns such as Cambridge, Somerville, and Everett. Some of this may well be due to the age of this housing stock, but some of the three-decker's physical characteristics offer at least the potential for productive rehabilitation and/or new construction for the purpose of maintaining or bolstering the stock of affordable family housing. These characteristics are as follows:

1) Relatively inexpensive, wood-frame construction that obviates the need for elevators.
2) Floor plates that can accommodate unit sizes from 800 to as much as 1,500 sf.
3) Apartments with natural light and air on all four sides.
4) Private back yards shared by only three households.
5) Semi-outdoor private spaces – always a rear porch, and sometimes a front one as well – available to each unit.
6) A lack of elevators and internal circulation corridors.
7) Street entrances facing the public right-of-way that are shared by, at maximum, two other households, and in some cases only one or none at all.
8) Off-street parking provided close to unit entrances (although some three-deckers are spaced too closely to allow room for parking alongside the buildings).
9) Building height and massing little greater than those of many contemporary suburban single-family houses, thus, in theory at least, making this form less objectionable to neighbors than other alternatives that deliver the same amenity package.

The ownership structure of three-decker housing also offers some potential advantages for affordable housing. In an era when the policy focus at the federal level has shifted from an emphasis on fostering low-income rental housing to spurring homeownership, the three-decker offers the possibility of achieving both objectives. With reference to the latter, a Boston Redevelopment Authority report from the mid 1970s says that "while [a three-decker] … does not compare with a … house on a one acre lot in a suburb, the triple decker today still gives the low income homeowner a chance to control his own living environment. The rental income from the two additional units makes homeownership possible for many who could otherwise not afford to own a home" (Boston Redevelopment Authority, 1974, p 20). If such a house is located in a neighborhood with generally increasing property values, the homeowner will receive rental income that increases over time, while his or her mortgage payments (in the case of a fixed loan) remain flat, thus allowing out-of-pocket

housing costs to decrease as time goes by, or at least to offset other rising costs such as real estate taxes, upkeep, and utilities.

Meanwhile the arrangement offers some attractive features from the standpoint of tenants. For instance, there is an alignment of interests between tenants and a live-in owner in ensuring that the property be maintained and operated to a high standard. As Alan Bell, a principal of New York-based developer the Hudson Companies notes, "Landlords cannot afford to have tenants fail to pay rent" (Bell, 2006). They are often willing to pass on the cost savings realized from using their own unpaid labor to maintain the rental units to tenants in the form of lower rent in order to attract and retain tenants that they feel are of a high quality.

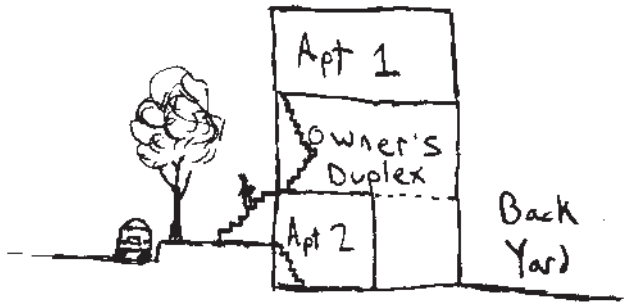


Figure 5. A common arrangement for three-family houses in New York City developed by the Hudson Companies: a three-bedroom owner's duplex occupies half of the first floor and all of the second, while a one-bedroom rental apartment takes up half of the first floor and a two-bedroom rental occupies the third. This demonstrates that the three-decker's traditional one-apartment-per-floor arrangement need not be used. Duplexed units are often better suited to households with children, for instance.

Furthermore, given the intense resistance to the construction of multifamily housing today in suburban areas, which in Massachusetts was sufficiently extreme to give rise to the controversial Chapter 40B legislation allowing the state to override local land-use controls in some instances, one wonders if a modern variant of a three-decker could not be more palatable to neighbors than the other, denser forms built as part of 40B projects. Could new affordable multifamily housing be perceived differently in its local jurisdiction if its investors also resided within the properties, as is the case with in the traditional three-decker ownership model? As McGill geography professor Sherry Olson notes, Montreal is often derided within Canada as a city with a low homeownership rate. But is the criticism justified when almost all of its "plex" structures are inhabitated by a resident-owner (even if such owners occupy only a minority of the housing units in these buildings)? This is something that is much rarer within the rental housing districts of cities that have much higher overall homeownership rates (Olson and Dufaux, 2006).

Given all of these seeming advantages, both from the standpoint of creating an attractive urban form and from that of providing low-cost affordable housing, both ownership and rental, it is striking not only that the three-decker abruptly ceased to be built in large numbers in metro Boston after 1920, but that it seems to have been constructed anew only in very limited numbers, and in very tightly circumscribed geographical locations. With this disconnect in mind, this thesis poses a set of related questions:

1) When, where and why did the three-decker arise historically?

2) Why did the three-decker rather abruptly cease to be constructed as a dominant housing form?
3) What is preventing the three-decker from being constructed in larger numbers and in a wider variety of locations than is the case today? Are there inherent shortcomings in the building type itself, or are the architectural, economic and regulatory realities of the current building industry impeding what would otherwise be a useful addition to the landscape of moderately priced housing? What about other similar forms in other cities?

After an introductory description of the three-decker and its position within the universe of housing types in the remainder of Chapter 1, Chapter 2 will address questions 1 and 2. Chapters 3, 4, and 5 will address possible answers to question 3 related to design, economic, and regulatory factors, respectively. Chapter 6 will conclude the thesis by synthesizing my findings, and by offering my thoughts on the past, present, and future prospects of the three-decker housing form.

The typical three-decker: a description

The typical Boston-area three-decker is a narrow, detached frame building with its short side facing the public street. The width of the building along the street frontage typically varies between 24' and 28' for "single wide" models with one bay window alongside the entry on the front facade, and between 32' and 38' for "double bay wide" models that have two bays flanking the entry. The long axis of the building can measure between 36' and 52', with 40' to 50' being typical. The lot on which the structure resides generally varies in street frontage width from 32' to 42' for single wides, and from 44' to 48' for double bay wide models. The lateral separation between buildings is generally from 8' to 10', although sometimes it is too narrow to park a car, resulting in near-tenement like lighting conditions along the sides of the structures, and sometimes it is as much as 15' (Doern, 1988).

Lots are generally 100' deep, but can vary from 80' to 120' in length. Resulting lot sizes range from 2,500 sf (about 17 per acre), common in East Boston, to a maximum of about 4,500 sf (about 10 per acre) in the least dense three-decker districts of Jamaica Plain. Building setbacks from the front lot line range from nothing at all to as much as 20'. Building heights from the ground level to the cornice line of flat-roofed buildings generally range from about 31' to 40'.

The typical three-decker front façade has a bifurcated appearance with a round, square or hexagonal bay window on one side and the building entrance on the other. The bays are important for allowing light into the front room and thus, if doors are left open, into the darker rooms in the interior of the floorplate – something that is particularly important when the lateral separation between adjacent three-deckers is not great. (Models with more generous widths can have two bays flanking a central entry.) In the case of Chicago's three-flats, Kamin notes that the fenestrated bays also give a "sculptural, plastic quality" to the front façade that "engages the street quite beautifully" (Kamin, 2006).

Some modicum of privacy is afforded to the rooms on the front of the first floor apartment, even when no setback exists, because the entrance is usually four or five steps up from the street. The entry usually consists either of one door leading to a shared lobby, or two doors, in which case one accesses the bottom unit (thereby further reflecting its status as the unit traditionally occupied by the building owner), and the other leads to stairs up to the second and third floors. Where a more generous front setback exists, the sense of privacy of the front entry is enhanced by an overhanging enclosure, sometimes topped by columned porches rising a further one to two stories above.

Three-deckers get their name and, in part, their characteristic appearance from the triple stacked porches that occupy the entire width of their rear facades. The porches are virtually always present, except where they have been removed, which is feasible because the rear stairs are typically situated inside the building envelope. The origin of the term itself apparently derives from naval culture: the "Sovereign of the Seas," the most fearsome man-of-war in Elizabethan England, launched in 1637, was referred to as a three-decker because of its three rows of cannons below the deck. Krim explains that by the American Revolution, the term "three-decker" had come to be popularly applied to phenomena of exceptional size and importance that occurred in threes. The term seems to appear in everyday usage in connection with the New England housing form beginning with a house in Worcester in 1893. Another term, "triple decker," has crept into common usage in recent decades.

Although there is some variation in three-decker unit floor plans, the amount of repetition in them is striking. The prototypical floor plan consists of two rows of three or four rooms, separated by a central hallway (Figure 27, Chapter 3). The narrowest three-decker models sometimes have a rowhouse-like floor plan with only one row of rooms accessed by a corridor along one of the building sides.

Built as they were during a period of rapidly advancing technology for residential amenity, virtually all three-deckers included, from the start, one furnace per apartment, all located in a basement, which also functions as a storage area. Each apartment, in almost every case, was designed from the beginning to include individual cooking and bathing facilities, with plumbing arranged in vertical stacks (Boston Redevelopment Authority, 1974).

Three-deckers are usually structurally simple wood-frame buildings, generally with cladding of wood clapboard or shingles. In some cases, the cladding has been replaced with vinyl or aluminum siding. It is also worth mentioning that there are examples of three-deckers clad in brick, although these are quite infrequent in the Boston metropolitan area (Figure 18, Chapter 2). In the public mind in New England, the three-decker is a wooden building. By contrast, in Montreal and Chicago, the local equivalents of triplexes and three-flats, respectively, are associated with brick construction, as veneer only, and as veneer covering a masonry structure, respectively. New York City commonly has both brick and wood-clad three-family houses, although brick three-family houses are more common, particularly since they are most often built as rowhouse flats.

Figure 6. A six-family house in Cambridge, Massachusetts. This is an exceptionally luxurious version of the basic six-family model.

Krim identifies two separate architectural stylistic strains of three-deckers that spread spatially outward along different radial streetcar lines before converging after the conclusion of World War I (Krim, 1977). One is a more urban, flat-roofed form that originated in South Boston and spread outward along Dorchester Avenue. The other is a more romantic, picturesque, pitched roof variant that originated in Roxbury and spread outwards along Blue Hill Avenue (Figure 16, Chapter 2). The roof pitch varies from one just sufficient to contain insulation to one great enough to permit the inclusion of rooms on a fourth story. (Providence, Rhode Island is known for three-deckers with end gables.) The BRA report also mentions another variant, a mansard roof type that is common in East Boston. These variations appear to have consolidated into the flat roof that forms the common perception of the typical three-decker in metro Boston (Boston Redevelopment Authority, 1974).

Finally, although they do not meet the strict definition of "three-decker" that I put forth earlier in this chapter, three common variations on the basic form identified in the BRA report merit mention:

1) The "six family" or "double three decker"

This consists, in effect, of two stacks of three-deckers arranged next to each other, thus eliminating natural light and ventilation from one side wall of each apartment (Figure 6). They are somewhat more efficient in their usage of land, since the units are generally 18' wide, resulting in 36' wide buildings residing on lots measuring about 50' x 110', or 5,500 sf. This corresponds to a net density of about 48 units per acre (excluding public right-of-way), versus 28 units per acre for typical three-deckers.

Figure 7. Rowhouse flats.

2) The "row three-decker"

This consists of more than two stacks of three-deckers placed adjacent to each other, thus eliminating natural light from both side walls of all units not lying on the ends. The distinction begins to blur between this form, built of wood yet designed to take this configuration, and brick rowhouses converted into flats, which are a

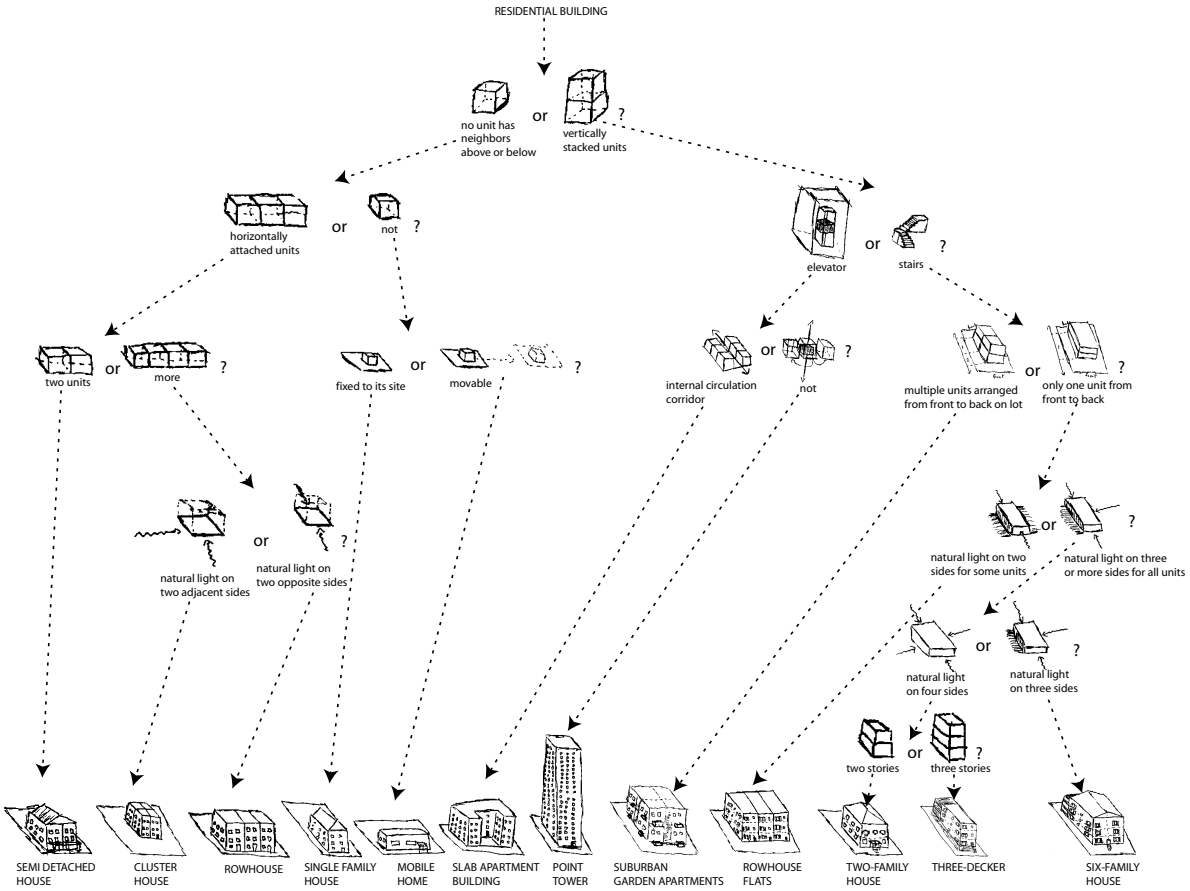


Figure 8. A method of classifying the three-decker and other housing forms currently in use in the United States today.

common phenomenon in the South End and Back Bay. The pure row three-decker is uncommon and rarely seen outside of major commercial arterials in the densest districts of South and East Boston. As wooden row three-deckers lacked fire separation party walls, they would be considered an unsafe building type today (Figure 15, Chapter 2). In Washington, DC, according to Christine Hunter "rowhouse flats," with full fireproof party wall separation, are a common housing form (C. Hunter, 1999). Montreal triplexes and New York three-family houses, both discussed below, are also forms of rowhouse flats. (Figure 7.)

3) The "mixed-use three-decker."

This is a three-decker, often built in rows, where the bottom floor is occupied by a commercial space. This can have been built by design, or the bottom floor can have been converted from residential to commercial usage, generally via an architecturally incongruous addition that touches the front lot line to create a storefront.

Refer to Figure 8 for a visual depiction of the three-decker's position within the universe of contemporary American residential building types.

Three-decker variations elsewhere in North America

Several North American cities have parallel traditions to the New England three-decker and its related two-family and six-family buildings. Although this thesis, due to its necessarily limited scope, focuses most heavily on the New England three-decker, I repeatedly invoke the equivalent vernacular forms of Chicago, Montreal, and New York throughout because they provide richly instructive comparisons and contrasts with the three-decker.

The Chicago "three-flat"

The most obvious points of contrast between the three-decker and the Chicago three-flat are that the latter:

1) is always made of brick;
2) is considerably narrower, since it is typically built on 25' or 30' wide lots, resulting in a floor plate that is perhaps 17' or 22' wide;
3) is always, rather than usually, flat-roofed;
4) sometimes lacks exterior rear stacked decks;
5) assumes essentially the same architectural form, aside from its number of floors, whether it is in a two-unit ("two-flat") or three-unit ("three-flat") configuration;
6) is served by rear alleys, which allows the off-street parking to be invisible from the front façade.

While the three-flat was historically constructed in its greatest numbers during roughly the same time period as the three-decker, it did not cease to be constructed altogether following 1930, as did the three-decker (this will be discussed in Chapter 2). The three-flat, also in sharp contrast to the three-decker, has experienced a vigorous revival in Chicago over roughly the past 15 years. This phenomenon will be discussed in some detail in Chapter 4.

The Montreal "triplex"

Montreal is the North American city whose building stock is most heavily composed of superposed flats. The term "plex" is used to refer to a family of building types that shape countless residential streets in the city and its suburbs. Plexes come in various different configurations, including the duplex, the three-plex, the triplex, the four-plex, and the six-plex (Figure 9). Of these, it is the triplex that most closely resembles the New England three-decker, but with several major points of departure:

1) The triplex is always faced in masonry or stone. Unlike the Chicago three-flat, with its load-bearing masonry system, Montreal plexes historically used the wooden plankwall system, which is itself descended from the ancient French "pièce à pièce" construction

method. The robust plankwall construction was the antithesis of the light American balloon framing technique: stacked boards laid end-to-end completely covered the façade, with the only openings being for doors and windows.

2) Triplexes are usually, though not always, built in rows with no space between adjacent structures. To use terminology explicated in Appendix A, triplexes are rowhouse flats. They are generally 25' to 30' in width, making their lots similar in width to those of Chicago three-flats, but the buildings are wider because they occupy the entire width of the lot, unlike their detached Chicago cousins.

3) Unlike both Chicago three-flats and New England three-deckers, a great deal of emphasis is placed in Montreal plexes on providing each unit with its own entrance via a door on the front façade. Although shared entrance lobbies sometimes exist, it is more typical for a steep external staircase, typically of metal or wood, to provide access to a second floor deck, from whence doors leading to the second-floor unit and to a private staircase within the building envelope ascending to the third-floor unit can be accessed. These staircases are sufficiently common that they have become something of an emblem of vernacular architecture in Montreal. This is despite the fact that Montreal has much the harshest winter climate of any of the four cities that I am most closely examining.

According to David Hanna, whose seminal 1986 Ph D thesis spawned a rich literature on the

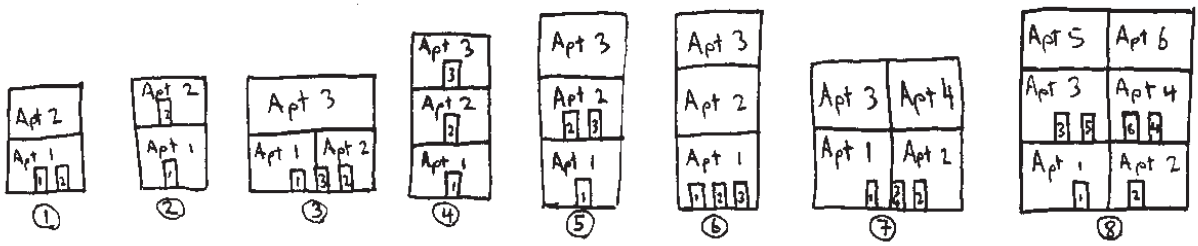


Figure 9. Architecture professor Alan Knight notes that while Montreal "plexes," as seen from the street, often appear to the uninitiated observer to be little different in texture than the rowhouses typical in other North American cities, in reality they exhibit a great deal of variation in subtle ways. Various combinations of several common elements – flats, entries on different levels, and internal and exterior staircases – allow for a great variety of different configurations. Examples include (above), with numbered doorways corresponding to numbered apartments, from left: 1) and 2) "duplex"; 3) "three-plex"; 4), 5) and 6) "triplex"; 7) "four-plex"; and 8) "six-plex." The resulting houses can be attached, semi-detached, or fully detached. Below, from left to right: a typical triplex with exterior staircase; an early triplex with a mansard roof and zero setback; apartments built as additive construction to the rear of the lot; a row of triplexes arranged perpendicularly to the street. (Knight, 2006.)

Figure 10. The variety of superposed flat forms in New York City can be seen above. From left to right: a newly-built two-family, Far Rockaway, Queens; a wooden three-family, Williamsburg, Brooklyn; a masonry three-family, Astoria, Queens; and a six-family, Astoria, Queens.

topic of plexes, "None of Canada's major urban centers, save perhaps Québec City, featured the [plex], or the superposed flat concept, as anything but an exotic form of housing, if at all" (Hanna, 1986). In spite of this limited geographic reach, the plex is a regional form as is the New England three-decker: it can be found throughout the province of Québec in such smaller cities as Sherbrooke, Trois-Rivières, Hull and Chicoutimi. As is the case with the Chicago three-flat, standing in stark contrast to the New England three-decker, the plex tradition never ceased to be built anew, and Hanna and Dufaux point to 1978 as a watershed year for the revival of the triplex in particular as new construction (Hanna and Dufaux, 2002).

Figure 11. Newly-built rowhouse flats made to emulate the traditional brownstone scale and appearance of the surrounding neighborhood, Harlem, Manhattan.

The New York "three-family house"

New York City has a well-established tradition of three-family houses, as they are generally called. The three-family house there, however, is not a part of the popular image of the city and its iconic skyscrapers, tenements, and brownstones, because it is geographically isolated from the heavily-visited portions of the city. This is a similar situation to that of Boston where John Sharratt, a noted local architect, observes that the three-decker is concentrated in a band of neighborhoods that are disproportionately blue collar and inhabited by recent immigrants, and are not part of the standard tourist circuit of the Back Bay, Beacon Hill, the Boston Common, the North End and other areas that lie within a compact swath of the pre-streetcar walking city (Sharratt, 2006). In New York, the three-family house traditionally tends to be located in the outer reaches of the four "outer boroughs," i.e. not on the island of Manhattan, which *is* New York in the popular conception of many. Nevertheless, as Roger Starr noted in 1997, the three-family house housed about 500,000 people at the time, or more than 6% of the city's population, and a share equal to that of the city's public housing, which receives far more attention (Starr, 1997).

The New York three-family house is a humble type that seems to generally lack the architectural flourishes of Chicago three-flats, the at-times ornate ornamentation of New England three-deckers, or even the vernacular whimsy of the staircases of the Montreal plexes. Roger Starr describes the typical New York three-family as a "brick shoe box," generally held to the relatively modest height of 22' by virtue of using a half-sunken basement to contain the lowest dwelling unit. A modest stoop then ascends to the upper two units, while downward steps access the ground floor dwelling. Another typical configuration is a four-story house, where one unit is duplexed or where there are four apartments. Two-family houses are also common, and can be of two or three stories in height. Three-family houses are usually built in rows, but sometimes stand alone. Examples exist of buildings with similar dimensions to a Montreal triplex, but with two apartments per floor to yield a building of six small apartments. Masonry appears to be the common cladding, but wood frame exists as well. Rear decks are sometimes present but often not (Figure 10). As in Chicago and Boston and unlike in Montreal, it appears that shared lobbies are commonly used to provide access to upper floors, rather than individual steep staircases and elevated entry doors on the front façade.

Newly-built three-family houses sometimes emulate the form and massing of New York's much-loved brownstone rowhouses, as in several recent projects in Harlem (Figure 11). This is a natural design choice, as brownstones are routinely converted into rowhouse flats, in part because their structural system of an exterior envelope independent from the floors has made it easy to do so. In the new three-family houses, the garden-level apartment's entrance is placed at grade rather than sunken in order to create a disabled-accessible entrance underneath the traditional high stoop that leads to the second-floor unit.

In short, there appears to be little of the standardization of the common elements in New York three-family houses that are seen in Montreal plexes, and especially in Chicago three-flats and in Boston three-deckers. It would appear that a richly varied tradition has developed in New York, while garnering little attention in architectural circles due to the location of such houses far from the limelight of this world-renowned city's famous locales.

Other cities

The essence of the three-decker form exists in some locations in North America aside from the example of metropolitan Boston, which this thesis focuses on most, and Chicago, Montreal, and New York, which this thesis focuses on to a lesser extent. As already mentioned, the three-decker exists in New England in locations other than Boston and its suburbs; it can be found in mid-sized cities such as Worcester and Springfield, Massachusetts; Providence, Rhode Island; and Hartford and New Haven, Connecticut. A similar form of housing also exists in some San Francisco neighborhoods. Washington, DC is known for its rowhouse flats, which in their laterally attached condition bear some

resemblance to the triplexes of Montreal.

It is striking, however, to note that there are many more North American cities, including quite dense ones such as Toronto, Philadelphia, and Baltimore, that lack this form of housing altogether. In some dense cities, for instance, one could surmise that the Anglo-Dutch tradition of vertically contiguous ownership in the form of rowhouses trumped the continental European tradition of the rental of vertically arranged flats. Why did this happen in certain places and not in others? It is an interesting subject for speculation that lies beyond the scope of this thesis. Nevertheless, it is interesting to place two of our four cities, Boston and Chicago, into the classification scheme that Hanna and Dufaux used to classify Montreal and New York and other cities, a scheme which itself builds on the work of Martin Daunton (Hanna and Dufaux, 2002). (Figure 12.)

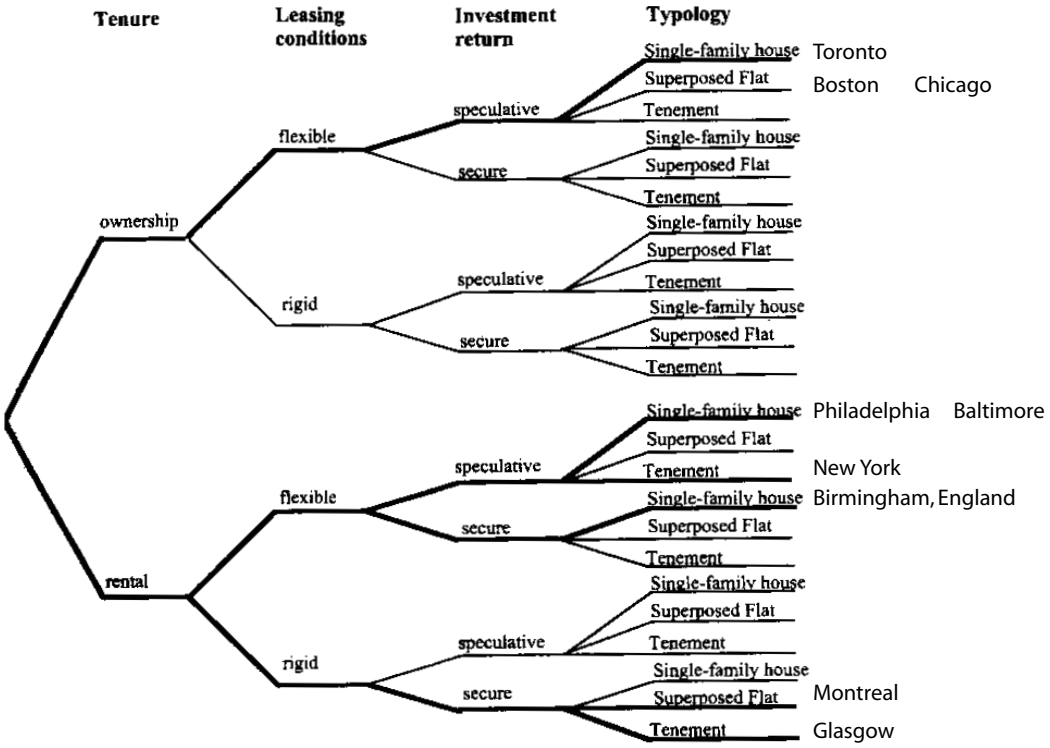


Figure 12. Hanna and Dufaux cite Martin Daunton's categorization scheme of different cities' housing culture in order to place a number of different cities into it. Cities are classified according to whether homeownership or rental predominates; whether landlords have flexibility with the lease contracts of their tenants or not; whether there is a culture of real estate speculation, or of holding assets for a long-term, stable investment; and by building type (houses/rowhouses, superposed flats, or tenements). This chart is reproduced from Hanna and Dufaux but I have also added the cities of Boston, Chicago, and Baltimore in their proper places (Hanna and Dufaux, 1998).

CHAPTER 2: THE RISE AND FALL OF THE THREE-DECKER

An overview of the historical evolution of American housing forms

The three-decker is part of the long, complex history of the evolution of housing in North America since the beginning of European settlement almost 400 years ago. (For simplicity, I am not addressing the multitude of different Native American building traditions, although some of these surely influenced the housing forms that newcomers to North America have used.) Figure 14 puts the three-decker in its historic context. It relies in part, with some modifications, on the American post-European settlement historical housing landscape delimited by Christine Hunter in Ranches, Rowhouses and Railroad Flats. Inevitably, it has omissions, particularly given the frequent difficulty in drawing strict boundaries between housing forms that blur into one another. Nevertheless, it is intended to be a historical guide to the various forms that have predominated over the last 400 years.

Please refer to Appendix A for a more complete explication of Figure 14.

The first three-deckers and plexes

The apocryphal tale of the construction of America's first three-decker, cited with barely concealed skepticism by Shand-Tucci and others, is as follows: the architect for a two-and-a-half story house with a mansard roof in Worcester made an error in the design and made it too tall. The builder duly followed the drawings and constructed an actual built structure. Upon realizing his mistake, the architect persuaded the builder to modify the design into what we would today recognize as a three-decker, and thus a new housing type was born (Shand-Tucci, 1978).

Figure 13. Early wooden houses that demonstrate, respectively, Shand-Tucci's (left) and Sam B. Warner's (right) theories of the origin of the three-decker. The house on the left is an early 1870s three-decker in Dorchester, Mass. with a mansard roof. On the right is an example of attached wooden rowhouses lacking fire separation in Cambridge, Mass.

Regardless of the circumstances surrounding the actual construction of the first three-decker, there is a more widespread agreement that the beginnings of the form seems to have been sometime in the early 1870s. The parallel South Boston and Roxbury traditions of three-decker construction were, according to Krim, influenced by the two dominant architectural trends

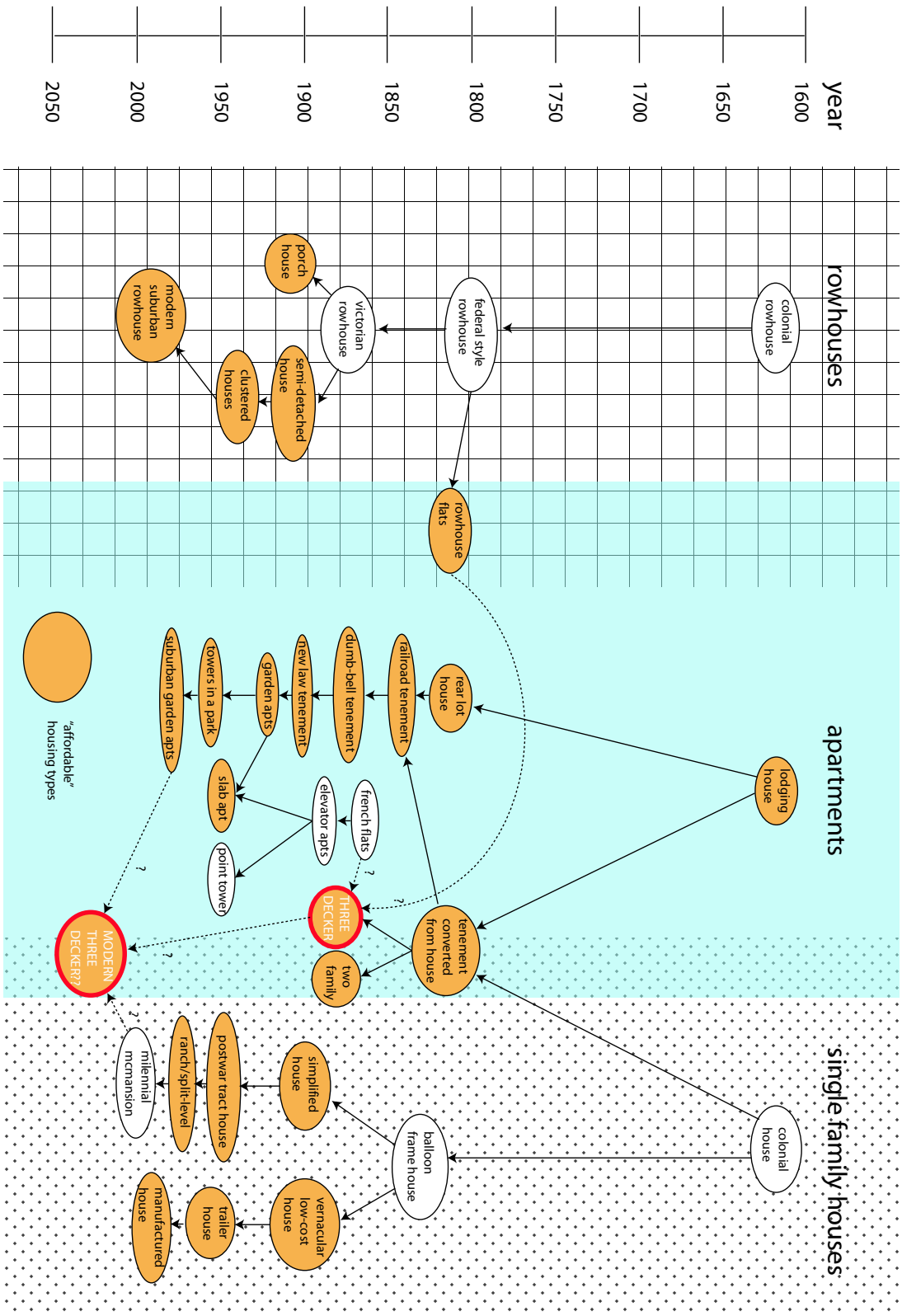


Figure 14. This chart shows the evolution of various housing forms in the roughly 400 years since the beginning of European settlement in the United States. Note the rapid development of multifamily types in the 19th century. Housing forms are individually described in Appendix A.

immediately after the Civil War: the Bracketed style, with flat, bracketed roof and entry details, and the French mansard style, respectively (Krim, 1977). Sam Bass Warner postulates a somewhat different origin of the three-decker as an evolution of a wooden rowhouse (Warner, 1962).

Given that, as Warner notes, many of the builders constructing three-deckers were immigrants from Canada, is it possible that the three-decker was exported to Québec for it to become an antecedent of that region's "plex" tradition (ibid)? Hanna dismisses this theory on several grounds: firstly, migration to urban New England from Québec tended to come from rural areas, not the large city of Montreal where the plex tradition was developing (Hanna, 1986). Secondly, the plurality of the Canadian migrants were from the Maritime Provinces, and yet cities in that region such as Halifax and St. John never subsequently developed a superposed flat tradition of their own. Thirdly, the architectural differences are striking. Three-deckers are in wood, usually with one entrance, while plexes are in brick, with a plankwall structural system, and usually have multiple entrances; three-deckers have typically American styling in their use of Greek, Colonial Revival, Shingle, Stick, and other local styles, while plexes have more subdued British Italianate or French Second Empire detailing. I would add my own counterargument: the three-decker did not emerge until the early 1870s. Meanwhile, Hanna identifies 1857 as the date of emergence of the Montreal duplex, with an early form of the triplex appearing in the 1860s (ibid). Hence, the three-decker seems to have arisen too late to influence the Montreal plex tradition.

While the exact origins of the three-decker are somewhat murky and in dispute amongst scholars such as Shand-Tucci and Warner, Hanna seems to have identified a veritable "smoking gun" for the genesis of the plex tradition in Montreal. This is the "Tyneside flat," a traditional rowhouse flat form that existed in a narrow band along the River Tyne in the hinterland outside of Newcastle in England, and which was strikingly anomalous within the United Kingdom. Like the Montreal "plex," the Tyneside flat was almost without stylistic flourishes, although it had a low-angle gable roof instead of the customary flat or mansard roof in Montreal.

What is the cultural link between this corner of England and Montreal? Hanna's "smoking gun" is a massive railroad bridge project that was slated to cross the St. Lawrence River, with a landing at Pointe-Saint-Charles in Montreal. (It was never completed.) A engineering and project management firm was brought in from Newcastle, the birthplace of steam railway technology, and the heart of the coal and iron industry in the United Kingdom at the time. As part of this project, the firm had 24 units of workers' housing built at the bridge landing in 1857 in the form of a row of "two over two" fourplexes known as Sebastopol Row (Figure 15). According to Hanna, this model was highly influential and immediately seized upon by local builders, because it solved a pressing housing problem: the need for low-cost yet reasonably dense housing to accommodate the sudden burst in industrial employment in Montreal that had occurred only within the past decade or so. The Tyneside tradition was grafted onto a rural Québec vernacular duplex form, which was itself a modification of

a common two-and-a-half story gable-roofed house. In the early 19th century, such houses began to be split into two living units, one on each floor, with a steep staircase along the side of the housee providing direct access to a unit entry door carved out of the façade on the second floor (Figure 15). This then evolved into a purpose-built duplex that became common in Québec City and Montreal in the 1840s, but did not become dominant.

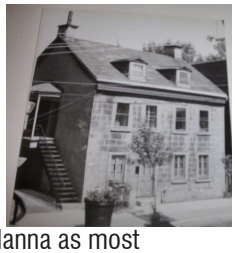


Figure 15. The two influences identified by David Hanna as most important to the development of the Montreal triplex: the Tyneside flat, brought to Montreal in 1857 (left); and the vernacular rural Quebec two-family house (right). Other important influences were British terrace houses and American flat roof technology. (Both illustrations from Hanna, 1986.)

The Tyneside flat offshoots, however, were strikingly different from these rural duplexes. This was because they were laterally attached, and because they were now faced in brick (also in response to fire laws that came on the heels of devastating fires in 1850 and 1852 that collectively wiped out 19% of the city's 1850 housing stock), although the underlying structural system was the traditional rural French plankwall method. Also, the internal circulation was now internalized within the building envelope rather than being accomplished via exterior staircases.

A couple of other influences asserted themselves: one was the tradition of the British terrace house, a row of laterally attached dwellings lying behind an architecturally unified façade. This approach, in greatly stripped-down form, for the purpose of creating low-cost housing, was applied to the duplex and the emergent triplex. Additionally, American flat roof technology had been introduced to the city in 1854 by C.M. Warren & Company of Boston, and it was quickly adopted due to its cost saving and space-maximizing attributes, as well as its solution of the problem of falling snow and icicles in the winter.

A later law mandating a setback from plex buildings caused the steep stairway of the vernacular Québec duplex, typically built of wood or metal, to re-emerge, but this time on the front instead of on the side, so as to profitably use the otherwise unmarketable front setback and thereby avoid wasting space for circulation inside the envelope. This practice became sufficiently ubiquitous that today the elaborate and varied staircases on the front façade of plexes are a visual icon in Montreal that are emblematic of a rich vernacular building tradition, although it is generally not continued in contemporary plex construction.

There does not appear to be any scholarship on the emergence of the Chicago three-flat and the New York three-family house; this would make for intriguing further research.

The subsequent development of the three-decker

In Boston, as the Victorian era wore on, fashions switched to the Queen Anne style, and the

three-deckers that formed part of the more romantic, Roxbury strain of design came to be bedecked with wood shingled cladding and iron crested towers. The three-decker crystallized in 1885 as a more or less standardized package of commonly repeated floor plans with stacked rear porches, a form destined to be repeated *ad infinitum* with endless cosmetic variations and several stylistic evolutions by many small builders over the next 45 years or so. The architecture containing this package remained bifurcated between the South Boston and Roxbury traditions for some decades after 1885.

An economic explanation for the emergence of the three-decker can be as readily put forth as an architectural one. The 1974 BRA report identifies two spurs. The first was a wave of reform legislation that regulated the most egregious aspects of slum tenements. In 1874, for instance, the Massachusetts state legislature passed a series of reforms that established height limits, lot coverage maxima, fire safety measures, and sanitation requirements for all buildings occupied by more than three families living independently, or by more than two families living above the second floor. Structured this way, the regulations allowed the three-decker to escape their oversight. The second spur was a fundamental change in transportation technology. After millennia of walking having served as the primary means for the mass of city dwellers to move about cities, the horse-drawn streetcar appeared in Boston, one of the earliest adopters of new transportation technologies in 19th century America, in 1852 (Boston Redevelopment Authority, 1974). This, according to Sam Bass Warner, doubled the possible commuting distance from the city center from the traditional walking city limit of two miles to four miles by 1887 (Warner, 1962). The speed, reliability, and comfort of streetcar commuting further increased in 1890 with electrification of the streetcar lines, allowing the metropolitan edge to extend to 6 miles, or a one hour commute from the city center, by century's end.

Figure 16. The more romantic, gable-roofed Roxbury tradition of three-decker house design identified by Krim. This is in contrast to the flat-roofed South Boston three-decker protoype (Chapter 1, Figure 2).

Rather than endure the 12% cost increases attributable to the new tenement legislation (as estimated in the BRA report), many developers chose to simply switch building types altogether and site them in the new suburban belt opened up by the new transportation technology (Boston Redevelopment Authority, 1974). The economic imperative of serving what Sam Bass Warner describes as the lowest third of the middle class led to the cost-saving measure of eliminating the expensive pitched roof of the two-family house, replacing it with a flat tar and gravel roof, all while hewing to the two floor-plus-attic height standard established by New England houses since the Colonial period. The inevitable result, according to this view, was the three-decker.

Shand-Tucci, however, views the explanation attributing the emergence of three-deckers solely

to tenement reform legislation as incomplete (Shand-Tucci, 1978). The second half of the 19th century in general was a period of great profusion of newly developed multifamily building types (see Figure 14). During this era, architects were being called upon to give form to two contradictory trends: reviving the tradition of the free-standing townhouse by pulling urban rowhouses apart onto garden lots, and building dense multifamily buildings. There was a great deal of historical precedent for the first trend, but none at all for the second.

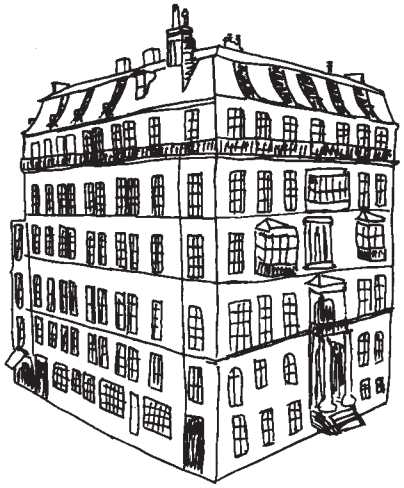


Figure 17. French flats.

In 1857, the first example of a building form entirely new to the United States (with the possible exception of New Orleans) appeared in Boston: this was the Hotel Pelham at Boylston and Tremont Streets, an apartment house, or "French flats" in the parlance of the time, specifically designed for city dwellers of means. This introduced the Continental system of dwelling to America, where a family occupied a dwelling lying entirely on one floor, rather than spread across two or three floors as was customary at the time in most of the United States. Shand-Tucci identifies a pre-existing Franco-Boston architectural connection as the reason why the French flat appeared in Boston over a full decade before the first equivalent appeared in New York City, a city where it later attained a pinnacle with such celebrated apartments houses as the Dakota, the Ansonia, and others.

Seen this way, then, the three-decker emerged not as economic imperative for the provision of low-income housing, but rather as a means of delivering the newly developed French flat amenity package in the lower density environment of the streetcar suburbs, which had been newly opened up via an innovation in transportation technology. This, along with an architectural assist from the mansard house, led to a number of early experiments that ingeniously spread two units, each including a five-room reception area (then considered essential for receiving visitors by upper echelon households) accessed off a central hall and five bedrooms, between three floors – all while preserving the illusion of a single family house with a steeply pitched roof. But such low densities could not keep up with the demand, and the pressure to provide three units in a single building mounted.

The architectural dilemma then became a choice between introducing a windowless wall in a building with three or more connected vertical units, or breaking the two-story cornice line and pitched roof streetscape with a whole extra floor. The choice was made obvious, according to Shand-Tucci by a widespread popular rejection of the windowless wall in the suburbs, and so the second choice triumphed, and hence the three-decker became "the smallest possible dwelling of more than two apartments where the essence of streetcar-suburb design – light and air on four sides of each dwelling unit – could be preserved" (Shand-Tucci, 1978, p 120). All of this was much less important than the

distinction between owning and renting; renting was perfectly acceptable to many households in the upper social echelons.

Thus, in marked contrast to the generally déclassé image that the three-decker has today, a number of them were constructed to appeal to the fashionable set. Some still stand today (Figure 18).

None of this is to suggest that three-deckers were not also built cheaply for people of more modest means. Indeed they were, and in enormous quantities. The picture that emerges, however, is one of greater diversity than is commonly portrayed.

Figure 18. Fenway district, Boston: an example of a brick three-decker originally built for wealthy tenants.

Opinions on this new phenomenon were mixed at the time. A leading early critic of three-deckers was B.J. Newman, although his vitriol seems to be directed against apartment living in general: "Sex morality is often by subtle ways weakened through long established apartment house living." Such buildings were "a shield to the lewd man and woman," since it was "a short cut from the apartment house to divorce court" (Shand-Tucci, 1978).

Others were much more sanguine, even well into the twentieth century. Housing reformer Charles Logue publicly referred to the three-decker as "the ideal type of house" in 1918, and Marion Booth and Ordway Teal wrote in 1914 that for the lower middle-class household,

> The values which the tenant receives in this modern flat in the three-decker are so little short of luxurious that it is no wonder that they are in demand. A flat which rents for from $20 to $25 a month includes a parlor, dining room, kitchen with set tubs, cook stove with water heater attached, two bedrooms, front and back piazza, hot air furnace, electricity and hard wood floors (ibid).

The three-decker therefore was built in a widely varying array of configurations to serve all three tranches of the middle class identified by Sam Bass Warner, and hence was a full participant in the new way of life emerging in Boston's streetcar suburbs.

The streetcar suburb era

Sam Bass Warner emphasizes the significance of the emergence of the streetcar suburb, which developed between about 1870 and 1920, to the spatial geography of metropolitan Boston in this way:

> No period in Boston's history was more dynamic than the prosperous years of the second half of the nineteenth century. One of the most enduring of the many transformations of this era was the rearrangement of the physical form of the city itself. In fifty years it changed from a merchant city of two hundred thousand inhabitants to an industrial metropolis of over a million. In 1850 Boston was a tightly packed seaport; by 1900 it sprawled over a ten-mile radius and contained thirty-one cities and

towns (Warner, 1962, p 1).

In contrasting the salient features of the era that saw the three-decker rise to prominence in the Boston region with those of our current era, I will rely heavily on the analysis that Warner puts forth in Streetcar Suburbs. Firstly, however it is worth noting several similarities between that era and our own:

1. Rapid spatial expansion

The introduction of the streetcar in the second half of the 19th century allowed a dramatic spatial expansion of the Boston metropolitan area, a process that would occur in intensified and altered form with the introduction of the automobile in the first half of the 20th century. The typical 1,600 sf lot of the walking city rowhouse grew to a streetcar suburb single family house lot of 3,000 to 6,000 sf. Warner observes that the developed land area of Dorchester, Roxbury, and West Roxbury in 1900, with almost three quarters of the three towns' population growth having occurred during the era of streetcar suburbanization, exceeded that of the entire walking city metropolis of 1850. Their population almost quadrupled from 1850 to 1900, from 60,000 to 227,000, versus just 200,000 for the entire greater Boston area in 1850.

These expanded house lots compare with a typical post-World War II single family house lot of about 10,000 sf, and the current lot size of almost 40,000 sf for single-family homes built in the Boston metropolitan region between 1998 and 2002, according to a recent study by the Housing Affordability Initiative jointly conducted by the MIT Center for Real Estate and the Massachusetts Housing Partnership (Fisher, 2006). It is interesting to note that the latter figure appears to be jarringly out of step with the nationwide trend, where according to data cited by Robert Bruegmann, house lots shrank from 10,000 sf to less than 9,000 sf between 1990 and 2003 (Bruegmann, 2005).

2. Cultural bias towards suburban living

Then, as now, the majority of households appeared to prefer a detached house on a private lot for their ideal mode of living. Warner attributes this to three powerful 19th century ideas about life in the city. The first was a romantic capitalism, emphasizing the excellence of the accomplished individual, even as the wider economy became more industrialized and complex. A captain of industry needed his "manor in a park" (to use James Howard Kunstler's term) estate to express his individuality, and people of lower social classes swiftly adopted the fashion (Kunstler, 1993).

The second attitude was a nostalgic nationalism, which responded to the tide of immigrant Irish, Italians, Jews, and others with a longing for the purity of an image of a "pure," Protestant Colonial America.

The third attitude, deeply intertwined with the second, was a romanticization of rural

surroundings. Such an idealized setting, in the metropolitan context of Boston, was symbolized by the various rural villages in Dorchester, West Roxbury and elsewhere that soon found themselves surrounded by creeping tides of urbanization. Warner describes a common attitude, which was strikingly parallel to one that predominates today, like this: "Each homeowner believed that his new house was in the country, or at least near it, though in fact in ten to fifteen years his house and land would be lost in a great plain of new streets and new houses" (Warner, 1962, p 45). Much of this mentality drew on an American pastoral intellectual tradition advanced by the likes of Thomas Jefferson and Henry David Thoreau.

According to Dolores Hayden, these ideas were crystallized in highly influential books by Andrew Jackson Downing (The Architecture of Country Houses, 1850), a landscape architect, and Catherine Beecher (The American Woman's Home, 1869), an author, and repackaged into the design of exterior and interior spaces, respectively, of a new kind of home, the self-consciously suburban dwelling. As she puts it, "Before Downing and Beecher, most families lived in city centers or rural areas, the man was assumed to be head of the house in all matters, and most middle-class families had domestic servants. The gendered, pious approach to middle-class suburban life – man nurturing the yard, woman the house and family – first laid out by these two best-selling authors, stands at the heart of our culture" (Hayden, 2003, p 42).

3. Social atomization

Then, as now, suburban development emphasized the production of private spaces of high amenity, with comparatively lesser concomitant investment in new public spaces. Then as now, according to Sam Bass Warner, the greatest profits in development were to be made in upgrading the value of land, and then by placing a generous housing package on the resulting lots (Warner, 2006). In expressing their preference for their new setting, denizens of the streetcar suburbs would often sort themselves by associations of ethnicity and class. Although the enclaves were arranged in what Warner calls a "weave of small patterns," unlike today's large subdivisions made by large, well-capitalized homebuilders, the ubiquity of streetcars as transportation for all but the wealthiest oriented daily travel patterns to employment and shopping centers, in particular Boston's Central Business District, more than to each other.

In the streetcar area, this centerlessness in the new suburbs was offset somewhat by the strengthening of some existing rural village commercial centers, such as Codman Square and Lower Mills in Dorchester, or the emergence of new ones as the result of transportation junctions, such as Fields Corner and Grove Hall. But the linear shopping strip arose in places such as Washington Street, Dorchester Avenue, and Blue Hill Avenue as a new form that served as a precursor to the auto-oriented retail strips, such as that along Route 1, that would emerge in the 20th century.

Then, as now, important new public institutions were often relegated to leftover land, in

contrast to their traditional placement in town centers. Warner cites the example of the placement of Dorchester High School in Ashmont instead of the traditional civic cluster of Meeting House Hill. He speculates that this reduced emphasis on public space and institutions has contributed to the insular mentality that has come to be a hallmark of Boston area local politics. This same critique of modern suburbia's character of civic centerlessness is made by contemporary commentators such as Duany et al (Duany et al, 2000).

The following are the major differences between the pattern of suburban development from 1870 to 1920 and our current era:

1. Culture of small vs. large builders

Warner records that between 1870 and 1900, 22,500 houses were built in Dorchester, Roxbury, and West Roxbury, of which 4,000 were three-deckers. These were constructed by 9,000 different builders. Today, the capability to attain regulatory approval for new suburban subdivisions, to construct needed new infrastructure, and to undertake large, sophisticated marketing campaigns, among other realities of modern real estate development, has caused the homebuilding industry in metropolitan Boston, as in the United States as a whole, to become increasingly dominated by large, well-capitalized firms such as the Green Company.

Not only did real estate development lack horizontal integration, it also lacked vertical integration. Land speculation, which entailed buying land, subdividing it into lots, and arranging for essential infrastructure to be extended to it, was a separate business activity from the construction of sale of new homes, and done by different people. "Both commercial house builders and individual families depended upon the prior work of land subdividers who cut up fields and laid out streets," as Warner puts it (Warner, 1962, p 61).

There are a number of plausible reasons as to why homebuilding in metro Boston bucked the general Gilded Age tendency towards industrial concentration. One is the scarcity of capital of the era, much of which was diverted towards enormous infrastructure projects, both public and private, such as the construction of urban sewers and railroads. The 19th century financial system also lacked the ability to aggregate investment capital from as great a variety of sources as is possible today in the era of Internet daytrading. Another reason is that the conservative, risk-averse culture of small homebuilders inhibited the adoption of mass-production techniques later pioneered after World War II by the Levitt brothers and others. There seem to have been regional differences: for example, Boston appears to have lacked figures such as Samuel Eberly Gross, a large Chicago real estate speculator and builder who developed, among other things, the suburban town of Brookfield in its entirety beginning in 1888.

The profusion of small builders in Boston had a number of consequences of relevance to the three-decker. Small, poorly-capitalized builders, most of whom had other professional identities,

tended to rely on tried-and-true designs of simple construction that had gained acceptance, such as the three-decker. Their lack of access to capital encouraged them to build less expensive houses necessarily targeted to households of more modest means. Many of these small builders were recent arrivals to Boston from other countries or from rural areas of New England and Atlantic Canada, which may explain why they did not choose to emulate the fashion for urban townhouses of the Back Bay and South End that had been *au courant* earlier, and instead selected the wooden, more suburban forms.

The only exceptions to this trend in the streetcar suburb era were the large landfilling projects of Boston, the last of which was the Back Bay, funded by the state government. These required enormous quantities of capital to undertake the creation of land, and to market and sell the expensive homes needed to justify the enormous upfront investment.

Today, because large homebuilders conceive of and execute the development of large land parcels simultaneously, they have an incentive to keep undesirable land uses, such as commercial development or multifamily housing, at a remove from the single family homes that they are trying to sell, or out of their developments altogether. Multifamily housing, when it is constructed in outer suburbs, tends to be built in large increments and on sites isolated from single family homes by high-speed roads or other barriers. In so doing, they are catering to the desires of the typical single family household that seeks to protect its investment in its biggest asset, the home. Fischel argues, in turn, that such households, besides expressing their preferences as consumers, act in the public sphere as "homevoters" who, particularly since the 1970s, have used the local governmental process to thwart multifamily development within their suburban towns (Fischel, 2001). The primary exception to this trend in Massachusetts has been developments permitted under Chapter 40B, which I will discuss in Chapter 5.

Interestingly, Francois Dufaux notes a parallel history in Montreal, which itself has long had a culture of small builders. Some of the explanations for this include the relative lack of affluence of the province compared with English-speaking Canada, the lingering influence of the French Colonial seigneurial land system into the 20th century, and the Catholic church's decree that economic returns on investment of greater than 6% were considered to be usury, thus discouraging large capital investments. Not only did all of this encourage a culture of small builders, it discouraged the typical American pattern of large-scale land speculation. The plex system, as described by Dufaux, is a non-speculative, conservative, and, because of its suitability for modification over time (something that can be seen in the accretive constructions in the back of plex rows throughout Montreal, as in Chapter 1, Figure 9), incremental strategy of real estate investment (Olson and Dufaux, 2006).

One of the striking differences between the Montreal situation and that of Boston is that the Montreal culture of small builders has continued to this day. McGill architecture professor Vikram Bhatt relates that the homes in a large subdivision on the suburban fringe, which typically take the

form of narrow townhouses or of plexes, will be constructed by several builders, not by a single one as is the standard practice in the US or in English-speaking Canada (Bhatt, 2006). Much of this is attributable to Québec's distinct legal system, which imposes strict labor laws that have discouraged many of Canada's large production homebuilders from entering the market.

2. Pro vs. anti-development environment

Although, as noted earlier, three-deckers emerged at least in part as a response to legislation regulating tenements, the notion of building inspections was in its infancy at the time, and inspection and enforcement were spotty and uneven at best. Modern zoning codes were nonexistent; nuisance codes were essentially the only controlling mechanism. Warner calls the streetcar suburb era a time of "regulation without laws." Regulation of homebuilding came in informal, market-driven adherence to standard practices by conservative, risk-averse small builders, rather than by endless conflicts over land use mediated by political and judicial means, as is the case today.

This relative lack of legal restrictions allowed Warner's "weave of small patterns" to become manifest. Three-deckers were often built on the last remaining unsold portions of a speculator's land holding, or in undesirable areas such as along arterial roads, and consequently were sprinkled throughout the suburban belt in a finely grained pattern. This is often impossible today, where homebuilders must commit to a predetermined, publicly announced plan for a subdivision before securing regulatory approval. Established residents, particularly owners of single family homes, tend to exert political pressure to ensure that zoning laws, minimum lot requirements and other regulations effectively preclude undesirable uses, including multifamily housing, from being built next to them.

The political and regulatory environment of the streetcar suburb era was more receptive than is the case today to construction, particularly of higher density housing catering to lower-income people, in a couple of ways. As Warner describes, speculators in Dorchester, Roxbury and West Roxbury could rely on the City of Boston extending sewer and water services outward to reach their land. There was a general public enthusiasm for the construction and extension of modern infrastructure, particularly sewer systems. Today, by contrast, because of decades of policies intended to "make development pay for itself," many homebuilders are faced with a choice between maintaining densities low enough to allow septic systems, or building an expensive private sewer system, because most suburban towns are unwilling to build or maintain new infrastructure. In many instances, the choice is made for them by zoning controls on undeveloped land that are highly time-consuming, expensive, and risky to try to relax via a local political process dominated by Fischel's "homevoters."

Secondly, the number of jurisdictions was smaller in proportion to the amount of development. The City of Boston expanded greatly into heretofore politically independent towns in the late 19th and early 20th centuries, annexing Roxbury in 1868, the last of Dorchester in 1870, Charlestown, Jamaica Plain, West Roxbury and Roslindale in 1874, and Hyde Park in 1912. Because Boston drew a lot

of undeveloped land into its boundaries, many of the metro area's subdividers found themselves dealing with the government of the generally pro-growth central city. By contrast, as today's suburban frontier pushes outward, it extends into formerly rural towns to whom suburban development may not be welcome. Because of the vagaries of school financing in Massachusetts today, there are many instances in which newly constructed single-family homes will adversely impact a town's school finances unless the homes are assessed for high property values. Such concerns, or others related to seeking the exclusion of people of lower economic classes, are seldom publicly acknowledged as the justification for restrictive zoning. As Janet Smith, a University of Illinois-Chicago urban planning professor and observer of housing patterns in metropolitan Chicago wryly notes, the language more typically employed by homevoters revolves around "the protection of our communities" (Smith, 2006).

In any event, the end result is that the typical path of least resistance for developers today in jurisdictions on the suburban frontier is the construction of large, single family homes. Some of these forces are also attributed by the MHP-MIT Housing Affordability Study as the reasons why lot sizes continue to increase in metro Boston, unlike other regions of the United States (Fisher, 2006). As will be discussed in greater detail later, these forces are so strong that they have only been able to be partly overcome by the rather extreme step of Massachusetts' Chapter 40B legislation, which allows the Commonwealth of Massachusetts to intervene in housing land use disputes, a power jealously guarded by local jurisdictions by almost four centuries of tradition in New England.

3. Low versus high homeownership rate

In the late 19th century and early 20th century, before the New Deal era introduction of FHA-insured, self-amortizing, 30-year fixed mortgages and the later federal policy of allowing mortgage interest to be deducted from income taxes, in a time of scarce and illiquid mortgage capital, the homeownership rate hovered around 25% of metro Boston households. As of the 2000 US Census, it was 59%. Quigley relates that prior to the Great Depression, home mortgages typically had terms of three to ten years, loan-to-value ratios of 60% or less, and were non-amortizable, resulting in balloon payments upon maturity (Quigley, 2005).

One could speculate that this helped to spur the development of two-family and three-decker homes, which provided a market mechanism for builders both to indirectly provide rental housing to the majority of households to whom ownership was out of reach, and to directly provide a product that would serve families who would be unable to attain homeownership but for the inclusion of income-producing rental units within the house.

Decades of policies of federal policy, beginning with the Roosevelt administration's New Deal policies during the 1930s, helped to stabilize the then-distressed home mortgage market, create a secondary market for it, and eventually allowed it to grow into the highly efficient system that we know today. These policies included the National Housing Act of 1934, which among other things

established the Federal Housing Administration (FHA), which insured mortgages; the partial guarantee of home loans by the Veterans Administration; and the later reconstitution of Fannie Mae as a Government Sponsored Enterprise (GSE) in 1968, and the establishment of another GSE, Freddie Mac, in 1970. Homeownership rates nationwide skyrocketed as a result; in Massachusetts, they increased from 38.1% in 1940 to 55.9% just twenty year later, and have increased further, albeit at a more modest rate, in the past 45 years to their level of 63.4% in 2005 (US Census). One could surmise that a greatly expanded pool of mortgages would have encouraged many metro Boston households in the mid 20th century to bypass the three-decker and its extra rental income and leap directly to the popular "American dream" of ownership of a single family house.

In recent years, concerns have arisen that the expansion of homeownership in the Boston metro area is slowing or even reversing, primarily due to rapidly increasing home prices fueled by a prosperous economy and an undersupply of new housing construction. Massachusetts experienced the highest increase in owner-occupied single family home prices of all states between 1980 and 2003 (573% versus 291% nationwide). As a consequence, inflation-adjusted median household incomes rose only 29% during a time when single family home prices rose, in real terms, 257%. This has led to a situation where, in the words of a recent report, "Young, first-time homebuyers are essentially locked out of the housing market in eastern Massachusetts and must be content to rent increasingly expensive apartments, move further and further from their jobs, or even migrate out of Massachusetts entirely" (Goodman and Palma, 2004). Could a return to the three-decker model bring homeownership within reach for more young families of modest means than is the case today?

4. Absence vs. presence of an affordable housing production system

The primitive nature of early building codes had the consequence that during the streetcar suburb era, the minimal housing package that for-profit builders would provide for a reasonable profit reached further down the socioeconomic spectrum than is the case today. As Warner describes it, streetcar suburbs housed the upper half of the economic spectrum, while the bottom half was housed in old wooden houses and newly constructed tenements, both in the inner city. While there was enormous public concern over housing conditions, particularly in dense urban areas, the public response was mainly limited to new regulations, such as the ones that culminated in New York City's Tenement House Act in 1901. Private philanthropists such as Boston's Robert Treat Paine established limited dividend corporations, experimenting with Philadelphia-style small brick rowhouses on alleys in the mid 1870s, and with a romantic subdivision, complete with curving streets, of 116 single and two-family wooden houses off Centre Street in Jamaica Plain in 1891. Because of their general unwillingness to extend subsidies beyond the level needed to merely reduce the normal profit margin of perhaps 12% to a limited dividend of, say 5%, such schemes did not have the broad-based impacts they often promised. Ford, writing more than a decade following the streetcar suburb era, in 1936,

estimates that philanthropists, cooperative organizations and the government together accounted for the construction of 1% of the housing standing at the time in the New York metropolitan region (Ford, 1936). Meanwhile, the for-profit homebuilding industry built large numbers of single family homes on undesirable land parcels, and two-families and three-deckers elsewhere, providing the bulk of the newly-built, moderately priced housing.

Today, a shrinking proportion of the population can afford new suburban single-family housing. Due to an increasing minimum amenity package for housing, large minimum lot sizes leading to "mansionization," and to the political explosiveness with which affordable housing is greeted in many communities, it is today widely accepted that the for-profit housing market will fail to provide any low to modest cost housing without subsidy or regulatory concessions. The only exceptions are mobile and manufactured homes, a sector that has traditionally been more lightly regulated than site-built housing, as explained by Christine Hunter (C. Hunter, 1999). Over the past several decades, the low-cost segment of housing has been otherwise almost entirely ceded to a complex array of public agencies, nonprofit, and charitable organizations. Many of the government subsidies designed to encourage such housing production, most notably the Low Income Housing Tax Credit (LIHTC), are not designed to work with the mixed ownership/rental tenancy split traditionally embodied by three-deckers.

This bifurcation of housing production into a for-profit segment targeting buyers and renters of greater means and a not-for-profit segment targeting households of lesser means could help explain why the three-decker, which seems to offer the opportunity to accommodate both within the same structure, is not part of the palette of housing options being built today.

5. Concentration versus dispersion of jobs

Warner describes the old walking zone of Boston in the era of the streetcar suburban expansion as a city of housing for the poor and of jobs – those in offices disproportionately for highly skilled workers, and those in manufacturing and crafts overwhelmingly for the working class. Then, as now, the transit and suburban railroad lines converged on downtown, but there was no alternative means of accessing the city core during that era for all but the most wealthy. Meanwhile, industry was in the process of moving out towards more spacious sites in the suburban belt beyond the two-mile walking city radius. Hence, working-class people employed in industrial jobs tended to require housing in the relatively few zones of the suburbs surrounding nexuses of inbound (to access shopping and other urban amenities) and crosstown (to access jobs) streetcar lines. Because housing for this socioeconomic class was bidding for land at these locations against industry, which sought it for similar reasons of accessibility, the result tended to be land prices 50% to 100% greater than the cost of land served by radial lines in more outlying areas. This process gave rise concentrations of exceptionally dense three-decker housing in these areas of inner Roxbury, South Boston, and

Dorchester – only such efficient land usage allowed housing uses to outbid industrial uses for these sites. Presumably the economic importance of industry, and its need for workers able to reach their jobs, cut through whatever political obstacles may have existed to the siting of dense working-class housing in these areas.

Today, housing for the working class in the suburbs follows an entirely different spatial logic. Although Boston's Central Business District remains an important destination, both for white-collar jobs and for shopping, its dominance within the region is much reduced. Jobs are spread throughout the metropolitan region. Many are located without any consideration of allowing their workers, even low-income ones, to be able to reach work by any means other than the automobile. As Fischel puts it, "The decentralization of metropolitan employment [means] … that workers no longer [need] … to live near a single central business district" (Fischel, 2001, p 20). Consequently, low-income housing developments, which are mentioned today as always subsidized (except for trailer courts, Figure 19), are located in whatever towns they can fall through the political and economic cracks. Leaving aside the state Department of Housing and Community Development's recent Transit Oriented Development Infrastructure and Housing Support Program to foster dense mixed-use development around commuter rail stations, such low-income housing developments tend to be predicated on the use of automobile travel for their residents to reach work and other necessities. Consequently, they are often not compelled to use land-efficient forms such as the three-decker. The construction quality, however, is generally austere and lacking in aesthetic refinement. Warner says the cramped suburban streets of three-deckers stand as an ugly joke against their models: the picturesque houses set on garden lots" (Warner, 1962, p 57-58). The same could be said of the typical low-income development of contemporary "garden" apartments, a pale imitation of their early 20th century forbears (Figures 20 and 21). The shortcomings today, however, are a lack of quality in architecture refinement and a failure to define a coherent streetscape, rather than an excess of density.

Figure 19. A trailer home: a rare example of modern unsubsidized low-cost housing.

Figure 20. Garden apartments of the early 20th century.

Figure 21. Modern suburban garden apartments.

The decline (and persistence) of the three-decker

As described in the 1974 BRA report, the first era of intensive three-decker construction, 1880-1900 (Krim has it beginning in 1885) featured two major patterns. The first was the dense building of three-deckers at crosstown and radial streetcar intersection points, as described above. The second was the construction of better-built three-deckers with more generous spacing further out in the suburbs where single-family and two-family houses predominated. The sites were the less desirable parcels along arterials, or small pockets within subdivisions of singles and two-families, sometimes sold off by poorly capitalized speculators needing to quickly monetize their land (Boston Redevelopment Authority, 1974). This presaged the modern subdivision practice of placing multifamily housing as a screen behind retail strips to buffer single family homes from noise, traffic, and visual impacts (Warner, 2006).

Beginning in 1895, barely twenty years into their existence, three-deckers began to sow the seeds of their own eventual end by spreading into more areas in the outlying suburbs, such as Jamaica Plain, adjacent to single-family and two-family houses. Though the workmanship was generally still high, they came to be viewed as a blight to the tranquility of their neighborhoods by the already established homeowners, whose homes had their light and air blocked by the tall, bulky structures. After the turn of the 20th century, according to the BRA report, there was a shift as three-deckers came to be increasingly built expressly for investors, and less often for eventual owner-occupants (Boston Redevelopment Authority, 1974). Although this shift was neither sudden nor universal, it intensified with the introduction of the six-family house in about 1905, which was more associated with absentee ownership than the three-decker, presumably because of the greater amount of capital required for its acquisition and operation.

Figure 22. The Victorian house, the "Millenial McMansion" of the late 19th century.

Also around the turn of the twentieth century, the three-decker underwent a similar evolution to that described by Christine Hunter in American single-family housing of the same era (C. Hunter, 1999). Both economic factors, such as an escalation in consumer demands for interior amenities such as furnaces, electrical wiring and modern plumbing, and a shift in popular tastes caused the ever-larger and more elaborate Victorian house of the late 19th century – which could be likened in spirit to the "Millennial McMansion" of our current real estate boom of the early 2000s – to evolve into less lavishly ornamented, but mechanically better-equipped, homes.

The three-decker's standard geometry, tightly fitted to its narrow lot, offered less room to economize on space than occurred with single family housing of the same era, and so cost reduction

measures tended to focus on the exterior. The romantic gabled roofs of the suburbanesque, or Roxbury, strain of three-decker house design yielded to a more modest hipped roof with attic dormers. The simplification continued after 1910, in what Krim calls the Late Classic period of three-decker design, as the Colonial Revival stylistic elements blended with the Prairie-Bungalow Style, fashionable in the American Midwest and West (Krim, 1977).

Market forces began to severely impinge on three-decker construction during World War I. Construction slowed in 1915, and almost ceased by 1918. According to the BRA report, the same three-decker built in 1908 cost almost double ten years later (Boston Redevelopment, Authority, 1974). They were increasingly shunned by families other than those of the lower middle class. A more rapid escalation in construction costs relative to land costs made the three-decker's intensive use of land less attractive. For instance, in New York City, where a similar process was underway, construction costs roughly doubled in the 30 years prior to 1936, while land costs held steady (Ford, 1936). By the 1920s, the infancy of mass automobile ownership was beginning to erode the dominance of the streetcar network as a means of transportation.

What few three-deckers were built after World War I were subject to an elimination of excessive detail. This is what Krim terms the Functional period of three-decker construction, extending to their absolute cessation in Dorchester in 1930. Excessive exterior detail was stripped away by the considerations of postwar inflation and the interior amenity package, escalating once again during the consumer boom of the 1920s. The parlor bays disappeared, leaving a flat, unarticulated front façade. The stylistic distinction between the Roxbury and Dorchester traditions of construction had by now vanished.

Construction of three-deckers had slowed to a trickle in the city of Boston by the time the city enacted a zoning ordinance in 1924 (in effect in 1927), effectively banning, under most circumstances, the erection of three-deckers in the city. Numerous close-in suburbs had already taken similar steps in response to growing and widespread scorn for three-deckers, due to their negative effect on single-family home values. A 1914 newspaper article reporting the adoption by the suburb of Bedford of state-enabled legislation outlawing three-deckers states without qualification that "the adoption of the tenement house act will prevent the erection of the 'three-decker' house and insure the erection only of desirable residential buildings" (Unknown, 1914). This attitude, obviously so widespread by then as to need no justification, was no doubt accelerated by destructive fires involving closely-packed three-deckers in Chelsea in 1908 and Salem in 1914, each resulting in the loss of hundreds of structures and the displacement of thousands of people.

The virtual cessation of construction of three-deckers in the early 1920s, however, by no means spelled the end of the three-decker as a major housing element. It has endured everywhere in metropolitan Boston's housing stock, constituting close to 19% of all of the city of Boston's housing units as of the 2000 Census, down slightly from 21% in 1974 (Boston Redevelopment Authority).

Their impact is heightened by their dominance of certain neighborhoods of the city, where the ubiquity of the three-decker has come to visually symbolize those areas. The range is striking: areas that developed before 1870, or that were subject to bans on fire-prone construction, have virtually no three-deckers at all. In Boston, these include the Back Bay, the Central Business District, the North and South Ends, Charlestown, and the oldest parts of South and East Boston. On the other extreme lie certain districts of Mattapan and Dorchester, where three-deckers constituted as much as 80% of housing units in 1974 (ibid).

Areas of remaining three-deckers in metropolitan Boston vary widely in their economic health. The most distressed areas, such as Dudley Square in Dorchester, have experienced great losses of three-deckers due to abandonment and arson fires. Others, such as Cambridgeport in Cambridge and Davis Square in Somerville, have seen substantial rehabilitation and conversion of three-deckers from single ownership to ownership in the form of condominiums.

Edel et al make a similar point, illustrating with an example from 1984 that in the politically, ethnically, and economically fragmented Boston metropolitan region, highly local factors can overwhelm the effect of building type on the desirability of a residential location:

> Aluminum-sided triple deckers in Brookline preserve their value, reflecting that community's advantageous tax base, transportation access, and political cohesion. Three-story brick buildings about one mile away in Boston are abandoned despite good transit access to downtown; reflecting the undesirability of high taxes, poor services and public schools torn by racial strife (Edel et al, 1984).

These anecdotal observations of the wide range in economic and physical circumstances surrounding surviving three-deckers square with the BRA's observation three decades ago that the three-decker form in of itself, and its original quality of construction, appear to have little bearing on neighborhood decline or stability. Subsequent maintenance figured to be much more important, and there appeared to be no inherent physical reason why three-deckers were any more subject to deterioration than wooden single-family houses.

On the other hand, the report observed that the three-decker is particularly vulnerable to being absentee-owned, poorly maintained, or abandoned altogether in neighborhoods where a cycle of decline has already set in. The pool of buyers who stand ready to step into the breach and purchase and rehabilitate a "fixer upper" three-decker is presumably lower than it is for other housing forms, because so much capital is required, and because it is somewhat management-intensive. Part of this could be that three-deckers are often perceived psychologically as a real estate hybrid, awkwardly occupying the nether space between a true investment property and the classic American image of homeownership, which inevitably revolves around the archetypal "American Dream" of a freestanding, singly-occupied house. Additionally, the management and maintenance of a house that contains two rental units is a daunting undertaking for many in a way that it is not for a house with no rental units at all, or even for a house with one, as in the case of two-family and (sometimes) semi-detached houses.

Additionally, some circumstances surrounding the original construction, aside from its quality of execution, seem to have had some importance in ascertaining whether three-deckers are likely to continue to be well-maintained. Characteristics that boded well for good upkeep included: mixing of three-deckers with single and two-family houses; location on quiet residential streets rather than on commercial arteries; lower densities and larger lots; and siting to face parks or other amenities. While the latter could be said to be true of any housing, it may be of particular importance for three-deckers because of the paucity of natural light in the middle of their floor plates.

As for the accusation often leveled against three-deckers that they are inflexible in interior arrangement, the BRA note that three-deckers easily permit an owner to expand vertically by absorbing one or both rental units, or even parts of them, into a contiguously occupied space. This issue will be discussed at greater length in Chapter 3 (ibid).

As for Shand-Tucci, he also dismisses some of the classic charges against three-deckers: that they are cheap, that they are speculator-built, that they are hard to maintain, and that they are densely-built. All of these charges could be just as easily leveled against wooden housing types built in various eras.

A substantial number of other cities and towns in metropolitan Boston appear to continue to have a major portion of their housing needs fulfilled by three-deckers. In the mid 1970s, a time of widespread physical deterioration and social and racial turmoil in Boston, the BRA authors invoked the example of Everett as a town with the advantages of a suburban yet close-in location, low property taxes, no rent control and little racial change, in which three-deckers, of identical design to those in Boston, contained 10% of the town's housing units with little apparent deterioration. The authors described the continuation of a tradition of upward socioeconomic mobility amongst the predominantly Italian-American families that seemed to embody the best of what three-deckers can accomplish for their occupants.

All of this seems to suggest that three-deckers will, for the foreseeable future, continue to play an important role in housing the residents of the inner portions of the Boston metropolitan region developed between about 1885 and 1920. The question remains: will modern incarnations of three-deckers be rebuilt where they have been lost? Will they be introduced to portions of the metropolitan region where they did not exist before? What about other North American cities where they are traditional? What about cities where they are not traditional? All of this is the subject of the remainder of my thesis.

CHAPTER 3: DESIGN

Chapter intro

Having examined the forces behind the three-decker's rise to prominence, the characteristics of the era that produced it vis-à-vis our own, and the historical reasons for its cessation as a newly-built form, the next step is to examine its prospects in the current era for rehabilitation and new construction. Design, economic, and regulatory considerations each present obstacles and opportunities. This chapter opens with design, and examines the four issues of security, unit placement, unit interiors, and parking.

Security

An association between areas of concentrated housing of impoverished people and a high level of crime has existed in the public imagination in the United States at least since the mid 19th century, when the processes of urban industrialization began to take hold in earnest. Such concerns have not abated in modern times. John Sharratt, a prominent Boston architect who has designed three large affordable housing developments, states flatly that "security was the most important issue" in his architectural approach towards low-income housing (Sharratt, 2006). While the perennial debate between "architectural determinism" and the primacy of social factors as the main causal agent in social health or breakdown continues, I will heed my own belief that both are important. Oscar Newman, one of the foremost writers on the topic of the link between design and security, puts it this way:

> Architecture operates more in the area of "influence" than control. It can create a setting conducive to realizing the *potential* of mutual concern. It does not and cannot manipulate people towards these feelings, but rather allows mutually desirable benefiting attitudes to surface (Newman, 1973, p 207).

Let us examine in turn the three-decker in light of the design factors that Newman identifies in Defensible Space. The first is the notion of **territoriality**. He defines this as the use of barriers, both physical and symbolic, to mediate the transition from the public street, with its wider range of permissible activities, through semi-private areas, into the private unit, where behavior is most tightly circumscribed. The three-decker's front steps achieve this purpose by introducing a grade separation between the public street and the semi-private building entrance.

Newman also emphasizes the importance, in fostering territoriality, of minimizing what he terms "number:" the number of buildings in a project, the number of apartment units per building, the number of apartments per hallway. The three-decker, obviously, has a low maximum number of three in the number of apartments that share its entrance and lobby; this can drop to two in some cases where there are two entry doors, because the lowest unit has its own entrance.

To Sharratt, however, a number of two or three is still too high. One member of one household assuming a threatening posture in a semi-private area, such as in a three-decker's shared entrance space, is all that is needed to terrorize the residents occupying the other apartments that share the lobby. Consequently, he went to great lengths in his designs to provide fully private entrances wherever possible. This can be seen in Villa Victoria in Boston's South End, part of which has a rowhouse flat configuration. Although it is three stories tall, the upper apartment in each repeated module is a duplex, i.e. it occupies two vertically stacked floors. This makes it possible for each unit to have its own private entrance (Figure 23). Another means of avoiding shared internal stairwells is seen in the vernacular Montreal triplex, in which the hardship of braving the elements to ascend exterior stairs is offset by having an individual exterior entrance for each apartment on the front façade.

Figure 23. At the Villa Victoria development in Boston's South End, careful attention was given to providing individual entrances, as in these rowhouse flats. Duplex units are stacked over half-sunken flats.

Number also becomes important in shared facilities, which in three-deckers are generally limited to the back yard. Such shared facilities become perceived as more valuable when they are shared by a lower number of households. Again, Sharratt's opinion, acquired via years of intensive consultation with residents of public housing in troubled Boston neighborhoods, is that "ideally you don't share a yard" (Sharratt, 2006). In Villa Victoria, he restricted backyard access, via a rear staircase to the large, more family-oriented duplex unit stacked on top of the smaller, ground-floor unit, which is targeted for households, presumably without children, less in need of back yard space. As he puts it, "people like to deal with their neighbors on a mutual common ground and not be forced into it" (ibid).

Of course, such concerns over number may abate in a three-decker if one household owns the entire building, because then it can exert a greater degree of control over the actions of the two renting households that impinge on semi-private areas and the back yard. But such control may not be possible where there is separate condominium ownership of the three units in a three-decker, a situation that is more frequent today, as discussed in Chapter 4.

In summary, although the three-decker is not ideal in terms of territoriality, it is vastly superior to most other multifamily building types where long halls prevail. The three-decker's lack of elevators, and its concomitant low ratio of apartments to vertical circulation facilities, then becomes an extremely attractive attribute.

Newman's second design consideration is that of **natural surveillance**. This is, in effect, a restatement of Jane Jacobs' notion of "eyes on the street" for the purpose of, in Newman's words, "allowing the resident to observe those public areas which he considers to be part of his realm of ownership and hence responsibility" (Newman, 1973, p 79 and Jacobs, 1961). In like fashion,

Sharratt emphasizes the great care with which he approached window placement in the design of his low-income housing designs, explicitly for this purpose of natural surveillance.

Newman evinces particular concern that a multifamily building lobby be visible from the outside. The lobby of a three-decker generally passes this test, as it is clearly seen from the street as a semipublic space reached by the highly visible stoop that precedes it in the sequence of entering a building. Conversely, the elevation of the stoop facilitates observation of the street below. In like fashion, the area in front of the building is clearly observable because of the large number of windows, particularly those in bays on the front façade, that overlook it. Of more concern are the rear yard, entry and stairwell, whose sight lines from the rear façade are interrupted by the stacked rear decks, which may not be occupied during the many cold months of the year in New England. Of additional concern is the area of lateral separation between three-deckers; when the houses are close together, it becomes difficult to observe what is occurring in this space because of the steep angle of the sightlines, particularly from the top floor, and the lack of daylight that penetrates. Such a consideration may have been part of the reason for Sharratt's stated strong preference for a rowhouse flats configuration over a group of closely-spaced three-deckers.

Finally, it is worth noting that three-deckers, in not needing to conform to high-rise building codes, need not have their staircases encased in a fireproof concrete well. This allows at least the possibility that both the front and rear stairwells can have windows on the building's façade, thus allowing enhancing natural surveillance in these semi-public spaces that have proven so troublesome in low-income elevator buildings.

Newman's third factor for safety in design is that of **image**. This becomes important when "the introduction of a large grouping of new buildings of distinctive height and texture into an existing urban fabric singles out these buildings for particular attention. If this distinctive image is also negative, "the project will be stigmatized and its residents castigated and victimized" (Newman, 1973, p 102). On this score, as with natural surveillance, the three-decker again has mixed results.

Figure 24. Public housing built on the "towers in a park" model: typically greatly out of scale with the surrounding residential fabric, both in terms of building massing and in terms of the geometry of the street network.

On the one hand, as we saw in Chapter 2, the original impetus for the three-decker's emergence can be viewed as the desire to provide vertically stacked multifamily housing while retaining the form of suburban detached houses. Its three-story height and its width comparable to that of a typical small-lot single family house ensure that a row of three-deckers does not create a jarring discontinuity on the skyline visible from several blocks away,

as is commonly the case with midrise slab public housing (Figure 24) such as the Bromley Heath development in Jamaica Plain. A row of three-deckers visually "reads" as a row of small, detached frame buildings, just as is the case with a block of single family houses.

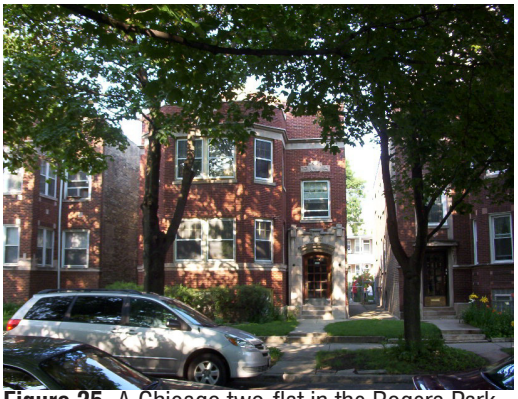


Figure 25. A Chicago two-flat in the Rogers Park neighborhood appears little different than a typical flat-roofed three-flat, other than its lack of a third story. This is in stark contrast to the disjuncture between New England two-family houses and three-deckers.

On the other hand, when viewed from a closer distance, three-deckers have visual attributes that immediately denote them as distinct from single family housing. For instance, they have their telltale stacked rear decks. Additionally, the flat roofs needed to hold the cornice line to the traditional limit of approximately 35' above the sidewalk without shortchanging the floor area of the top apartment are another visual discontinuity in Boston, a city whose wooden single family homes generally have pitched roofs. Could the visual congruence between the flat-roofed, brick Chicago three-flat and the flat-roofed, brick Chicago townhouse partly account for the more positive overall perception of three-flats in that city as compared to three-deckers in Boston?

Interestingly, as noted by Matthew Littell of Utile Design, a local Boston architecture firm, the Boston two-family house is much more visually similar to the single family house than is its cousin with one more floor (Littell, 2006). While its twin entry doors are a giveaway as to its true nature, these are relatively small in visual impact when one considers that such a house can generally accommodate a pitched roof without rising to unusual height. Sometimes even the double entry is disguised behind just one exterior door. This makes two-families, in the eyes of the typical metro Boston resident, "look more like homes" according to Kristen Hunter, a project manager at Maple Hurst Builders, a small developer operating in Jamaica Plain and surrounding areas (K. Hunter, 2006). Additionally, the two-family house's length is considerably shorter than that of a three-decker due to its ability, under local building codes, to forego providing a second means of fire egress, and to its general lack of exterior decks. All of this means that the New England two-family house therefore avoids the boxy appearance of the typical three-decker building. It is interesting to note that Montreal, New York, and Chicago traditions of superposed flats all have much less of an architectural disjuncture between the two- and three-unit forms. For instance, a Chicago two-flat generally looks exactly like a three-flat with one story removed

Figure 26. A typical New England two-family house: it normally resembles a single-family much more from the exterior than it does a three-decker.

(Figure 25).

Of course, it is difficult to disentangle the negative image that has arisen for so many Bostonians in connection with three-deckers and this housing form's geographical concentration in parts of the city that underwent severe economic decline in the 1960s and 1970s for a complex, interrelated set of reasons. But, in terms of image, the three-decker, true to its chameleon-like quality of taking on characteristics of both single-family and multifamily housing, takes the appearance of either depending on the distance from which it is perceived.

Newman's fourth design factor for safety is that of **milieu**. Because three-deckers fit on lots of similar dimensions to those of small-lot single family houses, the factors related to surrounding land uses that can impinge upon their desirability, good and bad, are little different than those for single family homes, and so I will not dwell on them. It is worth noting, however, that the three-decker's siting within a traditional configuration of frontage lots and conventional blocks gives it a decided advantage, according to Newman's analysis, over mid-century public housing built on superblocks (Figure 24).

Unit placement

As already noted, John Sharratt believes that attached rowhouse flats make a great deal more sense than detached three-deckers. What accounts for the prevalence of the attached condition in New York and Montreal, in contrast to the detached configuration that is ubiquitous in Chicago and Boston? Even Roberta Feldman, a native New Yorker long steeped in the Chicago building tradition through her tenure as director at the University of Illinois-Chicago's City Design Center, believes that it is "just plain dumb" to, given a choice, select detached over attached three-flats. Construction costs are greatly increased due to the much greater amount of perimeter wall construction that needs to occur (616' vs. 256', or 240% more in the case of four 17' x 60' three-flats). In Boston, due to the width of the lots, at least the side yards offer the benefit of allowing parking in many cases; but in Chicago the lateral separation of typically 4-6' on a narrow, 25' wide lot allows space for nothing more than a side walkway. Operating costs are increased as well; buildings with party walls need considerably less energy for heating and cooling compared to detached structures. The floor plates of the Chicago three-flat have the greatest aspect ratio (length to width) of all four of the superposed flat types that this thesis examines, due to the three-flat's combination of being detached like a three-decker yet placed on a narrow frontage lot of the same width as is typical in Montreal and New York. As a consequence, the possibilities for their interior layouts become extremely limited. What, then, accounts for the persistence of this detached condition, even to the point where it is enshrined in the zoning code (as described in Chapter 4)?

A cultural explanation may be in order. It is possible that Boston and Chicago are inheritors of the Anglo-Dutch tradition of laterally separated property ownership, but taken to the extreme of building

detached buildings – "that's how crazy private property ownership is in Chicago," as Feldman puts it (Feldman, 2006). Meanwhile, Montreal, as explained by Alan Knight, is an amalgam of British and French language, culture, architecture, and law completely unique on the North American continent amongst large cities with the possible exception of New Orleans. New York City, for its part, developed at a density that placed it in a category of its own in North America. Perhaps these cultural attributes of Montreal and New York caused them to diverge from the Chicago and Boston pattern, which themselves are still somewhat out of step with the American norm in that they have superposed flats at all! It is apparent that different cities have markedly different traditional building cultures. Often the original reasons for their selection are obscure, particularly, as Knight observes, in the case of vernacular building traditions for humble building types like three-deckers, triplexes, three-flats and three-families, where architectural knowledge is informally passed along, rather than transmitted via the medium of trained architects (Knight, 2006). Why, asks Sherry Olson, a geography professor at McGill University, did Montreal select the duplex on a 25' wide lot while in Philadelphia the same width of street frontage will often contain two rowhouses side-by-side (Olson and Dufaux, 2006)? Builders will continue to hew to the originally established pattern with little conception or questioning of its original justification. Such patterns, once established, tend to have tremendous persistence, even across different historical eras.

In any event, the choice of a detached versus attached condition for superposed flats has major implications for a city. For example, Chicago's detached vernacular form is what made it possible for hundreds of three-flats to be constructed in recent times, lot by lot, on discontiguous parcels formerly occupied by modest single-family homes (a process described at greater length in Chapter 4). Perhaps New York's tradition of attached three-family houses, with the consequent cost savings in their construction, not to mention their ability to physically blend into the physical fabric of neighborhoods historically characterized by brownstone rowhouses, led to the type's heavy use in a highly successful program emphasizing homeownership for moderate-income households in distressed neighborhoods (also described in Chapter 4). Could the flexibility and affordability of Montreal's "plex" building tradition, coupled with that city's lower "natural" population density than that of New York City, and consequently lower demand for housing in taller elevator buildings, explain the dominance of plexes there? Could the inefficiency of building detached wooden buildings, on individual lots, that must be treated from a code standpoint as small multifamily buildings (described in Chapter 5), have detracted from a re-emergence of the three-decker in Boston?

Unit interiors

As Christine Hunter points out, modern building codes have disassociated the basic interior unit amenity package from the building type (C. Hunter, 2006). (Figure 27.) The same minimum standard apartment can be built in the form of a single family house, as a rowhouse, or within an

apartment building. Therefore, unlike in the late 19th century, when a single family house was widely perceived as an inherently healthier and safer interior living environment than a tenement apartment, the same is no longer the case in North America today.

With that being said, all apartment unit interiors that rise above the basic minimum standards allowed by building codes are not created equal in terms of their attractiveness to their occupants. How do the unit interiors of three-deckers fare – whether in their original form, after renovation, or as

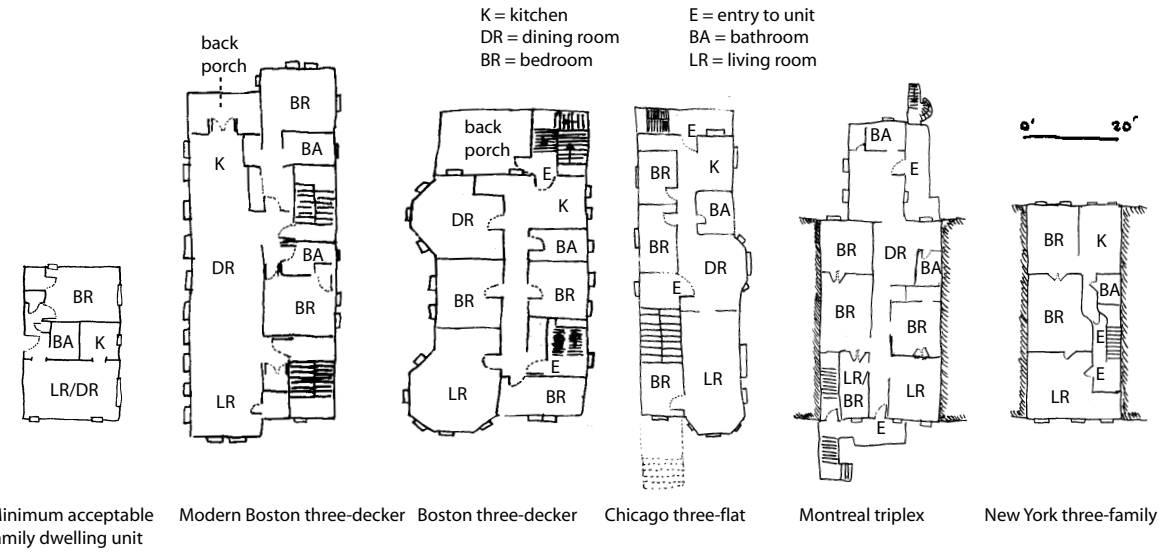


Figure 27. A comparison of the floor plans of the three-decker and its counterparts. From left to right: the minimally acceptable family dwelling unit (just over 500 sf) that meets building codes in the United States; a modern three-decker with an open layout; a traditional "railroad car" three-decker with central corridor; a narrow, deep Chicago three-flat; an attached (and hence shallow) Montreal triplex with rear "tail;" and a small, attached Brooklyn three-family house. All floor plans are of upper stories and hence don't include ground-floor entry lobbies. (Floor Plan Sources, 2006.)

new construction?

A real estate broker (who prefers to remain unnamed) who is particularly active within the Jamaica Plain neighborhood of Boston is blunt about buyers' perceptions of unrenovated "railroad car" three-decker layouts: "they stink" (Anonymous, 2006). She relates that modern households in the market for condominiums typically find three-decker interiors preferable when interior dividing walls have been removed. This is confirmed by Kristen Hunter, who observes that the bedrooms in a traditional three-bedroom three-decker floor plan of 1,300 sf would be unacceptably small for today's condo buyers (K. Hunter, 2006). Furthermore, due to the great standardization in layouts during the heyday of three-decker construction, as described in Chapter 2, layouts tend to be highly formulaic and unvaried. This is much less the case, for example, in two-family houses, which can be more square in plan and thus deviate from the long central corridor layout. Meanwhile, it is difficult to eliminate the inefficient, dark central corridor in a three-decker without creating walk-through rooms, a difficult proposition given the need for privacy amongst members of contemporary households.

According to Kristen Hunter, the on-suite or "master" bathroom, accessed only from a "master" bedroom, along with a walk-in closet in this room, has become almost *de rigeur* in market-rate new construction and renovations. Although the kitchens in traditional three-decker layouts are generally already rather large by the standards of their era, they are easily expanded and spatially joined with the rear living room to reflect the emergence of the combined kitchen/informal dining area as the premier social center of the home in the early 21st century. In a new construction three-decker project, such as that designed by Matthew Littell on Wyman Street in Jamaica Plain, the architect can further enhance the attractiveness of the space by moving the traditional rear egress stairway into the middle of the floorplate, so that it is still far enough away from the front staircase to comply with fire code requirements, but so that the centerpiece rear kitchen/dining room space receives more light than in the traditional configuration (Figure 27).

Interestingly, Roberta Feldman believes that a layout that meets the expectations of a household interested in a condo layout does not work in the context of low-income housing. Such housing must, she notes, serve "a very fluid household type," wherein a housing unit is often pressed into service as shelter for a visiting relative or friend who needs a place to stay, perhaps sleeping on a fold-out bed in the living room, for instance. The open floor plan then becomes unsuitable, because household members who wish to remain awake while others want to sleep cannot do so without disturbing them. There are strategies for fostering a compromise between light and openness and the creation of spaces that can maintain privacy for multiple people. For instance, the living room, kitchen, and dining room can be arranged from the back façade of the apartment towards the front in succession, with sliding pocket doors so that they may become connected or separate as circumstances dictate. Nevertheless, even though such flexibility is possible, this suggests that interior designs may need to differ in three-deckers or other superposed flat buildings depending on whether they are being built as condominiums or as rentals for low-income households.

Figure 28. A recent development in Roslindale, Massachusetts features four-story doubly-stacked duplex units. They give buyers the feel of a townhouse design, but are massed to relate to the three-deckers across the street.

Even if, as often happens, according to Littell, the front living room in a condominium layout takes inspiration from Feldman's approach and becomes a "swing use," such as a room convertible between a study and spare bedroom, the end result is still for a modernized three-decker interior to have two bedrooms instead of the traditional three (Littell, 2006). Developers in metro Boston who are renovating three-deckers and converting them into condominiums, in addition to introducing the interior finishes that are by now so ubiquitous that the Jamaica Plain real estate broker

refers to them as “stainless granite maple,” along with other essential amenities such as unit-specific HVAC, almost without exception will open up the floorplans (Anonymous, 2006). This tendency may be even more acute with three-deckers and three-flats than with Montreal triplexes or New York three-family houses: since the latter are laterally attached, their length is limited to an absolute maximum of 40’, and is usually considerably less (Figure 27). By contrast, three-deckers and three-flats, by virtue of being detached, can be 50’ long or greater, and long floorplans are “difficult to work with,” as explained by Roberta Feldman (Feldman, 2006). The simple solution becomes to open up the floor plan by removing walls where function and structural limitations permit.

In three-deckers, these trends have the side effect that renovated three-decker units appeal more to single people or young couples, but much less to families with children than in the past. This may explain the real estate broker’s observation of an inversion of value of units by vertical position: whereas the traditional owner-occupant of a three-decker tended to live in the ground floor unit, presumably for ease of managing children, today the desire for views and light makes the top unit in a renovated three-decker converted to condominiums fetch the highest price per square foot (Anonymous, 2006).

If it is now difficult for a three-decker unit to provide housing for a family with children on a single level, what could be done to achieve this? One possibility is to create a duplex unit with internal vertical circulation to create a sort of hybrid house – a two-family within the envelope of a three-decker. According to Kristen Hunter, duplex units in Boston’s inner neighborhoods fetch more on a per square-foot basis than single level units, presumably because they give more of the feeling of being in a traditional multilevel single family house (K. Hunter, 2006). This design can be seen in a project currently under construction in Roslindale, Massachusetts. The buildings are four stories in height, consisting of two duplex units stacked on top of each other, but massed in such a manner as to relate to the stock of three-deckers that predominate in the immediate area (Figure 28).

A more flexible approach is advocated by McGill University architecture professor Avi Friedman, who in his writings urges that contemporary housing foster a quality of “adaptability.” This entails “providing occupants with forms and means that facilitate a fit between their space needs and the constraints of their homes either before or after occupancy” (Friedman, 2002, p 1). His prototypical Next Home is a modernized interpretation of a stacked flat building, more similar in layout to a traditional Montreal triplex than to a Boston three-decker because of its side party walls.

Friedman’s emphasis on adaptability in housing stems from his observation that contemporary North American households exhibit greater heterogeneity in terms of composition and spatial needs than ever before. Furthermore, social changes such as declining job security, higher divorce rates and other factors increase the likelihood that a given household will itself experience a change in spatial needs for its living space over time. While the traditional solution under these circumstances has been for a household to move, his Next Home proposes to offer the adaptability that will allow a household

to own an entire three-story stacked flat building, and to occupy and rent out differing proportions of the building over time as its needs change. For instance, a young couple may buy an entire Next Home, and live in one unit while renting out the other two; combine one rental unit with their living space to create a duplex unit for themselves as their income rises; combine the other rental unit into the living space to make a single family house once children are born; and pare their living space back down to a ground-floor unit once the children have left, their ability to climb stairs decreases, and they need the extra rental revenue to supplement the fixed incomes of their retirement.

What does adaptability of this sort actually mean in practice? Friedman offers a number of specific steps that can be taken. Function-related fixtures and fittings can be left out by the builder, to be finished out by a homebuyer (or as a post-sale service offered by the homebuilder), as is the common practice currently in Europe but not in North America. Electrical and telecommunications wiring can be placed in a raceway around the perimeter of the floorplan for maximum flexibility. Windows can be placed frequently to allow large bedrooms to be partitioned in a code-compliant manner. Staircases can be placed inside the building, as in the case of the Boston three-decker (though not in the case of the traditional Montreal triplex) to allow semi-private vertical circulation to be easily made fully private (i.e. internalized within a duplex or three-story unit). Open-web floor joists and flexible PVC water and sewer pipes can free architects and renovators from the traditional vertical stacking of wet functions endemic to three-deckers, which greatly reduces the adaptability of floor layouts over time.

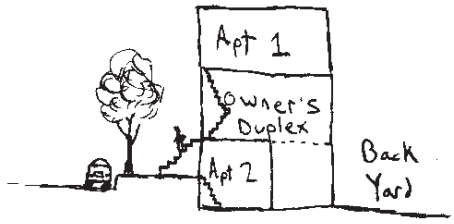


Figure 29. A scheme commonly used by the Hudson Companies in their New York three-family homes: the three-bedroom owner's unit includes half of the ground floot, leaving a studio unit and a two-bedroom as rentals on the first and third floors.

In summary, then, the three-decker's unrenovated floor plan, while it has provided family housing for many decades, does not meet the needs of contemporary homebuyers that are seeking to live in a unit with a modern layout. The three-decker can be modified (or built new) to meet the needs of such buyers, but the changes have the effect of producing apartment interiors that the typical North American middle-class household might deem too small for housing a family of more than one child. The solution then becomes to offer units with duplex or three-floor units – which become, in effect, two-family houses, single-family houses, or rowhouses, if attached on the sides – or else designing new construction three-deckers or triplexes that are specifically designed to take advantage of the possibilities for flexibility offered by the form. Alan Bell of the Hudson Companies, a New York-based developer that has built hundreds of units in three-family houses and other housing types over the past 20 years in New York City, offers one example that he implemented in a project. The owner's three-bedroom unit occupies the second floor and half the ground floor, leaving a modest studio on the ground floor and a two-bedroom apartment on the third story (Bell, 2006). (Figure 29.)

Marco Gutierrez, a Chicago-based architect who has designed many three-flat houses there, observes that the superposed flat's suitability for creating a unit with no internal stairs is also an attractive attribute. He notes that that many of his clients for whom he is designing single-family homes, even young ones, often have a sufficient distaste for stair climbing while inside the home that they request that he place the master bedroom suite on the first floor (Gutierrez, 2006). Consequently, one could infer that single-level units and multifloor apartments within three-deckers or other superposed flat buildings are attractive under different circumstances. The flexibility inherent in the form allows developers to configure the distribution of units within the building to best target their markets, or for buyers to make subsequent modifications, as Friedman advocates.

Parking

Parking is one of the implacable realities that must be dealt with in urban housing today. Even in Boston and Chicago, two of the densest and most transit-accessible central cities in the United States, new housing typically faces demands both from government regulation and from the market to provide off-street parking. Nor is this consideration necessarily absent from low-income housing: today, many low-income urbanites depend on automobiles to reach jobs in locations not well-served, or not served at all, by transit. Manhattan is essentially unique in the United States for the omission of off-street parking in many (not all) of its new residential developments. How well does the three-decker accommodate the well-nigh universal demand for parking?

Three-deckers, and moderate density housing in general, occupy a difficult middle ground with respect to the issue of parking. Densities are typically too low to justify the construction of structured parking; in any case, the experience of walking between a widely shared parking garage and a small house would devalue the feeling of individuality that a three-decker boasts in comparison to denser multifamily housing types. Garages are notoriously unsafe spaces, and car theft, as John Sharratt points out, deprives a low-income household of what is often its most valuable possession, its automobile (Sharratt, 2006). Sharratt also speaks of the benefit of a car parked within sight of the dwelling unit as, in effect, an outdoor room that allows members of a large household some space away from each other. Just as Sharratt went to great lengths to provide individualized unit entries, his understanding of the importance of placing parking close to unit entries led him to, for instance, sacrifice front yards in favor of off-street parking at the Mission Park development along Huntington Avenue in Boston (ibid).

On the other hand, unlike in single family houses, or even in some rowhouse configurations, three-deckers will generate far more demand for parking than the street itself can accommodate. How can we balance the unnamed broker's assertion that almost all buyers interested in a condominium in a three-decker in Jamaica Plain expect a parking space with her countervailing observation that one of the primary attractions of being in the streetcar suburb of Jamaica Plain is the neighborhood's ample

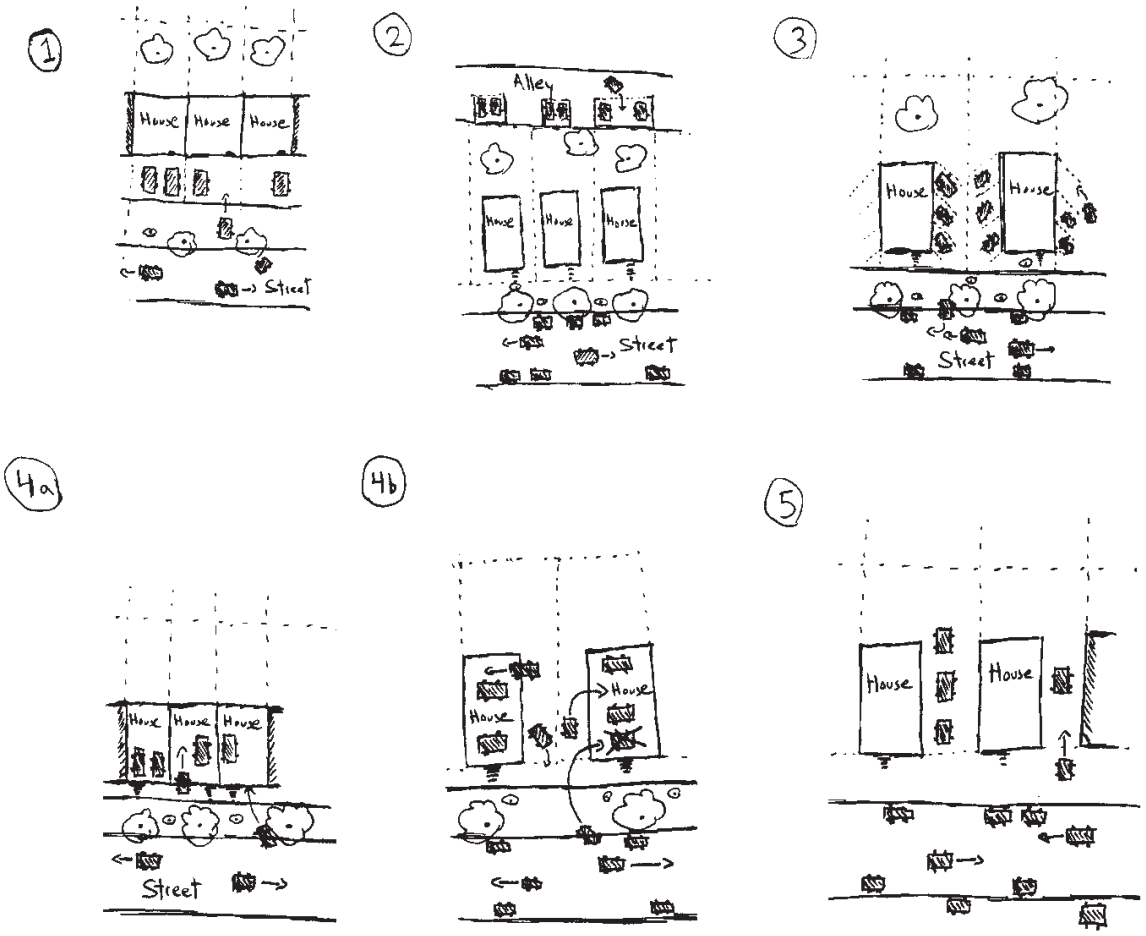


Figure 30. Five different parking configurations for superposed flats, the first four of which are identified by Avi Friedman (Friedman, 2002). They are: 1) parking in the front setback; 2) parking in the rear, accessed by an alley; 3) angled or head-in parking along the side of the house (which must then be detached or semi-detached); 4) "tuck-under" parking within the structure, which can be accessed from the front (4a) or from the side (4b); and 5) tandem parking along the side, as is typically the case with traditional three-deckers where lateral spacing provides enough room.

back yards?

Avi Friedman identifies four parking configurations for his Next Home. The first, parking in front of the house, requires a setback of at least 15', and mars the appearance of the building's front façade, so important to establishing its urban character. The second, rear parking accessed from an alley, conceals the visual impact of the parked cars from the front, but requires an extra deep lot, of a sort that does not generally exist in the Boston metropolitan area, in order for the 20' length consumed by the parking spaces to leave enough space for a sizeable back yard. (The provision of alleys and rear parking in Chicago is facilitated by the city's standard lot depth of 125', a full 25' deeper than is typical in Boston's streetcar suburbs). The third option, non-tandem side parking between buildings, requires gaps of, at a minimum, 40' between adjacent structures, thus breaking the continuity of the

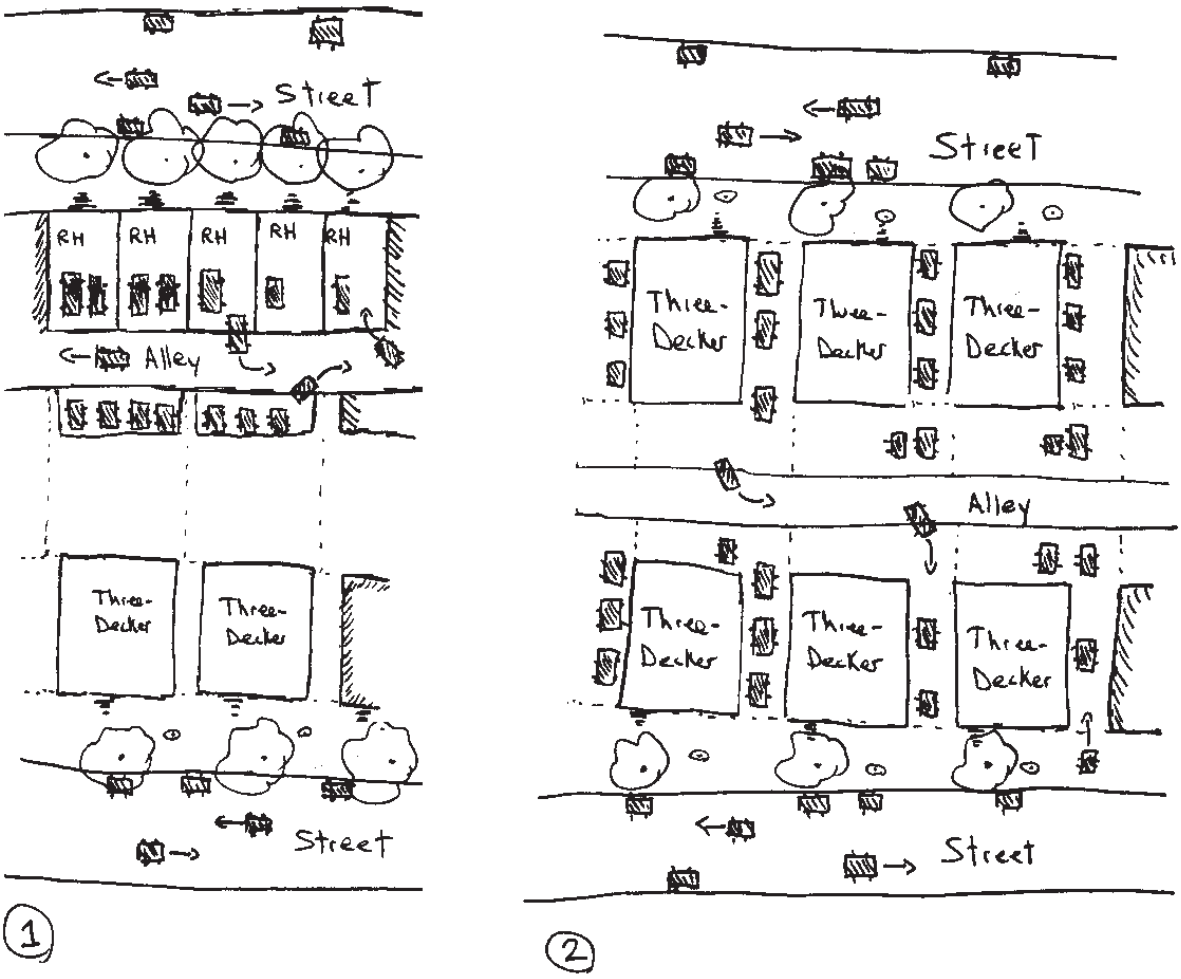


Figure 31. With the assembly of several contiguous lots occupying the whole width of a block, it becomes possible for a three-decker site layout to accomodate parking in a more convenient manner (and/or more of it) than the traditional tandem configuration along the side of the house that is generally seen in New England (Configuration 5, Figure 30). Two examples that fit within a typical 180' wide block in the Boston streetcar suburbs: left, the placement of rowhouses lacking back yards across an alley from typical three-decker lots (an approach pioneered by architect John Sharratt). Right, the usage of shallower three-decker lots (thus reducing the length of the houses or their back yards) in conjunction with an alley and side driveways that allows more convenience than fully tandem parking. (Warner, 2006.)

street wall. Additionally, considerable space on private property (as much as a third of the parking land area if parking is head-on into the buildings) is wasted for maneuvering cars in and out of the parking spots. The fourth option, indoor parking, is expensive, particularly in earthquake-prone areas such as San Francisco where structural reinforcement is necessitated by seismic codes. The different possibilities for indoor parking each have their difficulties: front-facing grade-level indoor parking mars the streetscape with the classic bane of critics of automobile suburbia, a blank garage door, and precludes a basement. Below-grade indoor parking, while visually de-emphasizing somewhat the blank appearance of a garage door, necessitates extra excavation that still does not result in habitable basement space. Side-loaded at-grade indoor parking necessitates a 20' wide maneuvering space next to the house, which in Friedman's 20' x 40' Next Home translates into 800 sf of wasted space per

house. In its defense, side-loaded at-grade parking provides four parking spaces, whereas the other indoor parking options allow two in a Next Home, or up to three in the 28' width of a Boston three-decker.

The Boston three-decker, in its vernacular form, where it includes off-street parking at all, typically uses a fifth option not available to the Next Home by virtue of the Next Home's lateral attachment: side driveways. This is the solution employed by Matthew Littell in his design for the Wyman Street new-construction three-decker project in Jamaica Plain. To meet modern disabled accessibility codes, 13' of lateral separation is needed between houses: 8' for the width of a car, and 5' for a person in wheelchair to be able to enter and exit the car. Such a width is consistent with the more generous end of the historical range of lateral separation of three-deckers. (The five parking options are illustrated in Figure 30.)

The problem is that fitting more than one off-street space in this manner requires tandem parking, i.e. the cooperation of the owner of the car located closer to the street is needed to access the parking space or parking spaces (up to three, total, are possible alongside a 60' long house) that are further towards the rear of the lot. While this arrangement is routine in already existing three-deckers in New England, it is, according to the Jamaica Plain real estate broker, unacceptable for condominium buyers. To her, it would be better to simply offer one parking space and offer a larger back yard, although in new construction this would tend to make the developer run afoul of Boston zoning requirements, which generally require at least one off-street space per unit. Setting aside the regulatory considerations, such a configuration might be acceptable in the event that a three-decker is owned by an extended family, whose members can cooperate with each other, or if it is owned wholly by one household, and in a location where the two renting households might be content to find on-street parking or forgo car ownership altogether in favor of public transit. Lot parcelization strategies novel to Boston could allow for other solutions, as shown in Figure 31.

In summary, parking for three-deckers is problematic. In a city such as Boston that generally lacks deep lots and rear alleys, the only economically viable means of providing three off-street parking spaces per three-decker, a rather stingy amount, without marring the urban appearance of the street wall, is to have tandem parking on the side. Marco Gutierrez relates that even in Chicago, whose alley-served block configuration more easily allows off-street parking to be provided, pressure for ever-more parking is leading developers of three-flats to propose the use of novel technologies to increase parking capacity, such as one that he describes as "like a vending machine for cars" (Gutierrez, 2006). (Unsurprisingly, this has not received approval from the Chicago Fire Department.) One could infer that the current level of demand for parking, which is much greater now than in 1920, when three-deckers began to disappear as new construction, could be tipping the scales towards the provision of parking in dense urban areas in the form of structured parking. This, in turn, would demand the construction of much denser building types than three-deckers in order to justify their cost.

CHAPTER 4: ECONOMICS

Chapter intro

This chapter examines some of the economic forces that impinge upon the continued viability of superposed flat buildings. The first two sections examine, in turn, the two forms of ownership that result in highly divergent economic models consequences for the same type of building. The first is condominium ownership, a phenomenon only several decades old. The section looks particularly to the experience of Chicago, which has had the largest market-driven boom in the construction of new superposed condominium flats of the past 15 years in North America. The second section looks at various efforts by governmental programs and by nonprofit entities to use the traditional model of ownership – the ownership of a vertical stack of two or three flats by one owner, who rents out the other(s) unit to tenants – to foster affordable housing. The chapter concludes with a brief discussion of finance and insurance considerations as they specifically relate to the latter form of ownership.

The three-decker as market-rate condominiums

An entirely new form of real estate ownership, the condominium, stemming from the civil law tradition of the Napoleonic Code, was brought to the United States in Florida via Puerto Rico in the late 1950s and early 1960s. This has permitted buyers to purchase ownership in an apartment within a multifamily building in a way that was simply unavailable before. Indeed, in densely-built cities with economically prosperous core areas, such as the four cities discussed at greatest length in this thesis, condominiums have become essentially the only means of ownership available in new residential construction within inner core neighborhoods. (The one exception is New York City, in which cooperative ownership continues to play a significant role.) One consequence of this larger trend for superposed flats is that the new three-flats, triplexes, three-family houses and three-deckers constructed in Chicago, Montreal, and (in miniscule numbers) Boston over the past three decades, financed entirely by profit-motivated private capital with no subsidies, appear to have come almost without exception in the form of condominiums. (New York City appears to have been an exception until sometime in the 1980s.) Although the physical forms of the modern incarnations of these superposed flat buildings are obviously descended from their historic antecedents, this evolution represents a radical change in ownership structure from the traditional model of a small investor-occupant owning all three units within a structure.

Alan Bell, the principal of The Hudson Companies, states that in areas where there is a market appetite for condominiums, selling a two- or three-family house as condominiums will almost always fetch more profit for the developer than selling the entire house to one occupant-landlord (Bell, 2006). The developer gains higher profit from the sale of three discrete entities to three owners, rather than one. Additionally, construction costs may be higher for three condos than for one three-family house

because units intended for condo ownership tend to have a greater level of interior finish, such as appliances, flooring, plumbing fixtures, etc., than those intended for rental. This results in higher developer fees and profit margins, which are generally budgeted as percentages of the overall project cost. The ubiquity of condos as the form of ownership in market-driven superposed flats construction is thus, seen in this light, not terribly surprising.

The Chicago three-flat boom

Chicago, of all North American cities, has seen the most explosive surge in new construction of superposed flats over the past 15 years. According to Blair Kamin, the *Chicago Tribune* architecture critic, this phenomenon was most pronounced in parts of the city that experienced gentrification beginning in the early 1990s, particularly North Side neighborhoods such as Lakeview and Lincoln Park (Kamin, 2006). Jonathan Fine, the president of Preservation Chicago describes the trend, at its peak, as "20 years of gentrification compressed into five" as a result of exceptionally low interest rates at the time (Fine, 2006). Janet Smith, a University of Illinois-Chicago professor in urban planning, uses the term "crossover market" to describe the typical buyer profile for condos in newly built three-flats: affluent, childless young professionals paying high rents (which peaked in 1999, fueled by a robust local economy and exacerbated by plentiful condo conversions of rental housing stock) who had the financial wherewithal to move into condo ownership (Smith, 2006).

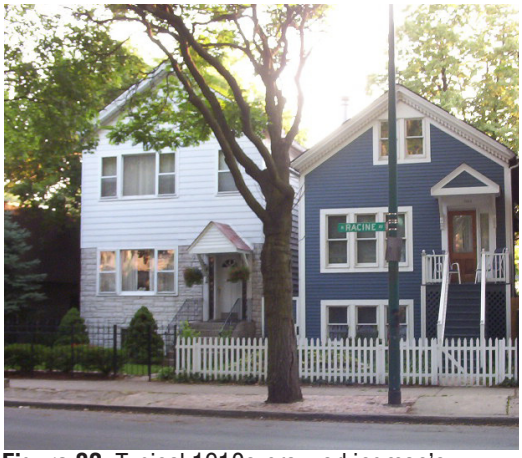


Figure 32. Typical 1910s-era workingman's cottages, Ukrainian Village, Chicago. Such housing stock is commonly targeted by developers for acquisition, teardown, and replacement with new construction three-flats.

The typical case, unfolding over thousands of individual instances, involved a developer purchasing a modest single family house, which in the most heavily impacted neighborhoods usually takes one of two vernacular forms: a workingman's cottage of the 1910s and earlier, or a bungalow of the 1910s or 1920s, a form influenced by the Prairie architectural movement then in vogue. The demolition of the house and its replacement by a much taller and longer newly-built three-flat house would trigger a wave of sales of other cottages and bungalows on the same block, as homeowners of modest incomes struggled to cope with the rapidly increased property taxes. In such a way, the conversion of three-flats to single-family houses, according to Kamin, was not uniformly distributed through the affected neighborhoods, but rather occurred in an uneven, block-by-block pattern (Kamin, 2006).

Such wholesale replacement of a major proportion of the housing stock within a small area completely altered the physical and demographic characteristics of streets and neighborhoods. Kamin

grants of new three-flats that "urbanistically, they could be worse" (ibid). They do not disrupt the streetwall as drastically as did earlier forms, such as the widely reviled "four plus one" apartment buildings of the 1950s, which placed four levels of apartments above a ground level garage on stilts. On the other hand, newly constructed three-flats, at least until the practice was mostly curbed in Chicago's comprehensive 2004 rezoning, often included sunken patio pits below the level of the sidewalk, providing a private amenity for the bottom homeowner, as well as natural light that allowed the basement level to be legally marketed as habitable space. There is some historical precedent for this – in many Chicago neighborhoods such as Pilsen and East Village, the city raised the level of the sidewalk in the late 19th century after plumbing was installed at grade level, thus forcing building owners to fashion new entrances on the second floor, reached by a bridge suspended above the resulting void below the sidewalk. Nevertheless, patio pits in newly built three-flats were widely viewed as a degradation of the public realm of the sidewalk in favor of the creation of private space. Additionally, occasional "sawtooth" front facades arranged diagonally with respect to the front lot line break the traditional conventions along such streets and further disrupt the street wall (Figure 33).

Figure 33. Left: a raised sidewalk in East Village, Chicago, dating to the late 19th century, when the city installed water and sewer lines in the street after the construction of houses had taken place. Right: a new three-flat in Ukrainian Village, Chicago, with a sunken patio, which many view as an erosion of the public realm of the sidewalk. Also note the diagonal, "sawtooth" alignment of the front facade with respect to the public right-of-way.

The wave of newly-built three-flats in Chicago neighborhoods has been blamed for a host of other problems, including the following:

1) Disruption of neighborhood scale and fabric

Prior to the 2004 rezoning, many of what Jonathan Fine terms "old law" three-flats were built to exploit the maximum dimensions permitted under zoning (Fine, 2006). Developers would often opt to build three-flats to the maximum height of 55' that allowed for omitting fire spinklering. Exceeding the three-unit maximum allowable in the typical zoning district and by disabled access regulations was generally avoided in such cases by having one or two of the resulting units be built as two-story duplexes with internal staircases. The resulting tall buildings often tower as much as 30' above the

neighboring 25' tall single family homes, resulting in a severe disjuncture of massing, and blocking light and views to the neighboring houses (Figure 34). The jarring disjuncture in scale is often accentuated by side facades whose concrete block is unrelieved by brick veneer or windows (perhaps because bedrooms in Chicago can only be legally counted as habitable if their exterior wall is at least 3' from the side lot line).

Jonathan Fine also complains of "inside-out architecture" – an emphasis on interior amenities, such as well-equipped kitchens, at the expense of a well-designed and constructed exterior elevation. In many cases, new three-flats lack the elegant, dignified outward appearance of their early twentieth century neighbors (Fine, 2006). Blair Kamin terms such design a "modern, sanitized, poorly-designed version of what was there already" (Kamin, 2006). Marco Gutierrez, the Chicago architect and a former director of the Chicago Buildings Department, points out that the repetitious geometry of Chicago building lots allows designs that sell well to be rebuilt elsewhere essentially without modification (Gutierrez, 2006). The replication of such poor design, one could argue, erodes the integrity of the built environment in a city that is world-renowned for the quality of its architecture.

Figure 34. A rather extreme, but not atypical, example of the disjunctures in scale and massing imposed by many newly-built three-flats upon the fabric of the community, Lakeview, Chicago. The new structure in the foreground occupies virtually the entire length of its lot and has no back yard, as do the neighboring houses.

Blair Kamin also speaks of the erosion of the fabric of alleys, which in Chicago are not the place from which the formal public façade of a building is viewed, but which are nevertheless important spaces that traditionally foster neighborly interaction. He speaks of the proliferation of cars as the greatest impact of the densification brought by new three-flats replacing single family houses. Even worse than the parking pads lined by three parking spaces at the rear of a three-flat are the effects of newly built six-flats, which often result in the replacement of a backyard with a parking lot. "The physical framework of the alley gets trashed," says Kamin. In higher crime neighborhoods of the South Side, such as Bronzeville, such parking configurations often come with fortress-like electronic gates (Kamin, 2006).

2) Poor construction quality

Chicago's newly built three-flats, particularly those from the earlier part of the boom, are notorious for their frequently poor construction quality, in addition to their often poor design. Kamin speculates that this is a byproduct of the highly aggressive culture of the pool of small

builders who have built the vast majority of new three-flats. (Sam B. Warner sees a historical parallel to the large pool of small builders who built many of Boston's three-deckers, Warner, 2006.) A drive through near North Side neighborhoods with Jonathan Fine in July of 2006 revealed dozens of cases of efflorescence, or streaks of precipitated mortar, on the front facades of three-flats built less than 15 years previously (Fine, 2006). (Figure 35.) This results from defective construction that allows moisture to penetrate behind the row of bricks forming the veneer on the façade. Janet Smith speaks of other common nefarious practices on the part of developers, such as using "straw buyers" to obtain the necessary pre-sales for construction financing to move forward, or the failure to apply a waterproofing sealant to concrete block exposed to the elements (Smith, 2006).

Compared to larger condominium projects, for only three new condominium owners to mount a legal challenge against what Jonathan Fine describes as a "hit and run developer" is a daunting undertaking, and thus individually-built three-flats could be seen to be particularly vulnerable to poor construction vis-à-vis other forms of construction (Fine, 2006).

Figure 35. White streaks, indicated by the yellow arrows, can be seen on the front facade of this recently-built three-flat, Ukrainian Village, Chicago. They indicate that faulty construction has allowed moisture to penetrate behind the brick veneer. Also note that small drains (generally lying at the top of each streak) have been installed to drain the excess water.

3) Increased turnover of residents

Although systematic data does not exist to support such a claim, the July 2006 windshield survey with Jonathan Fine seemed to show an abundance of "for sale" signs on newly-built three-flats, and a near absence of them on existing single family homes and wholly-owned historic two and three-flats, which according to Janet Smith are seldom targeted for teardowns by developers (Fine, 2006 and Smith, 2006). It seems intuitively logical that newly-built three-flats aimed at young professionals with little long-term commitment to the city would produce social disruption in a once solidly working class urban neighborhood. Such destabilization, presumably, would be exacerbated by the poor construction quality of some of the new three-flat buildings.

The Chicago three-flat boom, according to Gutierrez and other observers, appears to be waning (Gutierrez, 2006). Condominiums created in high-rise buildings in the city's core and in Chicago's plentiful reservoir of early 20th century industrial buildings suitable for conversion in such

areas as the West Loop, not to mention replacements of modest single family houses by much larger detached homes in neighborhoods such as Bridgeport, may have sapped much of the former market for condos in new three-flats. Interestingly, even as the trend has abated in the city's most active real estate markets, it has spread to formerly depressed areas of the West and South Sides of the city, such as Bronzeville and West Garfield Park. Such areas, which in some cases witnessed rapid racial turnover, drastic population declines and the virtual cessation of all new residential construction for decades, tend to have a greater supply of vacant lots. Could a burst of three-flat construction in such areas be viewed more positively? As Janet Smith of UIC asks, does the picture change when the new product delivers a relatively affordable $250,000 new two-bedroom condo to a long-distressed neighborhood on the South Side, rather than the $400,000 units common in gentrified North Side neighborhoods (Smith, 2006)?

From the standpoint of many of America's chronically economically depressed central cities, such as St. Louis or Cincinnati, the Chicago three-flat boom may seem like a good problem to have. As Kamin admits, "if you have to pick your poison, this is the poison you would pick" (Kamin, 2006). Nevertheless, the Chicago experience seems to offer a cautionary tale for other cities, such as Boston, where a future boom in purely market-driven three-decker construction could conceivably occur. Indeed, a recent *Boston Globe* article cites US Census data to report that 80 apartments within three and four-unit structures were built as new construction within the City of Boston in 2005 (Ravgiala, 2006). Even such a tepid level of production, given that much of it is taking the form of three-deckers, would have been unimaginable as recently as 5 or 10 years ago.

What could be done to forestall some of the most egregious consequences of the Chicago three-flat boom? Jonathan Fine speaks of creating historic preservation landmark districts and zoning as the two principal mechanisms available for regulating the new construction (Fine, 2006). Some problems, such as the vast scale disjunctures imposed by new construction on historic building stock and the disruption of the public realm posed by patio pits, were at least partially addressed in Chicago's comprehensive 2004 zoning overhaul. This limited building heights to 38' in the R-4 zone, the zoning district that saw most of the newly built three-flats, and eliminated patio pits in most cases. But the single-family teardowns, and the consequent replacement of the homes by three-flats, even tastefully designed and built ones, still produces major impacts. What will happen in coming years as the newly-built three-flats, even the ones without construction flaws, age, thus requiring cooperation amongst the three condominium owners to perform expensive tasks such as roof replacement? Such agency problems seem to offer the possibility for more problems in a small condominium association than in a larger one, where the effect of one recalcitrant owner would be proportionately much less. The coming years will see if this problem arises in Chicago. Time will also tell if Boston's current incipient three-decker surge strengthens, and if it does, whether the city's three-decker neighborhoods experience the same types of strains that Chicago's areas of new three-flat construction have.

The three-decker as subsidized affordable housing

Although, as noted above, the unfettered free market has not delivered three-deckers in Boston or elsewhere within recent decades in any form other than as condominiums, there are several instances where groupings of two or more vertically stacked units in rehabbed or newly built buildings have been sold explicitly for purchase by owner occupant investor households, in each instance with the usage of significant governmental subsidies. Below I briefly profile four efforts, two of them involving existing properties, and two involving new construction, in three cities, that fit this profile. Collectively, these demonstrate the continuing relevance of superposed flats in fulfilling a major part of their historical raison d'être: bringing homeownership within reach to families unable to afford a single-family house in their preferred location, but that are willing to undertake the hard work and risks associated with being small landlords.

1) The Boston Three-Decker Plus program

Boston's Three-Decker Plus program, launched in late 2002 as part of a policy initiative by Mayor Thomas Menino to increase homeownership within the City of Boston, provides subsidies for households at or below 80% of Area Median Income (AMI) in metro Boston to purchase existing three-deckers. In return, buyers must sign a covenant restricting the rental of one of the three apartments to households at or below 80% of AMI, and at rates that such households can afford to pay (using the HUD standard that households should pay no more than 30% of their gross monthly income towards rent and utilities). The City of Boston has allocated $22 million to this pilot program, and the monies go toward a $20,000 direct subsidy against the purchase price; $1,000 in closing cost assistance; and a share of up to half of the 3% downpayment required. The lender, FleetBoston, offers a combined first mortgage and soft second mortgage that cover 77% and 20% of the purchase cost, respectively, allowing both a low down payment and the avoidance of a mortgage insurance premium.

2) The Chicago Greystone Initiative

The Chicago Greystone Initiative, currently in advanced planning stages, employs a different approach from that of Boston's Three-Decker Plus program in that it targets residential buildings with a common architectural feature in a particular neighborhood, as contrasted with the latter's targeting of a particular building type regardless of location within the city. In its approach and name, it is explicitly modeled after an earlier program, the Bungalow Initiative, which focused on a characteristic type of single-family house found in a "belt" in some of the outermost neighborhoods within the city limits. In similar fashion, one-to-three-family "greystone" houses, generally built between 1890 and 1920, are well-recognized as a type in Chicago because of their characteristic front façade of limestone veneer over a masonry structure (Ryan et al 2006). Originally

built for solidly bourgeois families, the greystones were built in a band of neighborhoods developed for the middle class lying within approximately three to six miles of Chicago's downtown "Loop." Interestingly, greystones are often found intermingled on the same block with brick-clad buildings that, aside from the difference in front façade appearance, are identical in every other way, and that were often built by the same builders. Nevertheless, a strategic decision was made by Charles Leeks, a North Lawndale neighborhood resident and the original visionary for the program, and by University of Illinois-Chicago (UIC) faculty with whom he collaborated, to limit the scope of the program to greystones.

In addition to the Greystone's Initiative's emphasis on historic preservation, it aims to economically bolster North Lawndale, the West Side neighborhood where its efforts are exclusively focused. This community experienced an extreme level of economic distress in the second half of the 20th century, losing 75% of its businesses and 25% of its jobs between 1950 and 1970, and decreasing in population from almost 125,000 in 1960 to barely 47,000 thirty years later. Although the program does not explicitly target small multifamily buildings, 92% of the neighborhood's greystone stock eligible for the program consists of two or three-flat houses. The program's designers are keenly aware of the value of rental income in helping to economically support the rehab of the buildings, which for 75 buildings already rehabbed cost an average of over $18,000 per unit, and in some cases entails a complete reconstruction of the entire house save its structure and shell (ibid).

The Greystone Initiative also demonstrates a novel combination of efforts between the organizational activities of neighborhood community activists, the architectural and real estate expertise of professors from UIC's City Design Center in the form of technical assistance, and the financial resources of the City of Chicago's Neighborhood Housing Services (NHS) in the form of low-cost loans and grants for new homeowners. Although many details remain to be worked out, it is clear that eligible buyers will be subject to income restrictions, most likely in the range of 80% to 120% of AMI, according to UIC architecture professor Roberta Feldman (Feldman, 2006). Consequently, the program, in a quite holistic way, will promote the objectives of historic preservation, neighborhood revitalization, and affordable homeownership.

3) The Resurrection Project's new construction two-flats in Chicago

Another example of a geographically-targeted effort to foster owner occupancy of stacked flat buildings comes from the Pilsen neighborhood on Chicago's Near Southwest Side. In the 1990s, a nonprofit affordable housing development, ownership and management arm of the Catholic Church undertook the construction of homes on 100 vacant lots distributed throughout the neighborhood, according to Ismael Guerrero, currently an equity investor in multifamily affordable housing projects and former associate director of the organization, the Resurrection Project. The lots had been foreclosed by the city for nonpayment of taxes, and each one was eligible for a $25,000 subsidy

under the municipal government's New Homes for Chicago program. Although the program had been designed to encourage the construction of single-family homes, Guerrero and the Resurrection Project took a liberal interpretation of the program's stipulations and decided to offer a modern version of a Chicago two-flat as one of their four designs, along with another one that included an unfinished half-sunken basement that could be converted to a separate apartment at a later date by the homeowner. Having himself grown up in a three-flat in Pilsen, a neighborhood traditionally heavily populated by new immigrants to the United States – predominantly Czechs in its early years, and mainly Mexicans in recent decades – Guerrero views superposed flats as "a way for working class folks with no established assets to obtain an owner-occupied residence" (Guerrero, 2006). According to him, immigrant families, many of them already the owners of small businesses, were likelier to be undaunted by the extra risks and work posed by being small landlords, such as the need to build up cash reserves to cover loan payments in the event of vacancy of the rental apartment. Additionally, partially due to Chicago's characteristic clustering by nationality, many immigrant families have an extensive network of acquaintances from the same ethnic group to draw upon as a pool of potential tenants, and for whom credit and character checks can be undertaken in a verbal, informal manner via social contacts. Interestingly, in a departure from Boston's approach, the Resurrection Project's buyers of new two-flats had no restrictions placed on the resulting rental unit, either in terms of rent amounts or the tenant's income.

The Resurrection Project decided to not offer three-flats for several reasons, among them the 1.5 parking spaces required per unit in the zoning district in which most of the vacant parcels fell; accommodating more than the three parking spaces required for a two-flat on a 25' wide Chicago lot would have been prohibitively expensive. Additionally, as in Boston, fire egress requirements for two-flats proved to be substantially less onerous than for three-flats. It was sufficient to include a suitably sized and openable rear window acceptable to the local fire department; moving to a three-flat would have required the construction of a costly system of exterior rear decks and stairs. While the inclusion of such decks was by this time routine with new three-flats being built in the burgeoning Northside neighborhoods at the time, the economics of the less affluent Pilsen neighborhood demanded that every effort be made to keep costs down.

4) The New York Partnership New Homes program

Much as Montreal has North America's proportionately highest stock and mostly thoroughly ingrained tradition of superposed flats, and as Chicago has had the continent's greatest recent boom in them as new market rate construction, New York City has had, over the past 22 years, by far the most comprehensive usage of them as a means of producing affordable housing. This has come through its Partnership New Homes program, in collaboration with a large, well-funded citywide nonprofit organization, the Housing Partnership Development Corporation.

The program was not, according to Leonard Seif, Director of the New Homes Unit of the New York City Housing Preservation and Development Department (HPD), specifically conceived to foster the construction of two- and three-family homes. The primary purpose was to foster homeownership in a city known throughout the United States, as is Montreal within Canada, as fundamentally out of step with the dominant national ethos of widespread ownership of the family home (Seif, 2006). This approach amounted to what housing scholar Howard Husock terms a "quiet revolution" in New York City's housing policy (Husock, 1993). The city had had a somewhat unique situation owing to its perpetually declared "state of emergency" with regards to housing shortages ever since World War II. This led to the nation's most restrictive rent control and rent stabilization laws, which persist in reduced form to this day, as well as several decades of aggressive and costly efforts to build new housing in high-density slabs and towers, even – unusually for an American city – for the benefit of the middle class (as in the city's Mitchell-Lama program). This occurred under the supposition that, given the scale of the problem, scarce land and subsidies should be used as efficiently as possible, i.e. through the construction of large elevator-served multifamily buildings.

Although Husock acknowledges that the plunge in operating subsidies to public housing of the Reagan era forced the city's hand in determining a new focus for its housing policy, he maintains that making the switch to a new model emphasizing homeownership in much smaller buildings would not have been politically possible had the city's existing approach not been widely considered to be a failure. He also cites a 1991 Department of City Planning survey conducted amongst prospective homeowners in the Bronx, in which 76% of respondents indicated that they were "not at all" interested in owning a high-rise condominium or co-op share, as evidence that the preferences of low-income residents themselves argued for a policy switch (ibid).

The Partnership New Homes program used the city's then-considerable inventory of vacant land, a legacy of decades of neighborhood decline, arson fires and property abandonment in the city's most economically distressed neighborhoods, such as Harlem in Manhattan, Melrose in the Bronx, and East New York in Brooklyn. The program has used a public-private model with participation from the city, from the nonprofit Housing Partnership Development Corporation, and from private, for-profit homebuilders. The city contributes land at below-market rates to a project, and additional subsidies flow in through city, state, and federal grants and low-interest loans. The resulting housing units for ownership are targeted to first-time homeowner households of moderate income levels. (Non-qualifying households can participate, but are not given the benefits of the subsidies.)

In return for being the beneficiaries of subsidies, the resulting homeowners are limited in their ability to capture the full price appreciation upon resale or refinancing. Until they have paid off the full amount of their subsidy, which encumbers the property as a soft second mortgage, homebuyers are responsible for the repayment to the city of 100% of all appreciation until three years following their purchase, and 50% of the remaining amount thereafter, with an equal proportion of the second

mortgage being forgiven each year following year three until it has disappeared altogether by either year 20 or year 25. Within HPD, according to Leonard Seif, a philosophical debate occurred between the respective merits of seeking to forestall blatant speculation on the one hand, and giving the first-time homebuyers, many of them fleeing bad housing conditions in public developments or in poorly-maintained private housing, the unalloyed benefits of the American Dream, on the other. This eventually led to the three year full repayment period being extended to five years, but also to the 20 to 25 period of full soft second mortgage forgiveness being rolled back to 15.

Figure 36. An example of three-family houses built under New York City's Housing Partnership New Homes program by the Hudson Companies. These rowhouse flats are adjacent to the Atlantic Center mall just outside of Brooklyn's Central Business District.

In the program's early years, economic conditions in the neighborhoods were so weak that two- and three-family homes typically did not work economically. Even with the various subsidies, the projected sales prices necessitated by their cost of construction exceeded the appraisals that lenders would give them. Later, beginning in the early 90s, the proportion of superposed flats (as opposed to single-family detached houses or attached rowhouses, and small condominium buildings) amongst the Partnership New Homes housing stock began to grow. Seif recalls the Bronx initially being the location most receptive to three-family houses, in part because it was a political priority of the then-borough president, Fernando Ferrer, to foster this type of housing, to the extent that Ferrer steered discretionary borough funds to such developments to the tune of $6,000 to $8,000 per unit (Seif, 2006).

As the economic health of the neighborhoods that were the locus of Partnership New Homes began to improve during the 1990s – presumably both a cause and an effect of the overall fiscal and economic improvements in New York City occurring during that time – rising land values and construction costs shifted the production of new units increasingly toward two- and three-family homes (Figure 36). In a city where those were a long-established part of the building tradition in Staten Island and the outer parts of the Bronx, Brooklyn and Queens, the transition was relatively simple. Leonard Seif states matter-of-factly, "if the market is there, and the zoning permits it, we build them" (Seif, 2006). By the period of 2003-2006, of the 1,498 units produced in the Partnership New Homes program, 1,044 of them were in the form of two-family homes (the preferred configuration, as discussed further below), and 423 were in three-family homes. Single-family homes and four-unit buildings accounted for only 23 and 8 units, respectively. Thus, a program designed to foster homeownership by initially producing the most stripped-down, low-cost single-family housing –

Figure 37. The Charlotte Gardens development of the South Bronx (left), well-known for its usage of a suburban form, the ranch house (right), in the redevelopment of a severely blighted neighborhood that gained national attention when visited by President Jimmy Carter in the late 1970s. In the initial years of New York City's Partnership New Homes program, such low-density development was the extent of what was economically feasible. As the city's blighted neighborhoods started to revive, denser construction, usually in the form of rows of attached two- and three-family houses, began to predominate amongst the sites redeveloped under the auspices of the program (image on left courtesy of Windows Live Local, http://local.live.com).

beginning with the famously suburbanesque, wood-framed Charlotte Gardens ranch houses sited in a devastated portion of the South Bronx in 1983 (Figure 37) – evolved into a de-facto two- and three-family home production program. As of the time of writing, market conditions in New York have so greatly improved over those of 20 years ago that the program, with the exception of a few remaining parcels in Far Rockaway, Queens, has exhausted its land supply and will soon be retired as a direct result of its own success. In other cities, such as Detroit and Philadelphia, the new residential construction in severely blighted neighborhoods has generally occurred at a sharply lowered density from what predominated at the time the areas were originally developed, as with Charlotte Gardens. Much of this can be attributed to substantially weaker overall central city housing demand in those cities compared to the New York of recent years. This phenomenon is extensively documented by Ryan (Ryan, 2002).

Financing and insurance

In assessing whether or not three-deckers and their ilk in other cities continue to be a viable form of housing, it is important to examine the role of financing. The market for mortgages on condominium has become extremely "thick" nationwide in recent years, but what about loans to owner-occupants purchasing properties with rental units on the premises?

Ismael Guerrero points out that Fannie Mae, the most influential force shaping the American home mortgage market, views structures of four units or fewer with the owner living on the premises as, in broad terms, equivalent to a single-family house from a financing standpoint. Such loans carry low down payment requirements, are relatively simple to originate, and can be bundled with each other for sale on the secondary market as Mortgage-Backed Securities (MBS), thus allowing enormous quantities of capital to be recycled in the highly developed US residential finance system. The willingness of lenders in the Chicago area to originate such loans is not an issue: "any lender can

do it" (Guerrero, 2006). Alan Bell of the Hudson Companies echoes the sentiment from the standpoint of the New York market. He points out that many banks view originating loans on newly built two- and three-family houses, which in New York tend because of the Partnership New Homes program (described above) to be located in economically disadvantaged areas, as a means of attaining much-needed credit under the Community Reinvestment Act (CRA) legislation that requires banks to lend in formerly redlined areas.

An enormously important development for such loans was the Housing Partnership Corporation of New York's success in persuading Fannie Mae in the early 80s, at the outset of the Partnership New Homes program, to allow a "PITI reduction." This underwriting practice allows the anticipated income from the rental apartments to be applied against the PITI (Principal-Interest-Taxes-Insurance) payment before the Debt-to-Loan ratio is applied to the adjusted PITI to determine the minimum income that the homebuyer needs to qualify for the mortgage. This practice has the effect of greatly increasing the effect of the acknowledged rental income on the minimum income level needed – by a factor of about three over what it would otherwise be in its absence. This can be readily seen in the hypothetical example given in Figure 38, which shows the details of the permanent financing for two- and three-family homes built under identical circumstances. The PITI reduction drops the qualifying income needed for a two-family home from over $63,000 to under $46,000, and from over $69,000 to under $41,000 for a three-family.

Notwithstanding this favorable underwriting practice from the standpoint of financing wholly-owned superposed flat buildings, there are some important ways in which two-family homes, at least in New York City, are treated more favorably than three-families. Some, such as both Alan Bell and Leonard Seif, from the private development and municipal spheres, respectively, would argue that this is justified. Seif speaks of a qualitative break in perception between the two types: the former looks and feels like a home that happens to have a rental unit included, whereas the latter, with its extra apartment, feels like a small investment property. Bell notes that in his experience, 60 to 70% of the tenants occupying the rental unit in a two-family home tend to have a less than arms-length relationship with the homeowner: they tend to be friends or relatives. Seif notes that particularly in the case of being a first-time homebuyer, the additional responsibility of managing rental units is considerable, and the amount of complexity (not to mention financial risk as a result of the higher implied leverage in a more expensive property relying more heavily on rental income to meet mortgage payments) from one rental unit to two goes up a great deal (Bell, 2006 and Seif, 2006).

This perceptual break between two- and three-family homes, which mirrors that in the respective building code treatment in some cities, as discussed further in Chapter 5, is manifested in permanent financing in at least three ways that may or may not apply in every instance, depending on geographic location.

Two vs. Three-Family House Financing Comparison

Uses	**Two-Family**	**Three-Family (1)**	**(2)**
Land	22,000	22,000	
Hard costs	251,567	315,856	
Soft costs	39,901	41,740	
Contingency	11,500	13,000	
Builder's fee	19,692	22,697	
Total cost per house	**$344,660**	**$415,293**	
Sources	**Two-Family**	**Three-Family (1)**	**(2)**
Subordinated land	20,500	20,500	
City article 16 funds	15,000	22,500	
HUD NOFA	26,650	39,975	
AHC	20,000	30,000	
Construction loan	224,368	259,671	
Builder/sponsor exp.	18,450	19,950	
Builder fee from sales	19,692	22,697	
Total sources per house	**$344,660**	**$415,293**	
Loan Terms	**Two-Family**		
Sales price	$262,510	$302,318	
Loan to value ratio	97%	95%	
Loan term (years)	30	30	
Gross rental income	$1,000	$2,000	
Rental income factor	75%	60%	75%
Assumed rental income	$750	$1,200	$1,500
Mortgage rate	7.25%	7.50%	
RE taxes/insurance	$260	$300	
Debt-to-Income Ratio	33%	33%	
Scenario 1: PITI reduction	**Two-Family**	**Three-Family (1)**	**(2)**
Monthly mortgage pmt.	$1,737	$2,008	
Plus: RE taxes/insurance	$260	$300	
Less: assumed rental income	($750)	($1,200)	($1,500)
Adjusted PITI	$1,248	$1,108	$808
Minimum monthly salary	$3,780	$3,358	$2,449
Minimum annual salary	**$45,366**	**$40,297**	**$29,388**
Scenario 2: No PITI reduction	**Two-Family**	**Three-Family (1)**	**(2)**
Monthly mortgage pmt.	$1,737	$2,008	
Plus: RE taxes/insurance	$260	$300	
PITI	$1,998	$2,308	
Minimum monthly income	$6,053	$6,994	
Less: assumed rental income	($750)	($1,200)	($1,500)
Minimum monthly salary	$5,303	$5,794	$5,494
Minimum yearly salary	**$63,638**	**$69,533**	**$65,933**
Downpayment (both scenarios)	**$7,875**	**$15,116**	

Figure 38. This hypothetical example compares the economics of two-family (left column) and three-family (center column) mortgage financing for a new development typical under the New York City Partnership New Homes program. It also compares the effects of a 60% underwriting assumption for the treatment of rental income in three-family houses (center column) with a 75% assumption (right column). Finally, it compares the effect of using a PITI reduction (Scenario 1, second lowest row) and not (Section 2, lowest row). Two- and three-family project development costs are estimated from an actual three-family project in Manhattan from about five years ago (courtesy of Leonard Seif, New York HPD). The estimates take into account the economies of scale inherent in three-family construction as compared to two-family construction, i.e. the production of a greater number of units in comparision to expenditures on site work, foundation work, etc. [This example is intended for illustrative purposes only and is not intended to resemble any specific, actual three-family project in New York City.]

1) Higher interest rates

According to a recent Chicago Tribune article, lenders add an extra 12 to 25 basis points to interest rate for a mortgage on a three-family house versus that on a two-family to account for the higher perceived risk (Jacob, 2005).

2) Stricter underwriting of rental income

While FNMA underwriting guidelines call for 75% of the income resulting from a rental unit (as supported by a lease or by rental comparisons by an appraiser) to count in the PITI reduction for a two-family home, the equivalent figure for the income from the two rental units in a three-family home in New York is 60%. In the words of Eric Enderlin of the New York HPD, "this takes the steam" out of a three-family house (Seif, 2006). The effect of this can be seen in the exercise in Figure 38: hypothetically using a 75% criterion instead of the customary 60% allows the qualifying annual income for a buyer of the three-family house to fall from over $40,000 to under $30,000.

3) Higher down payment requirement

Fannie Mae loans in New York City on two-family homes generally require a 3% down payment, while a 5% down payment is required on three-family homes (unlike in Boston's Three-Decker Plus program, where a 3% downpayment is sufficient, with half of that being provided by the city). Again turning to the exercise in Figure 38, this causes the required down payment of under $8,000 for a two-family house to be almost double that in the case of the three-family.

Consequently, one could argue that these underwriting practices, justified or not, have the effect of counteracting some of the inherent economies of scale of the three-family home over a two-family, i.e. the gaining of a whole extra housing unit for the marginal cost of an additional floor, while major cost components, such as design, site work, excavation, and foundation construction are fixed or nearly so whether it is a two- or three-family house that is being built. Of course, the entire project of bringing homeownership of two- and three-family homes into reach for households of modest means raises some important questions: given the greater potential for costly maintenance in a three-family home, or the greater proportional impact of rental unit vacancy, for instance, do households of such modest means have the ability to financially withstand the inevitable economic ups-and-downs? Resolving this question would require the systematic examination of the performance of loans made on such properties to such households. (Topics for further research are discussed in Chapter 6.)

Although this thesis does not pretend to carry out a comprehensive investigation of mortgage finance practices for three-family homes, there do appear to be regional variations. For instance, William B. Bradshaw, a Cambridge, Massachusetts-based real estate investor and urban planning graduate student, reports that local banks quoted him loans on the purchase of an existing three-decker in Dorchester during 2005 in which the rental income of both units was underwritten at 75%,

and in which the PITI reduction was used (Bradshaw, 2006). Here, it seems, three-family homes were not treated differently than two-family homes. The Chicago Tribune article also describes the 75% criterion and PITI reduction as being standard for both two- and three-flats, although it also mentions that many lenders will reduce the 75% ratio for buyers who are not "seasoned" managers of units in small multifamily properties, i.e. in possession of less than two years' of experience in management (Jacob, 2005).

In the Boston example, the banks insisted on Bradshaw escrowing two months' worth of mortgage payments so that he would be able to financially withstand unusual maintenance costs or vacancies in the rental units. In the best proposal that he received, a first/second mortgage structure resulted in a minimum downpayment of roughly 10%, but allowance for gifts allowed his cash contribution to be as low as 3% of purchase cost. This also permitted the avoidance of mortgage insurance. The loan product had a provision for also borrowing up to 5% of the pre-improvement acquisition cost of the property in order to cover renovation costs. The second mortgage, which absorbed these extra renovation costs, carried rates that were relatively similar to the first mortgage. Closing costs were just over 1% of the loan amount. Rates were about 60 basis points higher than those for single-family loans, not because of inherent characteristics of three-family homes, but because the higher loan amount for the three-decker placed it into the "jumbo loan" category (i.e. as would be the case with an expensive single-family house). (Bradshaw, 2006.)

In the Chicago article, rates and downpayment requirements appear to be less favorable specifically due to differential treatment of two- and three-flats from single-family homes (Jacob, 2005). Part of the reason could be that Boston-based banks find three-decker lending to be a far less risky and involved means to garner credits under the Community Reinvestment Act than, for example, funding construction loans, which require far more capital, the acceptance of more risk, and have much higher staffing requirements. By contrast, in Chicago, where three-flats are much likelier to be located in economically healthy neighborhoods than is the case with three-deckers in Boston, the CRA may not be as powerful of an inducement for banks to attempt to lure three-flat borrowers.

As for homeowners' insurance, there is at least some evidence that three-deckers in Massachusetts are adversely impacted by market practices. For instance, a 2003 Massachusetts Housing Alliance (MAHA) report calls for the state Commissioner of Insurance to "undertake a major study of flat roof triple-deckers with an eye towards examining whether or not a sound underwriting reason exists for insurers to avoid these properties" (Massachusetts Housing Alliance, 2003). Another report critical of these practices reports that insurance companies frequently cite flat-roofed three-deckers' propensity towards water damage as the typical reason given for not insuring this property type (Luquetta et al, 2001). The MAHA report implies that the increasing share of homeowning households from 1997 to 2002 – rising to as high as 60% in one Dorchester zip code in 2002 – using the state-provided Fair Plan insurance product (presumably because of an absence of market

competition) in certain areas heavily populated by three-deckers is indicative of systematic redlining practices (Massachusetts Housing Alliance, 2003).

CHAPTER 5: REGULATIONS

Chapter intro

This chapter examines the regulatory factors that impinge upon the viability of the three-decker form, or the lack thereof. It begins by examining, in the first two sections, evolutions in building codes and accessibility regulations that have been introduced between the heyday of three-decker construction and the present. In the event of new construction of a three-decker, these new regulations would force its design to deviate from the historical pattern. In the chapter's third and final section the focus shifts to zoning laws that operate at larger spatial scales, influencing what can be built, and where.

Building codes

The 19th century and early 20th century witnessed the introduction of building codes. The turn to regulation contrasted with earlier eras, when occupants of buildings trusted that their builders had built them in a safe manner by observing established conventions for construction. By the second half of the 19th century, it was clear that this was no longer adequate. The multiplicity of builders in the 19th century industrial city and the explosion in new, novel building types abetted by emergent technologies necessitated governmental involvement. In New York City, the first building law was introduced in 1866: it introduced such basic concepts as requirements for fireproof party walls, minimum partition wall thicknesses, and fire escapes. When these regulations, and other incremental reforms, proved inadequate to forestall the construction of unhealthy and unsafe tenements, the Tenement House Act of 1901 tightened the requirements, and created a new municipal department specifically charged with enforcing its provisions.

Although Ford writes, in 1936, of Boston's housing building codes as having lagged behind those of New York City, nevertheless the three-decker emerged sufficiently late for certain new (at the time) code requirements that are standard today to be encapsulated into its basic design (Ford, 1936). For instance, the Boston codes required a rear staircase for the second form of egress, a standard that is generally required in all new multifamily housing (with the common exception of two-family homes) in the United States today. Nevertheless, some new regulations have been promulgated that would affect any effort to build a new three-decker today. These include:

1) Fire safety requirements

As Matthew Littell points out, three-deckers are essentially treated as multifamily buildings today due to the requirement that all buildings with stacked apartments (again, with the exception of two-family homes) be fire sprinklered (Littell, 2006). John Sharratt contends that this is not without justification: fire can easily leap across the gaps of 8' that laterally separated many three-decker

houses in the past (Sharratt, 2006). The economic consequences are considerable: Kristen Hunter estimates that while costs vary by the particular situation, the need to add fire sprinkling to a three-decker can increase its cost by $30,000, or $10,000 per unit (K. Hunter, 2006). Marginal costs per unit are lower, so that, for instance, a comparable 9-unit building may cost only $60,000 to have fire sprinklered (or less than $7,000 per unit). Also, the need to install certain equipment in every building requires a specific subcontractor, generally not a plumber, to install the fire sprinklering. This presents a major diseconomy of scale for a singly-built three-decker. The same can be said of other fire safety requirements in which three-deckers are treated as multifamily buildings rather than as single-family houses, such as the requirement to install commercial-grade fire detection systems with strobe and horn alerts. Alan Bell of the Hudson Companies believes that the requirement for a second means of egress is overly onerous for three-family houses. Why, he asks, should the third story of a three-level,

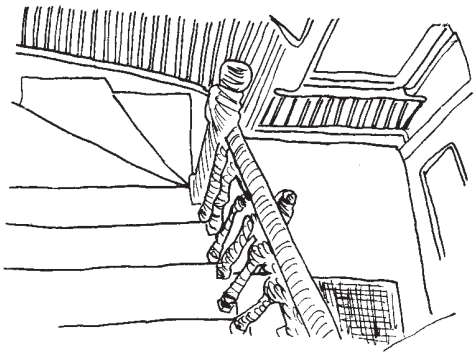


Figure 39. A "winder" staircase of the sort that is typical in three-deckers built in the late 19th or early 20th centuries, but that is no longer compliant with building codes. Today, stairs must come to rest at a landing when they change lateral direction.

Figure 40. A typical example of modern fire-proof construction in Chicago, which is required of all residential buildings higher than two stories. The structural system is built out of concrete block, and a brick veneer is laid next to it on the exterior.

two-family house (typical in New York City) not be required to have a second means of egress, when that same house rearranged into a three-unit configuration *is* required to have it (Bell, 2006)? Roger Starr makes much the same point (Starr, 1997).

The case of Chicago illustrates an interesting, and completely different, regulatory approach to fire safety from that of Boston. Blair Kamin states that the legendary destructiveness of Chicago's Great Fire of 1871 is embedded into the "genetic code" of the city and its building culture (Kamin, 2006). Perhaps as a consequence, the local building code stipulates that all residential construction of greater than two stories must be in masonry. Indeed, this requirement was introduced just three years after the Great Fire, in 1874. This stands in stark contrast to Boston, where even larger multifamily buildings as much as four stories in height can be built with wood structure to this day.

The result is that all recently built three-flat buildings in Chicago consist of structural concrete block

with a veneer of brick covering the front façade, and sometimes all or part of the side and rear facades as well. However, sprinklering with such construction is not required until buildings exceed 55' in height. Presumably, then, if masonry construction is a baseline requirement for any sort of construction that will fully exploit the zoning capacity of a given lot, then its expectation will be built into the market for house lots, and it will not act as a barrier to the selection of the three-flat versus other building types. Furthermore, the standard for the construction of "McMansions" in the place of torn-down modest frame houses is for them to be built with brick veneer over a wood frame, and so the contrast in cost between the structural and facing system between a single family house and three-flat is not as great as it otherwise would be. By contrast, Boston's sprinklering requirements for three-decker houses place them into a significantly more expensive category of construction than single or two-family houses.

2) Prohibition of "winders" in staircases

John Sharratt observes that "winders," or stair steps that change horizontal direction as they climb, are no longer permitted under current codes (Figure 39). A change in direction in a staircase requires a horizontal landing today. Sharratt estimates that 6' of additional lineal space would be required by the footprint of a staircase in compliance with today's codes, thus eating into the space available for the apartments (Sharratt, 2006).

Disabled access

The introduction of a suite of federal and state laws, including the federal American with Disabilities Act (ADA), passed in 1990, and the addition of disabilities to the federal Fair Housing Act with the Fair Housing Act Amendments in 1988, constituted arguably the most far-reaching new regulatory regime impinging on residential construction in the second half of the 20th century.

One important effect of the Fair Housing Act legislation is to prohibit the ability of landlords to deny rental housing to tenants on the basis of any disabilities that the tenant may have. However, under the parallel state law in Massachusetts, which in many instances of disability legislation is tighter than at the federal level, no distinction is made between the treatment of three-deckers and less dense housing forms such as two-families and single family houses. For instance, the break-point in terms of the number of units in a building or group of buildings above which a landlord, instead of a tenant, must pay for "reasonable modifications" (such as the installation of a strobe light activated by a doorbell for a deaf tenant) to make a leased unit suitable for "full enjoyment" by the tenant is ten, the same as in federal law. Therefore, this particular provision makes no demands on owner-occupants of three-deckers seeking to rent out the other units greater than those imposed, for instance, on a single family homeowner renting a basement suite to a student.

Much more relevant to three-deckers is this passage from a US Dep't of Justice Publication:

"The [Fair Housing] Act … requires that new multifamily housing with *four* or more units be designed and built to allow access for persons with disabilities. This includes accessible common use areas, doors that are wide enough for wheelchairs, kitchens and bathrooms that allow a person using a wheelchair to maneuver, and other adaptable features within the units" (US Department of Justice, 1996, p 6). (Italics added for emphasis.) This would seem to exempt the three-decker from regulation, but the stricter Massachusetts law trumps the federal rules: "The MCAD [Massachusetts Commission Against Discrimination] regulations provide that all new residential construction for multi-family dwellings (*three* or more units) must provide "basic access" (Attorney General of Massachusetts, no date, p 5). (Italics added for emphasis.) "Basic access" means, most importantly to the design of a three-decker, that 5% of all units (rounded *up)* – in other words, the first floor apartment in a project that consists of a single structure – must be wheelchair accessible.

Of course, it is feasible for the bottom of the entry door to the lobby in a three-decker to be positioned so as to be level with the ground plane. As Roberta Feldman of UIC points out, this has been the approach used in many mixed-income redevelopments of public housing sponsored by the federal HOPE VI program (Feldman, 2006). The trouble is that, as Matthew Littell puts it, "the stoop is a social institution" and would be eliminated under such a configuration (Littell, 2006). The stoop is so much a part of the image of the three-decker that it is difficult to imagine the form without one. It also fosters sociability by providing residents a casual place to stand or sit, and it helps enhance the privacy of the ground-floor unit by lifting it perhaps 4 to 5 feet above the ground. Of course, as John Sharratt points out, it is a relatively simple matter to construct a system of ramps to the side of the house that can provide wheelchair accessibility to the front entrance while maintaining the image of the stoop (Sharratt, 2006). But such an undertaking adds cost, and may encroach on the side driveway, thus necessitating a widening of the lateral separation between adjacent three-decker houses. Matthew Littell's solution for the Wyman Street new construction three-decker project in Jamaica Plain is to leave room for a lift, so that any of the three units can be made accessible via an entrance on the side of the building should the need arise, all while retaining the traditional front stoop (Littell, 2006). According to Prof. Vikram Bhatt of McGill University, in Montreal a lift providing access to the two first floor units is economically possible there in a six-plex, the local equivalent of a Boston six-family house (Bhatt, 2006). Judging by the inclusion of a lift in a recently built six-family in Dorchester, the same appears to be true there as well (Figure 41).

Figure 41. A recently-built six-family house in the Neponset section of Dorchester, Massachusetts uses a wheelchair lift (bottom center, to the right of the staircase) to provide wheelchair accessibility to the two ground-floor apartments.

Marco Gutierrez, the former head of the Chicago Buildings Department, says that the situation in Chicago is different. Illinois law allows the federal Fair Housing minimum unit count of four to prevail. As a consequence, Chicago three-flats have been constructed by the hundreds over the past 15 years with no need to provide for a wheelchair-accessible entrance to any of the three units (Gutierrez, 2006).

According to Roger Starr, a local New York City law pushed by labor unions and adopted in 1987 stipulated that new non-elevator buildings had to provide at-grade wheelchair access for the ground floor apartment (Starr, 1987). This meant that the customary 22' tall New York three-family house, with a half-sunken basement providing the bottom apartment, now had to rise 4' in overall height. Accordingly, state and local law pushed the house 's height up to a threshold where it now needed to include a brick parapet for fire safety. Starr relates that in some cases, the net effect was to increase construction costs by as much as 10%. Starr, in his article, advocates reforming the local law so that only one in five houses would need to provide an apartment flush with grade level, rather than every house. Of course, such an approach would be more workable in New York, where three-family houses are typically built in rows, than in a location like already-built portions of Boston or Chicago, where they are generally built singly on individual lots.

Figure 42. Masonry parapets extend the fire separation party walls above the cornice line on a row of three-family houses, Far Rockaway, Queens. This adds to the cost needed to bring a three-family house in New York City into compliance with the local building code. The local requirement that the ground-floor units be wheelchair-accessible raises the building height to the minimum where a parapet is required.

While a typical developer might view the need to provide for accessibility as a regulatory requirement, William Henning, executive director of the Boston Center for Independent Living, a statewide disabled advocacy group, sees things differently.

"Think of access in terms of it being a good business move. Legal issues are secondary, or should be. The more you build inaccessible stuff, the more you eliminate big segments of your market right from the beginning (Henning, 2006).

It is interesting to note that in the past 100 years, the life expectancy of the average American has increased by about 30 years (US Census). With the population in the United States projected to continue to increase in age, stairs, in addition to posing an insurmountable obstacle to the relatively small number of people in wheelchairs, will pose a substantial obstacle to a much larger slice of the population than has been the case in the not-so-distant past.

All of this means that widening the target audience for renovated or new superposed flats

beyond their current niche of young childless professionals, as is certainly the case in Chicago and Boston, may require some rethinking of the traditional design of such units. This is particularly the case as the concept of "universal design," or design that allows for *all* dwellings, not just the 5% required under law (where applicable), to be accessible, gains greater currency. The basic concept is that universal accessibility to at least one entrance of all dwelling units allows people that find it difficult or impossible to ascend steps to visit other dwellings, not simply the one in which they live, or public spaces, workplaces and other spaces already under the domain of the Americans with Disabilities Act.

Could some sort of modification to the basic three-decker design handle these increased demands for accessibility posed by adherence to the concept of universal design? Can some sort of vertical lift mechanism be installed cheaply enough to overcome the diseconomies of scale that are not present in larger buildings with hallways that allow many units to be served by the elevators in each core? Roberta Feldman of UIC cites $40,000 as a typical cost for an elevator in a superposed flat building in Chicago (Feldman, 2006). Or is the three-decker's lack of accessibility simply one more of the reasons that the three-decker is seldom built today in Massachusetts, and will continue to not be built in the future? It is difficult to tell.

Zoning regulations

While zoning is an enormous topic, a full treatment of which is beyond the scope of this thesis, no chapter describing regulatory impacts on three-decker housing would be complete without at least a brief discussion of it.

Fischel, in his historical account of zoning, makes the case that zoning had little impact on housing patterns until the 1970s, when there was a sharp increase in the extent of zoning laws that had the effect of excluding denser housing and/or housing targeted to low or moderate-income households, such as three-decker houses. Focusing mainly on suburban jurisdictions, Fischel notes that it was by no means inevitable that the interests of the owners of single-family detached homes would become as dominant as they now are in the local politics of suburban towns. "How did [single-family] homeowners get the game rigged in their favor?" (Fischel, 2001.)

Fischel identifies three trends of that era of the 1970s that caused this sharp shift. Firstly, as noted in Chapter 2, jobs and the residential location of poor households became "footloose," as he puts it. This was caused in large part by the diffusion of automobile ownership and investment in Interstate and other high-speed highways within metropolitan areas. All of this caused suburbs to differentiate themselves more on the basis of their exclusive residential character and top-flight municipal services, and less on the basis of their proximity to downtown job centers, as modeled in the classical concentric ring theories of urban development of the past. Secondly, the triumph of civil rights legislation over racial covenants and other egregiously discriminatory means of excluding racial minorities led to a shift towards more subtle means for towns to preserve their affluent character:

minimum lot sizes and lot coverage maximums. Thirdly, the emergent environmental movement of the 1970s provided a new intellectual justification, beyond blatantly parochial self-interest, for halting or slowing or reducing the density of growth (ibid). The slogan "think globally, act locally" translated into a sharp increase in legal challenges to residential development projects, particularly when new legislation such as the Endangered Species Act at the federal level gave well-organized and financed local citizens' groups powerful new tools to influence local land-use decisions.

The severity of these trends has varied in different regions. New England, with its highly localized decision-making and weak or non-existent county government, is a region where these trends are highly pronounced. In Massachusetts, the problems were seen as serious enough as early as 1969 for one of the few major pieces of legislation nationwide counteracting the exclusionary trend (the other notable examples being the metropolitan governments in Portland, Oregon and the Twin Cities, Minnesota) to be passed at the state level: Chapter 40B.

Chapter 40B allows local Zoning Boards of Appeal (ZBAs) to approve residential developments under the program's rules in towns and cities where 10% of the housing stock does not meet a test of affordability when the proposed developments have 20% of ownership units or 25% of rental units designated as subject to 30-year affordability restrictions. The resulting units must be affordable to households at 50% (rental) or 80% (ownership) of AMI. Chapter 40B has become *the* dominant mechanism for the creation of affordable housing stock in cities and towns that are out of compliance with 40B (a list that excludes the state's largest cities, such as Boston, Springfield, Cambridge, Worcester, and others). 23,000 units of housing at or below 80% of AMI have been created since the early 1970s, and in the past five years, 82% of all affordable housing production in jurisdictions failing the 10% test has been attributable to 40B (Citizens' Planning and Housing Association, 2003).

Thus, with such a powerful, legislatively-sanctioned mechanism for forcing affordable housing upon the jurisdictions most resistant to it available in Massachusetts, has the three-decker been reintroduced as a result? The answer appears to be no. While there is extensive data about Chapter 40B housing production, none of it tracks projects by building types. However, the CHAPA report examines 16 recent Chapter 40B developments meant to be representative: not one of them features three-deckers (Citizens' Housing and Planning Association, 2003). Additionally, a study by Ritchay and Weinrobe, in an effort to ascertain whether the most locally controversial 40B projects depressed the property values of nearby single family houses, examined nine Chapter 40B projects in the Boston metro area from the period between 1985 and 2000 that were dissimilar in "size, bulk, form, and density from the surrounding community" (Ritchay and Weinrobe, 2004). Again, not one of these projects included any buildings resembling three-deckers. If any three-decker project had, given the form's negative reputation, one would expect that it would have made Ritchay and Weinrobe's list. All of this suggests that zoning is not the only disincentive to the construction of new three-deckers in Massachusetts.

Large central cities, with their proportionately much smaller population of homeowners and school-age children, would according to Fischel's methodology appear to be less prone to tendencies towards exclusionary zoning. Yet even here, obstacles emerge. The picture appears to vary from city to city. For instance, Kristen Hunter speaks of Boston as a city where both zoning and permitting are notoriously onerous for developers, leading builders there to budget unusually high pre-development allocations of soft costs such as legal fees, permit costs, and land loan interest as a matter of course when pursuing a new mutifamily project (K. Hunter, 2006). Matthew Littell, the Boston architect who designed a new three-decker in Jamaica Plain, notes that zoning in many areas often permits less density than is reflected in the housing stock that currently exists: "the whole city is downzoned," as he puts it (Littell, 2006).

The situation in Chicago, at least until quite recently, appears to have been quite different. It seems that virtually all of the teardowns of single-family homes to make way for three-flats described in Chapter 4 were uses by right; consequently, in many fashionable neighborhoods, unlike in Boston, the zoning capacity for density exceeded that of the existing built housing stock. R-4, the zoning category in which three-flats tended to be built, as previously noted, allowed heights of up to 55', and necessitated only one off-street parking space per unit, a requirement that could be met with a simple parking pad or garage occupying the width of the rear of the lot. Three-flat development clearly had become a routine process for many local builders, something that can be seen in the exact duplication of certain designs on various lots scattered throughout a neighborhood. As Marco Gutierrez relates, this had become reflected in the process for the issuance of building permits: while head of the Chicago Buildings Department, he introduced a "self-certification process." In this, developers could get expedited approval for previously-approved building designs, to be built on a different lot, that had undergone only cosmetic changes in exterior appearance inconsequential to the safety concerns under the purview of the Department (Gutierrez, 2006). This "customer-friendly" approach seems miles apart from the current regulatory climate in Boston.

As discussed in Chapter 4, the modern three-flat boom in Chicago led to political pressure that led to something of a curbing of the permissive zoning stance towards three-flats with a comprehensive 2004 zoning ordinance. This created new zoning categories that then began to be adopted neighborhood by neighborhood, often under contentious circumstances. Marco Gutierrez describes the end result in this way: "it downzoned the whole city" (ibid). A new category, R-3.5, is sufficiently narrowly defined to permit nothing denser than two-flats. The R-4 zone's controversial height limit of 55' was dropped to 38'. The side yard requirement of 10% of the lot's width was increased to 20%, meaning that there had to now be 5' of side yards in a 25' wide lot, versus the 2.5' required before. (It is interesting to note that these requirements, both before and after the 2004 zoning change, have forced Chicago builders to hew to the city's traditional pattern of detached three-flats, as opposed to using the Montreal or New York pattern of building them as rowhouse flats.)

In New York City, parking requirements play very little role, since Alan Bell relates that the R-6 zone district – which houses the majority of newly constructed three-family houses – allows a project required to have 5 parking spaces or fewer under the zoning to simply ignore the parking requirement altogether (Bell, 2006). This proviso can be invoked even for long rows of three-family houses by simply splitting the project into pieces small enough to qualify for five parking spaces apiece and then filing them for zoning approval separately. Nevertheless, the developers in many cases have chosen to still provide off-street parking, as can be seen in Figure 43.

All the same, Roger Starr observes that in New York City, the R-6 zoning category commonly

Figure 43. Two recent three-family rowhouse flats projects in Harlem, Manhattan demonstrate two different means of providing parking: via a rear alley entered via a gate from the street (left) and via a surface parking lot partially enclosed by the mass of the buildings (right). Although New York City zoning regulations did not require any off-street parking for these projects, these examples show that even in dense, transit-rich Harlem, developers will often choose to provide parking for three-family homes.

used for three-family houses is the same as that which permits much larger, denser, multifamily buildings (Starr, 1997). One and two family houses are included in a different zoning category. Consequently, builders seeking to build three-family houses in the past have often been forced to compete for land with builders seeking to build denser projects. He believes that the differential treatment of three-family houses vis-à-vis one- and two-family houses in New York State's landmark tenement reform legislation, the Multiple Dwelling Law of 1929, inspired the drafters of New York City's zoning ordinance in the 1950s to echo this same distinction in the zoning code. The options of these builders then became to either buy large tracts of land to operate at sufficiently large scales, or to build in one- or two-family zones what he terms "illegal threes:" officially two-family houses with a half-sunken basement marketed as a "hospitality suite" but clearly intended for subsequent conversion by the homeowner into an illegal second rental unit. He notes that this practice was common in the 1960s, 70s and 80s in outer Queens and Brooklyn, and in Staten Island. Even this design became infeasible after the passage of the local disabled access law in 1987, described earlier in this chapter. (ibid).

The reform of restrictive zoning regulations, even when done in the name of affordable

housing, is notoriously difficult, contentious and fraught with political risk. Fischel proposes an interesting solution: the usage of homeowner's equity insurance, a product that insures against decreases in home value of single-family homes (Fischel, 2001). This then would, in theory, remove the fear that causes homeowners to lobby so vociferously against more permissive zoning – irrationally, according to Ritchay and Weinrobe's findings, that found that the most blatantly out-of-scale Chapter 40B developments in Boston suburbs generally had no negative impact whatsoever on local single-family home property values (Ritchay and Weinrobe, 2004). Fischel notes that this approach has been successfully used in Oak Park, Illinois since the 1970s, a time when that close-in Chicago suburb was perceived to be on the brink of wrenching racial turnover, induced by "blockbusting" and panic selling of the sort that had befallen Austin, the neighboring Chicago district to the east, shortly before (Fischel, 2001). Instead, Oak Park, due to active reform initiatives, has managed to remain something of a model racially integrated inner suburb ever since that time. As more metropolitan areas in America struggle with a lack of affordable housing, could zoning changes to increase the areas permitting affordable building types such as the three-decker, bolstered by homeowner's equity insurance, be part of the answer?

CHAPTER 6: CONCLUSION

Chapter intro

This final concluding chapter begins, in its first three sections, by summarizing the answers to the three research questions, originally posed in Chapter 1, that have been explored in Chapters 2 through 5. The three questions are: how did the three-decker arise; why did new construction of the three-decker mostly cease after 1920; and what is keeping the three-decker from returning as new construction today? The next section introduces a diagram that compares the culture of building superposed flats in the four cities of Boston, Chicago, Montreal, and New York City. The following section after that offers some brief policy suggestions that might allow for a greater role, with more positive effects, of superposed flats in North American cities. Finally, this concluding chapter ends with some suggestions for further research.

Where did the three-decker come from?

Below I briefly summarize the most important factors, discussed in Chapter 2, identified by scholars in the emergence of the New England three-decker (not in order of importance):

1) The desire for the "French flat" package in the suburbs

A Franco-Boston architectural connection appears to have brought the Continental European notion of family living in a one-level "flat" apartment to Boston earlier than anywhere else in North America that had never been colonized by France. The three-decker became a way of providing this amenity package, first introduced in the densest walking city portions of Boston, in the new streetcar suburbs.

2) Tenement reform legislation

Stricter requirements for the design and construction of tenement houses stemming from a series of legislative reforms in Massachusetts eroded the profitability of for-profit investment in tenement house development, and spurred the development of a new housing type that was inexpensive and suited for the new suburbs that had been opened up by new transportation technologies (see below).

3) New transportation technology

Mechanized transportation, beginning with horse-drawn streetcars and improving with electric trolleys, was needed to open up enormous swathes of land in order to permit the new suburbs to be developed at a much lower density than had been the norm. This fundamental alteration of the functioning of the city broke with millennia of human history where walking was the only means of

transport for the great majority of the population.

4) Demand for inexpensive, moderately dense housing with abundant light and air

For the new streetcar suburbs to house the working class, they had to include housing types that were cheap in construction cost, and yet still provided dwellings at a moderate density. The density requirement stemmed from Boston's topography and water, features which, as William Wheaton explains, tended to raise the overall density of residential development in the metropolitan area over what it would have been otherwise (Wheaton, 2005). Hence, although the streetcar suburbs were of a much lower density than the neighborhoods of the old walking city, they were considerably more compact than those of other cities in North America with fewer geographic constraints. Perhaps in reaction to the notoriously unhealthy and unsafe conditions common in Boston tenement districts of the time, market preferences for working-class housing in the suburbs seemed to favor producing units with light and ventilation on four sides, even at the cost of having them be vertically stacked. All of this made the three-decker a popular solution.

5) Colonial wood building tradition

New England developed an early, rich tradition of wooden residential construction beginning in the 17th century, abetted by necessity and plentiful nearby supplies of timber. Wooden construction remained a well-respected aspect of the local building culture well into the late 19th and early 20th centuries in a way that it did not, for instance, in Chicago. The simplicity of the design of a three-decker allowed it to be easily adapted from already extant regional house patterns realized in wood.

What *did* happen to the three-decker?

The following factors – not listed in order of importance, and interlinked in complex ways – are the most important ones in explaining why the three-decker disappeared as a form of new construction for all practical purposes after 1920, and completely by 1930. They also summarize much of the discussion in Chapter 2.

1) Poor economy after World War I

While the end of World War I posed economic difficulties for the United States as a whole, Boston endured a particularly protracted period of regional economic stagnation from roughly 1921 to 1960. Thus, one would expect that the rapid spatial expansion of the era that Warner examines would have been considerably slowed during the 1920s, a decade that saw much economic growth elsewhere in the United States. The period of 1930 to 1945 was one of economic depression and war affecting the entire nation, a time that saw little residential construction or improvement, but Boston would presumably have had less economic expansion than the country as a whole in the postwar

period of 1945 to 1960. By the time a modicum of prosperity returned to the Boston region, the circumstances of residential development had completely changed from those of the streetcar suburb era, and presumably many of the characteristic forms and practices of that period had been forgotten.

2) End of the culture of small builders

In the middle of the 20th century, Boston's real estate development industry became more concentrated and comprised of larger firms. Real estate development became less of Warner's "weave of small patterns," as developers increasingly shunned elements within their developments (such as three-deckers) that might detract from the value of the primary product they were selling (generally single-family homes). (Warner, 1962.)

3) Homevoter phenomenon

As Fischel explains, local governmental regulation became sharply more exclusionary nationwide in the 1970s, and this trend was particularly pronounced in New England (Fischel, 2001). The political barriers to building a widely reviled building type such as the three-decker became well-nigh insurmountable in most suburban jurisdictions during this period. Regulation of land use, minimum lot sizes, maximum densities and other aspects of zoning have frequently made it impossible for anything resembling three-decker housing to be erected in many locations without a protracted struggle that few developers would be willing to undertake.

4) Emphasis on homeownership

Beginning in the 1930s, the United States federal government underwent a revolution in housing policy that caused it to heavily intervene in the development of a liquid and well-capitalized nationwide market in home mortgages. This trend dovetailed with the emergence of the image of the "American Dream" of homeownership of a detached single-family house as an emblem of middle-class respectability. Many households who may have bought a three-decker in the past out of necessity, in order to use the rental income to defray the mortage payments, now found, thanks to more widely available and inexpensive mortgages, that they could attain their long-held goal of single-family home ownership.

5) Formalized affordable housing production system

Federal government policy, beginning in the same period of the 1930s during which there was a big push for homeownership, also began to encourage the production of large-scale rental housing developments in cities throughout the nation, including Boston. Such an approach to the production of housing had no place for a superposed flat, with its modest scale, on-site ownership and emphasis on mixing homeownership and rental units within the same building. Later, as government-sponsored

public housing development began to retrench during the 1960s, much of the void was filled by nonprofit housing developers. However, these do not appear to have frequently selected the three-decker as a type except in building rehab projects. Meanwhile, in the past several decades, the for-profit building industry – the same industry that once built three-deckers and, before them, tenements, for the working class – appears to have completely abandoned the development of housing aimed towards households below the middle class, except when subsidized. The one exception, possibly due to lighter regulation, appears to have been mobile homes and manufactured housing.

6) Deconcentration of jobs and the working class

The gradual switch from streetcars, buses, commuter rail, ferries and subways – motorized means of mass transit – to automobiles as the most common means of both commuting and daily travel in metro Boston from the 1920s until the 1950s has been as revolutionary as the previous transition from walking to mechanized mass transit in the mid 19th century. The ability for the majority of workers, including relatively poor ones, to use automobiles to journey from any point to any point within the metro area has allowed both jobs and housing for the working class to escape their traditional concentrated locations and to be diffused throughout the region. The economic imperatives for land-conserving, dense housing for the working class no longer exist as they did when housing for industrial workers needed to be located at the junction of radial and crosstown streetcar lines. Low-cost suburban housing – often abetted by Chapter 40B – now uses forms such as the suburban garden apartment, which typically has half of the density of three-decker housing (Figure 4, Chapter 1).

7) Decline in image of the three-decker

There is a negative psychological reaction to the three-decker form amongst many residents of metro Boston. As Kristen Hunter relates, many people in the region view the three-decker as a Spartan living arrangement from which their grandparents gratefully escaped once they attained the American Dream of homeownership of a single-family house. For their descendants to live in one again once would seem like a step backwards (K. Hunter, 2006). Massive fires in the 1910s and countless small ones following those – often caused by oil stoves that would overheat under heavy winter usage – have cemented the image in the popular mind of closely-packed, wooden three-deckers as dangerous firetraps. Additionally, the extreme physical and economic deterioration in certain portions of the Boston metropolitan area, such as in parts of Dorchester, Roxbury, Mattapan, Brockton, and Chelsea, has often occurred in areas with a preponderance of three-decker housing stock. Although it is difficult to separate the causes from the effects, the result has without a doubt been the association to many of the flat-roofed, wooden three-decker form with poor maintenance, crime, social disorder, and arson fires. This is intensified by a quirk in the New England decker tradition in which there is usually

a sharp architectural distinction between two- and three-family homes, in a way that is *not* the case in the Chicago, Montreal, and New York superposed flat building cultures.

8) Zoning changes in Boston and the suburbs

Although Fischel relates that zoning had little effect on development patterns in the United States until the 1970s, early zoning changes in Boston and its suburbs in the 1910s and 1920s appear to have been specifically directed at excluding the three-decker (Fischel, 2006). To this day, the city of Boston retains a reputation as a place where the development of any dense multifamily housing – three-decker or otherwise – is notoriously contentious and difficult for developers.

What is keeping the three-decker from coming back?

Chapters 3, 4, and 5 examined the various design, economic, and regulatory factors, respectively, that enhance or detract from the attractiveness of the three-decker as a housing type. These are summarized in graphical form in Figure 44. Although much of the chart is relatively self-explanatory, brief summary explanations are provided below for each factor. To answer the question posed by the title of this section: although the analysis is purely qualitative, the negative factors for selection of three-deckers as a housing type generally appear to outweigh the positive ones. Some of the factors are due to inherent qualities of the three-decker, but others could change if suitable reforms were undertaken (see the suggested policy reforms later in this chapter).

Low "number"

Three-deckers are small buildings with low numbers of units per building and low numbers of units per floor (only one, or two in the case of six-families). Three-deckers lack the hallways and elevators of denser buildings, so often viewed as security problems.

Individual entrances

This factor is ranked netural because three-decker entries sometimes serve more than one unit (sometimes two, or as many as six in the case of a six-family). This is not ideal from the standpoint of security, particularly where there is absentee ownership and the owner household cannot exert control over the other two households.

Natural surveillance

While the stoop allows for easy surveillance of the street, the areas to the side of a three-decker, as well as the rear entrance, are hidden from public view.

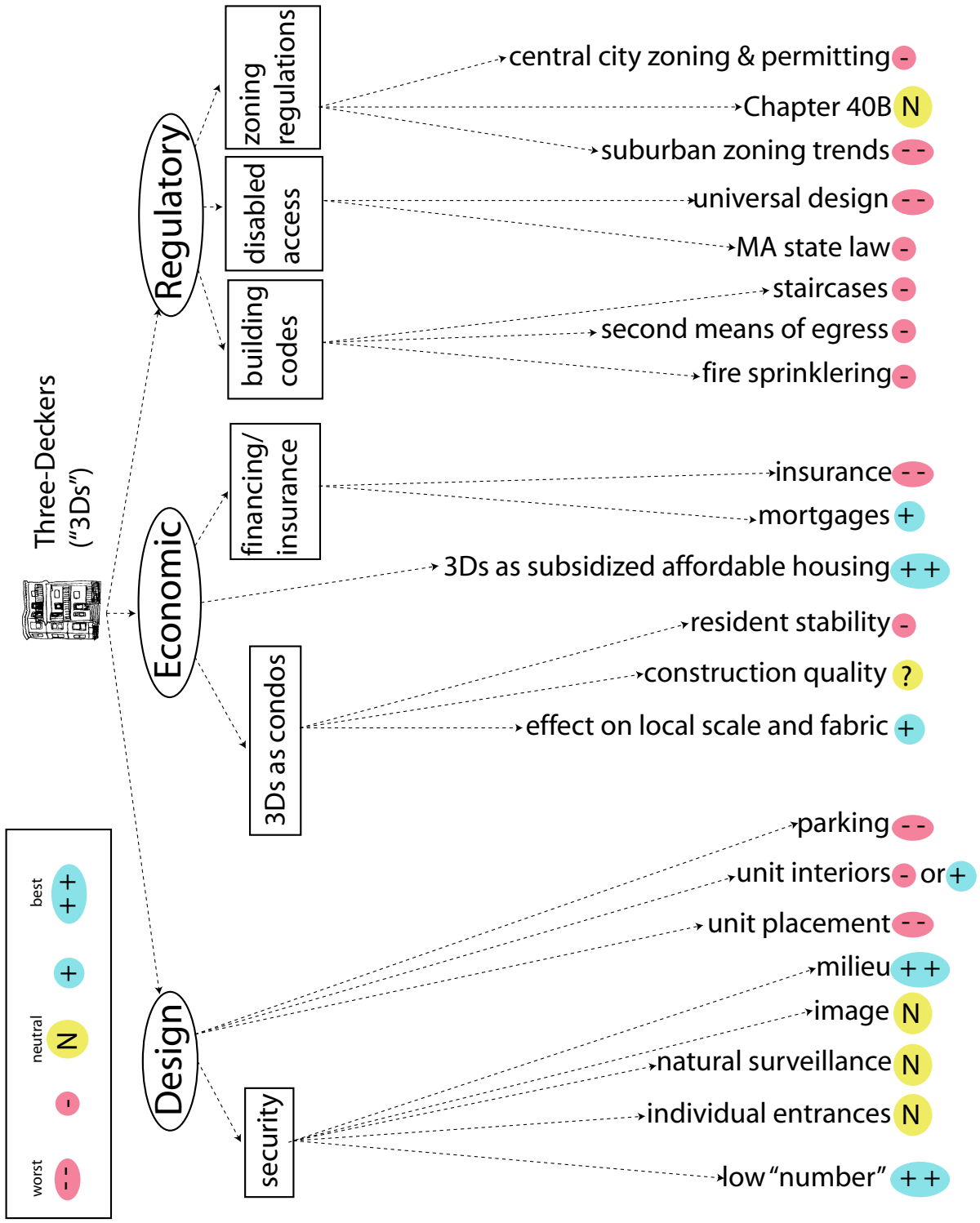


Figure 44. This chart summarizes the three-decker's qualities with respective to the design, economic, and regulatory considerations discussed in Chapters 3, 4, and 5. Each factor is given a rating ranging from "worst" to "best." Although this is a purely qualitative analysis, with no consideration placed upon weighing the relative importance of the various factors, the picture that emerges of the three-decker is nevertheless one where the negatives outweigh the positives.

Image

Although the three-decker has the positive attribute of being similar in size and scale to single-family housing (when compared to larger multifamily buildings), its flat roof and stacked rear porches set it off in appearance from lower density housing. These elements have come to have a negative perception for many in metro Boston.

Milieu

Three-deckers fit comfortably into the traditional pattern of blocks of frontage lots, in stark contrast to public housing on superblocks, for instance, or even to ranch houses that align their long axis with the street.

Unit interiors

Unrenovated three-decker floor plans are perceived negatively by most contemporary buyers, whether they are households with or without children. However, when renovated or built new, three-deckers can be made into attractive housing for childless households, or households with children (if floors are combined so as to provide sufficiently large units).

Parking

Conventional three-decker site layouts cannot accommodate even one parking space per unit without the use of tandem parking or alleys. Meanwhile, three-decker densities generally cannot support structured parking, as denser housing forms can.

Effect on local scale and fabric

Although the newly constructed three-flats in Chicago has posed so many difficulties to the surrounding houses in this regard, sites for new three-deckers in Boston typically exist on streets that already have existing three-deckers, and hence the erection of a new structure of similar dimension poses few difficulties. Boston does not seem to have, at least yet, the phenomenon of teardowns of single-family houses to make way for three-deckers – perhaps because many single-family houses in the streetcar suburbs were built for the bourgeoisie and retain their high social status today (while Chicago had a larger stock of modest single family houses).

Construction quality

Although the recent Chicago three-flat construction boom appears to have been rife with poorly constructed buildings, it is unclear whether or not this will occur in Boston if and when three-decker construction becomes more widespread.

Resident stability

The Chicago experience suggests, and intuition would also dictate, that adding condominium owner households with little long-term commitment to a neighborhood can disrupt the neighborhood's social dynamics and sense of stability.

3Ds as subsidized affordable housing

New construction three-family homes in New York City sold in their entirety to owner-occupant-landlord households, with strong incentives against speculation, seem to have been successful in stabilizing many formerly distressed neighborhoods.

Mortgages

While three-family homes in New York are treated somewhat more strictly than two- or single-family houses in mortgage financing, there are some reasonable arguments for this. The main point is that three-family homes are broadly placed in the same category as those for less dense housing, to the great benefit of three-families, something that cannot be said in the arenas of zoning and building codes.

Insurance

Limited evidence suggests that there is redlining of three-deckers in Massachusetts from the standpoint of homeowners' insurance.

Fire sprinklering

Three-deckers are treated as though they were larger multifamily buildings, while two-family homes are not.

Second means of egress

See above.

Staircases

Banning winders impinges on the viability of the three-decker, because the code-compliant alternative uses more space and thus consumes more of the floorplate.

MA state law

The state law is stricter than federal law for disabled access, necessitating placing the ground floor unit at grade (thus eliminating the traditional and beloved stoop), building a ramping system on the side (which consumes space for parking), or building a lift for the entrance (which is expensive).

Universal design

The principles of universal design, advocating that all residential units be visitable by people with physical disabilities, appear to be in direct conflict with the use of three-deckers, a multifamily housing type that includes as one of its main selling points its lack of elevators, and thus its numerous cores in relation to the number of units served. Perhaps there are small, inexpensive elevators available, but the installation and maintenance cost economies of scale would work against three-deckers and in favor of denser multifamily types.

Suburban zoning trends

Outlying Boston suburbs appear to be well-entrenched in their resistance to dense, multifamily housing. In this regard, they are out of step with the rest of the United States, where lot sizes are decreasing and residential densities are going up.

Chapter 40B

This landmark legislation, which has had considerable success in forcing unwilling towns to accept dense affordable housing, and which one might think could have led to the construction of three-decker housing in such locations, has apparently not done so.

Central city zoning and permitting

Boston appears to be one of the nation's most difficult central cities from the standpoint of developers seeking to receive entitlements to build multifamily housing, even in neighborhoods that were originally developed in a dense manner.

Four cities, four superposed flat building cultures

Although the New England (and specifically Boston) three-decker was the main focus of this thesis, I did travel to and observe the locally equivalent building traditions in Montreal, New York, and Chicago. I was struck by how each of the four cities had its own specific practices and traditions for superposed flats. Although it is based on qualitative observation and not on quantitative sampling (as is this entire thesis), Figure 45 is my effort to compare the superposed flat building cultures of the four cities to each other with respect to 11 different variables. Few patterns emerge – the four cultures seem to mix and match different elements. Two cities will resemble each other in one respect, and then not at all in another respect. The only discernible pattern is that Chicago repeatedly turns up on the right side of the diagram – this is merely an artifact of my somewhat arbitrary decision to have the extreme of each variable that tended in Chicago's direction be placed to the right hand side. The main conclusion that I draw from these comparisons is that each city evolved its building culture in a

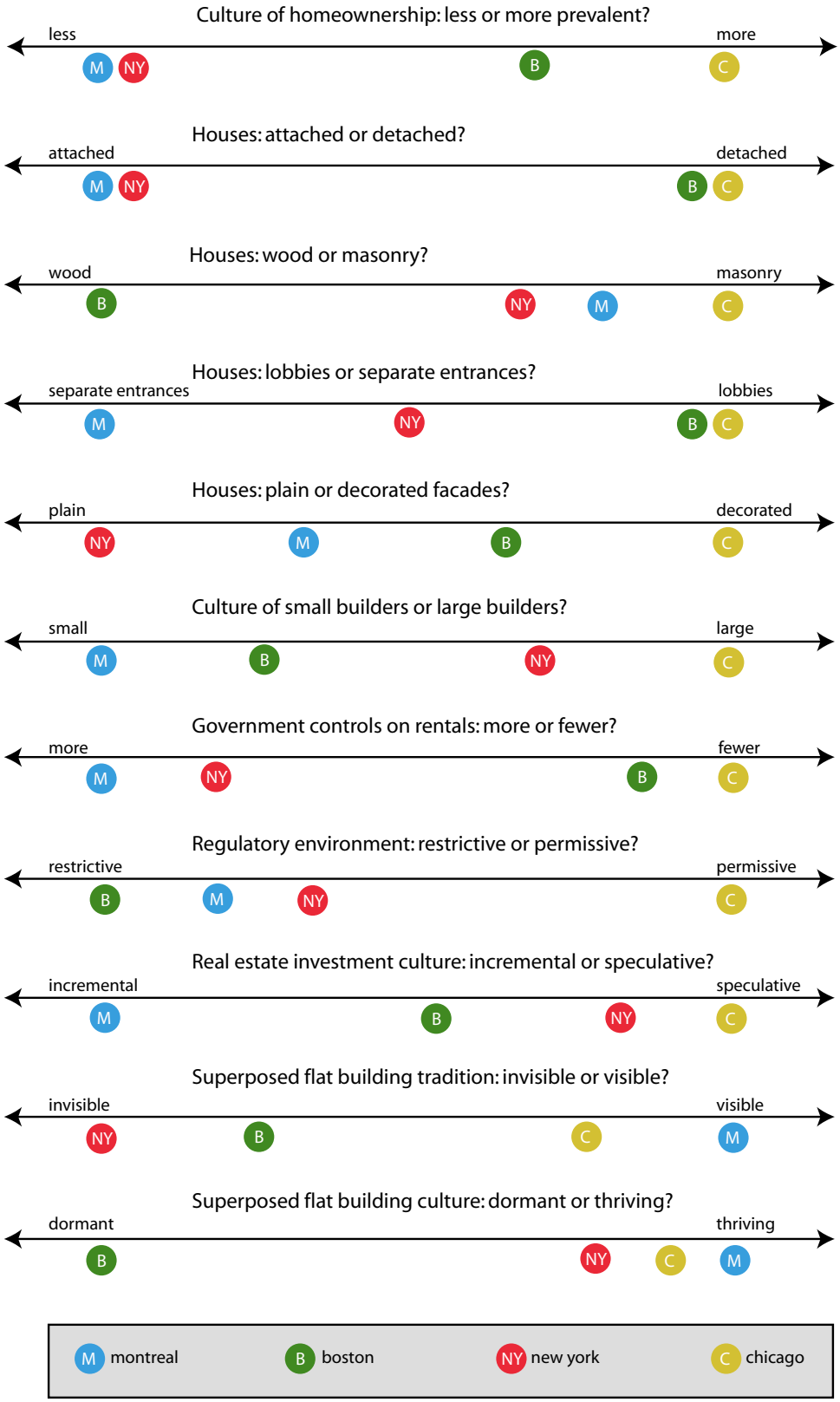


Figure 45. This chart qualitatively compares the traditional building culture of superposed flats that exists in the four cities of Montreal, Boston, New York, and Chicago. Few patterns emerge: each city seems to "mix and match" different characteristics to form its own distinct culture.

remarkably separate manner, and that attempts to reform or augment a particular building culture ought to take that city's pre-existing historical patterns into account.

Policy recommendations

While bearing in mind my own caution about the specificity of each city's local building culture, I nevertheless offer the following policy recommendations relating to superposed flats:

1) Reform zoning laws and building codes to treat three-family homes like two-family and single-family homes

Three-deckers once provided inexpensive housing to many working class households because they were the densest form of housing that could be easily purchased by a homeowning household not limited to professional real estate investors and managers. Now that three-family homes are usually grouped in terms of both zoning and bulding codes with bigger multifamily apartment houses instead of two-family homes, instead of being the densest inexpensive housing type, three-families are now the least dense moderately expensive housing type. Economies of scale then greatly detract from their attractiveness as a product to build compared to larger multifamily buildings. Although Seif and others speak of a perceptual break between two- and three-family homes, it would seem that in some more densely populated areas, the construction of three-family houses might be a good way to produce more affordable housing, and more of it (Seif, 2006). Failing that, *two*-family homes would be a significant improvement (from the standpoint of increasing density and fostering affordability) over single family homes, especially if built attached in rows.

2) Reform zoning to allow rowhouse flats

In Chicago, dimensional requirements within the zone districts that permit three-flat construction have the effect of demanding that three-flats be built as separate, detached structures. While reforming these rules to permit rowhouse flats might seem to flout the local tradition of detached three-flats, the benefits to building superposed flats in attached rows are considerable: more efficient use of land, more flexible floor plates, cheaper per-unit building costs (due to reductions in foundation and perimeter wall construction), and cheaper energy-related operating costs. As has been seen in New York, rowhouse flats can be built to emulate attached townhouses in massing, scale, and detailing. Parking can be accommodated either in rear alleys, or in surface lots partially obscured by the rows of houses (both techniques used in recent Partnership New Homes projects in Harlem, New York, including Shabazz Gardens Phase 1 and the East Harlem Partnership Homes). Chicago and Boston have highly regarded neighborhoods such as the Gold Coast in the former and the Back Bay and the South End in the latter that are renowned for their elegant townhouses – why not draw on this tradition in the service of creating affordable ownership and rental housing by building rowhouse flats?

3) Build three-family demo projects in cities and suburbs that do not have superposed flat traditions

The same positive attributes of superposed flats that exist in the cities where they are traditional could be introduced to cities and suburbs where they are not. Many North American cities lacking superposed flats altogether have a traditional building stock mainly comprised of single-family homes, punctuated by occasional much denser buildings such as slab apartment buildings and point towers. Examples include Atlanta, Dallas, Phoenix, Toronto, Calgary, Las Vegas, Seattle, Portland, and Salt Lake City, to name but a few. Why not introduce an intermediate density housing form to such places? Ismael Guerrero, the affordable housing equity investor who is now based in Denver, says of that city that "we are getting to the point density-wise where a three-flat could be viable" (Guerrero, 2006). Dramatic mass transit improvements and a general upgrading of the Denver city core have enhanced the overall attractiveness of the inner city. New housing forms, such as apartment slab perimeter blocks surrounding interior parking garages, have been introduced; why not superposed flats, which are intermediate in density between those forms and the traditional stock of detached single-family homes? Sometimes it seems as though the main barrier is simply a lack of familiarity with the concept. Demonstration projects subsidized by a governmental body or by a nonprofit organization could help overcome this. The same could apply to many suburbs in greater Boston that are seeking to densify their downtowns as part of strategies for economic revitalization, the creation of a sense of place, and the encouragement of usage of MBTA commuter rail. Superposed flats, if conceived, designed and marketed correctly, could be a politically more palatable means of densification than other, more visually jarring dense housing forms.

4) Institute a national program for three-family loan products

Fannie Mae loans treat, all things considered, three-family homes much more favorably than such structures are treated by, for instance, zoning and building codes. Nevertheless, a program could be introduced on the federal level to counteract the greater risk that lenders appear to perceive in three-family mortgages versus two-family or single-family ones. Jonathan Fine of Preservation Chicago, despite his strenuous efforts to mitigate the effects of the wave of three-flat construction in historic North Side neighborhoods described in Chapter 4, is an advocate for such a program (Fine, 2006). Among other things, a successful mortgage program at the national level could create a financial product that might make it more attractive for developers to once again build unsubsidized superposed flats sold as wholly-owned properties with built-in rental units, rather than as condominiums. The federal government, through its continued enormous subsidies to Freddie Mac and Fannie Mae, not to mention its generous mortgages tax deductions, continues to implicitly subsidize single-family homeownership to a great degree. Why not extend the same subsidies to

a form of housing – superposed flats – that offers the potential to, as a side effect, produce much-needed locally-owned, reasonably priced rental housing?

5) Build on the success of New York's Partnership New Homes program

New York's Partnership New Homes program has had a major positive impact in the city, both from the standpoint of revitalizing distressed neighborhoods, and from that of fomenting homeownership amongst many moderate-income, minority, and first-time homebuyer households. The construction of two- and three-family homes has proven to be a valuable tool in achieving these objectives, if not a direct end of the program itself. This seems to suggest that such efforts could be initiated elsewhere – perhaps, for instance, in Chicago, with its enormous reservoir of vacant land in many still-distressed neighborhoods of the West and South Sides of the city. While efforts such as Boston's Three-Decker Plus program and Chicago's incipient Greystone Initiative are helpful, the comprehensive, citywide scale and long-term time horizon of New York's program stands as a model for other cities in North America to emulate.

Suggestions for further research

I have found the topic of the New England three-decker and its commonalities and contrasts with superposed flat building traditions elsewhere to be an extraordinarily rich one. Given the time constraints of a master's thesis and my desire for this work to be a qualitative "lay of the land" for this type of housing, my research has necessarily been "broad and shallow" in scope. Nevertheless, a number of topics for further research have suggested themselves to me throughout the course of my work, and I present them below in the form of research questions. I have become strongly convinced that it would be beneficial for this building type to be looked at more closely than it has been. Superposed flats appear to have been overlooked everywhere in North America with the exception of Montreal, where a rich scholarship has arisen around an examination of the plex tradition.

1) Where *did* the three-decker come from? Can more investigation bolster one of the differing accounts given by Shand-Tucci and Warner for the origin of the three-decker, or can it come up with a new one (Shand-Tucci, 1978 and Warner, 1962)? Is there an equivalent architectural "smoking gun" as Hanna seemed to find linking the Montreal plex tradition to the vernacular housing of the Tyneside hinterland of Newcastle, England?

2) From whence did the Chicago and New York traditions of three-flats and three-family houses, respectively, arise? There seems to have been little or no scholarship on this.

3) Where else do superposed flat building traditions exist in North America? Where else do they

exist in other parts of the world? Where are they conspicuously absent, despite circumstances that might lead one to expect them to arise?

Figure 46. A modern three-decker, Dorchester, Mass.

4) How have mortgages made on three-family homes fared? For example, it would be interesting to examine the default rate of mortgages made to the three-family homes built under New York's Partnership New Homes program. Are three-family homes really a more risky form of ownership, as many – most importantly, lenders – seem to perceive them to be?

5) What is the fire safety record of superposed flat buildings in various locations? Is their stricter treatment from the standpoint of building codes excessive, as I suspect, or not?

6) Do superposed flats really create better-maintained and more inexpensive rental units that those in absentee-owned larger multifamily buildings, as many of the people that I interviewed seem to suspect? This could be analyzed systematically by hedonically comparing rents from superposed flats with rents from larger absentee-owned apartment buildings.

7) What is the history of the two-family home in New England? In this thesis I have generally focused on three-deckers and their equivalents in other cities, but two-family homes have a qualitatively different appearance, they have a wider geographical distribution, and they seem to enjoy a more positive public image. Where and when did they arise in New England? Why did they continue to be built in locations such North Cambridge and Arlington after three-decker production had ceased?

8) What is the history of conversion of rowhouses to rowhouse flats and the conversion of single-family houses to multiunit buildings in North America? What are the architectural, safety, and economic issues involved? It seems that the topic of superposed flats could be broadened from purpose-built superposed flat buildings to include conversions that result in configurations that for practical purposes have all of the same physical and economic characteristics as superposed flats.

Final thoughts: should the three-decker be brought back?

This thesis poses the question, "What happened to the three-decker?" It has examined, in some detail, the three-decker's origins, its disappearance, and factors that have conspired against it returning as a major component of new housing in New England. All of this begs another question: *should* the three-decker come back?

It seems, on balance, that the answer is no. This is not without exception: some areas of the Boston region, such as parts of Dorchester, that were originally heavily built up with three-deckers and that suffered major declines in recent decades, have now experienced revivals during recent years. This has been due to both an overall real estate boom (although one that seems, as I write, to have abated) as well as a major increase in interest amongst people of choice and means for living in close-in urban locations. In some of these neighborhoods, there has been a modest phenomenon of three-deckers being newly built on vacant lots, with the resulting units sold as condominiums (Figure 46). In their vertical stacking of units, their wood structure and cladding, and their placement on their lots, these new buildings bear many of the basic hallmarks of the traditional three-decker pattern, although their architecture often symbolizes the current era – both in terms of exterior appearance, and in terms of the modern floor plans that are designed to appeal to contemporary condo buyers. This phenomenon promises to allow the physical reconstitution of the tattered urban fabric of these neighborhoods in a way that is sympathetic and in scale with the existing housing stock. Of course, questions arise as to how three-unit condo associations will fare with internal governance and maintenance as the years pass, and as the inevitable problems arise.

Figure 47. A Millenial McMansion.

But the prospects for three-deckers to spread to areas where they are not already physically present seem dubious. The emotional associations that the flat-roofed wooden houses invoke amongst many New Englanders might well just be kerosene thrown on the fire of hostility to low- and moderate-income multifamily housing that is already acute in metropolitan New England. For a Chapter 40B developer, for instance, to use three-deckers as an arrow in his or her quiver seems rather unlikely.

None of this, however, means that the concept of the *superposed flat* could not be successfully applied throughout New England – it is only the three-decker form, specifically, that seems problematic. There is no reason, for instance, why two-family houses could not be revived. Or why two- and three-family rowhouse flats – perhaps drawing for their design inspiration and exterior appearance upon the rich traditions of rowhouses in the Boston region – could not be built. New York and Montreal illustrate this well. Or, as Sam B. Warner has suggested, in this era of the "Millenial

McMansion" (Figure 47, see Appendix A), a new kind of large wooden house, designed to appear as a single large dwelling but in reality comprised of several apartments, and owned by a single household, could be introduced to recalcitrant suburban areas (Warner, 2006). This approach was applied, for instance, at the Lowry Air Force Base redevelopment in Denver, Colorado, although the resulting units were sold as individual condominiums. As Lynn Fisher, an MIT professor in real estate economics, points out, the history of American housing is full of examples of single-family mansions that have become subdivided into multiple units as their neighborhoods have come to house people of more modest incomes. This process could well occur again – why not anticipate it and plan for it? (Fisher, 2006.)

All of this suggests that the Boston region, and other cities within North America, can learn from the lessons of the three-decker, and apply them in ways that meet their needs in the present day. While it may be a mainly extinct form, it deserves a closer look, because the current housing situation in coastal urban New England and elsewhere, with its mounting lack of affordability for an increasing share of the population, could desperately use innovation of the sort that the three-decker first pioneered over 130 years ago.

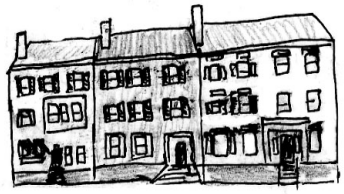
APPENDIX A: AMERICAN HOUSING TYPES

This appendix offers a more complete explication of Figure 8, which shows the historical evolution of the major forms of American housing that have evolved over the past nearly 400 years since the first European settlement of the original thirteen colonies of the United States. The types follow closely the descriptions given by Christine Hunter in Ranches, Rowhouses, and Railroad Flats, albeit with numerous additions and omissions (C. Hunter, 1999). The method of classifying housing into rowhouses, apartments and single-family houses is hers; the identification of antecedents for the various forms is mine.

Rowhouse types

Colonial rowhouse

Rowhouses were built early in the Colonial era, beginning in the 1630s in Jamestown, Virginia.



Federal Style rowhouse

By about 1800, the Colonial rowhouse had developed into a solid, dignified style, with simple details from Ancient Greece, and brick and/or masonry construction. As with the colonial rowhouse, this type followed English architectural fashions.

Rowhouse flats

The 19th century rowhouse, because of its fire-proof party-wall construction and load-bearing exterior shell, was easily adapted into vertically stacked “rowhouse flats” as economic pressures for density mounted. This process occurred in Boston’s South End following the Civil War, causing the locus of fashionable townhouse development to shift to the Back Bay after its new homes were released to the market in the early 1870s (Edel et al, 1984).

Victorian rowhouse

In the mid 19th century, increasing land prices in urban areas along with an increasing demand for luxurious housing caused rowhouses of the era to become longer and taller. As the depth of the buildings grew past 40’, shapes became more comple than simple rectangles due to the need for light to reach inside the floorplates.

Porch house

Spatial dispersion facilitated by streetcar transportation allowed the rowhouse form to become less cramped via a setback from the street, thus allowing room for front porches and planted areas. This form became common on the outskirts of Washington, DC, Baltimore, and Philadelphia in the 1910s.

Semi-detached house

A row of two laterally attached houses in many jurisdictions escaped building code strictures regarding fire-proof party walls, thus allowing cheaper wooden construction to offset the less efficient use of land than for rowhouses. In other cases, masonry continued to be used, creating rowhouses of sorts, but with all units enjoying light and air on three sides. This form, which emerged in the 1910s and 1920s, responded to the spatial dispersion engendered by transportation advances in that era.

Clustered houses

This building type, consisting of houses sited in a pinwheel arrangement, although advocated by such influential people as Frank Lloyd Wright, never caught on to a great extent in the United States, although some were built. It was intended to economize on land while still providing convenient automobile access and the feeling of a large, expansive lawn for every unit.

Modern suburban rowhouse

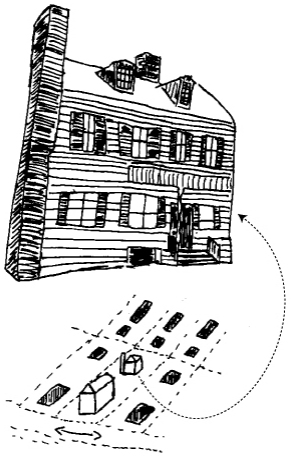
Although the rowhouse form almost vanished altogether during the Great Depression (with the exception of public housing projects designed in a military barracks-like configuration), rising land prices in the 1970s caused a new

type of suburban rowhouses to appear. Parking is plentifully provided in large lots immediately outside of units, thus eliminating the 19th century rowhouse's traditional relationship with the street.

Apartment types

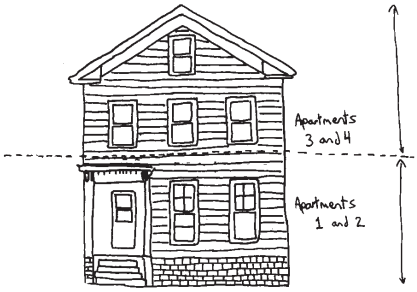
Lodging house

The Colonial era had only the humble lodging house, in the form of taverns, inns, and the like, as a form of purpose-built multifamily housing. While catering to travelers, many also provided semi-permanent quarters for unmarried people and others not within the mainstream of society.



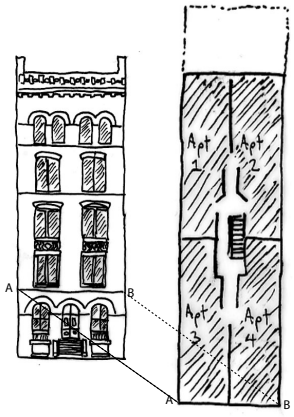
Rear lot house

As pressures for density mounted with the growth of cities during an era in which human feet were the only means of transportation for most, the logical solution was to construct an outbuilding in the rear of a single family house lot, behind the privy.



Tenement converted from house

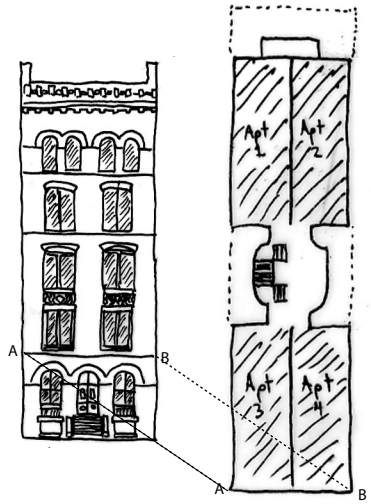
With further rising pressures for density, the next logical step was to adapt the floor plan of a single family house into vertically stacked apartments, with one per floor.



Railroad tenement

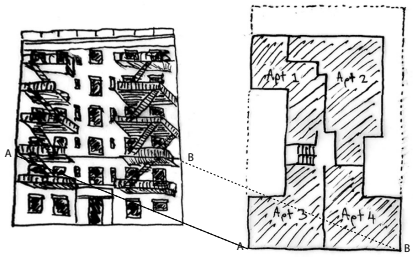
The tenement, or "tenant apartment," emerged on both sides of the Atlantic in response to advancing industrialization in cities, thereby creating the need for housing of the large numbers of workers needed to work in increasingly large-scale factories. A tenement is a purpose-built walk-up apartment building with one core, built side-to-side against its neighbors, with multiple apartments per floor. Maximum heights were generally

six stories, the greatest height that is within the limits of reasonableness for people to walk up and down on a daily basis. Ford identifies New York's first tenement as having been built in 1833. Within twenty years, the notorious "railroad" tenement type had emerged, with four apartments per floor, 90% lot coverage, and 75% of the rooms lacking any exterior light or ventilation at all. According to Ford, conditions in Boston were, if anything, worse, with narrower streets, greater lot coverage, and equivalent population densities (Ford, 1936). Tenements emerged in other cities, such as Los Angeles, as well.



Dumb-bell tenement

In response to the grossly overcrowded conditions that came to arise in New York's tenements, a trade publication in 1878 organized a competition for a new tenement design that could fit on a standard Manhattan 25' x 100' lot. The winning entry was widely adopted by for-profit builders, and came to be known as a "dumb-bell tenement," due to the building shape caused by ventilation shafts on both sides of each building that were 2' wide by 40' long. Lot coverage therefore dropped to 75% from previous levels commonly approaching 90%. Still, the improvement was modest, and "dumb-bell" tenements came to be widely reviled by late 19th century housing reformers as a continuing locus of overcrowded, unhealthy and dangerous housing.



New law tenement

The crowning achievement of late 19th New York housing reformers was the 1901 Tenement House Act, which established much stricter standards for the construction of new tenement houses. This represented, according to Ford, the best that could be reasonably achieved by combining traditional 25' x 100' Manhattan lots. In a way, this was a somewhat hollow victory, as suburban elevated, subway, and streetcar transportation systems, industrial deconcentration, rapid escalation of construction costs and other forces would soon end the era of for-profit tenement construction altogether.

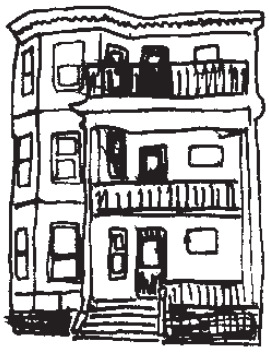
French flats

As explained in Chapter 2, the first French flats, or walk-up apartment houses purpose-built for families of means, appeared in Boston in 1857, and in New York City in 1869. These elegant structures pioneered the new phenomenon of well-heeled families trading the tranquility and spaciousness of suburban houses for the convenience and ease of maintenance of a multifamily residence in the city.

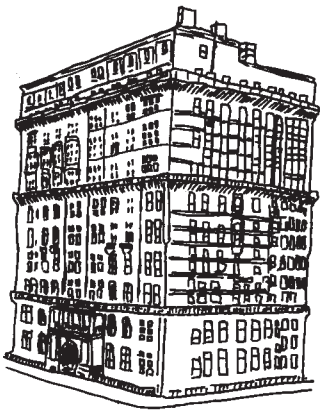
Two-family

The two-family is a vernacular New England wooden house form that evolved prior to the three-decker. Unlike in the New York, Chicago, and Montreal superposed flat traditions, the two-family house in New England usually is sharply different in appearance than its cousin with one more unit (the three-decker), as it normally has a steeply pitched roof, and it often lacks stacked rear porches.

Three-decker

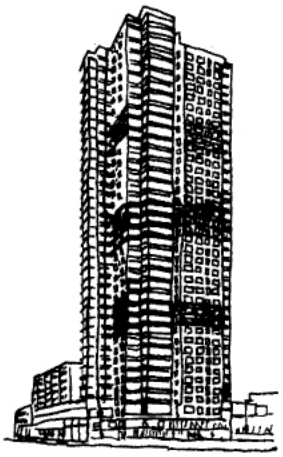


As is discussed at much greater length in the text, the three-decker took some of its architectural cues from French flats, but deployed their package of amenities in the new, more spacious setting of the streetcar suburb. On the lower end of the economic scale, the three-decker served as speculator-built housing serving the lower middle class, as with tenements, but in the form of a freestanding house with natural light and air on four sides. In this respect it resembled earlier houses converted into flats, but now the three-decker was explicitly designed for this purpose, with new features such as rear porches for every unit to make it more habitable.



Elevator apartments

The invention of the safety elevator in the 1850s allowed people, for the first time in human history, to comfortably live at heights above six stories off the ground. Because of the high costs involved (particularly given the need for elevator operators until after World War II), elevators were initially found only in buildings housing the well-to-do.



Point tower

Advances in building technology, such as poured slab floors, that allowed the structural support and cladding systems of towers to be independent permitted the radical new form of the point tower to evolve from earlier elevator apartment houses. It was and remains a high-end building type, due to the relatively low number of units served per elevator core.

Garden apartment

The garden apartments of the 1920s were heterogeneous in their form, but generally involved some enclosure of semi-private, richly landscaped outdoor space, as a conscious reaction to the lingering memory of the squalid conditions in tenements. They were heavily influenced by the principles of the Garden City Movement advocated most fervently by the visionary British town planner Ebenezer Howard. The use of corridors allowed more apartments to be accessed per elevator core, thus allowing more economical construction than in the case of point towers.

Slab apartment

The apartment slab is the modern continuation of the garden apartment. In most American cities, the provision of parking, usually either in an underground garage or an aboveground deck, is essential. This has become a more important consideration than the provision of generous planted areas, as was the case with garden apartments.

Towers in a park

The influence of European modernism of the first half of the 20th century, advocated most famously by the Swiss-French architect Le Corbusier, reached the United States in its most palpable form after World War II. It was then that federal government-sponsored slum clearance projects that built public housing and middle class developments adopted the “tower in the park” model of widely

spaced slab buildings, often rigorously repeating stark forms such as cruciform-shaped towers. This phenomenon made its greatest impact in the largest, densest American cities, such as New York City and Chicago.

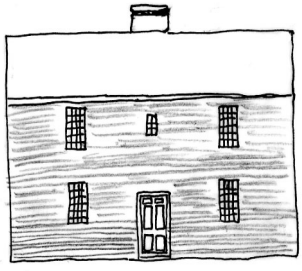
Suburban garden apartments

The humble modern suburban garden apartment is the only remaining walk-up apartment form widespread in the United States today. It provides inexpensive housing at modest densities and with plenty of parking. As with the modern suburban rowhouse, its large surface parking lots break the traditional urban relationship with the street.

Modern three-decker

Could the aesthetic and urbanistic shortcomings of the suburban garden apartment, combined with the escalating cost of the Millenial McMansion, cause a revival of the three-decker, reconceived in a contemporary form? This has already occurred in some gentrifying areas of Chicago, where modest bungalows are being demolished to make way for the construction of “three flats,” as three-deckers are locally known. Could the same phenomenon be replicated in other traditional three-decker regions, such as Boston or New York? Could it arrive in cities where three-deckers are not part of the local building culture, such as Denver or Atlanta?

Single family house types



Colonial house

European house building traditions had to be adapted to the reality of conditions in the Thirteen Colonies. For instance, the half-timbered style proved to be inadequate in its insulation qualities for the harsh winters of New England. Local vernacular styles, such as the Cape Cod saltbox house, soon evolved.

Balloon frame house

The invention of balloon framing in Chicago in the 1830s, replacing the traditional tenon-and-mortise framing system of fitted timber joints with standard milled pieces of lumber joined by metal nails, and pre-built doors and windows, revolutionized home building in the United States. For instance, the highly articulated facades of the Victorian era, with their elaborate rounded turrets and bay windows, only became feasible as a result of this innovation.

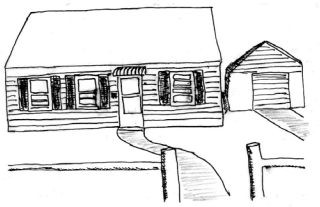
Simplified house

According to Christine Hunter, there was a general reduction in the exterior visual complexity of the American home after about 1900 (C. Hunter, 1999). This was reflected both in a reduction in floor area and a streamlining of exterior formal complexity and ornamentation. The causes were both stylistic and economic: a reaction against the excesses of Victorian rococo, and the continuing pressure to deliver an ever-more elaborate package of interior amenities that, shortly after being introduced, came to be regarded as essentials. Examples included furnaces and indoor plumbing. The standardization of the interior package was brought about not only by market expectations, but also by enshrinement of many of its elements into the local building codes dictating minimum standards for construction. Architectural styles such as Arts and Crafts and the Prairie Bungalow, as well as new commercial practices such as the Sears Roebuck ready-made house shipped on a railcar, reflected these trends.

Vernacular low-cost house

Vernacular low-cost offshoots of the simplified house evolved to provide modest housing for working poor and lower middle class people. Examples include the one-room wide “shotgun” house of New Orleans and miners’ cottages in Colorado.

Postwar tract house

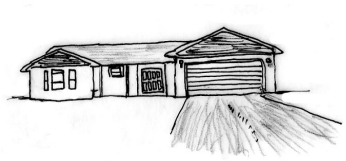


After World War II, the enterprises of real estate speculation and homebuilding underwent a swift unification and increase in scale. Techniques adopted from the mass production of automobiles were applied to homebuilding, with the result being the construction of vast numbers of tract houses in locations such as Levittown, New York and Lakewood, California. Modest in appearance but built to high standards of quality, the homes came loaded with modern amenities such as air conditioning. Although houses had gradually begun to be designed to accommodate automobiles as early as 1905, the postwar tract house made automobile access a central element of its design. The traditional streetcar suburb orientation of the narrow end of the house to the street was rotated ninety degrees, and lot sizes were doubled from 20 years earlier, reflecting the vast amounts of new land opened up to development because of widespread availability of the fast, convenient and inexpensive point-to-point transportation afforded by the car.

Trailer house

A product of the emergent automobile culture of the 1920s, the trailer house, initially intended for recreational use, emerged as the *de facto* form of low-cost, for-profit single family housing in suburban and rural America, particularly in the fast growing Sunbelt areas of the South and West, after World War II. The industry enjoyed more lax regulatory control than was the case for site-built housing, and consequently passed on the cost savings to consumers, while also besmirching the trailer house with negative stereotypes related to its ostensibly shoddy, unsafe construction. In this sense, the trailer house was the functional inheritor to the role played by vernacular low-cost housing.

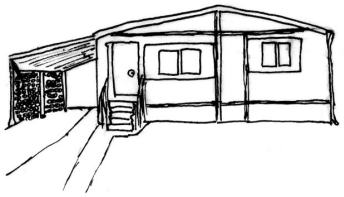
Ranch/split level house



The mass prosperity of the 1960s and 1970s allowed the ranch and split level house forms to burst out of the lingering wartime austerity embodied in the tract houses built immediately after World War II. Single or one-and-a-half story floor plans (in the ranch, and split-level,

respectively) reflected an increasingly informal lifestyle, with specialized living areas and more of them, and the cheap land on the suburban fringe continually opened up by enormous investments in freeways and other automobile infrastructure.

Manufactured house



As factory-built homes matured and adopted more of the standards of site-built housing, they came to resemble their conventional cousins to a greater extent. They became increasingly immovable following delivery to their parcels; they offered more upscale interior amenities; and modularization of their masses into components delivered by separate trucks allowed their formerly cramped envelopes to equal those of site-built housing. Today, the industry continues to crave respectability, and is seeking to attain it by attempting to move its product further up the socioeconomic scale.

Millenial McMansion

At the turn of the 21st century, the ongoing trend in most of the United States was for suburban single-family homes to be built ever-larger on ever-smaller lots, even as household sizes declined. Building envelopes, in a return to some of the exuberance of the Victorian era, became larger and more complex. Elaborate amenities, such as three-car garages and master bathrooms outfitted with dual sinks, came to be regarded as standard. A number of causes could be advanced for these trends, including rising national affluence; an unprecedented array of home mortgage products; a profusion of noise-generating electronic gadgets; the need to store an unprecedented quantity of household consumer goods; a desire for social status as embodied in the size of the home; and others. There are signs that the trend may have reached its apogee. Could we be on the brink of a 21st century era equivalent to the post-1900 reaction against Victorian houses? Alternative ideologies, such as the New Urbanism and Sarah Susanka's The Not So Big House, not to mention increasing fears of the consequences of fossil fuel depletion, suggest that this is a possibility (Susanka, 1998).

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