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Code Manipulation: Architecture In-Between Universal and Specific Urban Space

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ABSTRACT OF THE DISSERTATION

Code Manipulation: Architecture In-Between Universal and Specific Urban Space

By Per-Johan Dahl

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Experiences from both academia and practice demonstrate that the legal instruments that comprise the primary tool for carrying out city planning in the U.S. have grown increasingly complex and abstract. Processing the universal rather than the specific aspects of urbanism, these zoning codes have a limited capacity to adapt to local significance and site-specific characteristics, to which architecture is much more responsive, and thus often constrain design innovation. Although various attempts have been made to improve the interconnection between the universal and the specific, we need a wider array of analytic frameworks within the discipline of architecture for evaluating the broader implications of the codes that regulate the form and use of buildings within the context of contemporary city planning. Taking architecture as an intermediary instrument, this study develops the notion of code manipulation as an analytical framework to be used for stimulating and evaluating designs beyond the constraints of code.

Investigation of three housing projects, and the urban contexts from which they arise, expands our understanding of how the manipulation of zoning codes can be used as a generative material for the design of architecture, as well as how this procedure can both advance the production of disciplinary knowledge, and catalyse urban transformation. A loft conversion in Greenwich Village (1967-1970); an accessory dwelling unit in Venice, California (2006-2009); and a real estate development along the High Line in New York City (2005-2011) represent diverse attempts to employ code manipulation to mediate between the universal and the specific aspects of urbanism, while, at the same time, informing the making of cities through innovative design. Comparative analysis reveals how architects can explore solutions in opposition to zoning provision, and how code manipulation can serve to inform policy makers about lucrative potentials and tendencies being repressed by their own rules. Demonstrating a range of outcomes strengthens the argument that conventional zoning controls hamper architectural responses to the shifting premises of urban life. Seeking to reinforce architecture's role in the making of cities, this research explicates the potentials of code manipulation to establish new interconnections between universal and specific urban space.

The dissertation of Per-Johan Dahl is approved.

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Per-Johan Dahl. “The Neglected Spaces,” in *Highwaying*, edited by Guy Lafranchi, 6-7. Vienna/New York: Springer Verlag, 2010.

Dana Cuff and Per-Johan Dahl. “Rx for the R1: Sustaining the Neighborhood,” in *306090* 13 (Winter, 2010): 24-33.

Per-Johan Dahl. “The Shadows of L.A.,” in *Critical Planning* 17 (2010): 124-139.

Per-Johan Dahl. “Post Suburban Tendencies: Exploring the Backyards of LA” Paper presented at the FUSE Seminar: Aspects of Density, SLU Alnarp School of Landscape Architecture, Alnarp, Sweden, April 14, 2011.

Per-Johan Dahl. “Leveraging Design: HL23 and the Flexible Envelope.” Paper presented at the 10th Hawaii International Conference on Arts & Humanities, Honolulu, USA. January 10-13, 2012, and published in conference proceedings.

Caroline Dahl and Per-Johan Dahl. “coLAB City och rummets innovativa kapacitet,” in *Plan* 1 (2012): 34-38.

Per-Johan Dahl and Caroline Dahl. *Loft P: Tracing the Architecture of the Loft*. Vienna/New York: Springer Verlag, 2012.

CHAPTER 1:

Positioning Architecture in the Realm of City Planning Regulation

"Zoning Law is not only a legal document; it is also a design project."[1]

- Rem Koolhaas

"The building of the City shall seek out certain satisfying relationships that shall characterize its singularity and institute its memory. The code and the plan are the armatures for the expression and extension of such preferences and the protocol for experiment."[2]

- Michael Sorkin

While the lead quotes indicate the trajectories of this dissertation, they are also epitomized by the codes that govern architecture's role in the making of cities. Unseen yet ever present, the legal instruments that comprise the primary tool for carrying out city planning in the U.S. regulate the form and use of architecture and thus determine a datum to which the shaping of cities must relate. Processing the universal rather than the specific, these codes have a limited capacity to adapt to local significance and site specific characteristics, to which architecture is much more responsive, hence they often constrain design innovation. We require a wider array of analytical frameworks for evaluating the broader implications of the codes that regulate the form and use of architecture within the contemporary context of city planning.

[1] Rem Koolhaas, *Delirious New York* (New York: The Monacelli Press, 1994), 107.
[2] Michael Sorkin, *Local Code: The Constitution of a City at 42 N Latitude* (New York: Princeton Architectural Press, 1993), 11.

Rules to which architecture must relate have always governed the making of cities. Françoise Choay studies Greek inscriptions from the fourth century BCE to contextualize the impact of legislation on architecture and urban organization in antiquity. In her research, Choay makes the important discovery that these inscriptions "are the result of legislation that was practical and specific rather than derived from abstract universal principles."[3] Establishing a dialectical relationship between the universal and the specific, she points to different ways in which architecture and urban organization can be governed through codes and regulations.

Following the successive split between architecture and the city, which culminated in 1867 when Ildefons Cerdá published his *The General Theory of Urbanization*, the reform movement tackled the social problems of the industrial city through the establishment of absolute rules.[4] Drawing from Cerdá's scientific approach on city building, zoning became the prime tool of carrying out city planning regulation in the United States.[5] With the dual ambition of controlling urban

[3] Françoise Choay, *The Rule and the Model: On the Theory of Architecture and Urbanism* (Cambridge, Mass: The MIT Press, 1997), 17.

[4] Françoise Choay develops scholarship on the successive split between architecture and the city. Choay analyzes two types of instaurational writing, which both have had the explicit aim of "developing an autonomous conceptual apparatus in order to conceive and build new and unknown forms of space." She takes the first architectural treatise -- *De re aedificatoria* by Leon Battista Alberti (1452, 1485) -- and the first utopian text -- *Utopia* by Thomas More (1516) -- as lenses through which to trace the division between architecture and urbanism. She analyses *De re aedificatoria* to conclude "that for Alberti there is no difference between the approach of the builder of buildings and that of the planner of cities." She takes Alberti's generative rules of *firmitas* and *commoditasas* subject-matter to analyze the subsequent evolution of treatises in the late Renaissance and the Classical Age. She discovers a gradual elimination of the concept of *commoditas* within the context of the architectural treatise that inevitable causes a split between architecture and urbanism. Failing to expand upon the concept of *commoditas*, architecture distanced itself from the emergence of a new paradigm, which was science. Likewise, science failed to connect solely with the concept of *firmitas*. When the Catalan civil engineer Ildefons Cerdá undertook his major project of expanding Barcelona beyond its medieval walls, he drew from the paradigm of science to outline the premises of urban growth. Publishing his *The General Theory of Urbanization* in 1867, Cerdá made urbanism an autonomous discipline, which solidified the schism between architecture and urbanism. See Ibid.

[5] Professor Emeritus, William C.Baer, says that "[a]doption of professional standards was part of an international movement at the end of World War I to incorporate a more 'scientific' basis underlying planning and housing proposals, based on efficiency and an increasing industrialization and standardization, as well as on design. See William C. Baer, "Customs, Norms, Rules, Regulations and Standards in Design Practice," in *Companion to Urban Design*, ed. Tridib Banerjee and Anastasia Loukaitou-Sideris (New York: Routledge, 2011), 277. Complementing

growth and stabilizing properly values, New York City adopted the first comprehensive zoning ordinance in 1916, which comprised three codes to specify "the allowed uses of land and buildings, the intensity or density of such uses, and the bulk of buildings on the land."[6] Conforming to Edward M. Bassett's concern for "public safety, health, morals, and general welfare," zoning became a powerful tool used by local governments to regulate private interests.[7] Winning constitutional approval with the United States Supreme Court's landmark 1926 decision in *Village of Euclid Case v. Ambler Reality Company*, the universal and abstract principles of zoning were cemented in American city planning, and the practical and specific were marginalized. Despite the abstract and universal approach to legislation that characterized zoning, local significance and site-specific characteristics still proved to be imperative for the evolution of buildings and cities. Intensifying in the 1950s, critical voices were raised about the deficient capabilities of zoning to process specificity; and these voices continue to haunt us as zoning remain impervious to these conditions. Therefore, this research examines how architecture can manipulate the zoning codes to address both the universal and the specific aspects of urbanism.

This dissertation recognizes the concept of the everyday, which often has been used to theorize the practical and specific aspects of urbanism. Moving from urbanism to architecture, however,

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Baer, the urban historian M. Christine Boyer contextualizes the scientific tone that comprehensive zoning took on from its introduction to the United States in 1916. She demonstrates how zoning became a mechanism to use when introducing Frederik W. Taylor's ideas of scientific management and efficiency to socially related issues, such as how to use the city. She argues that zoning followed the same logic of scientific management and administration that influenced Henry Ford's perfection of the assembly line. She says that zoning designated the land use categorizations of American urbanism to the demarked plots that concurrently shaped the twentieth-century metropolis. See M. Christine Boyer, *Dreaming the Rational City: The Myth of American City Planning* (Cambridge, Mass: The MIT Press, 1983).

[6] Eric Damian Kelly, "Zoning," in *The Practice of Local Government Planning*, ed. Frank S. So and Judith Getzels (Washington D.C.: International City Management Associaiton, 1988), 251.

[7] Edward M. Bassett, *Zoning* (New York: National Municipal League, 1932), 8.

the practical and specific expands the realm of the everyday to also incorporate the intrinsic qualities of site, which instantly are thwarted by the universal and abstract principles of zoning. Practices and places specifically elaborated on in the context of this dissertation encompass the obstruction of architecture through use separation, the hampering of incremental interventions through low-density policy, and the inability of code to process site-specific conditions.

Going beyond the mere technical approach to zoning codes that characterizes most literature, this dissertation develops the notion of architecture as a critical practice feasible to mediate between the universal and the specific and thus elucidate some relative effects. The intention is not to postulate a critique on the singularity of the universal and the specific, but rather on the dialectical relationship between the two. We cannot change the fact that the socio-economic systems of production and consumption, which channel the universal premises of modern legislation, encompass the prime apparatus of exercising power to which architecture and urban organization must relate. Being the sovereign power, they will continue to marginalize, or repress, the specific. However, as Michel de Certeau points out, marginality is "no longer limited to minority groups, but is rather massive and pervasive."[8] Using architecture as an intermediary instrument, this dissertation analyzes the relation of the practical and specific to the field of abstract forces in which they act.

This dissertation explores some intersections between architecture and urban planning through the manipulation of zoning codes. There are other ways to render intersections between these two disciplines, for example through the modification of zoning codes. While modification leads

[8] Michel de Certeau, *The Practice of Everyday Life* (Berkeley: University of California Press, 1984), xvii.

to altered code, and ultimately to amended ordinance, manipulation operates in constant opposition to zoning provision, always recognizing the intent of legislation while introducing some new interpretations of the code. Code manipulation may or may not result in zoning updates. Therefore, this research does not propose architecture to convert into code-writing praxis, but rather to illuminate some often disregarded interconnections between architecture and urban planning that might be beneficial to attain when seeking to overcome discrepancies between universal legislation and specific prospect.

As the lead quote by Michael Sorkin suggests, architectural manipulation of zoning codes operates through two traits. On the one hand, it seeks to inform the collective enterprise of city building by engaging in the search for discrepancies between universal rules and site-specific conditions. On the other hand, it seeks to inform architecture as a disciplinary practice by using the challenges implicit in code manipulation as incentive for experimentation on the form and use of buildings. The most productive architecture for this dissertation succeeds in interconnecting these two traits by advancing disciplinary knowledge through the making of cities.

This dissertation explicates three building types -- the loft, the single-family house, and the condominium tower -- which function as lenses through which to focus on architectural manipulations of zoning codes. By contextualizing the research in three small to medium incremental projects with different motivations for manipulation, all three zoning codes of use, density, and bulk are critically reviewed. As most architectural projects to some extent involve the tweaking of code, the case studies for this dissertation facilitate research beyond the

administrative aspects of legislation by embodying exquisite designs that, through code manipulation, have catalyzed some aspects of urban transformation. The Westbeth Artists' Colony in Greenwich Village (1967-1970), the Palms Residence in Venice, California (2006-2009), and the HL23 condominium tower in West Chelsea (2005-2011) all represent diverse attempts of employing code manipulation to mediate between the universal and the specific aspects of urbanism. Studies of these buildings demonstrate architecture's capacity to inform the making of cities through innovative design.

This research empowers both scholarly and practical concerns that address diverse audiences. By widening perspectives on architecture, it sensitizes architects to the broader repercussions of urban change, and increases understanding of architecture's role in the making of cities. At the same time, it raises awareness of the importance of architecture for both city governance, and for the forces of contemporary urbanization that seek solutions to alter the constraints of universal regulation. As the lead quote by Rem Koolhaas alludes, the power of legal instruments goes beyond the realm of city administration as it offers generative material for architectural design. Becoming an intermediary instrument, architecture can inform the making of cities by exploring the space in-between the universal and the specific aspects of urbanism.

CODES AND ARCHITECTURE

While the conception of code applies to numerous fields and doctrines, Peter Eisenman helps us to limit its relevance to architectural discourse by positing that "architecture has always been about codes, whether literally, in building codes, or metaphorically, in classical codes."[9] Following Eisenman's distinction, the disciplinary aspects of metaphorical codes have repeatedly been the subject matter for critical discourse, while the technical aspects of building codes have mainly been preoccupied with practical implementation and the production of an ever-growing array of manuals on how to follow these codes. We lack critical discourse on the technical aspects of codes and their impact on architecture's role in the making of cities.

While this dissertation addresses the lack of critical discourse on the technical aspects of codes, it seeks, however, to explore a third realm, which concerns the interaction between architectural design and the city planning codes that regulate the use and form of buildings and cities. Often targeted for their hampering -- even straight-jacketing -- effect on architectural creativity, these codes have been, throughout the twentieth century and until today, the subject matter of a massive array of attacks from both architects and urban planners as well as from other related fields.[10] While recognizing their hampering effects, this dissertation goes beyond aggression and,

[9] Peter Eisenman, "Digital Scrambler: From Index to Codex," in *Written into the Void: Selected Wrtings 1990-2004* (New Haven: Yale University Press, 2007), 136.

[10] The architectural historian Suzanne Stephens says that "the problem with zoning has occurred in the values and attitudes that have shaped zoning through the years." See Suzanne Stephens, "The Sky Is Not the Limit: Midtown Zoning," *Skyline* (October, 1981): 5. Architect and editor, Elijah Huge, says that codes "are frequently dismissed as onerous requirements to be met and inhibitions to the free undertaking of design." See Elijah Huge, "Editorial Statement," *Perspecta* 35(2004): 4. The architectural theorist Lebbeus Woods says that "[a]ny city's growth (and decay) is governed by legal instruments, building codes, and zoning ordinances, which guide and constrain the ideas and ambitions of individuals and smooth out all but the most jarring cultural changes." See Lebbeus Woods, *Radical Reconstruction* (New York: Princeton Architectural Press, 1997), 20. The Law professor Charles M. Haar and the urban planner and lawyer Jerold S. Kayden evaluate the first 60 years of zoning, which "offer grounds for optimism and cause for pessimism. Protection of the 'haves' in their single-family suburban communities against the 'have

through critical analysis, stipulates productive ways to manipulate the codes that obstruct innovation.

Three traits of contemporary design discourse engage in critical review of the city planning codes that regulate the form and use of buildings. Andres Duany and Elizabeth Plater-Zyberk's neoconservative architecture draws from Léon Krier's critique of zoning; Rem Koolhaas's urban architecture draws from Hugh Ferriss's use of zoning as a stimulus; and Michael Sorkin's structural architecture draws from Lewis Mumford's adoption of zoning as a social device.

Most vocal of these traits, Andres Duany and Elizabeth Plater-Zyberk's Traditional Neighborhood Development (TND) branch of New Urbanism expands on Léon Krier's critique of zoning to rehabilitate a set of exclusionary codes that impose conservative values on how buildings and cities ought to be shaped.[11] For Krier, functional zoning was something evil to be

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nots' locked in central cities is surely zoning's most damning legacy…Artificial separation of uses, the heart of traditional Eucledian ordinances, has resulted in self-evident sterility." See Charles M. Haar and Jerold S. Kayden, "Part V: Anticipating the Future," in *Zoning and the American Dream: Promises Still to Keep*, ed. Charles M. Haar and Jerold S. Kayden (Chicago, Il: Planners Press, American Planning Association in association with the Lincoln Institute of Land Policy, 1989), 331. The lawyer Richard F. Babcock says that "[n]o one is enthusiastic about zoning except the people. The non-people -- the professionals -- hope it gets lost. The judge find zoning a monumental bore, most lawyers consider it a nuisance, and the planner treat it as a cretinous member of the planning family about whom the less said is better." See Richard F. Babcock, *The Zoning Game: Municipal Practices and Policies* (Madison: The University of Wisconsin Press, 1966), 17. The real estate blog Triple Mint takes Asymptote's 166 Perry Street "to prove how there is only so much you can do within the buildable envelope (straight jacket?) that is New York City zoning." See Triple Mint, "166 Perry Street - Asymptote," Triple Mint http://www.triplemint.com/triplemint/2007/07/166-perry-stree.html.

[11] Douglas S. Kelbaugh distinguishes between two traits of New Urbanism, which are TODs (Transit Oriented Development) and TNDs (Traditional Neighborhood Development). Kelbaugh refers TOD to "pedestrian pockets" and traces its origin to the theory of Peter Calthorp. Kelbaugh traces the origin of TND to Andres Duany and Elizabeth Plater-Zyberk. Kelbaugh suggests that "TODs are predicated more on a regional transit and regional open-space systems, while TNDs have tended to be more rigorous and prescriptive about architectural typology, style, and detail." He argues that Seaside, Florida, is the original TND. See Douglas S. Kelbaugh, *Repairing the American Metropolis* (Seattle: University of Washington Press, 2002), 161.

exterminated.[12] Krier distinguishes between traditional culture and modernist urban planning as two means of conducting city building.[13] He argues that traditional culture exercises city building through urban morphologies, while modernist urban planning seeks to render "the effective and habitual mobilization of society" through the establishment of functional zoning.[14] The former results in "the restoration of precise forms of urban spaces" while the latter results in wastelands.[15] For Krier, it is "the proximity and dialogue of the greatest possible variety of private and public uses" that renders urban morphologies.[16] By reorganizing "the city into units of complex and integrated functions," he sets up a dialectical relationship between the building block and the urban space which, through a limited range of principles, can be used "to form a highly differentiated urban environment."[17] Establishing a set of universal rules on how to

[12] Léon Krier criticizes functional zoning and zoning. He says that "[f]unctional zoning is not an innocent instrument; it has been the most effective means in destroying the infinitely complex social and physical fabric of pre-industrial urban communities, of urban democracy and culture. Functional Zoning of city and countryside has been an authoritarian project corresponding nowhere to a democratic demand. Zoning is the *abstraction* of city and countryside. *One cannot destroy the city without also destroying the countryside*. Zoning is the *abstraction* of communities; it reduces the proudest communities to mere statistical entities, expressed in numbers and densities. Zoning, dictated by big industry and their financial and administrative empires, can be fought only by democratic pressure that demands the reconstruction of urban communities where *residence*, *work* and *leisure* are all within walking distance." See Léon Krier, *Léon Krier, Houses, Places, Cities*, ed. Demetri Porphyrios (London: AD Editions Ltd, 1984), 34-35. Léon Krier continues his critique arguing that "[f]unctional ZONING guarantees the maximum and obligatory consumption of units of hardware and software in the accomplishment of all social activities. Functional Zoning is the principal cause for our own wastage of TIME, ENERGY and LAND. It is by nature ANTI-ECOLOGICAL." See ———, "Tradition - Modernity - Modernism: Some Necessary Explanations," in *Post-Modernism & Discontinuity*, ed. Andreas Papadakis (London: AD Editions Ltd, 1987), 41.

[13] Léon Krier uses "the terms Traditional and Traditional in contradiction to Modernist and Modernism." He says that in "Traditional cultures INVENTION, INNOVATION, DISCOVERY are means to improve handed-down and time-honored systems of thinking, planning, building, representing, communicating etc…in the arts, philosophy, town-building, language, sciences, industries, agriculture etc…They are means to an end, namely to conceive, realize and maintain a solid, lasting, comfortable and beautiful human world. Fundamental esthetic and ethic principles are conceived to be of universal value, transcending time and space, climates and civilizations." See Krier, "Tradition - Modernity - Modernism: Some Necessary Explanations," 39-40.

[14] Ibid., 41.

[15] ———, *Léon Krier, Houses, Places, Cities*, 21.

[16] ———, "Tradition - Modernity - Modernism: Some Necessary Explanations," 43.

[17] ———, *Léon Krier, Houses, Places, Cities*, 21. Léon Krier argues that "urban blocks ought to have a well defined quality of *size*, *volume*, *orientation*, *typology*, *order* and *complexity* in order to become *urban*. Although the size and nature of urban blocks vary enormously, he wants to define a very limited range of principles not only for analysis but as a basis of urban design philosophy." He uses the diagram to "describe the three possible dialectical connections of building block and public space" that he finds in the European City. He says that "[t]hese three

instigate urban morphologies, Krier uses metaphorical codes to alter the fragmentation of urban space, which, he argues, results from the use segregation of Modernist planning.

Drawing from Krier's antagonistic approach to use segregation, TND New Urbanism seeks to "reform zoning" through a set of standardized design guidelines.[18] These codes, that shift Krier's metaphorical codes towards prescriptive zoning codes, are tailored to impose particular values on how urban patterns ought to be designed and maintained.[19] Contextualized in Krier's classicism, the TND New Urbanism, however, traverses from culture to aesthetics by establishing form-based principles that appropriate a series of well-established rearrangements of traditional architecture.[20]

The success of TND New Urbanism in the U.S. and elsewhere can be explained through the consistent -- even fundamentalist -- mode of establishing universal zoning principles to guide the development of built form. With their norms and restrictions, such as SmartCode and transect

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polemical categories have all participated in the formation of the European City, either following each other chronologically or overlaying and transforming each other in the process. They hardly ever occur as exclusive systems but complement each other to form a highly differentiated urban environment." See ———, *Léon Krier, Houses, Places, Cities*, 44.

[18] Andres Duany and Elizabeth Plater-Zyberk set out to "reform zoning" and thus develop codes that unify the segregation of activities, which they argue is explicit in "conventional zoning." Their reform of zoning proposes a city building process administrated by standardized codes, or design guidelines. These guidelines are laid out in five different documents: Regulating Plan, Urban Regulations, Architecture Regulations, Street Sections, and Landscape Regulations. The Regulating Plan, they suggest, should replace the master plan and thereby serve as the comprehensive plan that identifies the street types, shows the public tracts, shows the platting of the private building lots, and assigns corresponding building types. The Regulating Plan, they say, "fixes, with technical precision, the information which is more loosely rendered in the Master Plan." Hence by their zoning reform, Duany and Plater-Zyberk solidify urban patterns, increase the detail of regulation, and communicate the code using documents that mimic the representational techniques of master plans. See Andres Duany and Elizabeth Plater-Zyberk, *Towns and Town-Making Principles*, ed. Alex Krieger and William Lennertz (Cambridge, Mass: Harvard University Graduate School of Design, 1991), 96-101.

[19] Following Peter Eisenman's distinction previously laid out, Léon Krier's codes never move from metaphorical to literal.

[20] Michael Sorkin, "The End(s) of Urban Design," *Harvard Design Magazine* (Fall 2006/Winter 2007): 12.

zoning, tangible mechanisms emerge in concurrence with political and economic forces that safeguard access to, and control of, the city building process.[21] Indeed, the codes of TND New Urbanism function as a syntax that interconnects architecture with the apparatus of exercising powers, thus transmitting what Michael Sorkin calls their "Puritan-inspired vision" to the wide range of interests involved in city building.[22] This move, however, reduces their capability to respond to the shifting grounds of local significance. Even if their codes can be drafted to meet geographical variations, they will fail to conform to the shifting premises of everyday practices because their implicit alliance with the apparatus of exercising powers, which seeks to repress the everyday, will always counter any such initiative.

On the opposite side of TND New Urbanism's hyper-controlled urbanism is Rem Koolhaas's discourse on urban architecture. In his polemical investigation of Manhattan, Koolhaas draws from Hugh Ferriss's response to the 1916 Zoning Law to formulate the premise of his Manhattanism, which, ever since his 1978 publication of *Delirious New York,* characterized the core of his urban ideology. For Ferriss, zoning offered the means of mobilizing artistic autonomy. The architectural historian Carol Willis elaborates on Hugh Ferriss's response to the 1916 Zoning Law, which influenced the formation of his utopian construct of a "skyscraper city."[23] Willis argues that "[t]he influence of zoning on the skyscraper city should be understood

[21] The SmartCode was made available by Duany Plater-Zyberk & Co in 2003. It is a form-based code intended to incorporate all components for transect-based developments, such as traditional zoning issues but also sustainability and building form. See Duany Plater-Zyberk & Co., "Smartcode Version 9.2," (Ithaca, NY: New Urban News Publications, Inc., 2008). Transect zoning is a universal standard developed by Duany Plater-Zyberk & Co. for creating a transition zone between countryside and town. The transect concept consists in six different zones: T1 Natural. T2 Rural, T3 Suburban, T4 General Urban, T5 Urban Center, T6 Urban Core. ———, "Smartcode Version 9.2," CS30.

[22] Sorkin, "The End(s) of Urban Design," 15.

[23] The architectural historian Carol Willis explains that the "unprecedented control over urban growth afforded by [New York's 1916 zoning ordinance] engendered in many architects [in the 1920s] a new confidence in their ability

having two phases."[24] The first phase encompasses zoning as an instrument of urban reform. Responding to the "inherited and exacerbated problems of the late-19th-century laissez-fair city," a first generation of zoning advocates set out to tame the most pressing urban problems, which "were the overbuilding and congestion in Lower Manhattan."[25] "Beginning in the early 1920s, however, a "second generation" of zoning advocates, mostly architects, found a new formal inspiration in the original reformers' restrictions. In the formula of the zoning envelope, they discerned a concept which they believed could generate a new aesthetic for the skyscraper."[26] Identifying these two generations, Willis draws the important conclusion that "zoning changed from a response to specific urban problems to a stimulus -- the impulse behind a vision of a modern skyscraper metropolis."[27]

Ferriss signifies the appropriation of zoning as stimulus. Working close to Harvey Wiley Corbett, he claimed zoning to be "a major stimulus behind a new style of architecture and urbanism, [which turned] upside down the original intention that zoning should function as

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to plan the modern metropolis." She explains that "[t]heir sense of efficiency and optimism was clearly reflected in the profusion of writing and visionary drawings of the skyscraper city." Willis contextualizes this "efficiency and optimism" with the formal transformation of Manhattan that followed the introduction of the 1916 zoning envelope. She explains that "[a]cross New York, the setbacks [which were predesigned by the zoning envelope] began to transform the urban landscape from an unruly assortment of flat-topped boxes or needle-thin towers into ranges of mountainous masses and jagged cliffs, all with related proportions. In addition, the limitation of the tower to one-quarter of the lot encouraged the assembly of large sites so that expensive tower construction would still be profitable. An enlargement of the setback formula produced a new building type: the 'superblock', a giant stepped-back tower rising over full, or even multiblock, base." Drawing from Hugh Ferriss's and Francisco Mujica's renderings, Willis demonstrates how the skyscraper city emerged as a utopian project in the beginning of the 1920s when zoning shifted from a response to urban problems to a stimulus of visions for a modern skyscraper metropolis. See Carol Willis, "Zoning and *Zeitgeist*: The Skyscraper City in the 1920s," *The Journal of the Society of Architectural Historians* 45, no. 1 (March, 1986).

[24] Ibid.: 50.

[25] Ibid.: 50, 47.

[26] Ibid.: 50.

[27] Ibid.

restrictive legislation."[28] Koolhaas builds upon this reverse approach to the intentions of the law when he traces the formation of what he calls the Culture of Congestion.[29] Koolhaas describes that the stimulus advocates used the dialectical relationship between the outside and the inside of Ferriss's aggregated zoning envelopes to camouflage the enterprise of creating of a hyper-dense and super-heterogeneous urban condition. This Culture of Congestion facilitated each block within the constituting parameters of Manhattan's grid to become a single structure characterized by "a different lifestyle and different ideology."[30] Filled up with series of solitudes, the intensified inside of Ferriss's construct aggregated "new and exhilarating human activities in unprecedented combinations."[31] It was by shifting zoning from a response to urban problems to a stimulus -- to "the impulse behind a vision of a modern skyscraper metropolis" -- that architectural innovation could operate in disguise, free from the constraints imposed by planning regulation.[32]

Koolhaas calls the inside of Ferriss's aggregated zoning envelopes "a pitch black architectural womb that gives birth to the consecutive stages of the Skyscraper."[33] Dividing the metropolis

[28] Ibid.: 55.
[29] Koolhaas, *Delirious New York*, 123-25.
[30] Ibid., 125.
[31] Ibid.
[32] Willis, "Zoning and *Zeitgeist*: The Skyscraper City in the 1920s," 50.
[33] Koolhaas analyzes Ferriss's research on the 1916 Zoning Law to contextualize what he refers to as the consecutive stages of the Skyscraper. He says that "[t]he genius of Ferriss' production is in the medium of his renderings itself, the creation of an artificial night that leaves all architectural incidents vague and ambiguous in a mist of charcoal particles that thickens or thins whenever necessary. Ferriss' most important contribution to the theory of Manhattan is exactly the creation of an illumined night inside a cosmic container, the murky *Ferrissean Void*: a pitch black architectural womb that gives birth to the consecutive stages of the Skyscraper in a sequence of sometimes overlapping pregnancies, and that promises to generate ever-new ones." See Koolhaas, *Delirious New York*, 117. Kolhaas continues to argue that Ferriss's "womb absorbs multiple impregnation by any number of alien and foreign influences – Expressionism, Futurism, Constructivism, Surrealism, even Functionalism – all are effortlessly accommodated in the expanding receptacle of Ferriss' vision. *Manhattanism* is conceived in Ferriss' womb." See ———, *Delirious New York*, 117. Ferriss's womb is further used to illustrate an enclosed space that accommodates the fantasy of infinity. Koolhaas writes about the remodeling of the Hotel Astor on Broadway to

into the two conditions of outside and inside the womb, Koolhaas allies himself on the one hand to the universal aspects of urbanism, just like TND New Urbanism. On the other hand, however, he celebrates the capacity of the metropolitan construct to hide all aspects of specificity, which the apparatus of exercising powers strive to repress. Due to the explicit division between inside and outside, Koolhaas creates a let-go-zone under the radar of planning expertise.

A third discourse on the city planning codes that regulate the form and use of buildings evolves from Michael Sorkin's structural architecture, which draws from Lewis Mumford's adoption of zoning as a social device. For Mumford, the city is a utopia of reconstruction. He defines the utopia of reconstruction as "a vision of a reconstituted environment which is better adapted to the nature and aims of the human beings who dwell within it than the actual one."[34] Mumford's vision regards the city as a total construct of social and physical fabric which is in constant evaluation and re-evaluation. He says "[b]y a reconstructed environment I do not mean merely a physical thing. I mean, in addition, a new set of habits, a fresh scale of values, a different net of relationships and institutions, and possibly -- for almost all utopias emphasize the factor of breeding -- an alteration of the physical and mental characteristics of the people chosen, through education, biological selection, and so forth."[35] Building on Anatole France, Mumford argues that "Utopia is the principle of all progress, and the essay into a better future."[36] Hence, his

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accommodate the 12th Beaux-Arts costume ball on January 23, 1931. Koolhaas describes that "the familiar interior of the hotel has disappeared and is replaced by a pitch black void that suggests the infinity of the universe, or that of Ferriss' womb." See ———, *Delirious New York*, 126. This spatial manipulation which overcomes the dichotomy of enclosed and infinite facilitates the orchestration of endless space within the constituting parameters of the womb.

[34] Lewis Mumford, *The Story of Utopias* (New York: Boni and Liveright, Inc., 1922), 21.

[35] Ibid., 21-22.

[36] Ibid., 22.

vision should not be regarded as an idea, but rather as a tangible process of guiding urban progress.

Mumford uses zoning to regulate the architecture of his utopia. He says that his urban vision is "based upon the notion of effective zoning of functions through initial public design rather than by blind legal ordinance."[37] Mumford's zoning, hence, is not a universal principle but rather a "communion and rational understanding" of how to organize social life.[38] Instead of providing a comprehensive plan of segregated land uses, he uses the code to describes a three dimensional matrix where "the various functional parts of the structure are isolated topographically."[39] Mumford says that "[l]imitations on size, density, and area are absolutely necessary to effective social intercourse."[40] Not necessarily using these restrictions to restrain the use and form of buildings, his code, rather, stipulates the critical measure of social aggregation. Like a machine, it operates through public design to distribute the criteria of social life in a polynucleated system of settlements. The zoning of Mumford's city, hence, transforms architecture from object to network.

Following Mumford's utopian urbanism, Sorkin envisions a city that is "both a place where all sorts of arrangements are possible, and the apparatus for harmonizing autonomy and

[37] Lewis Mumford calls his urban vision the "highwayless town." He says that in the highwayless town, "the needs of close and continuous human association on all levels will be uppermost." For the regulation of architecture, Mumford says "the highwayless town is based upon the notion of effective zoning of functions through initial public design, rather than by blind legal ordinance." See ———, "What Is a City?," *Architectural Record* 82, no. 5 (November, 1937): 62.
[38] ———, *The City in History: Its Origins, Its Transformations, and Its Prospects* (New York: Harcourt Brace & World, Inc., 1961), 48.
[39] Mumford, "What Is a City?," 62.
[40] Ibid.: 61.

propinquity."[41] Visible only through means of representation, he writes a code to shape the city through the regulation of architecture.[42] Sorkin's code "embraces the idea that the city is a collaborative artifact" and he calls for a re-examination of the static principles and tools traditionally used to guide urban development.[43] He dismisses the conventional assumption that "form has a constant relationship to content" and develops instead a code that processes various interconnections between the "the private and collective."[44] Consolidating this social intercourse, Sorkin's code becomes both an archive of the city's identity and an instruction for how the city is supposed to function and evolve. Describing the city as an ecosystem rather than a singularity, Sorkin's code turns Mumford's network into the DNA of urbanism, creating architecture through instant feedback between memory and evolution.

Universal zoning codes, which hamper architectural creativity, regulate the form and use of buildings. We can draw from the scope of this literature review to conclude that even if TND New Urbanism and Rem Koolhaas operate on opposite ends of the code, they both associate themselves with the apparatus of exercising power, which reduces their capacity to mediate the space in-between the universal and the specific aspects of urbanism. When TND New Urbanism represses the specific aspects of urbanism through values and forms, Koolhaas's theoretical womb hides the presence of all social and geographical deviation. Neither TND New Urbanism

[41] Sorkin, *Local Code: The Constitution of a City at 42 N Latitude*, 11.
[42] Michael Sorkin begins his afterword to his *Local Code: The Constitution of a City at a 42 N Latitude*: "This text is a kind of utopia. It attempts to imagine a new city via a building code, a regulatory prescription for an urban fantasy." Ibid., 127.
[43] Michael Sorkin "calls…for a re-examination of the narrow coercions of conventional 'master' plans [and that he] seeks a city designed not simply through the deduction of dominating generality but also via introduction from numberless individual points of departure." The "dominating generality" should be understood in context to his concurrent critique of what he calls "the fallacy that form has a constant relationship to content." It is this "over simplified" relationship between form and content and the persistence to "anesthetize the confusion of the contemporary" that hampers architecture's ability to process the diversity of urbanism. See Ibid., 127-28.
[44] Ibid., 11.

nor Koolhaas render intermediate action between the universal and the specific aspects of urbanism. Michael Sorkin, on the other hand, develops discourse on instant interaction between the universal and the specific aspects of urbanism. Using memory and evolution to guide architecture, he sets up a feedback loop between the universal and the specific to inform the trajectory of city building through architecture. Sorkin drafts an interesting alternative to common code. His aversion to the disciplinary connotations of form and content serves one the one hand to activate the feedback loop.[45] On the other hand, however, it obstructs implementation as it signifies the failure of moving beyond the utopianism of his discourse.

[45] Michael Sorkin says that ”the prevalence of a single model [i.e. that form has a constant relationship to content], defensibly clear, inevitably distorts architecture’s ability to comprehend and respond to changes in an environment it has not wrought.” Ibid., 128.

ZONING AND THE SPECIFIC

Zoning describes a universal principle of how to regulate the form and use of buildings and cities, which lawyer Richard F. Babcock so thoroughly describes.[46] Guarded by federal law, zoning epitomizes the apparatus of exercising power that, through socio-economic systems of production and consumption, orchestrates and manages what Michel de Certeau calls "the representations of a society…and its modes of behavior."[47] Being one of several sovereign forces that fuel contemporary urbanization, this dissertation takes zoning as an agent of the universal aspects of urbanism to establish a dialectical relationship with the local and specific.[48]

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[46] Lawyer Richard F. Babcock says that "zoning is the most universal of all the tools for shaping the character of the municipality…" He takes the concept of districting to demonstrate that "zoning techniques have been elevated to the status of principles." He says that "[t]he birthmark of zoning was the division of the community into zones or districts, each with designated use, bulk, and open space regulations." "From 1920 to 1940," he says, "districting was 'cumulative'. That is, if a community had four districts -- single-family, multiple-family, business, and industrial – the first was the 'highest', the last was the 'lowest'. All the uses permitted in the 'highest' single-family district were also permitted in the other three districts. Uses permitted in the 'second', multiple-family district, were also permitted in the business and industrial zones until the industrial zone became the garbage pile for all uses, including residences." He continues to explain that "[a]fter World War II, there became popular the planning 'principle' that each district should be exclusively reserved for the uses deemed appropriate in that district…No longer were there a hierarchy of uses. Each class of uses had an equal dignity and each was entitled to protection from the baleful results of exposure to the other." This shift in planning praxis rendered "the new 'principle' of exclusive districting." He demonstrates that "[t]he unstated consequence of the 'principle' of exclusive districting…was that it underscored the differences between uses and discouraged a search for a way to recognize and express in the law similarities between different uses. This result was bound to cause trouble in an era of increasing social mobility and massive changes in building technology and design." See Babcock, *The Zoning Game: Municipal Practices and Policies*, 124-37.

[47] Certeau, *The Practice of Everyday Life*, xii.

[48] The centralized and scientifically measured distribution of services through reform strategies, which has been exercised by zoning, comprises one criterion of urbanization. Other criteria, for example, comprise the substitution of politics with economics as a mode of city governance. Hence, it is important for this dissertation to recognize multiple criteria of exercising powers implicit in urbanization that exercises control over the universal and the specific. Zoning is one power, but so is the socio-economic system of production and conception that channels the distribution of wealth through city governance. Pier Vittorio Aureli tells us that "[t]he word *urbanization* was introduced by the Spanish engineer and Planner Ildefons Cerdá, who theorized the concept in his 1867 book *Teoría general de la urbanización*." Aureli says that "Cerdá legitimized his invention of urbanization as elucidating the emerging "conceptual features of a paradigm. This paradigm was the condition of limitlessness and the complete integration of movement and communication brought about by capitalism." He says that Cerdá's proposal to expand Barcelona "is widely considered the first city plan in history to make systematic use of scientific criteria such as statistics." These criteria, Aureli argues, "were aimed at the homogenous and controllable redistribution of social wealth, and made clear at the scale of urban design a method of governance in which social wealth and economic control of the working class – and thus the security of urban space –was at stake." Cerdá's redistribution of wealth followed "reformist strategy." Implicit in his redistribution "is the suppression of the city's political character in favor of a form of power…defined as…economy in its original sense." Aureli concludes that "the notion of

Taking zoning as the representative, the meaning of the universal is clarified within the context of this dissertation. Zoning is contextualized in discourse and has some explicit connections to architecture. The specific, on the other hand, lacks similar clarity. Suffering from the absence of signifier, the specific becomes more elusive, which tends to obstruct research. We have to describe the meaning of the specific within the context of this dissertation. We can do that by elaborating on the specific in opposition to the universal.

Michel de Certeau's *The Practice of Everyday Life* offers a theoretical model for how to elaborate on the specific in opposition to the universal. Situating his scholarship at the intersection of Michel Foucault's interest in the "disciplinary procedures that subsequently organize the social space" and Pierre Bourdieu's interiorization of these procedures -- an interiorization referred to by Bourdieu as *habitus* -- de Certeau elaborates on a series of modalities and techniques available to the ordinary man and the common place for reclaiming autonomy from the all-pervasive forces of commerce, politics, and culture, which, through sovereign power relationships, define representations and behaviors that institutions seek to impose on the individual.[49] With his scholarship, de Certeau outlines opportunities for ordinary

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urbanization presupposes the fundamental substitution of politics with economics as a mode of city governance to the point that today it is reasonable -- almost banal -- to ask not what kind of political power is governing us, but whether we are governed by politics at all -- that is, whether we are living under a totalitarian managerial process based on economy, which in turn uses different political modes of public governance ranging from dictatorship to democracy or war." See Pier Vittorio Aureli, *The Possibility of an Absolute Architecture* (Cambridge, Mass: The MIT Press, 2011), 9-13. For more detailed background on Ildefons Cerdá's innovation of the term *urbanization*, see, for example, ———, "Toward the Archipelago," *Log* 11(Winter, 2008). Ildefons Cerdá, *Cerdá: The Five Bases of the General Theory of Urbanization*, ed. Arturo Soria y Puig (Madrid: Electra, 1999). Choay, *The Rule and the Model: On the Theory of Architecture and Urbanism*.

[49] Certeau, *The Practice of Everyday Life*, 45. Michel de Certeau says that the task of the philosopher is to mediate "between society and a body of knowledge…insofar as he re-establishes the relevance of general questions to a particular technique." ———, *The Practice of Everyday Life*, 6-7. Michel de Certeau elaborates on the space in-

people to subvert the rituals and representations that institutions seek to impose upon them. Drawing from Wittgenstein's intention to redirect linguistics from their "metaphysical to their everyday use," de Certeau seeks to clarify "an ensemble of *procedures*" to unlock the constraining orders of locale.[50] These procedures, which operate in contrast to the universal, are referred to by de Certeau as everyday practices, and they delineate some constituting premises of the specific within the context of this dissertation.

Michel de Certeau's discourse on everyday practices needs to be illuminated from the context of architecture, which can be accomplished through Jane Jacobs's discourse on city neighborhoods. As Jacobs has been used by planning literature to signify the intensified critique of zoning that proliferated in the post-World War II period, her scholarship postulates useful connections between Certeau's reclaimed autonomy and the subject matter of this dissertation.[51] Jacobs's fight with Robert Moses, which started with the battle of Washington Square in 1952, provides us with a near-personification of the dialectical relationship between the specific and the universal aspects of urbanism. Moses, who succeeded in implementing a number of fine large-

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between the scientist and the ordinary man. He says that he "shall try to describe the erosion that lays bare the ordinary in a body of analytical techniques, to reveal the openings that mark its trace on the borders where science is mobilized, to indicate the displacements that lead toward the common place where 'anyone' is finally silent, except for repeating (but in different ways) banalities." See ———, *The Practice of Everyday Life*, 5.

[50] Certeau, *The Practice of Everyday Life*, 9. ———, *The Practice of Everyday Life*, 43. Michel de Certeau says that "a North African living in Paris or Roubaix (France) insinuates into the system imposed on him by the construction of low-income housing development or of the French language the ways of 'dwelling' (in a house or a language) peculiar to his native Kabylia. He superimposes them and, by that combination, creates for himself a space in which he can find ways of using the constraining order of the place or of the language." See ———, *The Practice of Everyday Life*, 30.

[51] Eric Damian Kelly says that "The Death and Life of Great American Cities, published in 1961, challenged the wisdom of traditional zoning practices and stressed the importance of diversity to a vital neighborhood. Based on author Jane Jacobs's experiences in New York's Greenwich Village, the book provided part of the philosophical base for a broad movement towards controlled, mixed-use development." See Kelly, "Zoning," 252-53.

scale projects, failed to see the potential of the local, to which Jacobs was receptive.[52] Her bottom-up activism and revolt against Moses's planning principles created a "coherent philosophy of urbanism" that, according to urban sociologist Robert Fishman "had the power to displace even the great CIAM manifestos of Sert and Le Corbusier."[53] Fishman makes it clear that Jacobs was not alone in this battle. On the contrary, she was one of many intellectual voices that coalesced to challenge the "conventional planning wisdom" of Moses.[54] However, we cannot disregard the importance of her analytical treatment of the Greenwich Village turmoil, which ultimately led to the 1961publication of *The Death and Life of Great American Cities*.

Jacobs complies with de Certeau when she deploys the "eyes upon the street" to call attention to some everyday practices overlooked by Modernism.[55] When she reclaims the street and its sidewalks as armatures for social connectivity, she plants the seed, for example, for Anastasia Loukaitou-Sideris's scholarship on the codes that regulate the use of sidewalks.[56] Jacobs's micro

[52] The battle between Robert Moses and Jane Jacobs exemplifies the gap between the universal and the specific and signifies the lack of interaction between the two. Robert Fishman points to the important improvements that Moses realized through his universal and CIAM-influenced planning principles. Fishman say that "[t]oday we can hardly imagine the region functioning at all without the Verrazano-Narrows Bridge, the Cross-Bronx Expressway, and so many other Moses works. Greenwich Village may not have needed new roads, but the New York region certainly did." His failure to understand the local and the specific mobilized the critique from which Jacobs emerged. Jacobs subsequent failure of understanding the abstract and universal principles of urbanism generated other issues to which Sharon Zukin's scholarship is devoted. See Robert Fishman, "Revolt of the Urbs: Robert Moses and His Critics," in *Robert Moses and the Modern City: The Transformation of New York*, ed. Hilary Ballon and Kenneth T. Jackson (New York: W. W. Norton & Company, 2007), 129. For Zukin's critique on Jacobs, see Sharon Zukin, *Naked City: The Death and Life of Authentic Urban Places* (New York: Oxford University Press, 2010).
[53] Fishman, "Revolt of the Urbs: Robert Moses and His Critics," 128.
[54] Ibid., 125. Other important figures that joined the battle against Robert Moses were, for example, Dan Wold, the editor of the *Village Voice*; Shirley Hayes, the founder of the Washington Square Park Committee; and Lewis Mumford, who published "The Highway and the City" in 1958 as a critique on the ideologies of prevailing planning doctrine. See ———, "Revolt of the Urbs: Robert Moses and His Critics."
[55] Jane Jacobs, *The Death and Life of Great American Cities* (New York: Random House, Inc., 1961), 35.
[56] Anastasia Loukaitou-Sideris takes the sidewalk as lens through which to critically analyze the regulation of sidewalks in Californian cities. Opening one of her essays -- written in collaboration with Evelyn Blumenberg and Renia Ehrenfeuch -- with a quote of Jane Jacobs, she builds upon Jacobs's discourse to investigate the "publicness of sidewalks as well as their primary purposes." See Anastasia Loukaitou-Sideris, Evelyn Blumenberg , and Renia Ehrenfeuch, "Sidewalk Democracy: Municipalities and the Regulation of Public Space," in *Regulating Place:*

scale-focus, however, adds an important element to the realm of the specific previously outlined by de Certeau. With her interest in "aged buildings," she, intentionally or not, leaves the use of the city for the form of architecture to draft a second trajectory of the specific. Celebrating "the ingenious adoptions of old quarters to new," she points to the specified -- often idiosyncratic -- mode of adjusting the significant attributes of a building site, which is implicit in the adaptive reuse of architecture.[57] Jacobs recognizes that her advocacy for the revitalization of storefronts and grocery stores catalyzed an unanticipated interest among designers for the renovation of neglected interiors.[58] This shift in focus, from site clearance to site transformation, called for updated approaches on how to render the forms and tectonic qualities of architecture. Illuminating architectural values neglected at the time, Jacobs expanded on the specific aspects of urbanism by complementing her everyday practices with observations on how to elaborate the significant attributes of site.

Jacobs's expansion, however, fails to stipulate some necessary interaction between the specific attributes of site and the universal aspects of governance. Due to her singular focus on the local city and the narrow time period she adopts, she neglects the crucial interaction between the site and property, which, in the end, determines the level of interaction between the specific and the

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Standards and the Shaping of Urban America, ed. Eran Ben-Joseph and Terry S. Szold (New York: Routledge, 2005). In other writings -- written in collaboration with Trib Banerjee -- Loukaitou-Sideris analyzes the development of California Plaza in downtown Los Angeles, and observes that Barton Myers's approach, which "sought to define public space as an extension of the sidewalk" was rejected in favor of Arthur Erickson's approach of disconnecting the plaza from surrounding public space by using freestanding towers "strategically planted in the open space" to unify the whole development. See Anastasia Loukaitou-Sideris and Tridib Banerjee, *Urban Design Downtown: Poetics and Politics of Form* (Berkeley, CA: University of California Press, 1998), 133-38.

[57] Jacobs, *The Death and Life of Great American Cities*, 194.

[58] Jane Jacobs tells the story about the interpretation of designers, planners, and students on a talk she made at a city design conference, which founded the slogan: "We must leave room for the corner grocery store." Even if she points out the need for not just the singular but an ecology of grocery stores, her advocacy for "the social need for commercial diversity in cities" unleashed a growing interest in the adaptive reuse of small and, at the time, neglected commercial spaces, which introduced an architectural element to her discourse. See Ibid., 190-91.

universal. The ultimate proof of Jacobs's failure is, as sociologist Sharon Zukin shows, her own Greenwich Village, which, ever since the publication of *The Death and Life of Great American Cities*, has evolved to something like an antithesis to her own discourse.[59] Failing to predict, and hence to process, the instant transformation of land uses that, through the assembly and development of sites, alters the social order and material condition of buildings, the sites of Jacobs's lively city blocks are rather quickly homogenized and repressed by the universal forces of production and consumption.

The making of the city implies interaction between site and property. We can use Dana Cuff's discourse on convulsive urbanism to clarify this interaction.[60] Cuff draws from Koolhaas's theory of Bigness to study the evolution and behavior of large-scale projects.[61] Creating a parallel path to Koolhaas's big buildings, she looks at the constellation of large urban zones comprised of small pieces of land and bundles of buildings.[62] Cuff's shifting focus on Bigness unfolds a context of research on the interaction between site and property, which includes the

[59] Zukin, *Naked City: The Death and Life of Authentic Urban Places*.

[60] Dana Cuff develops discourse on convulsive urbanism. She says that convulsive urbanism evolves "in time and material development as sites within the city are assembled and developed." (37) Focusing primarily on the years before and after World War II, she takes housing in Los Angeles as subject matter to contextualize the constant erasure and eruption that shapes the premises of convulsive urbanism. She argues that residential neighborhoods make up the perfect context for research on convulsive urbanism because while "they may seem like the urban zone most deserving of stability, they are, in fact, a part of the city that is highly vulnerable to large-scale change." (45) Following this argument, Cuff takes two dimensions of architecture and urban form, which are scale and the politics of property, as lenses through which to study the instant land use transformations that make up the premises of convulsive urbanism. She argues that transformation "takes one land use, eradicates it, and replaces it with some vision of a better life." (37) Recognizing the social and cultural dimensions implicit in land use transformation, she intersects the public with the private and addresses multiple forces of convulsive urbanism, such as real estate, policy, community activism, and architecture. See Dana Cuff, *The Provisional City: Los Angeles Stories of Architecture and Urbanism* (Cambridge, Mass: The MIT Press, 2000).

[61] The premise of large-scale operations is imperative to Dana Cuff's research on convulsive urbanism. Focusing on bundles of micro-scales rather than the micro-scale itself, she succeeds in going beyond Jane Jacobs's elaborations on the interface between social intercourse and built form to also address their implication on the forces of production and conception that instigates some criteria for the universal aspects of urbanism.

[62] Dana Cuff says that "[w]hat Koolhaas describes as bigness in a single building has parallels to bigness in urban plans comprised of many buildings." See Cuff, *The Provisional City: Los Angeles Stories of Architecture and Urbanism*, 11.

architecture of sites, the use of land and buildings, and issues of ownership.[63] Cuff says that "land is converted to property when ownership comes into play; property is transformed into site when some development is intended."[64] Following Cuff's elaboration, the transformation of land into property, hence, is rendered by the universal aspects of urbanism without any recognition of the intrinsic qualities of site that, in multiple ways, influence the premises of all architecture, such as "geography, ecology, or demography."[65] These qualities, which have implicit or explicit influences on all creation of space, are unveiled and processed by architecture when the financial procedures of ownership intend to advance the capability of land. Illuminated through interaction between site and property, these intrinsic qualities of the site, from which architecture emerges, are overlooked by planning praxis, which rather processes the interaction between property and development.

Drawing from Cuff's scholarship we can conclude that the intrinsic qualities of site that renders architecture are illuminated, and often shaped, by the instant interaction between site and property. When intersected with the social and cultural premises of everyday practices, which permeate all urbanized land, they unfold the meaning of the specific within the context of this dissertation.

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[63] Dana Cuff says that "[w]hen an area is composed of independent, small bits of land, the buildings, use, and ownership make a certain sense that can be discerned by a situated observer." See Ibid., 13.
[64] Ibid., 62.
[65] In her book, Dana Cuff uses the abstraction of land through the premises of the grid to point to lacking account on the local circumstances that in multiple ways influence the premises of architecture. She says that [t]he grid had little to do with local geography, ecology, or demography; instead it had everything to do with neat subdivision and subsequent speculation, that is, the conversion of land into property." See Ibid., 78. Cuff's argument is backed up by Jonathan Barnett, who says that "setback and bulk controls take no account of topography, orientation, or the nature of existing buildings in the area; nor does the land-use separation enforced by zoning generally take into account the possibilities created by modern construction, air conditioning, artificial illumination." See Jonathan Barnett, *An Introduction to Urban Design* (New York: Harper & Row, Publishers, 1982), 66.

ZONING AND CITY

The codes that concern this dissertation derive from the implementation of zoning as the key tool for carrying out planning policy in the U.S. Dating back to antiquity, these codes were modernized in the 1870s by the Prussian planner Reinhard Baumeister's regulation of Berlin and brought to U.S. the at the turn of the century to embark upon some issues of public heath, safety, and welfare.[66] Fueled on the one hand real by estate interests, and on the other hand by visions of social reform, zoning took root throughout the American continent in the early twentieth century.[67] Proliferating with Edward M. Bassett's comprehensive ordinance in New York of 1916, aimed at tackling the *laizze fair* growth of the city, zoning deployed the use, bulk, and coverage codes to mediate between private and public interests.

Zoning was rapidly introduced in American cities after 1916 as a tool adopted by local governments to control land use. Due to its comprehensive character, zoning was soon proven

[66] Françoise Choay says that "[t]he study of Greek inscriptions has revealed the complex measures that, especially form the fourth century BCE onward, governed the allocation of land in Greek cities to public an private uses by means of genuine *zoning* regulations…" See Choay, *The Rule and the Model: On the Theory of Architecture and Urbanism*, 17. On Reinhard Baumeister's implementation of modern zoning, see for example Aldo Rossi, *The Architecture of the City*, ed. Peter Eisenman, trans. Diane Ghirardo and Joan Ockman, Oppositions Books (New York: The Institute for Architecture and Urban Studies, 1982), 66. Eran Ben-Joseph, *Code of the City: Standards and the Hidden Language of Place Making* (Cambridge, Mass: The MIT Press, 2005), 53. On Baumeister's influences on American zoning, see Frank B. Williams, "Zone System Advocated to End City Congestion," *New York Times* December 21, 1913.

[67] The union of real estate and zoning is illustrated in the story about 5th Avenue's covenants, which catalyzed New York's 1916 zoning ordinance. See, for example, Max Page, *The Creative Destruction of Manhattan, 1900-1940* (Chicago: The Chicago University Press, 1999), 49. Regarding social reform, Arthour B. Gallion and Simon Eisner observe the "sad condition of housing that developed with the factory system in the nineteenth century [which] eventually forced the enactment of many laws to curb abuses." (79) Gallion and Eisner point to the nineteenth century Europe and the U.S. to describe the beginning of "[s]ocial activism on behalf of decent housing." (91) They mention prominent spokesmen, such as Jacob Riis, John Ruskin, Thomas Carlyle, Lord Shaftesbury, Charles Dickes, Friedrich Engels, and Benjamin Disraeli, engaging in the "[u]rban speculation and its disintegrating effect upon the living environment." (93) They demonstrate the rapid increase in population and the "unbearable living conditions imposed on the poor," which mobilized massive critiques and instigated social reform. See Arthur B. Gallion and Simon Eisner, *The Urban Pattern: City Planning and Design*, Fifth ed. (New York: Van Nostrand Reinhold Company, 1986), 73-98. Regarding the implementation of zoning in the U.S., the 1908 division between residential and non-residential districts in Los Angeles has been considered a benchmark. See Dana Cuff and Per-Johan Dahl, "Rx for the R1: Sustaining the Neighborhood," *306090: Sustain and Develop* 13(2010): 26.

incapable of processing the specific aspects of urbanism. The variance, for example, appeared in 1923 as a technique to assist zoning in handling the specific.[68] However, the elusive balance between freedom and constraints initiated by zoning required a "redefinition and expansion of the police power in the United States," which was established with the *Euclid* case of 1926.[69] Winning constitutional approval with the United States Supreme Court's landmark decision, the power of local government to constrain private development interests was cemented into

[68] The 1916 ordinance established a set of universal principles to regulate the form and use of buildings and cities. The difficulty in processing the specific was, however, immediately recognized. Babcock traces the introduction of a technique in 1923, which, dubbed 'variance', was introduced to handle the specific. Babcock also shows, however, that the incorporation of this technique in local governance blurred the distinction between technique and principle. And it is exactly "the failure of most commentators and judges in distinguishing between principles, on the one hand, and techniques, on the other," (126) that marks the key problem of zoning to respond to both the universal and the specific and made zoning to "establish a formidable stable dogma" (16) lacking the ability to adapt to the specificity of urban change. See Babcock, *The Zoning Game: Municipal Practices and Policies*.

[69] Charles M. Haar, "Reflections on Euclid: Social Contract and Private Purpose," in *Zoning and the American Dream: Promises Still to Keep*, ed. Charles M. Haar and Jerold S. Kayden (Chicago, Il: Planners Press, American Planning Association in association with the Lincoln Institute of Land Policy, 1989), 333. Urban planner and lawyer Eric Damian Kelly recognizes the significance of the 1916 ordinance in New York, and adds that "[t]he second major event encouraging the adoption of zoning was the 1926 Supreme Court decision *Village of Euclid v. Ambler Realty Co.*, which upheld the constitutionality of a comprehensive zoning system in Euclid, a suburb of Cleveland, Ohio." Planning scholars Arthur B. Gallion and Simon Eisner say that the *Euclid* case was "[o]ne of the most important legal decisions in the history of zoning," and law professor Charles M Haar calls the 1926 case "a revolution in land use jurisprudence [and] a landmark case whose effects 60 years after its launching continue to reverberate across the legal landscape." For Haar, the case "brought into focus fundamental questions about the content of private property in the United States…" "In its decision," he says, "the Supreme Court defined for its era the role of local and state governments in handling the economic and physical development of communities." With the *Euclid* case, zoning, which was introduced as a tool for local governance to use when carrying out city planning policy, the Supreme Court redefined and expanded the concept of police power. Police power, Kelly says, describes "the power of government to intervene in the lives of private citizens for the protection of public health, safety, and welfare." Gallion and Eisner add that "[t]he power to pass and enforce laws to protect the welfare of all the people, whether they be enacted at a local or a national level, is called the exercise of the police power." Hence, with the constitutional approval, zoning could be enforced on the premises of federal law. Haar observes that "the lawyers for the property owner [i.e. the defense] chose to attack the fundamental concept of zoning as an abstract idea [which] raises the level of discourse to a philosophical and abstract plane." He point out that "the Court's response…was the obverse of the board question posed to it: In upholding the general validity of the zoning ordinance, it did not bar attacks on the specific application of the rule…" Hence in *Euclid*, the Supreme Court "gave its reply on the highest level of generalization," which elevated zoning from a technique used by local governance to a universal principle exercised by federal law. This split between the local and the federal -- or between the specific and the universal -- escalated after Euclid. The case also signified an attitude that was -- and still is -- characteristic of traditional zoning. Kelly says that this tradition, which often in called Euclidean zoning after the village in the case, "upheld not only the [zoning] plan but also its broader social and economic implications." Kelly quotes the original decision, which "describes a hypothetical apartment building in [single-family] neighborhood as 'a mere parasite constructed in order to take advantage of the open spaces and attractive surroundings created by the residential character of the district'." "The resumed superiority of the neighborhood of detached single-family homes," he says, "continues to provide a philosophical basis for much zoning law." See Gallion and Eisner, *The Urban Pattern: City Planning and Design*, 228, 37. Haar, "Reflections on Euclid: Social Contract and Private Purpose." Kelly, "Zoning," 252, 54.

American planning praxis.[70] Incorporated in federal law, zoning was elevated from a technique to a universal principle, with limited possibility to process the practical and specific aspects of urbanism.

After winning constitutional approval in *Euclid*, zoning experienced a synchronized celebration and critique from the apparatus of exercising power, which rendered a schism between federal agencies and local planning administrations. Introduced as a local planning instrument, zoning was gradually altered by federal agencies through subdivision practice. Used as a scientific tool to distribute the financial assistance and mortgage insurance that had been instigated by federal sources to resurrect the post-1929 economy in the U.S., zoning disconnected local planning administrations from the specific aspects of urbanism as it "created the most ambitious suburbanization plan in American history."[71]

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[70] The law professor Charles M. Haar and the urban planner and lawyer Jerold S. Kayden published in 1986 a reflection on the sixty years of *Eucledian* zoning in the U.S. to trace its overall successes and failures. With their publication *Zoning and the American Dream*, Haar and Kayden bring together expertise mainly from planning, economy, and law to trace the overall successes and failures of zoning. See Charles M. Haar and Jerold S. Kayden, eds., *Zoning and the American Dream: Promises Still to Keep* (Chicago, Il: Planners Press, American Planning Association in association with the Lincoln Institute of Land Policy,1989). With his own article, "Reflections on *Euclid*: Social Contract and Private Purpose," Haar builds upon the famous Court decision to critically evaluate the status of zoning in the 1980s and thus project some future impacts. His article focuses on zoning's capacity to mediate the public and private interests. He deploys the *Euclid* case to contextualize his critique on zoning because "its progeny [represents] an extraordinary expansion of government power into what previously had been considered a relatively autonomous area of private decision making." Haar argues that the key to understanding the past and future of zoning lies in comprehending the paradox of regulating "the activities and the aspirations of private property without monetary compensation." See Haar, "Reflections on Euclid: Social Contract and Private Purpose," 334.

[71] For federal agencies, zoning complied with the general belief in scientific rationality and standardization, which, in concurrence with Taylorist ideals, characterized the management of societal progression through "civic sanitation." See Ben-Joseph, *Code of the City: Standards and the Hidden Language of Place Making*, 68. M. Christine Boyer provides a rigorous contextualization of zoning and the scientific. With her book *Dreaming the Rational City: The Myth of American City Planning*, Boyer maps the intricate relationships between the institutionalization of zoning and the political economy of housing development that characterized the urbanization of post-World War I America. Boyer's scholarship is particularly relevant for the purpose of this dissertation because she focuses on the founding principles of land-use distribution through the means of zoning. Boyer contextualizes the scientific tone that comprehensive zoning took on from its introduction in 1916. Drawing from the general faith in scientific management of labor productivity and corporate administration that characterized

With the post-World War II suburbanization of America, zoning guided rather than regulated city building. Exercised through subdivision practice and increasingly associated with the financial interests of real estate and housing industry, zoning was divorced from the central goal of the urban planning profession, which, according to planning scholar Eran Ben-Joseph is "to foster democratic civic processes and outcomes whereby communities retain their local character, make the most of the existing conditions of the built and natural environment, and create developments that are sensitive and sensible to their immediate surroundings."[72] The critique on the lack of flexibility and lost objectivity escalated, both from within the urban planning doctrine and from other related fields.[73] While zoning fixed the form and use of suburbia, it seriously hampered the efforts to adjust urban America after the consequences of mass-suburbanization. Drained of any flexibility, zoning was proven insufficient to mediate between private and public interest in the appropriation of American urbanism. The first

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American society in the wake of Frederik W. Taylor's 1911 *The Principles of Scientific Management*, the introduction of zoning in the U.S. complied with the transition of Taylor's system from "the business to the social sphere." With Taylor as a model, "engineers would [after 1911] discuss and apply scientific laws to the solution of social problems." See Boyer, *Dreaming the Rational City: The Myth of American City Planning*, 163. Ben-Joseph, *Code of the City: Standards and the Hidden Language of Place Making*, 70. On federally backed montages of single-family housing as the generator of suburbia, see also Emily Talen, *City Rules: How Regulations Affect Urban Form* (Washington, DC: Island Press, 2012), 6.

[72] The planning scholar Eran Ben-Joseph maps the implementation of subdivision practice in the U.S. through the financial assistance and mortgage insurance plans of the Federal Housing Administration (FHA). Established in 1934, FHA introduced "minimum standards and design regulation" for subdivision layout to render a more efficient building of suburbia. Through its position as a federal agent, the FHA "exercised tremendous authority and power" over local planning administration. With its 1938 "free review program for prospective developers," the FHA initiated cooperation with "real estate developers, builders, and their technical consultants," which, fueled by federally-funded loans, introduced sovereign control on "over-building insertions, which would undermine values [and on] population trend, the neighborhood standards, and material and everything else through the President." See Ben-Joseph, *Code of the City: Standards and the Hidden Language of Place Making*, 70-74. Author B. Gallion and Simon Eisner confirm FHA's authority and power over local planning administration. They say "this federal agency has performed a service in raising the quality of subdivision design in those communities where local laws are ineffectual or no trained planning officials are active." See Gallion and Eisner, *The Urban Pattern: City Planning and Design*, 482. Ben-Joseph, *Code of the City: Standards and the Hidden Language of Place Making*, 189.

[73] Tending to "overstep their bounds and lose grounding in the objective measure of their benefit," Eran Ben-Joseph says, standards intended for health and safety exceeded "the original rational for their existence." Ben Joseph, On Standards, 2.

comprehensive revision of New York's 1916 zoning ordinance, which was adopted in 1961, signifies the escalating calls for new routines.[74]

The 1961 ordinance laid the foundation for a number of techniques developed to stimulate a greater flexibility of bulk and coverage restrictions within the legal framework of zoning. Introducing a number of provisions, such as the floor area ratio (FAR), the plaza bonus, and the open space ratio, the urban planning doctrine set out to rectify "the weight of amendments" while rescuing the builders and architects from "stereotyped designs enforced by regulations rigidly restricting the outer form but ineffectively dealing with the bulk and density they [were] intended to control."[75] Failing, however, to address both the "segregation of land uses implicit in the concept of zoning" and the emerging interest in historic preservation and participatory planning, additional techniques were added later in the '60s, such as the special zoning district, transfer of development rights, and performance zoning.[76] Piled upon comprehensive legislation, the complex configuration of sub-zones intensified.

Gathered under federal law, the twin trajectories of subdivision practices and sub-zones have created what Babcock calls a "disordered condition," which, difficult to navigate even for local

[74] Even if planning scholar Emily Talen is correct when she argues that "most of the large cities in the United States undertook complete revisions of their zoning ordinances" during the 1950s, New York's 1961 ordinance must be recognized as the signifier of a new era in the history of zoning, when new techniques were introduced on a comprehensive basis to stimulate more flexible regulation of buildings and cities. Talen postulates a critique against the 1961 ordinance, arguing that it was "[m]oving from as-of-right rules to discretionary review." According to Talen it "triggered additional layers of review, creating 'a costly and time-consuming negative synergism' disliked by many (including most architects) for its tendency to open the door to manipulation, favoritism, and unfairness." For Talen's critique, see Talen, *City Rules: How Regulations Affect Urban Form*, 176-77.
[75] For FAR, see, for example, Gallion and Eisner, *The Urban Pattern: City Planning and Design*, 453. and Barnett, *An Introduction to Urban Design*, 72. Voorhees Walker Smith & Smith, *Zoning New York City: A Proposal for a Zoning Resolution for the City of New York* (New York: City Planning Commission, 1958), vi.
[76] Barnett, *An Introduction to Urban Design*, 78.

planning administration, "discourage[s] efficiency and increase[s] housing costs."[77] Massive calls have been made by the planning profession to reform zoning. Discussions have, for example, asked if zoning ought to be reviewed though rule or discretion and if zoning should be prescriptive or performative.[78] The planning scholar Emily Talen helps us to channel the multiple approaches on zoning reform by establishing two directions, which, she says, are "either pushing toward greater flexibility, or pushing toward greater predictability."[79] On zoning reform through flexibility, she recaps the complexity and confusion that have arisen since the post-1961 implementation of sub-zones and discretionary reviews. Flexible zoning, she says, "has often

[77] Richard F. Babcock says that "zoning has provided the device for protecting the homogenous, single-family suburb from the city." See Babcock, *The Zoning Game: Municipal Practices and Policies*, 3. Lane Kendig demonstrates the different ways to measure land use intensity in the suburb and the city. He says that "[d]ensity is a measure of residential land use intensity which is expressed as the number of dwelling units per acre [while] [f]loor area ratio is a nonresidential land use intensity measure analogous to density." See Lane Kendig, *Performance Zoning* (Washington, D.C.: Planners Press American Planning Association, 1980), 28-29. Ben-Joseph, *Code of the City: Standards and the Hidden Language of Place Making*, 168.

[78] The lawyer and urban planner Jerold S. Kayden elaborates on the arguments for and against rule and discretion. He says that "the principal argument for the rule-based approach is that it provides predictability, if not certainty, for developers and lenders who above all else prize predictability and certainty unless that predictability and certainty is that the developer predictably and certainly cannot develop anything." He also observes that the rule-based approach "is easier and cheaper" to administrate; is "less susceptible to the corruption of politics;" it forces "planners to decide about planning in a more comprehensive, future-oriented way;" and it prevents planners from being "co-opted by developers." He observes that the discretion-based approach is more likely to comply with "the qualities that make for well-designed urban environments;" that rules not necessarily prevent mediocrity, because "developers provide letter-of-the-law compliance or find loopholes;" that discretion encourages a "collaborative inventiveness absent from the rule-based approach;" that discretion "allows planners to get exactly what they want, even if the owner does not want to produce it;" and that the social and rhetoric skills of developers and expertise encompasses an asset in jurisdictional procedures. Kayden demonstrates a combination approach between rule and discretion "that attempt to marry the best of rules and the best of discretion." He promotes a process that goes "under the name 'certification'," which "in at least one jurisdiction, New York City,…has lasted for many years." See Jerold S. Kayden, "The Law of Urban Design," in *Companion to Urban Design*, ed. Tridib Banerjee and Anastasia Loukaitou-Sideris (New York: Routledge, 2011). Professor Emeritus William C. Baer elaborates on the differentiation between prescriptive and performative standards. He says that "*prescriptive* standards practice a mini-max (minimize maximum regret)," while "a *performance* approach to standards has attempted a maxi-min strategy (maximize minimum reward)." He says that prescriptive standards "have been shown by years of experience to be safe and not to include many unintended and unwanted side effects," while performance-based standards "seeks to encourage creativity and innovation in meeting a requirement rather than merely invoking" a predetermined approach. He takes the word standards as a lens through which to unpack some positive and negative effects, and he sets up a dialectical relationship between standards and criteria, and between product and process. With three established dichotomies of prescriptive/performance, standards/criteria, and product/process, he systematizes "the way to think about rule formulation," which, he argues, "helps provide clear professional norms, regulations, and standards for design." See Baer, "Customs, Norms, Rules, Regulations and Standards in Design Practice."

[79] Talen, *City Rules: How Regulations Affect Urban Form*, 175.

resulted in sprawl disguised as 'planned unit development', or 'innovative' arrangements that are really nothing more than lifeless open spaces, insular and disconnected superblocks, or anti-pedestrian thoroughfares."[80] Opposing the various levels of discretion often implicit in flexible zoning, she advocates zoning reform through predictability. Using the code to specify design, she seeks explicit control on the shaping of cities and buildings, getting the "rules of disparate professions and the idiosyncrasies of individual designers…to act 'with unity of purpose'."[81] Replacing the complexity of zoning with totalitarian control, Talen wants to use a new set of "collective norms about urban pattern and form" to balance certainty with responsiveness to local variation.[82]

It should go without saying that Talen's approach on the code runs counter to the accounts of this dissertation. The problem with her advocacy for predictability lies precisely in the core of the codes that she promotes, namely within her suggestion to dictate planning regulation through a very limited -- even moralizing -- set of norms.[83] Talen contextualizes her discourse with a distinct differentiation between good and bad urbanism, and she determines a set of universal

[80] Ibid., 181.
[81] Emily Talen complies with Andres Duany's aim to reform zoning through the implementation of form-based codes (FBC). She argues that "FBC are much different than conventional zoning, subdivision regulations, and the myriad of 'flexible' techniques instituted from a previous generation of core reformers because FBCs code a *plan*." She quotes Henry Hubbard arguing that "FBCs implement this plan by controlling form explicitly – recalling a time when planners were expected to "know what kind of forms – of buildings, ground, perhaps of vegetation" are needed, and then "to provide for these forms and for their arrangement in the best way to serve human needs, not forgetting that one of these needs is always beauty." See Ibid., 185. ———, *City Rules: How Regulations Affect Urban Form*, 184.
[82] Talen, *City Rules: How Regulations Affect Urban Form*, 196.
[83] Emily Talen says that "[r]ules are a reflection of values, but now, given the disconnect between rule and effect, it is hard to imagine that what people really want is sprawl, bad urban form, and monotony." She recognizes her power to shape civic life through codes when she argues that "[t]hrough their manipulation of pattern, use, and form, rules have a strong impact on quality of life." See Ibid., 3.

principles to dictate the constituents of "good urban form."[84] But, considering the rapid pace of change that characterizes contemporary urbanization: is it really possible to determine what constitutes good or bad urbanism without being sensitive to tendencies beyond our own perceptions? And can we really specify design guidelines for the creation of an urban form that not only avoids, or seeks to fix, some historical issues, but also embraces the unknown premises of future opportunities?

"Norms are collectively determined," law professor Lawrence Lessig says.[85] For Talen, it is her alliance with New Urbanism that determines the norms she deploys when coding the form of buildings and cities. Contemplating Talen's moralism, we have to remember, as Lessig points

[84] Emily Talen defines 'good urbanism' as "compact urban form that encourages pedestrian activity and minimizes environmental degradation; encourages social, economic, and land use diversity as opposed to homogeneity; connects uses and functions; has a quality public realm that provides opportunities for interaction and exchange; offers equitable access to goods, services, and facilities; and protects environmental and human health." She defines 'bad urbanism' as "disconnected, automobile dependent, land consumptive, environmentally degrading, single-use, homogenous, inequitable, and inaccessible, and with a low-quality, poorly designed public realm." See Ibid., 1-2. Emily Talen says that her concept of code "is based on an intransigent belief in the existence of universal principles, of an urban form that transcends style and taste and is based on a certain degree of human hard-wiring." Her "human hard-wiring" can be explained through her proclamation of a collective and universally applied value system that represses all urban forms that don't meet the aesthetic preferences of a city building tradition that comply with "connectivity, pedestrian oriented, compactness, land-use diversity, enclosure, small blocks." See ———, *City Rules: How Regulations Affect Urban Form*, 196, 11. Emily Talen seeks to use the code to recapture "the task of creating what is believed to be good urban form." See ———, *City Rules: How Regulations Affect Urban Form*, 12-13.

[85] The law professor Lawrence Lessig studies the increasing control of cyberspace. He demonstrates that under the influence of commerce, cyberspace is becoming a highly regulable world where behavior is tightly controlled. For Lessig, the users of cyberspace are responsible for choosing what kind of virtual environment they want and what kind of freedom it will guarantee. He argues that it is the code that determines how cyberspace is regulated. The questions we have to focus on, he says, are "[h]ow the code regulates, who the code writers are, and who controls the code writers." He says that "cyberspace is regulated by its code, and that the code is changing." (79) He says that "four constraints regulate [cyberspace] -- the law, social norms, the market, and architecture -- and the 'regulation' of [cyberspace] is the sum of these four constraints. Changes in any one will affect the regulation of the whole." (123) He demonstrates that "[t]he constraints are distinct, yet they are plainly independent. Each can support or oppose the others. Technologies can undermine norms and laws; they can also support them…Norms constrain through the stigma that a community imposes; markets constrain through the price that they exact; architecture constrain through the physical burdens they impose; and law constrains through the punishment it threatens." He says that the code that sets these four features "constrain some behavior by making other behavior possible or impossible. The code embeds certain values or makes certain values impossible. In this sense, it too is regulation,

out, that "[c]ode is never found; it is always made [hence] [w]e can build [the] code…to protect values we believe are fundamental [or] to allow those values to disappear."[86] Lessig, who traces the increased regulation of cyberspace, analyzes different means of exercising control through the premises of code, and he concludes that "they differ in the values they embrace."[87] Lessig helps us to realize the power of codes in cyberspace, but also their provisional character, and their existence beyond technicality. "Code codifies values," he says, "and yet, oddly, most people speak as if code were just a question of engineering [or] best left to the market [or] best left unaddressed by government."[88] He points out that most of us "believe that there are collective values that ought to regulate private action."[89] A striking example is the origins of planning regulation, which codified some collective values to protect public health, safety, and welfare. Tremendously successful in the early twentieth century, these original values became hopelessly obsolete with the transition from modern to postmodern society, and beyond, and they have repeatedly been proven insufficient to meet the social, cultural, and economic premises of emerging lifestyles.[90]

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just as the architectures of real-space codes are regulations." (124-125) See Lawrence Lessig, *Code: And Other Laws of Cyberspace* (New York: Basic Books, 1999).

[86] Ibid., 6.

[87] Ibid., 34.

[88] Ibid., 78.

[89] Ibid., 320.

[90] The planning scholars Bruce Katz, Andy Altman, and Julie Wagner observe that "the population living in the world's cities [constitute] the majority of the world's population." They argue, hence, that "we live in an urban age." This urban age, they say, "is more than just a description of what is; it is a vision of what can be, if we imagine it, will it and deliver it." It is "happening at a dizzying pace and with a scale, diversity, complexity and level of connectivity that challenges traditional paradigms and renders many conventional tools and practices obsolete." They observe that "cities lack a coherent roadmap to realize the promise of the urban age," and they "call for an urban agenda that matches the pace and intensity of the urban age." They detect numerous shifting premises that will require new approaches on how to direct and manage urban growth. They point to "five qualities of [twenty-first century] urbanization -- scale, speed, diversity, complexity and connectivity -- [which] place cities at the centre of the global economy, global challenges and, ultimately, global solutions." It is the "messy intersection of [these] activities," they say, that generate "the physical elements that advance competitive, sustainable and inclusive cities." We need, however, to "find new languages and methodologies to capture the complex reality of cities. The twentieth-century notion of measuring density, for example, fails to reflect the wide range of economic, residential

So what values are supposed to shape contemporary codes? Do we have any value systems that seek not just to avoid, or fix, some historical issues, but also to embrace future opportunities? We have seen, throughout the twentieth century, how regulatory frameworks based on prescriptive rules and ethical principles have marginalized emerging tendencies and hampered social, cultural, and economic progress. By grounding city planning regulation on certain values, we again run the risk of bypassing or repressing the new ideas that surface outside the realm of normalized value systems. This dissertation explores, therefore, a parallel system to common regulation, where architectural manipulations of codes are instigated to seek out, and test, the discrepancies between zoning and civic life. Not generated for the purpose of writing new codes, architectural manipulations of zoning regulation could become the agent of change, critically processing some tentative ideas and pointing to repercussions and synergies. By constructing new codes on critical analysis of the findings made by architecture, this prototyping urbanism could gradually adjust the premises of city building regulation through the circumstances that drive civic life.

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and social activities that are simultaneously underway in all parts of the city. Cities are not black and white, but shades of grey, increasingly blurring the line between the working world and the living world, informal and formal activities." See Bruce Katz, Andy Altman, and Julie Wagner, "An Agenda for the Urban Age," in *The Endless City*, ed. Ricky Burdett and Deyan Sudjic (London: Phaidon Press Ltd, 2007).

ARCHITECTURE AND URBANISM

The scope of this dissertation concerns the codes that, through urban planning, regulate the form and use of architecture. Hence, the relationship between architecture and urbanism needs to be historically and theoretically contextualized. Françoise Choay offers useful scholarship for such contextualization. Analyzing two types of instaurational writing, both having "the explicit aim of developing an autonomous conceptual apparatus in order to conceive and build new and unknown forms of space," she takes the first architectural treatise -- *De re aedificatoria* by Leon Battista Alberti, presented to Pope Nicholas V in 1452 and published in 1485 -- and the first utopian text -- *Utopia* by Thomas More, published in 1516 -- as lenses through which to trace the division between architecture and urbanism.[91]

Analyzing *De re aedificatoria*, Choay discovers "that for Alberti there is no difference between the approach of the builder of buildings and that of the planner of cities."[92] Taking his generative rules of *firmitas* and *commoditas* as primary guidelines for the building of any structure, Alberti made the city "an integral part of the edification."[93] When tracing the subsequent evolution of the architectural treatises in the late Renaissance and the Classical Age, however, Choay discovers a gradual elimination of the concept of *commoditas*, which renders the disappearance of "the city as a specific and comprehensive edifice."[94] It is the elimination of Alberti's *commoditas* within

[91] Choay, *The Rule and the Model: On the Theory of Architecture and Urbanism*, 6.
[92] Ibid., 81.
[93] "For Alberti, it is not possible to achieve beauty unless the rules of *firmitas* and *commoditas* have first been observed." See Ibid., 186. Françoise Choay writes that "[u]nlike the treatise writers of the Classical Age, who focus on the architecture of individual edifices and neglect the city, for Alberti the city is indeed an integral part of the edification." See ———, *The Rule and the Model: On the Theory of Architecture and Urbanism*, 81.
[94] Françoise Choay traces two treatises that followed Alberti, *Trattato d'architettura* by Antonio di Piero Averlino, called Filarete (written between 1451 and 1465) and the *Trattato d'architettura civile e militare* of Francesco di Giorgio Martini (composed sometime between 1481 and 1492). She discovers the gradual dominance of *firmitas* in concurrent treatises, which culminates with Jacques- François Blondel, who "devotes the majority of his treatise to

the context of the architectural treatise that inevitably causes a split between architecture and urbanism.

We can point to other significant transcripts throughout history that draw from Alberti's discourse on the edifice but, for various reasons, intensify the split between architecture and urbanism. King Philip II's *Laws of the Indies* of 1573 and Giovanni Battista Nolli's *Nuova pianta di Roma* of 1748, for example, signify such works.[95] If we, however, adhere to Choay's

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the question of how the orders contribute to the beauty of buildings." See Choay, *The Rule and the Model: On the Theory of Architecture and Urbanism*, 187,88.

[95] For Alberti's discourse on the edifice, Françoise Choay observes that Alberti's rules didn't "concern building in general, but the diversity of possible edifices, and, in particular, the noblest of them all, the city." See Ibid., 78. King Philip II's *Laws of the Indies*, Robert C. Smith recognizes the influence Leon Battista Alberti had on the writing of the *Laws of the Indies*. Smith also observes the failure of adopting Alberti's geometry for the making of colonial cities, which points to a schism between Alberti's geometrical principles and the pragmatics of laying out urban plans. Smith says: "In devising their plan the Spaniards were obeying the trend established by Italian humanists of the 15th century, who revived in theory, if not in fact, the orderly layout of classical cities, for none of their designs were actually carried out. Men like Alberti and Filarete based their plans for ideal cities upon the monumental concept they obtained from reading the text of Vitruvius, the chief original written source for information on Graeco-Roman architecture. From him they developed their taste for broad squares, stately colonnades and straight thoroughfares, but they used these features on a radial rather than a gridiron basis, apparently because Vitruvius was not sufficiently specific in describing the street pattern of his city and because the radial system was common in the Middle Ages. Thus none of the town plans of the Italian humanists which came to be known in Spain by the early years of the 16th century can be considered precise models for the master plan of the Laws of the Indies." See Robert C. Smith, "Colonial Towns of Spanish and Portuguese America," *Journal of the Society of Architectural Historians* 14, no. 4 (December, 1955): 4. The *Laws of the Indies* evolved during an extended time period, "but it was not until…13 July 1573, that Philip II issued a comprehensive compilation expanding and incorporating previous decrees by Ferdinand and Charles." See Dora P. Crouch, Daniel J. Garr, and Alex I. Mundigo, *Spannish City Planning in North America* (Cambridge, Mass: The MIT Press, 1982), 2. For Giovanni Battista Nolli's *Nuova pianta di Roma*, Pier Vittorio Aureli says that "[t]he figure-ground distinction that Nolli introduced has often been discussed as symbolizing the difference between public and private space, but such interpretation is incorrect." "Rather," Aureli argues, "the distinction between the figure of architecture and the ground of the city introduces a more subtle but decisive difference in the cartographic representation of the city: the difference between architectural space and urban space." Following Aureli's argument hence, Nolli's plan becomes a signifier of the gradual division between architecture and urbanism. Aureli argues that "[t]he resulting *Nuova pianta di Roma* was the first rigorous scientific survey of Rome." He contextualizes Nolli's plan in evolution of cartographic knowledge during the first half of the eighteenth century. With new knowledge, "archeology advanced the principal mode of scientific investigation [which] was embraced by the Enlightenment as a scientific reconstruction of the past based on empirical knowledge of findings in the field and their accurate stylistic classification." From an urban point of view, this progression catalyzed interest in the *instauration urbis*. "*[I]nstauration urbis*, which literately means 'the installment of the city', and in practice involved the reconstruction of the ancient form of the city," was developed by Pope Nicholas V in the late fifteenth century. Aureli tells us that "[f]rom the beginning of his papacy in 1447, Pope Nicholas V explicitly envisioned Rome as the heir of its ancient empire and translated that vision into a plan for the city. The ghostwriter of this vision was Leon Battista Alberti, whose architectural treatise *De re aedificatora*

mapping of the exclusion of *commoditas* from the writing of architectural treatises, we will discover how the gap between architecture and urbanism is increased with the emergence of a new paradigm, which is science.[96] Rising primarily from the context of More's utopia, science fails to connect solely with the concept of *firmitas* and, thus, it distances itself from the discipline of architecture. The progressive destruction of the figure of the architectural treatise, which follows the implementation of science, complies, according to Choay, with the emergence of two new agencies for the development of inhabited space -- the scientist and the engineer.[97] The schism between architecture and urbanism is finally solidified in 1867 when Ildefons Cerdá draws from the paradigm of science to write *The General Theory of Urbanization*, which marks the birth of urbanism as an autonomous discipline.

Architecture and science remain disconnected throughout the nineteenth and early twentieth centuries, as architectural historian Siegfried Giedion so thoroughly describes.[98] Hence, so do

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was the theoretical framework of the reinvention of the city in continuity with the legacy of Roman civilization." Aureli's scholarship, hence, shows explicit connections between Nolli's *Nuova pianta di Roma* and Alberti's *De re aedificatora*. See Aureli, *The Possibility of an Absolute Architecture*, 85-140.

[96] Françoise Choay calls the rise of science "[t]he great disturbance [because it] begun to challenge the traditional practices of Western societies" in the second half of the eighteenth century, "which triggered the emergence of new human relations to the world and to knowledge [and] affected the organization of the two instaurational paradigms." She argues that "[t]here factors in particular contribute to this: the development of the physical sciences and their technical applications; the medicalization of social knowledge and practices; and the establishment of 'disciplinarity'." See Choay, *The Rule and the Model: On the Theory of Architecture and Urbanism*, 213.

[97] "The progressive destruction of the figure of the treatise can be exemplified by a work historians have unjustly neglected, the *Mémoires sur les objects les plus importants de l'architecture* published in 1769 by Pierre Patte, architect to Louis XV." See Ibid., 214.

[98] The architectural historian Siegfried Giedion traces the schism between architecture and technology. This schism, he says, "opened in the course of the nineteenth century between science and its techniques on the one hand and the arts on the other, and hence between architecture and construction." Giedion contextualizes this schism with the foundation of the two schools in Paris: The École Polytechnique (1794) and the École des Beaux-Arts (1806). While the latter "fostered a constantly increasing isolation of the arts from the conditions of ordinary life," the former attempted to "establish a connection between science and life, to bring out the practical applications to industry of discoveries in the mathematical and physical sciences." He credits "Rondelet -- the theorist whose work on the Panthéon in Paris prevented its collapse -- who first insisted that scientific techniques had an important role to play in architecture." With the "quickening of the advance of industry in the middle of the nineteenth century," he says, "there becomes evident a feeling on the part of the architect that his privileged position is menaced and the traditions

architecture and urbanism.[99] The first systematic interconnection of the two disciplines began again in June 1928 when the *Congrès Internationaux d'Architecture Moderne* (CIAM) was founded in La Sarraz, Switzerland. Rooted in the discipline of architecture, CIAM rigorously debated and formulated "the basic elements of a new approach to architecture and urbanism."[100] The architecture of CIAM was fighting the classically-oriented Beaux-Arts school and advocated new architectural approaches through "the rationalization and standardization of building components," while its urbanism, which complied with "earlier Garden City ideas," was "based on the concept that modern industrial cities should be designed to improve the living conditions of the majority of the population, to increase economic efficiency through transportation improvements, and to protect the natural environment as a place for mass recreation."[101] Drawing from both architecture and urbanism in their creation of discourse, CIAM illuminated disciplinary intersections.

CIAM's integration of architecture and urbanism was to be molded into application through the birth of a new discipline formally known as 'urban design'. The architectural historian Eric Mumford traces the emergence of urban design though the institutionalized platform of Harvard

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of his art outmoded." He argues that the interest for bridging architecture and technology was growing in the mid nineteenth century. He takes a number of quotes, from 1849 to 1924, to support his argument. He recognizes a "solution of the break between the architect and the engineer" with Le Corbusier's 1924 opinion that "[t]he century of the machine awakened the architect. New tasks and new possibilities produced him. He is at work now everywhere." See Sigfried Giedion, *Space, Time, and Architecture: The Growth of a New Tradition*, Fifth ed. (Cambridge, Mass: Harvard University Press, 1967), 211-18.

[99] This argument omits, for example, Camillo Sitte's urban theory. Sitte, who drew from Alberti's treatise to reconnect architecture and the city, discarded Cerdá's scientific urbanism in favor for "a strictly aesthetic perspective" on the city. For the purpose of this literature review, the term urbanism is used in compliance with Ildefons Cerdá's scientifically outlined urbanism. See Choay, *The Rule and the Model: On the Theory of Architecture and Urbanism*, 255-60.

[100] "From its founding, CIAM was divided between German-speaking and Bauhaus-centered radical architects active in Germany, Switzerland, Holland, and Eastern Europe, including Hannes Meyer and the more Paris-oriented adherents of Le Corbusier." See Eric Mumford, *Defining Urban Design: CIAM Architects and the Formation of a Discipline, 1937-69* (New Haven: Yale University Press, 2009), 2.

[101] Ibid., 3.

GSD, which served as a context in the 1940s and ´50s to reconnect various CIAM members in exile. Drawing from CIAM's linkage of "social action and visual perception," urban design emanated, primarily, from the ideas of Josep Lluís Sert and Siegfried Giedion, and their interest in utilizing architectural design to rehabilitate the urban core of American cities.[102] Becoming a discipline via a series of conferences organized by Sert in the mid and late 50s, urban design was channeled through his studio teaching at Harvard GSD to become a graduate program in 1960 which, managed by Sert, combined instrumental scholarship from various prominent figures, such as Kevin Lynch, Walter Gropius, and Maxwell Fry.[103]

Becoming a model for architecture and planning schools around the world in the mid 1960s, the disciplinary implications of urban design were expanded in New York City.[104] Turned into practice with Major Lindsay's Urban Design Group (UDG) of the New York City Planning Commission, the new discipline became a critical project at the Institute for Architecture and

[102] Regarding social action and visual perception, see Ibid., 145. Regarding the prominence of Josep Lluís Sert and Siegfried Giedion, see Mumford, *Defining Urban Design: CIAM Architects and the Formation of a Discipline, 1937-69*, 114. Regarding architecture's role in the renovation of American city centers, the rehabilitation of the urban core was a central theme in the founding of urban design. Josep Lluís Sert, for example, began in 1955 to prepare for the First Harvard Urban Design Conference, which would be held at Harvard GDS in April, 1956. Sert's preparations were centered on his "concept that "after a period of rapid growth and suburban sprawl," the centralized city should remain a key element of American culture." (122) The idea of using architectural design to rehabilitate the core of American cities was problematized in a number of occasions. Sert advocated, for example, in line with Louis Kahn and Edmund Bacon that "the metropolitan congestion could be better reduced by city center redevelopment along modernist lines." (104) He responded to Jacob B. Bakema's criticism of the core that "the core should be understood not as a traditional monumental civic plaza but as a monument of awareness that could be enhanced (but not produced) by architecture." (109) See ———, *Defining Urban Design: CIAM Architects and the Formation of a Discipline, 1937-69*.

[103] For Sert's collaboration, see Mumford, *Defining Urban Design: CIAM Architects and the Formation of a Discipline, 1937-69*, 137. Jonathan Barnett widens the context of urban design. He says that "[t]he development of urban design as a separate technical specialty is relatively recent, but has been rapid. The first academic curriculum in the United States was the University of Pennsylvania's Civic Design Program, begun in 1957, followed by Harvard's Urban Design Program in 1960. Now it is offered at dozens of universities either as a degree program or as an area of concentration within architecture or city planning." See Barnett, *An Introduction to Urban Design*, 12-13.

[104] Mumford, *Defining Urban Design: CIAM Architects and the Formation of a Discipline, 1937-69*, 176.

Urban Studies (IAUS).[105] While the UDG -- also dubbed the Task-Force for Urban Design -- was formed around a triad of Yale graduates, consisting of Jonathan Barnett, Richard Weinstein, and Jaquelin Robertson, the IAUS came primarily out of Princeton through its founding members, consisting of Peter Eisenman, Robert Gutman, Colin Rowe, and Arthur Drexler.[106] We can cross reference the practical and critical of urban design through two significant sources, both published 1982, which are Barnett's *An Introduction to Urban Design* and the English translation of Aldo Rossi's *The Architecture of the City*.[107] Due to the interest of this dissertation, we will focus on different approaches to the rules that govern architecture's role in the making of cities.

For both Barnett and Rossi, cities are designed by rules that govern the shaping of architecture.[108] Perceiving the city as an agglomeration of elements, they both suggest

[105] David Grahame Shane argues that "Jonathan Barnett, writing as a practicing designer, describes the emergence in the late 1960s of the first professional group to be called 'urban designers'." See David Grahame Shane, *Recombinant Urbanism: Conceptual Modeling in Architecture, Urban Design and City Theory* (London: John Wiley & Sons Ltd, 2005), 120.

[106] For UDG, Thomas S. Hines writes about "Richard Weinstein who, along with Jaquelin Robertson and Jonathan Barnett, formed Mayor John Lindsay's triad of architectural planners in the Manhattan-based Urban Design Group of the New York City Planning Commission." See Thomas S. Hines, *Franklin D. Israel: Buildings + Projects*, ed. Joe Day and Dan Waterman (New Yok: Rizzoli, 1992), 211. For IAUS, Harry Francis Mallgrave explains that "[t]he institute [IAUS] had been founded in early 1967, and historically it was related to CASE in that it grew out of Eisenmans's dissatisfaction with the lack of direction of that organization." See Harry Francis Mallgrave, *Modern Architectural Theory: A Historical Survey, 1673–1968* (New York: Cambridge University Press, 2005), 411. Kenneth Frampton explains, in conversation with Stan Allan and Hal Foster, that "[w]hen I first went to Princeton, he [Peter Eisenman] organized a group called CASE, Committee of Architects for the Study of the Environment. It was a rather inclusive group that held a number of hot, fairly confused weekend seminars." See Stan Allen and Hal Foster, "A Conversation with Kenneth Frampton," *October* 106 (Fall, 2003): 42. For IAUS, see also Sylvia Lavin, Per-Johan Dahl, and Sergio Miguel Figueiredo, "IAUS," *Log* 13/14 (Fall, 2008).

[107] Barnett, *An Introduction to Urban Design*. Rossi, *The Architecture of the City*.

[108] Jonathan Barnett says that "designers of cities should seek to write the rules for the significant choices that shape the city, within and institutional framework that can be modified as times, and needs, change. See Barnett, *An Introduction to Urban Design*, 12. Rossi is looking for the "true laws" of architecture. For Rossi, the architectural type "is the *rule*, the structuring principle of architecture." See Rossi, *The Architecture of the City*, 40, 46.

architecture to lead the modification of the rules that, through design, dictate urban change.[109] The difference between Barnett's and Rossi's approach to the modification of rules, however, unfolds at the intersection of architecture and the environment it which alteration takes place. For Barnett, modification of rules describes an interdisciplinary process where interaction with various stakeholders facilitates the writing and rewriting of the guidelines that dictate urban transformation.[110] For Rossi, on the other hand, modification of rules is an autonomous process where the morphology of types generates new guidelines for how the architecture of the city is to be designed. The difference between Barnett and Rossi has not so much to do with ideals on the form and use of architecture, but rather with a larger question about architecture's role as a civic art. For Barnett, the modification of rules describes the development of public policy, where architectural design is used to solve urban problems, such as growth, conservation, and change.[111] For Rossi, the modification of rules is an integral process of urban evolution to which architecture must comply, being the agent of both the permanent monuments that contain memory, and the continuous evolving stage for human events.[112] Through their modification of rules, however, both Barnett and Rossi seek to limit, rather than multiply, architecture's capacity to negotiate complex relations between the universal and the specific aspects of urbanism. Through Barnett's compliance with the universal principles of zoning, and Rossi's confirmation

[109] Aldo Rossi says that "[t]he laws of reality and their modifications thus constitute the structure of human creation. It is the purpose of this study to organize and order these principal problems of urban science." See Rossi, *The Architecture of the City*, 22. Not interested in the dichotomy of city and architecture but rather in the architecture of the city, Rossi describes the urban environment as a form assembled by types and typologies. See ———, *The Architecture of the City*.

[110] Barnett says that cities "are created by a decision-making process that goes continuously, day after day. If people trained as designers are to influence the shape of the city, they need both a strong vision of what ought to happen and the opportunity to be present when the critical decisions are being made." See Barnett, *An Introduction to Urban Design*, 10.

[111] "Design is a methodology that, when applied to public policy, can help solve some problems of misallocated resources, misused land, and the unnecessary destruction of historic buildings." See Ibid., 7, 12.

[112] Rossi, *The Architecture of the City*, 22.

to a series of universal typologies, they both adhere to the abstract field of forces that always strive to repress the specific aspects of urbanism.

HOW TO MANIPULATE THE CODE: INTRODUCING THE CASE STUDIES

Through historical and contemporary research, *Code Manipulation: Architecture In-between Universal and Specific Urban Space* explicates three building types -- the loft, the single-family home, and the condominium tower -- that function as lenses through which to focus on the manipulation of zoning codes. The selection of cases has been made with the purpose to cover the three codes of use, coverage, and bulk regulation, which are implicit in zoning. Focusing on small- to medium-sized housing projects, the political aspects of large-scale projects are avoided, while the most pressing realm of planning regulation, which is the zoning of residential uses, is approached. Selecting projects significant for the staging of contemporary culture, using Sylvia Lavin's theorization of the term, this dissertation investigates how architectural design traverses zoning codes in a time when urban reconstruction and infill are increasingly important.[113]

[113] Sylvia Lavin says that becoming "contemporary is a project and an ambition that requires the identification of an architectural terrain that activates the sensibility of being with time." (130) She analyzes a number of architectural projects by distinguishing between contemporaneity and modernity. She concludes that contemporary architecture acts counterproductive on "concentrated gaze [to render] a superabundance of special visual effects." The effect, she says, "may be understood as a condition that is detachable form the logic of causality." Drawing form comparison with Modernist transparency, she says that "cause is not immediately visible and would be dissipated by enhanced legibility." (135) Following Lavin's theorization, all three case studies in this dissertation have been proven sensible to emerging premises of urbanity. They seek out forms and uses not yet recognized by common praxis. Not visible for the *Zeitgeist*, they all elucidate some relative effects beyond conformity. See Sylvia Lavin, "The Temporary Contemporary," *Perspecta* 34 (2002).

Each of the case studies in this dissertation fulfills three criteria:

1) Building. The building's form or content was formulated in opposition to zoning provisions adopted when the project was initiated.

2) Design. Code manipulation was rendered within the prevailing framework of zoning ordinances, with no primary intention of amendment, and it was generative for the design of architecture.

3) City. The project informed, in one way or the other, the collective enterprise of city building by engaging in the search for discrepancies between universal rules and site-specific conditions.

The following briefly introduces each of the three cases, and outlines their significance for the purpose of this dissertation.

Richard Meier's Westbeth Artists' Colony (1967-1970) in Greenwich Village, New York City, was the first legal loft building in the U.S. Manipulating single-use zoning through a drawing process specifically rendered to conceptualize the loft space, Meier's design became a benchmark for the emerging interest in the adaptive reuse of historical architecture, and a signifier of a new building type today commonly referred to as loft architecture. Emerging in the post-World War II period as a spatial typology tailored to join live and work functions, the loft space challenged single-use zoning through a grassroots revolt against Modernist city planning. The case study excavates the spatial typology of the loft by cross referencing Sharon Zukin's scholarship on loft living with Siegfried Giedion's scholarship on the history of Modernist architecture. Building upon this excavation, the case study illuminates urban forces proliferating in SoHo and Greenwich Village throughout the late 1950s and '60s to establish a context from

which the generative aspects of Meier's code manipulation can be examined and described. Tracing Meier's conceptualization of the loft, the research addresses a gap in prevailing scholarship on the loft. Recognizing the substantial body of knowledge that has been produced on the loft, primarily from the doctrines of sociology, human ecology, urban geography, and cultural studies, the case study adds new scholarship by explicating the architecture of the loft.

The Accessory Dwelling Unit (ADU), currently proliferating in the City of Los Angeles, and which, throughout the second half of the twentieth century, has been protected by R1 zoning, mobilizes a critique on low-density urbanism. The case study argues that the widespread implementation of ADUs, which often proceeds in conflict with the R1, indicates prevailing discrepancies between city planning praxis and civic life. Exploring three paradigms of suburban expansion, this case cross-references Dana Cuff's scholarship on postsuburbia with Michael Dear's urban geography to outline a context for the proliferation of ADUs in the City of Los Angeles. Examining two proactive laws passed since 1982 to promote ADU implementation in California, the case instigates a historical and theoretical evaluation of the ADU. After exploring the illegal addition of ADUs in Los Angeles, the case study takes a specific example of a legal ADU as a lens through which to contextualize the architecture of the ADU. By analyzing Daly Genik Architects' Palms Residence (2006-2009) in Venice, California, the case study elaborates on the specific qualities of the second unit, but also on its relationship to the main house, the site, and the neighborhood. The analysis indicates that the adding of density through land use intensification can serve as a generative material for the design of ADUs. The ADU describes the emergence of a new building type, thus we lack knowledge on its architectural characteristics.

Therefore, the case study builds upon previous scholarship to advance our knowledge on the architecture of the ADU.

Neil M. Denari's HL23 (2005-2011) in West Chelsea, New York City, serves as a case study to examine manipulation of the zoning envelope. The HL23 challenged the prevailing bulk code by cantilevering over the public space of the High Line Park. Drawing from Gilles Deleuze and Félix Guattari's scholarship on the rhizome, this case takes the setback codes of the High Line Transfer Corridor as subject matter to critically examine the interface between zoning and site. The case contextualizes the HL23 project with historical research on zoning updates, socio-economic alternations, and shifting real estate markets. It analyzes the edifice through different design cultures, and it cross-references Denari's design practice with planning praxis to unfold the process of code manipulation. Expanding the zoning envelope through innovative design, while still complying with the tentative values of public good and enhancing the qualities of public space, the HL23 unveils some generative aspects of code manipulation.

Following the establishment of Talen's two directions, the three case studies in this dissertation have all been realized within a zoning culture that rather complies with flexibility than predictability. Westbeth Artists' Colony and HL23 were both permitted within the framework of special district zoning, which is one of the sub-zones developed in the late 1960s, and the ADU of Palms Residence demonstrates the legalization of new architecture through amendment procedure. Hence, all three buildings results from a city planning culture that rather comply with Barnett's and Rossi's transformative codes than with the rigid codes of Talen's New Urbanism.

All three projects, however, build upon Babcock's critique, which demonstrates that zoning has evolved into a complex system of universal principles difficult to navigate and resistant to design innovation. Recognizing this condition, the case studies operate in opposition to the zoning provision that hampered the implementation of some innovative solutions tailored to meet the specific circumstances of site. Determined to develop architecture in opposition to the code, the tools that activated the design processes were strictly architectural. Indeed, even if both Westbeth and the ADU catalyzed zoning amendment, none of the three case studies engaged actively in planning praxis to rewrite the code. Instead, they all approached the constraints of code on similar basis as they approached other stipulations that, in one way or the other, hamper site adjustments, such as economical, structural, or climatic constraints. Manipulating the code solely from the realm of architecture, they did, however, seek instant feedback from the forces that in multiple ways influence -- often control -- the architecture of the site. Through their semi-autonomous approach on architectural design, they advanced the knowledge we previously gained from Barnett and Rossi to demonstrate that code manipulation may multiply architecture's capacity to negotiate complex relations between the universal and the specific aspects of urbanism.

By treating the zoning provision as one of many constraints possible to overcome through rigorous design, all three case studies turned the code into a generative material. Activated by manipulation, the mediation between the universal premise of code and the specific attributes of site rendered the creation of inhabitable space. When architects engage in code manipulation they, intentionally or not, contribute to the task of bridging architecture and science, which

Giedion is concerned about. Using design to elaborate on Choay's dichotomy between the universal and the specific, they unleash new interconnections between architecture and urbanism.

All three case studies advance Cuff's research on the interaction between property and site. Using design to render connections between architecture, urban planning, and real estate, they animate Cuff's scholarship by illuminating different approaches on how to establish relationships between the universal forces of legislation and the intrinsic qualities of the site. The feedback loop between the universal and the specific aspects of urbanism, which was instigated by Sorkin's code, is activated by all three architects. Both the Palms residence and the HL23 use design to reconceptualize the zoning provision that hampers implementation, and Westbeth Artists' Colony uses the architectural drawing to manipulate the premises of code. Using form experiments to process and represent Sorkin's mediation between memory and evolution, all case studies move beyond the utopianism of his discourse to serve as an intermediary between abstract principles and local significance. By rendering their designs through code manipulation, they all develop architecture in-between universal and specific urban space.

CHAPTER 2:

Code Rejecters: The Story of Westbeth and the Architecture of the Loft

Abstract

This case study takes Richard Meier's Westbeth Artists' Colony (1967-70) in Greenwich Village as a lens through with to examine the architecture of the loft. The case study argues that the loft emerged in post-World War II New York City as a critique on Modernist city planning. Being the consequence of a marginalized life style operating the deteriorated city, the loft implied an illegal space that met the specific needs and desires of artists. The case study builds upon Sharon Zukin's scholarship on loft living to trace the spatial significance of the loft. Drawing from Siegfried Giedion's scholarship on Modernist architecture, the case study explains the spatial typology of the loft through Modernist discourse. Using this synchronized critique and celebration of Modernism as a platform, the case study unfolds the process of loft legalization, which culminated in 1968 when Westbeth Artists' Colony was approved by planning and building regulations. Tracing the emergent advocacy for preservation, the case study focuses on Meier's conversion of Westbeth's lofts. Drawing from the design process of Westbeth, the conceptualization of the loft is analyzed, which was a necessary move to meet the criteria of universal legislation. Westbeth instigated a new building type. The case study takes a series of laws enacted in the 1970s and early '80s to examine some repercussions of post-Wesbeth loft architecture. Recognizing some advantages of legalization, a few significant articles on the loft are used to trace the architecture of the loft.

Framing and Methodology

The main research period starts in 1961 with four overlapping occurrences: the re-election of Robert Wagner, the formation of the Artists' Tenants' Association (ATA), the first rezoning of New York, and the publication of Jane Jacobs's *The Death and Life of Great American Cities*. The main research period concludes in the summer of 1968, when the Westbeth Artists' Colony was squeezed through both the FHA and the New York City Department of Buildings.

The case study research follows Robert K. Yin's methods.[114] Data collection includes literary research, interviews, archival research, and site visits. Literature has been collected at the UCLA libraries in Los Angeles, at the Getty Research Institute in Los Angeles, and online. Interviews have been conducted with Professor Emeritus, Richard Weinstein, on December 07, 2009, and on June 14, 2011; and with architect, Richard Meier, on March 29, 2011. Email correspondence with Senior Broker, Dixon Bain, on June 10, 2011, has been instrumental for the research. Archival research includes the New York City Department of City Planning and the Real Estate Board of New York in New York City. The project site was visited in July 2010 and in March 2011.

[114] Robert K. Yin, *Case Study Reserach: Design and Methods*, 3 ed. (Thousand Oaks: SAGE Publications, 2003).

THE FORMATION OF A SPACE

"*The city was a real city, shifty and sexual. I was lightly jostled by small herds of flushed young sailors looking for action on Forty-second Street, with its rows of X-rated movie houses, brassy women, glittering souvenir shops, and hot-dog vendors.*"[115]

- Patti Smith

"*The horizon must be captured.*"[116]

- Le Corbusier

Walking north in Lower Manhattan, we find ourselves facing a mesmerizing array of architectural expressions. Merging most conceivable uses that together constitute the epitome of urban life, the multiple forms and sizes of buildings we pass create a dazzling visual and sensory experience that overcomes most other cities. The late Modernist skyscrapers, which so explicitly dominate the areas around the Financial District, blend with traditional brownstones and neo-classical institution buildings, when we move beyond City Hall. Bound together by the Commissioners' grid, the heterogeneous architecture we experience on our walk indeed supports the richness of urban life that can only be obtained when various uses and aesthetic expressions are meant to coexists.

[115] Patti Smith, *Just Kids* (New York: HarperCollins Publishers, 2010), 26.
[116] Giedion, *Space, Time, and Architecture: The Growth of a New Tradition*, 519.

When we cross Canal Street and enters the district formally known as SoHo, the character of the city changes slightly. The spatial organization, with commercial storefronts on the street level and other uses above, maintains the city buzz we previously experienced. But the architecture suddenly takes on greater historical significance. Clearly dating from the nineteenth century, the beautifully-ornamented cast iron façades create what Philip Johnson called a "modular rhythm" to orchestrate the pace of our northbound walk.[117] [Figure 2.1] Varying from five to six stories, the historic buildings north of Canal incarnate a greater depth of spatial layers. Partially covered by the fire escape ladders which, due to egress code, introduce a diagonal element to the otherwise rectilinear arrangement of fenestrations, the interiors behind the cast-iron façades reveal an extraordinary spaciousness rarely found inside more contemporary buildings. [Figure 2.2] Due to the extensive window heights, the interiors give evidence of spaces initially built for industrial uses now redesigned for other uses that are difficult to label. Indeed, neither illuminated for office use nor advertised as commercial use, and not decorated for residential use, the large fenestrations of SoHo's cast-iron buildings signify an ambiguous interior space that complements the heterogeneous cityscape we traverse.

The interiors we've spotted are the former manufacturing spaces that, since the 1950s, have been converted to lofts. Built for industrial uses in the nineteenth century and doomed to demolition in the post-World War II period, these interiors have been resurrected through code violation and given new identity through architectural innovation. Legalized when Richard Meier's nearby Westbeth Artists' Colony of Greenwich Village was approved by City authorities in 1968, the

[117] Foreword by Philip Johnson in Margot Gayle and Carol Gayle, *Cast-Iron Architecture in America: The Significance of James Bogardus* (New York: W.W. Norton & Company, 1998), 7.

spatial significance of SoHo's lofts have ever since been reproduced all over New York City and beyond, to provide spaces that overcome the Modernist dichotomy of live and work, and to spur new real estate economies. Emerging from a critique on Modernist city planning, the revolt against the universal principles of zoning that unleashed the subsequent proliferation of loft development points to the inadequacy of common practices to determine rigid interconnections between the form and use of cities and buildings. Indeed, if we conform to Henri Lefebvre and consider the city not as a thing but rather "a set of relations between things," then it seems contradictory -- even wrong -- to assign absolute content to demarcated urban districts.[118] In fact, the success of the loft to challenge the separation of functions points to the fact that absolute content can hardly be assigned to a city district because the transition of activities and behaviors can never be predicted.

For architecture, the loft implies a resurrected spatial typology and a new architectural type. Resisting the separation and classification of uses that still characterizes most interior environments, loft architecture requires a different design process than most other spaces and types. When the relationship between form and content remain in flux, then the shaping of space deploys other vocabularies than the ones generally used by conventional practices. Still characterized by a rather vague definition, however, loft architecture needs to be contextualized in a greater array of disciplinary events. When explained through specific terminology, loft

[118] Henri Lefebvre defines the city as a "space which is fashioned, shaped and invested by social activities, during a finite historical period" and he continues to argue that that "space is not a thing but rather a set of relations between things." Lefebvre expands on a Marxist discourse when he argues that space "never quite becomes absolute, never quite emancipates itself from activity, from use, from need, from 'social being'." See Henri Lefebvre, *The Production of Space* (Malden, Mass: Blackwell Publishing, 1991), 73, 83.

architecture can offer a viable alternative to other spatial typologies, and thus be designed to match the needs and desires of its inhabitants.

Code Manipulation, Lifestyle, and Domesticity

The loft emerged in New York City after World War II, when marginalized forces revolted against the principles of Modernist city planning by illegally living and working in the same space. Drawing from the supplies and demands of a specific context, the illegality of combined uses, which was implicit in the early loft spaces, signifies the inability of universal zoning ordinances to process local trends and opportunities. Characterized by illegality during the post-war era, the loft was legalized and introduced to normative practices in 1968, when Richard Meier's adaptive re-use of Westbeth Artists' Colony in Greenwich Village, New York City, was approved by City governance. This transition from illegal to legal occupies the core interest of this dissertation, as it not only points to architecture's capacity to bridge the universal and the specific aspects of urbanism, but also to the transition from a marginalized space to an architectural type. Legalized through an architectural design process, which also catalyzed the implementation of the first special zoning district in New York City -- a zoning technique that, after Westbeth, was widely used by Jonathan Barnett and his team at Major Lindsay's Urban Design Group -- the loft was introduced to the forces of sovereign powers and used beyond its intentional purposes.[119] This case study does not seek to postulate a criticism on the social and cultural transformations that often have been catalyzed by loft architecture since the 1970s. This criticism has already been made by various scholars, including sociologist Sharon Zukin who,

[119] On the evolution of New York City's special district zoning, see Barnett, *An Introduction to Urban Design*, 77-98.

through her criticism on Jane Jacobs, explicates the failure of the specific urban forces of Lower Manhattan to predict how the universal forces of "capital and culture…view, and…shape, the urban spaces they inhabit."[120] Rather, the interest that mobilizes this research concerns architecture's role in the urban processes that generated the loft space, and the architecturalization of these processes. Therefore, this case study takes Richard Meier's manipulation of the codes that hampered loft development in the'60s as a lens through which to analyze the transition of the loft from space to architecture.

The loft is primarily a consequence of a new lifestyle emerging in New York City after World War II, when artists rebelled against the zoning laws that prohibited living and working in the same space. Zukin argues that this new lifestyle was a result of "two changes that occurred in the 1960s: a change in lofts and a change in middle-class patterns of consumption."[121] Taking the "change in lofts" as prime incentive for expanded research, this case study draws from Zukin's scholarship on the formation of social and cultural configurations that spurred the emergence of what she calls the loft lifestyle. Zukin argues that the loft lifestyle derived from the desire for a specific space, and she points to some qualities and configurations that characterize that space.[122] Taking the significance of the loft space as a lens through which to focus on the shifting social and cultural practices that triggered urban change, she illuminates some intersections of real estate and policy which have had a tremendous impact on how cities have been developed since the '70s.

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[120] Zukin, *Naked City: The Death and Life of Authentic Urban Places*, 17.
[121] Sharon Zukin, *Loft Living: Culture and Capital in Urban Change* (New Brunswick, N.J.: Rutgers University Press, 1989), 58.
[122] Sociologist Sharon Zukin argues that "many people choose to live in a loft because the space itself appeals to them." She points to various reasons, such as, for example, the "unfinished quality of a loft," the "detachment from the city," and the "openness [which] makes it a public space." See Ibid., 60.

The question that remains after Zukin's scholarship, however, concerns architecture's role in the formation of the loft space. The loft became a real estate success in the 1970s, and numerous architects were commissioned to design loft interiors and buildings. Still, the architectural implications of the loft remain unsolved, and we lack a disciplinary context from which to explain the spatial characteristics of the loft. Together with the general critique on zoning's inability to process use integration, this gap in prevailing scholarship on the loft has mobilized the research for this case study. We must understand the loft space if we want to describe the procedure of squeezing it through the code.

The core principle of the loft comprises a flexible arrangement of form and content rendered through the insertion of the dwelling function into a space designed for industrial use. The dwelling function encompasses, thus, a significant feature for the social and cultural background of the loft. This case study uses the term 'dwelling' with reference to Martin Heidegger's scholarship. For Heidegger, dwelling describes a process of "cultivation and construction."[123] We "must ever learn to dwell," he says, "it is the soul summons that calls mortals into their dwelling."[124] Rather conforming to space than to building, Heidegger argues that dwelling is an "activity that man performs alongside many other activities."[125] Space, for Heidegger, "is something that has been made room for" and from which dwelling, for example, "begins its presencing."[126] The use of Heidegger's scholarship on dwelling in the context of this dissertation does not necessarily require a phenomenological reading of the loft. Rather, Heidegger's

[123] Martin Heidegger, *Poetry, Language, Thought* (New York: Harper & Row, 1975), 146.
[124] Ibid., 159.
[125] Ibid., 145.
[126] Ibid., 152.

scholarship is deployed to support a more nuanced understanding of domesticity, where dwelling signifies an open-ended process, and residency a fixed end product.

Raw Spaces

The aim of accomplishing an interior space that facilitates the integration of live and work functions is not a new phenomenon. The spatial organization of Roman townhouses, for example, changed constantly according to the succession of social status obtained by the inhabitants.[127] More recently, Constantin Brancusi has shown us that certain spaces are open to instant re-programming, and thus support the seamless interconnection of leisure, work, and contemplation.[128] From 1905, Brancusi lived and worked in a "combined studio and home," with the purpose of achieving an easy transition from one activity to another. With the advent of the reform movements in the early twentieth-century, however, versatility and interconnection were replaced by taxonomy and separation, which aimed to improve the quality of life in overpopulated cities. Following the reformists' ideas, zoning was introduced as a primary tool to regulate the uses of land and buildings, which segregated functions by law and thus made integration of uses illegal. The separation of uses facilitated by zoning was celebrated by Le Corbusier's *Functional City*, and by CIAM's *Athens Charter* of 1933.[129] [Figure 2.3] A core principle of CIAM urbanism was to divide "architectural activity into four major areas [hence] dwelling, recreation, work, and transportation were differentiated as distinct fields of

[127] On the flexibility of Roman houses, see for example Guy P. R. Metraux, "Ancient Housing: "Oikos" and "Domus" in Greece and Rome," *The Journal of the Society of Architectural Historians* 58, no. 3 (September, 1999).
[128] On Constantin Brancusi's life space, see for example Eric Shanes, *Constantin Brancusi* (New York: Abbeville Press, 1989).
[129] Le Corbusier's Functional City was based on the four functions; dwelling, work, amusement (later changed to leisure), and circulation. These functions made up his argument for CIAM 4, 1933: The Functional City, which thus would have a great impact of the formation of CIAM's Athens Charter. See Eric Mumford, *The CIAM Discourse on Urbanism, 1928-1960* (Cambridge, Mass: The MIT Press, 2000), 79.

architecture…and assigned mutually exclusive urban zones."[130] However, Modernist use separation was to be challenged by artists in the post-World War II period. Appearing most frequently in New York City, artists' defiance of CIAM urbanism was channeled though loft dwelling.[131]

As pointed out in various texts, loft dwelling emerged in Lower Manhattan after the World War II, then boomed in the 1950s, when artists began to violate zoning and building codes more frequently by taking up residence in the outmoded manufacturing spaces they acquired for the purpose of art production.[132] [Figure 2.4] Often dating from the nineteenth century, the interior spaces of these buildings proved feasible to support an emerging lifestyle that nurtured the social and cultural premises of a specific urban context that erased the separation between living and working. Sharon Zukin describes the loft as a "relatively large, generally open space on each floor in multi-story industrial buildings and warehouses."[133] And it was exactly these kinds of spaces that the artists illegally resided in when populating Lower Manhattan in the '50s. Robert Rauschenberg's 1952 loft on Fulton Street is a notorious example.[134] But also Jasper Johns's 1954 loft on Peal Street and Alison Knowles's 1957 loft at Broadway and Canal exemplify the

[130] Ignasi. de Solà-Morales, *Differences: Topographies of Contemporary Architecture*, ed. Sarah Whiting (Cambridge, Mass: The MIT Press, 1997), 43.
[131] By defining dwelling as a process I conform to Martin Heidegger's discourse on habitation. Ignasi de Solà-Morales explain Heidegger's terminology when he says that "dwelling, which begins as a process of putting an end to our uprootedness, ultimately leads to construction. The end of dwelling is residence, and the process of construction is thereby to erect a residence, a home, a place that constitutes a spiritual or moral core, and in which life engages things." See Ibid., 47. For Martin Heidegger's discourse on habitation see, for example, Heidegger, *Poetry, Language, Thought*.
[132] James R. Hudson quotes George Macuinas, who "maintained that artist were living and working in the midtown garment district during World War II." See James R. Hudson, *The Unanticipated City: Loft Conversions in Lower Manhattan* (Amherst: University of Massachusetts Press, 1987), 30. Various literature dates the beginning of loft dwelling with Willem de Kooning's 1946 loft. See, for example, Alexander Gorlin, "Lofty Ideals," *Metropolis* 27, no. 1 (July-Aug, 2007): 112.
[133] Zukin, *Loft Living: Culture and Capital in Urban Change*, 1.
[134] Hudson, *The Unanticipated City: Loft Conversions in Lower Manhattan*, 30.

spaces that emerged from the problematic situation that American urbanism faced in the '50s.[135] Due to issues like restructuring of industrial production methods, Fordist regionalization, and general trends in decentralization, industrial production in the U.S. faced a rapid relocation, moving from the urban cores to the hinterlands, hence leaving major districts in the center of cities to de-populate and deteriorate.[136] This was particularly true for the area south of Houston Street, today formally known as SoHo, which had been built during the nineteenth century as a manufacturing district.[137] [Figure 2.5] Suffering depopulation of industries, the number of abandoned cast-iron buildings south of Houston rapidly increased, which, zoned for service and light industry, became targets for demolition. David Rockefeller wanted to raze the old

[135] Read about Jasper Johns and Rachel Rosenthal moving to separate lofts on Pearl Street after meeting in 1954. Jill Johnston, *Jasper Johns: Privileged Information* (London: Thames & Hudson, 1996), 128-30. Before becoming a Fluxus artist, Alison Knowles inhabited a loft in 1957 upon suggestion of her teacher, Adolph Gottlieb. See Zukin, *Loft Living: Culture and Capital in Urban Change*, 96.

[136] For the restructuring of industrial production methods, in the opening essay to the catalogue for the 1967 exhibition *The New City: Architecture and Urban Renewal*, Former Deputy Executive Director of the New York City Planning Commission Sidney J. Frigand discusses the loss of jobs in postwar New York. Frigand argues that "[c]hanges in the nation's technology have had profound effect upon our city. Automation has created a radical change in the job market. The nature of production has shifted from tall building to horizontal layouts, creating demands for cheap land that New York finds hard to satisfy." See Sidney J. Frigand, "A Perspective on Planning," in *The New City: Architecture and Urban Renewal (an Exhibition at the Museum of Modern Art, New York, January 23-March 13, 1967)*, ed. New York The Museum of Modern Art (New York: The Museum of Modern Art, New York, 1967), 5. Following this shift in production, old buildings were outmoded because they "could not accommodate new manufacturing technologies, which favored large horizontal spaces organized so that overhead cranes could shift machinery about with ease." See Hudson, *The Unanticipated City: Loft Conversions in Lower Manhattan*, 27. For Fordist regionalization, Edward W. Soja discusses the post World War II depopulation of city centers in the U.S. Soja refers to the emerging Fordist regional metropolis which thus characterized the urbanization of postwar America. Soja argues that "[b]acked by the powerful alliance of big government, capital, and labor, the growth of mass production and its space-consuming assembly lines, along with the even more space-demanding rise of consumerism and mass-suburbanization, led to an increasing dispersal of the once highly centralized location of factories and blue-collar workers in and around the downtown area of the central city." See Edward W. Soja, *Postmetropolis: Critical Studies of Cities and Regions* (Malden, Mass: Blackwell Publishing, 2000), 115. The decentralization of American cities during the post-war period has been discussed in many texts. In part, the procedure follows Edward W. Soja's Fordist regional metropolis. However, the changing transportation costs resulting from the federal investments in the National Interstate Highway system add to the discussion. Due to the improved infrastructure, cargo traffic moved from trains to trucks, thus railroad hubs were no longer necessary for the distribution of goods. Alan Altshuler, James P. Womach, and John R. Pucher elaborate on the post-war investments in highway infrastructure, and their affect on centrally-located industries and businesses, arguing that "[i]mprovments in communication have been rapidly increasing the locational freedom even of office activities traditionally viewed as downtown captives." See James P. Womack Alan Altshuler, John R. Pucher, *The Urban Transportation System: Politics and Policy Innovation* (Cambridge, Mass: The MIT Press, 1979), 23.

[137] Read about the 1968 invention of the term SoHo in Jim Stratton, *Pioneering in the Urban Wilderness* (New York: Urizen Books, 1977), 31-32.

neighborhoods and build a new town "for members of a financial and professional elite" and Robert Moses wanted to turn the district into a freeway interchange.[138] In the absence of decisions, however, the raw spaces of the deserted warehouses were gradually, and illegally, converted to lofts.

The *Janus* of Modernism

There are numerous factors why the outmoded cast-iron buildings south of Houston began to be converted to lofts in the '50s. Scholars have, for example, pointed to the financial benefits caused by a surplus of empty industrial spaces, which were relatively cheap to rent and easy to fix; to the renewed interest in urban culture, which emerged from some shifting preferences to modernity; and to the specific qualities of the district, which attracted artists and stimulated social interaction.[139] For this case study, however, we are more interested in the spatial qualities that fostered loft dwelling. If the resurrected warehouse spaces contained some specific characteristics capable of stimulating the creation of what the sociologist Sharon Zukin refers to

[138] For David Rockefeller, see Zukin, *Loft Living: Culture and Capital in Urban Change*, 44. For Robert Moses, see Fishman, "Revolt of the Urbs: Robert Moses and His Critics," 123.

[139] Jim Stratton published a do-it-yourself manual on how to convert a loft, with guidelines on how to avoid conviction. See Stratton, *Pioneering in the Urban Wilderness*. James R. Hudson argues that "[t]he appeal of SoHo was the availability of large spaces at very low rent." See Hudson, *The Unanticipated City: Loft Conversions in Lower Manhattan*, 31. Richard Plunz tells us that in "1961 Esquire magazine published an article on the "loft generation," pointing out the advantages of low rents, large spaces, and the potential for individual initiative within urban housing." See Richard Plunz, *A History of Housing in New York: Dwelling Type and Social Change in the American Metropolis* (New York: Columbia University Press, 1990), 316. Richard Kostelanetz describes the reduced rents he experienced when moving to his SoHo loft. See Richard Kostelanetz, *SoHo: The Rise and Fall of an Artists' Colony* (New York: Routledge, 2003), 30-31. Sharon Zukin points to the shifting preferences to modernity that were channeled through loft dwelling, such as the quest for authenticity; the individualization of mass production; and the reconciliation of home and work, which recaptured some of the urban vitality that had been lost in the wake of American suburbanization. See Zukin, *Loft Living: Culture and Capital in Urban Change*, 66-70. James R. Hudson points to the social interaction that was channeled through the agglomeration of artists living in lofts and working with the materials and the expertise found in the area. See Hudson, *The Unanticipated City: Loft Conversions in Lower Manhattan*. Richard Kostelanetz points to the "arrival of galleries exhibiting art, which meant that fortunate artists could not only live and work but also sell in the same neighborhood." See Kostelanetz, *SoHo: The Rise and Fall of an Artists' Colony*, 31.

as a “loft lifestyle,” then we want to extract the typology of that space.[140] Drawing from previous scholarship, we can frame some attributes of the loft space. By cross referencing these attributes, we can start to define a disciplinary context for the architecture of the loft.

Most of the cast-iron buildings south of Houston were composed of five to six stories, and located in a dense urban setting. They were vertically organized, with one open manufacturing space on each floor, and their building footprints were generally small and narrow due to the limited lot sizes that grew out of the Commissioners’ grid. [Figure 2.6] Developed for light industry, such as the production of textiles, fashion accessories, and cheap household necessities, the buildings were structurally dimensioned for exceptional loads that overcame any conventional building.[141] These tectonic qualities became an important feature for the creation of loft space. The sociologist James R. Hudson tells us that the warehouses “had such great bearing capacities that large sculptures could be undertaken on the upper floors, which could easily be reached by the large freight elevators in the buildings,” and Zukin describes the high ceilings with vaulted arches and cast iron columns that stand in stark contrast to the fragile materials generally used in current buildings.[142] Hence, the tectonic qualities of the cast-iron buildings provided robust interiors, which became essential for any artist engaged in the emerging trends

[140] See chapter 3 “The Creation of a ‘Loft Lifestyle’” in Zukin, *Loft Living: Culture and Capital in Urban Change*, 58-81.
[141] SoHo-Lofts.com, "History of SoHo -- New York, Ny " SoHo Lofts: New York City, NY <http://www.soho-lofts.com/soho-history.html>.
[142] Hudson, *The Unanticipated City: Loft Conversions in Lower Manhattan*, 31. Zukin, *Loft Living: Culture and Capital in Urban Change*, 2.

of American art and culture in the '50s, including the production of immense paintings and sculptures, and the execution of audience-oriented happenings and performances.[143]

The tectonic qualities were not, however, the only feature of the outmoded cast-iron buildings that nurtured art practice. Equally important were the phenomenological aspects of illumination and spaciousness that characterized the manufacturing spaces.[144] When the cast-iron buildings were erected in the late nineteenth century, the supply of electricity was limited hence natural light was the primary source of interior illumination. As the access to light was hampered by surrounding buildings, the interiors were designed with great volume to provide extra light. With immense fenestration, the spaciousness of the nineteenth-century workspace regulated the illumination of the workplace to improve labor efficiency. [Figure 2.7] The exceptional luminosity, proven essential for the productivity of the nineteenth-century workforce, became a valuable resource for the production of art in the post-World War II period.

Tectonics and spaciousness were imperative for art production, but it was the open plan that made it possible to insert the dwelling function in the work space. [Figure 2.8] Indeed, it was the absence of interior subdivisions that rendered the flexible interconnection of live and work, which challenged the Modernist land use principles, and transformed the warehouse interiors. Organized by circulation rather than by hierarchies of function, the open plan describes the

[143] The professor of architecture Richard Plunz points to the increased size and weight of the Abstract Expressionists' artworks. See Plunz, *A History of Housing in New York: Dwelling Type and Social Change in the American Metropolis*, 314. The emergence of happening and performance art in New York City coincided with the booming loft scene of the 1950s. Allan Kaprow's 1959 happening "18 Happenings in 6 Parts" marks a beginning for happening and performance art. See David Joselit, *American Art since 1945* (London: Thames & Hudson Ltd, 2003), 50-55.

[144] Iñaki Ábalos and Juan Herreros use the history of office space to discuss the relationship between artificial climate controls and production. See Iñaki Ábalos and Juan Herreros, *Tower and Office: From Modernist Theory to Contemporary Practice*, ed. Joan Ockman (Cambridge, Mass: The MIT Press, 2003), 39-40.

primary attribute of the loft space. Zukin observes, in concurrence with other scholars and professionals, the programmatic repercussions of the open plan.[145] "The sheer physical layout of most lofts, interrupted by few doors or walls," she says, "opens every area and every social function to all comers."[146] The controversial act of adding the dwelling function by commemorating the spatial significance of the open plan dissolved all aspect of conventional program. Zukin argues that the absence of "barriers between 'service' and 'entertainment' areas eliminates the hierarchy of functions that is typical of most household arrangements."[147] Lofts don't have drawing rooms, morning rooms, or dressing rooms," she says, "they imply an easy transition from one activity to another."[148] Indeed, the open plan marks the key feature of the loft space as it renders spatial flexibility and eradicates conventional program.

Zukin deploys Frank Lloyd Wright's open plan discourse to contextualize the spatial significance of the loft. She pays particular attention to Wright's move to "open up the kitchen to the dining room so that the "work space," as Wright called it, flowed into the living area."[149] Zukin's faith in Wright's open plan discourse may mark an obvious beginning for our exercise to extract the spatial typology of the loft. As we will see, however, it fails when we cross reference the open plan with the tectonic qualities of the loft, which, as we just realized, were imperative for the

[145] Jim Stratton decries the loft as "those large and relatively open spaces normally used for manufacturing and storage purposes." See Stratton, *Pioneering in the Urban Wilderness*, 7. James R. Hudson says that "the common denominator [of loft conversions] was the emphasis on large open areas." See Hudson, *The Unanticipated City: Loft Conversions in Lower Manhattan*, 56. Alexander Gorlin describes lofts as "large open spaces with long-span beams and grids of giant columns allowed for a flexible area to work and live." See Gorlin, "Lofty Ideals," 146. Mayer Rus discusses "[t]he free, open spaces of lofts…" See Mayer Rus, *Loft* (New York: The Monacelli Press, 1998), 15. Suzanne Slesin discusses loft design and argues that "[k]eeping a large space open, an option that attracts people to lofts in the first place, is often a challenge for loft dwellers and designers alike." See Suzanne Slesin, Stafford Cliff, and Daniel Rozensztroch, *The International Book of Lofts* (New York: Clarkson N. Potter, Inc., 1986), 97.
[146] Zukin, *Loft Living: Culture and Capital in Urban Change*, 68.
[147] Ibid.
[148] Ibid., 68-69.
[149] Ibid., 70.

formation of a loft culture in the '50s. By cross referencing Zukin's scholarship with architectural historian Siegfried Giedion's discourse on the history of Modernist architecture, we will sketch out a path that helps us to uncover the spatial typology of the loft.

The open plan can be contextualized with the tradition of the flexible and informal ground plan in American architecture. Giedion traces this tradition and he argues that Frank Lloyd Wright was the first modern architect to "realize a flexible treatment of the inner space of a building" through open planning.[150] Hence, based on Giedion's scholarship, it is safe to say that Wright marks the beginning of the open plan in Modernist discourse.[151] Giedion takes Wright's geometrical perception as a lens through which to uncover some fundamental beliefs in materiality and spatial organization, which rendered the development of his open plan discourse.[152] By matching these findings with the characteristics of the loft, we can point to some discrepancies, and thus formulate a trajectory for expanded research on the open plan of the loft.

As both Hudson and Zukin observe, the loft originates from the use of industrialized building materials and machinery. Indeed, iron construction and modern transportation equipment facilitated the establishment of the loft space. The use of these materials and machinery run counter to Wright's tectonic preferences. Giedion analyzes Wright's design practice from the years of his vocation at Louis Sullivan's office to discover that "he did not carry over the use of

[150] Giedion, *Space, Time, and Architecture: The Growth of a New Tradition*, 363-68, 405.
[151] Giedion traces Wright's early practice to argue that he was "quickly accepted and understood by the [European] generation which was responsible for the modern movement." See Ibid., 397.
[152] Siegfried Giedion distinguishes between organic and geometrical perception. He argues that Frank Lloyd Wright conformed to the former. Giedion argues that Wright's "urge toward the organic may partly explain why Wright preferred to use materials taken directly from nature, rugged stone walls, rough granite floors, and heavy unfinished timber" and that his "urge toward the organic accounts for his developing his flexible, open plan." See Ibid., 414-16.

new materials -- the iron skeleton and the great glass surfaces of the office buildings -- into his own sphere: housing."[153] Leaving the use of modern materials and machinery behind, Wright's tectonic preferences were rather conservative. In many respects he even followed Henry Hobson Richardson's aspiration for the tradition of British Arts and Crafts, which explicitly rejected the use of industrialized building materials.[154] Indeed, Wright's preference for materials taken directly from nature, such as "rugged stone walls, rough granite floors, and heavy unfinished timbers," doesn't meet the tectonic qualities of the loft space.[155]

In addition to materiality, there is an organizational problem with Wright's open plan, which, as we will see, runs counter to the configuration of the loft space. We can unpack this problem by analyzing his open plan for the *Isabel Roberts house* of River Forest, Illinois. [Figure 2.9] Completed in 1907 and organized as an elongated plan, the house contextualizes the spatial hierarchy that Wright had been elaborating on to reach the principles for his open plan discourse. Designing the first floor primarily as a cellar, Wright located the enclosed living quarters on the upper floor. This arrangement allowed him to free the ground plane from interior subdivisions, which facilitated the flexible and informal space that would be so characteristic for his concurrent practice.[156] Following the *Isabel Roberts house*, Wright became more explicit in his horizontal arrangement of houses and, by 1910, had "achieved a flexibility of open planning unapproached hitherto."[157]

[153] Ibid., 397.
[154] Siegfried Giedion says that "in many respect he followed Richardson more than Sullivan." See Ibid.
[155] Ibid., 416.
[156] Ibid., 405.
[157] Ibid.

The *Isabel Roberts house* puts Wright's open plan discourse into practice. By analyzing the plans of the house, we can extract some fundamental principles that Wright used when organizing the spatial configuration of his open plan. When we study the *Isabel Roberts house*, the central core is clearly marked with the fireplace. Almost like paying homage to Gottfried Semper, who celebrated the fireplace as one of his four elements, Wright turned the fireplace into a primary feature for the organization of his architecture. By locating the fireplace at the core of the house, he created a concentric space which runs counter to the spatial hierarchy of the loft. This organization, which celebrates a concentric arrangement of space, would remain a primary principle for Wright throughout his entire practice.[158] He would "never abandon the idea of the house spread out from a central core."[159] Hence, just like his materials preferences, this centrality runs counter to the spatial organization of the loft.

Even if Wright marks the beginning of open planning in Modernist discourse, his discourse can't be used to contextualize the spatial typology of the loft. A different approach on the open plan has to be illuminated, which draws on the legacy of Wright but incorporates the use of industrial materials and the decentralized organization of space. We find these references in Le Corbusier.

In 1915, Le Corbusier drew up the *Dom-ino system* to illustrate a principle on the relationship between space and structure. [Figure 2.10] With his perspective drawing, Le Corbusier used the idea of mass production to express a new conception of housing. Almost like modernizing Semper, Le Corbusier suggested four new elements for domestic architecture: foundation,

[158] Siegfried Giedion pays attention to Frank Lloyd Wright "using the central chimney as the core of the house." See Ibid., 400-01.
[159] Ibid., 404.

column, slab, and circulation. By pushing the staircase to the periphery of his construct, Le Corbusier rendered vertical circulation independent of spatial organization. Only interrupted by six columns that support horizontal slabs, the principle of Le Corbusier's *Dom-ino system* operates on the intersection of spatial organization and primary structure. And it is exactly at this intersection that we can contextualize the emergence of Le Corbusier's open plan discourse.

With the *Dom-ino system*, infinite space is rendered through a structural concept that eliminates the presence of interior walls. Conceived "as a flexible system of reinforced concrete framing that could be readily filled in with traditional masonry," with the *Dom-ino system* Le Corbusier freed the interior space from load-bearing walls, which rendered complete freedom for the delineation of interior space.[160] The flexible organization of space that unfolds with this system was possible due to the use of modern materials in housing design, which Le Corbusier, in contrast to Wright, took advantage of. Giedion builds upon the *Dom-ino system* to argue that "Le Corbusier carried "further the kind of 'open planning' which Frank Lloyd Wright had begun [and that he] used those properties of the supporting framework of reinforced concrete which make the disposition of inner walls a matter of choice."[161] Indeed, the open plan that unfolds with the *Dom-ino system* provided superior flexibility for the arrangement of interior form and content.

It is important to recognize that the *Dom-ino system* abolishes the need for load-bearing walls, and not for armatures that organize the traversing of space. It is actually by separating primary structure from secondary structure that the new means of flexibility unfolds. Armatures that

[160] Kenneth Frampton, "Towards a New Architecture 1915-1927," in *Le Corbusier* (London: Thames & Hudson Inc., 2001), 22.
[161] Giedion, *Space, Time, and Architecture: The Growth of a New Tradition*, 523.

organize the traversing of space will always be needed, especially to support the dwelling function with fixtures for bodily comfort and hygiene. With the *Dom-ino system*, it is the *freedom* to organize these armatures in accordance with specific needs and desires that renders flexibility. When the wall has been replaced with a combination of structural elements and armatures for interior subdivision, then space is shaped on new premises. Drawing from this reconceptualization of the wall, Le Corbusier used the *Dom-ino system* to make the partition and the structure two different systems. Giedion tells us that Le Corbusier didn't invent this principle, but with the *Dom-ino system* he was "able to transmute the … skeleton developed by the engineer into a means of architectonic expression."[162] Hence, with the *Dom-ino system* Le Corbusier drew from the tradition of industrial building to contextualize the principle of separating structure and partition in architectural discourse. Turning structure and partition into two different systems, he demarcated the genesis of his open plan discourse. It is this separation of structure and partition that establishes the prime significance of the loft space.

Drawing from the *Dom-ino system*, we can formulate the spatial typology of the loft. Contextualized in Le Corbusier's open plan discourse, the loft facilitates a flexible arrangement of form and content by making structure and partition two different systems. Focusing solely on the inside of architecture, the spatial significance of the loft builds upon this separation to render the structural integrity of a single volume. Emerging from the architecturalization of industrial

[162] Ibid. Siegfried Giedion points to the schism between architecture and construction that was instigated with the 1794 founding of the École Polytechnique. This schism formulates the context for the transition Le Corbusier instigated with the *Dom-ino system*. Giedion's remark on the schism between architecture and construction is backed up by Françoise Choay, who explains similar procedure through the collapse of the architectural treaties. Choay says that "[t]he façade behind which the architectural treatise masked its internal deterioration and decay was preserved, in some cases, by virtue of the academicism of professional milieus well into the nineteenth century. In general, it collapsed under the pressure of external factors, and particularly as a consequence of the application of scientific discoveries of this period to the development of inhabited space by new agents: scientists and engineers." See Choay, *The Rule and the Model: On the Theory of Architecture and Urbanism*, 214.

building, the loft becomes an autonomous space explicitly contextualized in the discourse of Modernist architecture. Building upon its critique on Modernist urbanism, it liquefies the dwelling function and rejects use classification. The spatial typology of the loft, hence, becomes the *Janus* of Modernism, rejecting its urbanism while celebrating its architecture.

Towards Legality

Loft-dwelling was illegal throughout the 1950s, yet fairly unaffected by urban governance. In 1960, however, this *modus operandi* came to an end when City authorities began to evict artists who used the loft not only for art production but also for dwelling. Due to a series of fires in old industrial buildings, the New York Fire Department had become anxious about artists illegally setting up residency in their lofts. These incidents had been geographically concentrated to the district south of Houston Street, which was becoming "known as Hell's Hundred Acres because of its demonstrated potential for major fires."[163] Accounts estimated a considerable number of artists living and working there, inhabiting lofts that from the outside were impossible to differentiate from common manufacturing spaces. The Fire Department was basically apprehensive about the fact that "fire fighters would be unable either to find or to save artists who might be live in a burning building."[164] In 1960, hence, the Fire Department began pushing their colleagues in the Building Department to start enforcing both building and zoning codes, and thus start eviction proceedings against loft dwellers.

[163] Hudson, *The Unanticipated City: Loft Conversions in Lower Manhattan*, 23.
[164] Zukin, *Loft Living: Culture and Capital in Urban Change*, 49.

The interference by city authorities generated a considerable degree of uncertainty among loft dwellers. Not only living in fear of the demolition plans imposed by Rockefeller and Moses, the eviction proceedings added to an already insecure living condition. Due to the escalating dispute with the Fire Department, artists begun to structure themselves under the designated term Artists' Tenants' Association (ATA) to call for the legalization of loft dwelling. In 1961, ATA was formally organized for taking action against the "zoning laws that forbade residential occupation of the buildings."[165]

In 1961, loft dwelling was hampered by universal legislation, hence both zoning and building codes inhibited loft developments. Founded as a grassroots organization, ATA set out to challenge universal legislation the same yeas as the City enacted the first rezoning of New York. Representing the interests of marginalized artists, ATA drew from the escalating critique of CIAM urbanism, which was fueled by, among others, Jane Jacobs, who published her canonical *The Death and Life of Great American Cities* that same year. Recognizing the quality of neighborhood space, Jacobs's book paid renewed interest to the social significance of the street, which had been overlooked by Le Corbusier's urbanism.[166] But she also pointed to the significance of aged buildings. "The [city] district must mingle buildings that vary in age and condition," she said, "including a good portion of old ones."[167] Jacobs argued that aged buildings

[165] Pamela M. Lee, *Objects to Be Destroyed: The Work of Gordon Matta-Clark* (Cambridge, Mass: The MIT Press, 2000), 96.
[166] Le Corbusier criticized the street on the premises of nuisance. He suggested to "repudiate the existing lay-out of our towns, in which the congestion of buildings grow greater, interlaced by narrow streets full of noise, petrol fumes, and dust; and where on each story the windows open wide to this foul confusion." See Le Corbusier, *Towards a New Architecture* (Thousand Oaks, CA: BN Publishing, 2008), 57.
[167] Jacobs, *The Death and Life of Great American Cities*, 187.

are necessary to support "the social need for commercial diversity in cities."[168] She emphasized the capacity of buildings to take on different functions over different time periods. When Jacobs argued that "[t]ime makes certain structures obsolete for some enterprises, and they become available to others," she paved the way for the following interest in adaptive re-use of aged buildings, which would flourish with the subsequent legalization of loft dwelling.[169]

The concern for aged building was not limited to ATA and Jacobs. On the contrary, 1961 marks the emergence of a new era, characterized by the intensified critique on the destruction of landmarks and cities that had been channeled thorough urban renewal plans and private redevelopment projects in the post-World War II period. Parallel with ATA and Jacobs, various grassroots organizations such as the civil rights movement, the women's rights movement, and the environmental movement, began to question the apparatus of exercising powers to shape what Michael Sorkin refers to as a new urban ideology.[170] Sorkin argues that New York City was to be the most visible battleground in the formation of this new ideology, hosting both a bottom-up revolt against City authorities, and the formation of a new academic discipline commonly referred to as urban design.[171] Josep Lluís Sert had recently launched the "first urban design program in the world" at Harvard GSD and Colin Rowe was to show up at the Cornell University the following year to initiate his urban design studio.[172] Indeed, the critique of CIAM

[168] Ibid., 190.
[169] Ibid., 189.
[170] For the women's rights movement, see Betty Naomi Friedan, *The Feminine Mystique* (New York: W.W. Norton & Co, 1963). For the environmental movement, see Rachel Carson, *Silent Spring* (Boston: Houghton Mifflin, 1962). For a new urban ideology, see Michael Sorkin, "The End(s) of Urban Design," *Harvard Design Magazine* (Fall, 2006/Winter, 2007): 6.
[171] Sorkin, "The End(s) of Urban Design."
[172]For Josep Lluís Sert and Harvard GSD, see Mumford, *Defining Urban Design: CIAM Architects and the Formation of a Discipline, 1937-69*, 159. Colin Rowe arrived at Cornell in 1962 and started up his urban design studio 1963. See Colin Rowe, *As I Was Saying, Volume 2: Cornelliana* (Cambridge, Mass: The MIT Press, 1999).

urbanism escalated in 1961 to support ATA's efforts of conquering the zoning laws that forbade the artists to dwell in their lofts.

The new urban ideologies that swept New York City in 1961 contributed to the update of urban practice and academia, but also introduced new connections between the universal and specific aspects of urbanism. When grassroots organizations proved the capacity of threatening authorities and expertise, they obviously represented a great deal of political power. Understanding and responding to the emerging ideologies that fueled bottom-up reactions became important practices used to inform election campaigns when canvassing for voters. By responding to the interests of grassroots organizations, political leaders could improve the support by gearing their campaigns toward the specific interests of a community. The shifting ideologies represented by marginalized groups, thus, became incentives for politics. Mayor Robert Wagner, who ran for reelection as a Reform candidate in the fall of '61, was a precursor for such procedure. Negotiating an agreement with ATA, he used the symbolic value and goodwill among grassroots organization when canvassing for voters.[173] When he issued the first Buildings Department rules in December of 1961 to permit artists to dwell in their lofts, he collapsed the space between the universal and the specific aspects of urbanism.[174] Similar engagement by grassroots organizations was exercised four years later by John V. Lindsay, who ran for Mayor in 1965 and explicitly utilized neighborhood activism to improve his Coney Island

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And Colin Rowe and Alexander Caragonne, *As I Was Saying, Volume 3: Urbanistics* (Cambridge, Mass: The MIT Press, 1999).

[173] Sharon Zukin writes that "[i]n his search for new allies and responsive constituencies to replace the lower-middle-class and working-class Tammany Democrats, Wagner discovered the artists. Although they were not a numerous constituency, artists were important symbols of Wagner's switch to Reform." See Zukin, *Loft Living: Culture and Capital in Urban Change*, 50.

[174] Plunz, *A History of Housing in New York: Dwelling Type and Social Change in the American Metropolis*, 369.

support.[175] In any case, Mayor Wagner's collaboration with ATA opened up a space in-between legality and illegality, which gradually would transform loft dwelling.

This space between legality and illegality had different meaning in New York City throughout the 1960s. For many of the artists who dwelled in their lofts, it signified anxiety. Living in fear of building inspectors, they blocked their windows at night and distributed their garbage throughout the area during the days in order to avoid eviction. The idea of defeating New York City's M1 zoning would certainly improve the living conditions for many artists, providing "the right to protected space."[176] For other artists, however, it was the space between legality and illegality that catalyzed art production. In 1967, the originator of the Fluxus artists' group George Maciunas, for example, begun to purchase buildings in SoHo that "artists divided among themselves in a kind of cooperative venture."[177] Converting his co-ops to lofts, Maciunas elaborated on a system of illegality and non-profit to instigate spaces liberated from societal constraints and governmental regulations.[178] Turning code violation into artistic expression, Maciunas made the loft a generative material for art practice. Other artists taking illegality as generative material to challenge the bureaucratic structures of regulation and governance were, for example, Tosun Bayrak, whose street performances involved copulating couples and communist propaganda, and Gordon Matta-Clark, whose urban guerilla cuts lacked any

[175] Richard Weinstein tells the story about getting involved in the campaign of Mayer John V. Lindsay through the premises of neighborhood activism. Richard Weinstein, interview by Per-Johan Dahl, December 07, 2009.
[176] Zukin, *Loft Living: Culture and Capital in Urban Change*, 50.
[177] Kostelanetz, *SoHo: The Rise and Fall of an Artists' Colony*, 21.
[178] Read about George Maciunas ignoring the M1 in Ibid., 45-54. and in Charles R. Simpson, *SoHo: The Artist in the City* (Chicago: The University of Chicago Press, 1981), 155-58.

permission from authorities or property owners whatsoever.[179] For both groups, however, the space in-between legality and illegality served as an intermediary to process the pivotal momentum where the individual is deprived, using Michel Foucault's words, "of a liberty that is regarded both as a right and as property."[180]

Loft dwelling in the 1960s New York City certainly occupied the space in-between legality and illegality. Prohibited by universal legislation, the marginalized forces that, in the '60s, proclaimed their right to live and work in the same space operated through the premise of that space. When the ATA petitioned Mayor Wagner for permission "to reside -- not just work -- in districts not officially zoned for residential use or in buildings lacking a residential Certificate of Occupancy, customarily called a C of O," the City responded by formalizing an Artist in Residence Program (A.I.R.).[181] Introduced to sidestep the code, A.I.R. was an executive order from the Mayor and not a formal law. The program allowed only two artists' spaces in a nonresidential building, and officially "these A.I.R. spaces remained commercial, which meant that the resident did not have to meet any elaborative code."[182] Forced to comply with universal legislation, still operating outside the law, A.I.R. signifies the space in-between legality and illegality.

[179] Tosun Bayrak's art practice is described in Kostelanetz, *SoHo: The Rise and Fall of an Artists' Colony*, 100-06. Read, for example, about Gordon Matta-Clark's illegal 1975 *Day's End* cutting in Thomas Crow, "Legend and Myth," in *Gordon Matta-Clark*, ed. Corinne Diserens (New York: Phaidon, 2003).
[180] Michel Foucault, *Discipline & Punish: The Birth of the Prison*, Second ed. (New York: Vintage Books, 1995), 11.
[181] Kostelanetz, *SoHo: The Rise and Fall of an Artists' Colony*, 11. The Certificate of Occupancy (CO) is issued by the New York City Department of Buildings to guarantee a building's compliance with applicable building and zoning regulations. A CO was -- and still is -- compulsory in New York City before any renovated space can be occupied. The banks request CO documents before issuing credit.
[182] Stratton, *Pioneering in the Urban Wilderness*, 26.

Parallel with A.I.R., two variances were filed during the 1960s to update the code. In '64 "the State Legislature amended Article 7-b to the State Multiple Dwelling [Law] to permit local municipalities to zone living work space for artists in the 'visual fine arts'."[183] The amendment was a temporary permit designated practicing artists, hence a definition of art practice was required, which soon was proved difficult, if not impossible, to sustain. The variance, however, permitted the first legal loft space in New York City.[184] The amendment was intended to expire in 1968. But after recognizing the value artists brought to the city and to the state, it was instead extended, and the definition of 'artist' was expanded to include individuals who were "regularly engaged … in the performing or creative arts, including choreography and filmmaking, or in the composition of music on a professional basis."[185] Still, the amendment was a temporary solution.

Even if the amendments provided temporary peace of mind for a few artists, a majority were still dwelling outside the established apparatus of code. As a consequence, the artists found themselves removed from banking services, which eliminated their chances of getting mortgages approved for renovation.[186] This financial obstacle proved to be a major concern, as most loft conversions required thorough renovations. Generally lacking sufficient plumbing systems and electrical wiring, maintenance had often been neglected for long periods of time, which had resulted in broken windows, non-functioning entries, and leaking roofs. Partitions also needed to

[183] Kostelanetz, *SoHo: The Rise and Fall of an Artists' Colony*, 15. To confirm the year 1964, see also Zukin, *Loft Living: Culture and Capital in Urban Change*, 52. Plunz, *A History of Housing in New York: Dwelling Type and Social Change in the American Metropolis*, 315.
[184] Stratton, *Pioneering in the Urban Wilderness*, 26.
[185] Zukin, *Loft Living: Culture and Capital in Urban Change*, 54-56.
[186] This problem was recognized, for example, by Ron Rosenbaum who argues that "artists were vulnerable to landlords who could threaten them with eviction unless they paid hush money or exorbitant rents or both. Moreover, bank couldn't lend money for necessary improvements." See Ron Rosenbaum, "Artists' Housing. SoHo in New York: A Fight for Survival," *Village Voice* 14, no. 56 (November 6, 1969). For similar argument, see "SoHo Artists Move into New York's Cast Iron District," *Architectural Record* 147 (June, 1970).

be built to create some degree of privacy in the vast spaces. Restorations of interior spaces can, of course, be accomplished in many different ways, and with very different budgets. There are, however, considerable costs associated with any such renovation, particularly if repairs of major building components have to be undertaken, such as structural elements, sanitary facilities, or climate controls. Being disqualified for montage loans, the loft dwellers lacked the benefits of legalized colleagues to obtain financial support for improving the comfort and safety of their lofts.

Lacking the authority of codes, the loft dwellers also operated outside the system of rent control, which, through the Multiple Dwelling Law, have regulated the rents in New York City since 1943.[187] Hence, any investment in loft renovation was worrisome as a "crafty landlord could raise the rent and oust the tenant, confident that someone with more money than an artist would step into the improved space."[188] Even if city planning regulations can be circumscribed by governing authorities, such as in the case of Mayor Wagner, the unforeseen effects can often go beyond the realm of planning praxis. The space in-between legality and illegality creates not just possibilities, but also repercussions.

[187] Rent control concerns the apartment building, which is defined under the Multiple Dwelling Law. See New York State, "Rent Regulated Definitions," Homes & Community Renewal <https://www1.dhcr.state.ny.us/BuildingSearch/popup.aspx>. For the year 1943 see New York State Division of Housing & Community Renewal, "History of Rent Regulation," TenantNet <http://www.tenant.net/Oversight/50yrRentReg/history.html>.
[188] Stratton, *Pioneering in the Urban Wilderness*, 26.

The Story of Westbeth

The first legal conversion of an entire commercial building into a loft building was completed on May 19, 1970.[189] Labeled Westbeth Artists' Colony, the project was not located in SoHo, but in the adjacent Greenwich Village, at Bank and Washington Street. Designed by Richard Meier, Westbeth became his first large commission. The project was conceived by Roger L. Stevens, a real-estate mogul who became a Broadway producer, and the first chairman of the National Endowment of the Arts (NEA).[190] Originally a factory building built by Western Electric (now Bell Laboratories) in 1897, the deteriorated structure was purchased in 1967 for $2.5 million, with help from the National Council on the Arts, the J.M. Kaplan Fund, and federal loans. [Figure 2.11] In the hands of Meyer, the interior of the disused laboratory was converted into 384 lofts "ranging from 700-square-foot efficiency units to 1,300-square-foot family units," including a gallery; theaters; film, photography, and recording studios; a communal print shop; sculpture studio; and a community multipurpose space.[191] After completion, Westbeth became the benchmark for "the adaptive reuse of architecturally and urbanistically significant buildings" as

[189] The formal opening of Westbeth Artists' Colony was on May 19, 1970. See Ada Huxtable, "Bending the Rules," *New York Times* May 10, 1970. Dixon Bain confirms that Westbeth Artists' Colony was formally opened in mid May, 1970. See Jeanne Houck, "Dixon Bain: An Oral History Interview Conducted for the Gvshp Westbeth Oral History Project," (New York: The Greenwich Village Society for Historic Preservation, April 27, 2007), 14. The first tenants moved in half a year prior to completion, in late 1969. See ———, "Richard Meier: An Oral History Interview Conducted for the Gvshp Westbeth Oral History Project," (New York: The Greenwich Village Society for Historic Preservation, November 8, 2007), 10. Houck, "Dixon Bain: An Oral History Interview Conducted for the Gvshp Westbeth Oral History Project," 19.

[190] Barbara Stewart, "Making It Work: Westbeth Memories," *The New York Times* November 20, 1994, 133.

[191] Robert A.M. Stern, Thomas Mellins, and David Fishman, *New York 1960: Architecture and Urbanism between the Second World War and the Bicentennial* (New York: The Monacelli Press, 1995), 252. Stewart, "Making It Work: Westbeth Memories."

well as the nation's biggest federally-subsidized arts colony.[192] The project also signified the emergence of a whole new building type, which was the loft.[193]

The story of Westbeth entails a complex web of codes and regulations necessary to be examined if we want to understand its impact on concurrent development. It was only by navigating this intricate web that Meier was able to complete the project. Supported by financial institutions and the City, the architecture of Westbeth was able to conquer the planning and building regulations that had been hampering loft development throughout the '50s and '60s. It also upgraded the economic system that, thorough loan guarantees and montage plans, facilitated the conversions of raw spaces into lofts. It was not the legal conversion of a single individual loft that made Westbeth canonical -- that had, as we already have seen, happened earlier. But the fact that a bundle of lofts were approved by planning and building codes would serve as a catalyst for the subsequent renovation and re-use of historical buildings.

The story of Westbeth begins with Roger L. Stevens's idea of creating a place for artists to live and work. Stevens, who worked with the NEA, had been engaged in "a long internal study [that] highlighted artists need for both affordable housing and work space."[194] The NEA is an independent federal agency committed to support artists and arts organizations and "promoting

[192] Stern, Mellins, and Fishman, *New York 1960: Architecture and Urbanism between the Second World War and the Bicentennial*, 254.
[193] Paul Goldberger says that Westbeth was "the spiritual father of all the commercial loft conversions that have created a whole new housing type for Lower Manhattan in the last decade." See Paul Goldberger, *The City Observed: New York* (New York: Vintage Books, 1979), 86.
[194] Jeanne Houck, "Joan Davidson: An Oral History Interview Conducted for the Gvshp Westbeth Oral History Project," (New York: The Greenwich Village Society for Historic Preservation, March 13, 2007), 3.

public knowledge and understanding about the contributions of the arts."[195] Proposed by President John F. Kennedy in 1963 and established by Congress in 1965, the NEA was looking for a major initiative of turning ideas into practice. When Stevens teamed up with Jacob Merrill Kaplan around 1966, he pretty much decided that the forthcoming Westbeth project was going to be that initiative.

The concept of affordable housing occupies the core of the Westbeth story. As we will see, the vision of creating a new kind of inexpensive housing geared towards the specific needs of artist families describes both the financial incentive and the legislative challenge of converting the former laboratories into a loft building. Kaplan -- the establisher of the J. M. Kaplan Fund in 1945, committed to support "established institutions and fledgling projects, mostly concerning civil liberties and human rights, the arts, and enhancement of the built and natural environments" -- was interested in real estate, and particularly in housing co-ops.[196] Through his foundation, Kaplan had provided the seed funds for a few smaller corporative housing projects in Greenwich Village in the early to mid-60s.[197] When joining Stevens, he saw the opportunity to apply his visions on a larger scale.

The construction of a house features design, financing, and authorization. Indeed, these three forces interact on any housing project to steer fabrication. It is the space of interaction that drives

[195] National Endowment for the Arts, "National Endowment for the Arts 2011 Guide," ed. Don Ball (Washington, DC: National Endowment for the Arts, 2011), 2.
[196] J.M. Kaplan Fund, "History of the Fund," J.M. Kaplan Fund <http://www.jmkfund.org/history.html>. See also Stratton, *Pioneering in the Urban Wilderness*, 26.
[197] Houck, "Joan Davidson: An Oral History Interview Conducted for the Gvshp Westbeth Oral History Project," 6. See also Plunz, *A History of Housing in New York: Dwelling Type and Social Change in the American Metropolis*, 315. Huxtable, "Bending the Rules."

construction. With a mutual agreement about the constituting principles of each force, they coincide to normalize the mental image of the house and thus decide the guidelines for construction. The metal image that has been created by the three forces represents a rather static construct. Molded into a type, it expresses the socio-economical patterns that combine to produce the image itself.[198] Operating on conformity, the housing type interlocks the preconceived ideas about design, financing, and authorization. As long as the three forces operate on stable ground, the process of construction can proceed without interruption.

Intermission occurs when one of the forces branches off to explore the space beyond conformity. In such cases, the mutual agreement is disrupted and a state of disorder emerges. Leaving the trinity, the nonconforming force has to develop alternative modes of operation. Still, being dependant on the constituting principles of the other forces, it has to reconnect and thus prove its superiority. Housing construction can only proceed if some common ground is unfolded. By introducing new standards to the space of interaction, the mental image of the house can fade or be replaced. The process of altering the mental image can be successful or not. If the nonconforming force finds a way to stabilize the turmoil and thus constitute a firm agreement with the other forces, a new housing type might result.

Westbeth describes such a procedure. As we will see, the process of construction emerged from the reconnection between the three forces of design, financing, and authorization. In the case of Westbeth, design was the nonconforming force. We have seen that a new spatial typology

[198] This line of thought is strongly influenced by Sylvia Lavin's remark that "[e]very socio-historical field produces a building type that singularly expresses the multiple forces that combine to produce the field itself." See Sylvia Lavin, "Order in the House," in *Re: American Dream, Six Urban Housing Prototypes for Los Angeles,* ed. Roger Sherman (New York: Princeton Architectural Press, 1995), 9.

emerged in New York City as a result of the artists' revolt against the principles of Modernist city planning. This spatial typology was viable to be explored for architectural purposes. Richard Meier was commissioned to design Westbeth. The architectural response to the specific needs of artist families, which was the NEA's and Stevens's incentive for the project, matched perfectly with Meier's interest in the spatial qualities of Modernist architecture, which, as we already have seen, form a disciplinary context for the loft space typology. In any case, Meier was well informed about the social and cultural needs that, through code violation, had instigated loft dwelling. As early as 1965, he had been commissioned by Frank Stella and Barbara Rode "to design their loft south of Canal Street at 84 Walker Street" and one year later he had been retained by the art historian and collector William Rubin to design a loft that also served to "effectively exhibit [Rubin's] extensive art collection."[199] Hence, the specific social and cultural needs of artists and art related patrons to replace the traditional housing layout with a spatial typology that facilitate a higher degree of flexibility began to find its way into architecture through Meier's practice in the mid '60s.

Meier's commission was to rehabilitate the set of five buildings that constituted the Bell Laboratories, and thus turn them into a live and work environment for low- to moderate-income artists.[200] With a tight budget and explicit knowledge about the spatial need of the artists, his prime response to the commission was to unite the five separate volumes into one single complex; reorganize the interior configuration of the complex to deal with issues of light, air, and egress; and create as many lofts as possible. Drawing from Le Corbusier's *Unité*

[199] Stern, Mellins, and Fishman, *New York 1960: Architecture and Urbanism between the Second World War and the Bicentennial*, 272, 74. See also Richard Meier, *Richard Meier Architect: Buildings and Projects 1966-1976* (New York: Oxford University Press, 1976), 19.
[200] Houck, "Joan Davidson: An Oral History Interview Conducted for the Gvshp Westbeth Oral History Project," 4.

d'Habitation at Marseille, which combined "living and working spaces [with] shopping and public services to create a vertically integrated, reasonably self-sufficient community,"[201] Meier set out to generate "an integrated, self-sufficient community that would provide artists not only with a loft space in which to live and work, but also with gallery space, theatrical facilities, film, photography, and dance studios."[202] His objective was to create a total environment in which artists could pursue their work, and also generate additional revenue, through renting commercial spaces to tenants outside of the community.[203]

Meier's architectural strategy for Westbeth was to slice the complex in order to provide light and air for the lofts, and to demarcate public access to various communal and commercial spaces. His main move to accomplish this strategy was to remove two floors within the complex's central well to "form a tall, narrow courtyard open to the sky."[204] The sheer walls surrounding the void were modeled by balconies, which provided secondary egress and eliminated "the mess of having actual fire escape ladders coming down in the interior courtyard."[205] [Figure 2.12] With

[201] Tod Williams, who begun working for Richard Meier early in the fall of 1967, when the schematic design of the project was initiated, recalls that "we were all very much interested in the work of Le Corbusier and the Marseille Block was the sort of an ideal for a young architectural community, thinking that one could solve social problems and build beautiful buildings in an urban condition." See Jeanne Houck, "Tod Williams: An Oral History Interview Conducted for the Gvshp Westbeth Oral History Project," (New York: The Greenwich Village Society for Historic Preservation, April 2, 2007), 8. See also Stern, Mellins, and Fishman, *New York 1960: Architecture and Urbanism between the Second World War and the Bicentennial*, 252.
[202] Richard Meier, "Westbeth Artists' Housing," in *Richard Meier Architect: Buildings and Projects 1966-1976*, ed. Richard Meier (New York: Oxford University Press, 1976), 113.
[203] Houck, "Joan Davidson: An Oral History Interview Conducted for the Gvshp Westbeth Oral History Project," 19-20. See also Stern, Mellins, and Fishman, *New York 1960: Architecture and Urbanism between the Second World War and the Bicentennial*, 254.
[204] Stern, Mellins, and Fishman, *New York 1960: Architecture and Urbanism between the Second World War and the Bicentennial*, 252.
[205] Houck, "Dixon Bain: An Oral History Interview Conducted for the Gvshp Westbeth Oral History Project," 6. Similarly, Paul Goldberger argues that "Richard Meier opened up the huge building in just the right way, with round balcony fire escapes bringing life to the inner court." See Goldberger, *The City Observed: New York*, 86.

an extended ramp that shoots out and into the courtyard, Meier clearly echoed Le Corbusier's *promenade*, while signifying the public access to the second floor of the building. [Figure 2.13]

At first glance, Kenneth Frampton seems to be right when he argues that the impressive gesture of Westbeth "was not so much the units themselves, which reflected mainly an ingenious solution to the problem of providing living lofts within an industrial shell, but rather the public space provided at grande."[206] When looking at the plan drawings of the lofts, they express solely an open space solution with no partitions, except for a few armatures containing the fixtures for bodily comfort and hygiene. No effort seems to have been made to articulate the detailing of the open space, or to provide some gradient between public and private space, and the partitions that separate the loft units seem to have been randomly inserted, sometimes wrapping the load-bearing structure, and sometimes leaving a column in an awkward relationship to the overall open space. Indeed, the focus of design seems to have encompassed the communal spaces, the armatures for circulation, and the detailing of exterior elements, with very limited concern for the loft units.

On a second glance, however, it becomes obvious that Frampton's brief commentary couldn't have been more wrong. It is actually the seemingly haphazard design of the loft units that describes the core of the project. Meier himself believes that "the most innovative process used in the conversion [of Westbeth] was leaving units without interior walls, so the residents could arrange sleeping and living spaces with working space as they chose."[207] And, as we will see,

[206] Kenneth Frampton, "Introduction," in *Richard Meier Architect: Buildings and Projects 1966-1976*, ed. Richard Meier (New York: Oxford University Press, 1976), 11.
[207] Houck, "Richard Meier: An Oral History Interview Conducted for the Gvshp Westbeth Oral History Project," i.

Meier is right, not Frampton. Westbeth's lofts were deprived of most aspects of conventional design. They lacked elaborate program and their interior configurations were almost untouched in order to meet the needs of the individual artist by accommodating maximum flexibility.[208] The absence of design revealed by the plan drawings of Westbeth's lofts might be disturbing for an architectural eye. But it is exactly this celebration of emptiness in Meyer's lofts that made Westbeth a landmark building, not only for the New York City Landmarks Preservation Commission, but also for the disciplinary practices of architecture and urbanism.[209]

[208] Richard Meier says that every unit provides "a large, open loft-type space ideally suited to the individual artist's needs." See Richard Meier, "Westbeth and Flexible Code Interpretations: A Statement by Richard Meier," *Architectural Record* (March, 1970).

[209] The New York City Landmarks Preservation Commission (LPC) proposed Westbeth for landmark designation in 2010. Westbeth gained landmark status on October 25, 2011. See, for example, Landmarks Preservation Commission, "Bell Telephone Laboratories Complex (Including the Former Western Electric Company and Hook's Steam-Powered Factory Buildings) (Now Westbeth Artists' Housing)," (New YorkOctober 25, 2011).

CONCEPTUALIZING THE LOFT

From Urbanism to Architecture

The loft started as a grassroots revolt on Modernist city planning with very limited connection to architecture. With the approval of Westbeth, the loft was transformed from a bottom-up reaction to planning principles, to a formalized space ready to be investigated by architecture. Hence, in the hands of Richard Meier, the loft design became a design practice possible to analyze through architecture. This argument can be unpacked if we look at the articles being published on lofts before and after Westbeth's 1970 completion.

The media coverage on lofts intensifies with the 1961 turmoil and successive formation of ATA, which, as we already have seen, resulted in the first move towards legalization. Media focus primarily targeted the escalating conflicts between artists' lifestyles and the City's urban renewal plans for the nascent SoHo. The adjacent neighborhood of Greenwich Village, where Westbeth would emerge some seven years later, was not so much part of the loft discussion, mainly because the area was already considered gentrified, hence access to vacant warehouses was rare.[210] Greenwich Village would, however, through the newspaper, *The Village Voice*, play a major role in the 1960s debate on changing lifestyles and urban renewal. Fueled by Jane Jacobs's activism, the *Village Voice* published numerous debates and critical articles related to the plans for leveling SoHo, and thus razing the historic cast-iron buildings that hosted artist lofts.[211] The

[210] William Barrett discussed the gentrification of Greenwich Village. See William Barrett, "The Village: Bohemia Gone Bourgeois," *New York Times* April 4, 1954.
[211] See the Village Voice articles Patrick Chavez, "Evictions Rise: Loft Colony Holds out as City Lays Siege," *Village Voice* 6, no. 21 (March 16, 1961). Jane Eccles, "West Village, Cont.," *Village Voice* 6, no. 24 (April 6, 1961). Ann Rosenhaft, "West Village, Cont," *Village Voice* 6, no. 24 (April 6, 1961). "City May Move to Legalize

two articles “City Relaxes Pressure on Loft Studios” and “City Cooperates but Artists Face New Problems: Demolition of Loft Area,” for example, were both published in December 1961 to report on the conflict. Other articles emerging during the ‘60s covered, of course, the support for demolition. Most significant was, perhaps, the City Club of New York and their 1962 publication, *The Wastelands of New York City,* which pointed to SoHo as an industrial slum, which influenced Robert Moses to revive the plans for the Lower Manhattan Expressway.[212] The *Village Voice* responded to the City Club of New York with Susan Goodman’s 1964 article “Incubator, Industrial Slum: Which is the Loft Area?”. The newspaper continued to cover the conflicts between artist lifestyles and urban renewal plans that proceeded throughout the mid ‘60s. Hence, little or no attention was paid to the architectural significance of the loft space in the early and mid 1960s.

Urbanism certainly dominated the loft discussion in the early and mid 1960s. Architecture was present, but rather via the discourse on preservation than the discourse on space making. Ada Louise Huxtable, who became the first full staff architecture critic at the New York Times in 1963, had already started to pay attention to the significance of the historical cast-iron buildings

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Artists’ Lofts, Stop Strike," *Village Voice* 6, no. 44 (August 24, 1961). "City Relaxes Pressure on Loft Studios," *Village Voice* 7(December 4, 1961). "City Cooperates, but Artists Face New Problem: Demolition of Loft Area," *Village Voice* 7, no. 9 (December 21, 1961). Stephanie Gervis, "Loftless Leonardos Picket as Mona Merely Smiles," *Village Voice* 8, no. 17 (February 14, 1963). "Artists Fight to Save Lofts," *Village Voice* 8, no. 17 (Februari 14, 1963). Susan Goodman, "City Still Cool to Artists on Loft-Housing Issue," *Village Voice* 9, no. 4 (November 14, 1963). ———, "State May Allow Artists to Make Wide Use of Lofts," *Village Voice* 9, no. 17 (February 13, 1964). ———, "Picket City Hall: State Softens on Artists, but City Will Not Relent," *Village Voice* 9, no. 22 (March 19, 1964). ———, "1,000 Artists at City Hall Picket for Their Lofts," *Village Voice* 9, no. 25 (April 9, 1964). "Rockefeller Signs Loft Bill, Artists Await City Action," *Village Voice* 9, no. 28 (April 30, 1964). Rosenbaum, "Artists’ Housing. SoHo in New York: A Fight for Survival."

[212] City Club of New York, *The Wastelands of New York City* (New York: City Club of New York, 1962). For Robert Moses’ revitalization of the plans for the Lower Manhattan see Alanna Siegfried and Helene Zucker Seeman, *SoHo: A Guide* (New York: Neal-Schuman, 1978), 9.

in the mid 1950s.[213] In 1964, she published her *Classic New York: Georgian Gentility to Greek Elegance*, which "is a scholarly guide to Manhattan's surviving early-nineteenth-century buildings." Following Huxtable, the architectural discourse on preservation was in full swing. The article "Instructive Disaster" in the 1966 March issue of *Architectural Forum*, for example, focused on the significance of SoHo's cast-iron buildings and the need for preservation.[214] With the vivid debate on issues of preservation, architecture joined urbanism within the realm of New York City politics. Richard Weinstein, "who, along with Jaquelin Robertson and Jonathan Barnett, formed Mayor Lindsay's triad of architectural planners in the Manhattan-based Urban Design Group of the New York City Planning Commission," recalls the Director of City Planning asking if all the SoHo cast-iron buildings were worth saving. Weinstein responded "that they were the most prominent architecture in New York."[215] Following Weinstein's response, the City started to sketch out the guidelines for a new zoning concept, commonly referred to as Special District Zoning. This concept, which would be overlaid SoHo in 1971 to finally safeguard preservation of the cast-iron buildings, was first tested in 1968 to permit the construction of Westbeth.[216]

Huxtable and Weinstein were certainly not the only advocates for the preservation of historical architecture and cast-iron buildings. A wide range of well-recognized urbanists and architects

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[213] Stern, Mellins, and Fishman, *New York 1960: Architecture and Urbanism between the Second World War and the Bicentennial*, 1205. From 1956 to 1958, Ada Louise Huxtable "published a twenty-article series in Progressive Architecture discussing significant historical American buildings from an aesthetic and structural point of view." See ———, *New York 1960: Architecture and Urbanism between the Second World War and the Bicentennial*, 1210.
[214] "Instructive Disaster," *Architectural Forum* 124 (March 1966).
[215] Hines, *Franklin D. Israel: Buildings + Projects*, 211. Richard Weinstein, interview by Per-Johan Dahl, June 14, 2011.
[216] Stratton, *Pioneering in the Urban Wilderness*, 36. Stern, Mellins, and Fishman, *New York 1960: Architecture and Urbanism between the Second World War and the Bicentennial*, 252. Huxtable, "Bending the Rules."

teamed up, such as Jane Jacobs, Paul Rudolph, and Philip Johnson.[217] Still, a critical discussion on the design of loft spaces, which, hidden from the public eye, occupied the interiors of the cast-iron buildings, was rather sparse.[218] Architects were, of course, involved in loft designs parallel to the preservation discussion -- we have already seen Richard Meier's two lofts from the mid 1960s. However, we lack publications on design's capacity to provide new meaning to historical interiors as the do-it-yourself mentality continued to characterize most loft conversions.[219] And, naturally, design didn't have much role to play in the mid to late '60s.[220] As long as the historical interiors were allowed only to host the activities that made them obsolete in the first place, design had very limited ability to provide new meaning and, hence, any discussion on the architectural significance of the loft lacked fertile grounds.

This situation changed with Westbeth. In the hands of Meier, the loft reached the realm of architecture. The project was published extensively the following years in American architecture press, and Meier received a 1971 award from the American Institute of Architects for his redesign of the former warehouse.[221] The preservation and the communal aspects of the re-used

[217] Read about these figures, and others, joining force in 1962 to preserve Penn Station. See Stern, Mellins, and Fishman, *New York 1960: Architecture and Urbanism between the Second World War and the Bicentennial*, 1115-17.
[218] Some rare comments were made during the early 1960s on the spatial significance of the loft, such as the photographer Michel Duplaix characterizing the loft as "a floor of unbroken space originally intended for commercial use." See Michel Duplaix, "The Loft Generation," *Vogue* 55 (June 1961).
[219] Various artists, such as Gordon Matta-Clark, were making a living by doing loft conversions. Pamela M. Lee tells us that Matta-Clark "found himself living in and constructing a number of different places, which over the years included lofts on Fourth Street, Chrystine Street, and Wooster." See Lee, *Objects to Be Destroyed: The Work of Gordon Matta-Clark*, 59.
[220] We may want to recognize Barbara Plumb's 1969 coverage on Richard Meier's 1965 design of Frank Stella and Barbara Rose's loft, even if Plumb's coverage was made from an interior design perspective rather than from architecture. See Barbara Plumb, *Young Designs in Living* (New York: Viking Press, 1969), 30-31.
[221] Both Architectural Record and Architectural Forum published Westbeth in 1970. For Architectural Record, see "Westbeth's Rehabilitation Project: A Clue to Improving Our Cities," *Architectural Record* (March, 1970). For Architectural Forum, see Ellen Perry Berkeley, "Westbeth Artists in Residence," *Architectural Forum* (October,

building were, of course, of great interest, but so also was the spatial significance of the lofts. The large number of legal lofts facilitated by Westbeth provided a quantity of flexible spaces receptive to the needs and desires of individual artists. The articles on Westbeth included both photographs of the open spaces and architectural drawings that communicated the architectural significance of the lofts. The do-it-yourself mentality that had dominated loft conversions throughout the '60s was still present through the imagery. But we can also sense a new attitude toward loft design emerging above the radar of planning expertise.[222] Westbeth interconnected the structures of financing and regulation to prepare the spatial typology of the loft for its entry within the realms of architecture.

Windows and Bedrooms

When Meier was commissioned by Stevens and Kaplan, some funds were designated the project, but not enough. Eventually, action had to be taken in order to achieve necessary funding. As the prime objective was to develop housing for low-income tenants, Westbeth met with the Federal Housing Administration's (FHA) criteria for mortgage insurances. Operating as a part of the U.S. Department of Housing and Urban Development (HUD), the FHA had, since 1934, controlled the allocation of mortgage insurance in the U.S. by working out standards for housing development, which decided whether or not a project qualified for mortgages insurance. If the project was approved by FHA standards, then "the full faith and credit of the federal government

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1970). Richard Meier published Westbeth in his own 1976 monograph. See Meier, *Richard Meier Architect: Buildings and Projects 1966-1976*.

[222] Other articles on designed lofts immediately following Westbeth featured, for example, Robert Indiana's loft and Bill and Yvonne Tarr's loft. See Elizabeth Sverbeyeff and Sue Nirenberg, "Robert Indiana," *House Beautiful* 112 (February, 1970). "Four Letter Word," *Architectural Forum* 132 (March, 1970). "Living Big in a Loft," *Life* (March 27, 1970).

[stood] behind [the] loan."[223] This credibility was certainly needed when approaching a bank, because loans for loft conversions were not common praxis in the late '60s.

A major issue for Meier, hence, was to squeeze Westbeth through the FHA standards. Characterized by the housing ideologies that suburbanized the U.S. in the '60s, the FHA standards were geared towards "wood-framed houses and garden apartments in non-urban areas."[224] The conversion of a former laboratory into lofts, hence, didn't comply with FHA's standards for domestic design. More problematic, however, was the open plan of the loft unit. Lacking interior walls, the open plan didn't match the criteria for what FHA considered "safe, decent, and affordable housing."[225]

If we unpack FHA's skepticism to the project, two main code issues occur: one straight-forward and one intricate. The straight-forward issue had to do with egress. The absence of "interior walls and the use of partitions raised a number of…fire safety issues," which caused some egress code problems.[226] Meier responded to these problems with his double balconies, which, as we already have seen, "provide fire escape egress without defacing the interior courtyard."[227] With his half-circled balconies, he basically paired two separate lofts, and thus established a second way out for the two-level units. He explains himself that "we created these balconies which then theoretically, if there is a fire you go out on the balcony and into your neighbor's apartment, is a

[223] Houck, "Dixon Bain: An Oral History Interview Conducted for the Gvshp Westbeth Oral History Project," 7.
[224] Huxtable, "Bending the Rules."
[225] Houck, "Dixon Bain: An Oral History Interview Conducted for the Gvshp Westbeth Oral History Project," 10.
[226] Dixon Bain, June 10, 2011.
[227] Ibid.

second means of egress."[228] Hence, Meier met the egress code through design and detailing of the communal space, which had little, or no, implication on the configuration of the autonomous loft space.

The intricate code issue was more complicated to squeeze through the FHA standards. Taking the bedroom as the subject matter of regulation, the second code issue encapsulated a core principle of loft design. Meier was commissioned to provide live and work spaces that met the individual needs of artists. He responded to this commission by contextualizing his design in Le Corbusier's open plan discourse.[229] Drawing from the spatial characteristics of the loft, which he already had explored through previous loft designs, Meier discarded fixed interior walls in favor of "movable partitions that [could] be locked in one place but moved the next day."[230] With his flexible system of space dividers, he abandoned the conventional program for residency, which determines a set of interrelations between privacy and use, and established instead a field condition that enabled different sensual and intellectual exercises to happen momentarily. Lacking conformist residential program, Meier's design of Westbeth's lofts consequently dismissed the specified bedroom.

The absence of bedrooms created two problems, one quantitative and one qualitative. First of all, a bedroom count was impossible, which was a FHA procedure of determining the scope of subsidy. Dixon Bain, who was the executive vice president of Westbeth from 1967 to 1971,

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[228] Richard Meier, interview by Per-Johan Dahl, March 29, 2011.
[229] Le Corbusier's influence on Richard Meier is well known. Joseph Giovannini, for example, argues that Richard Meier "built on Le Corbusier's insight of separating skin and structure, which freed him from the limiting idea of the wall as structure." See Joseph Giovannini, "Richard Meier, Platonist," in *Richard Meier:Houses and Apartments*, ed. Ron Broadhurst (New York: Rizzoli, 2007), 74-75.
[230] Houck, "Dixon Bain: An Oral History Interview Conducted for the Gvshp Westbeth Oral History Project," 10.

explains that "the way in which FHA would agree to insure a loan for housing [was] based in large parts on the fact that the design [met] their criteria…based on the number of bedrooms."[231] "[T]he more bedrooms you have, theoretically," he says, "the more people... the more people, the more money to help construct [the housing]."[232] This quantitative problem had a qualitative counterpart, which was that the open plan loft didn't *look* like a residential space. With no fixed interior walls, the loft was difficult to distinguish from the manufacturing space that it was replacing. This ocular quality of the loft plan had repercussions not only through the FHA, but also through planning and building codes.

For the planning department, it had immediate repercussion through the invention of special district zoning. "In order to make residential use of the previously industrial complex possible, the City Planning Commission was forced to create its first special zoning district."[233] Used for the first time with Westbeth and drafted through the disciplinary connotations of urban design rather than urbanism, the "special district is a zoning technique that has been developed to achieve specific planning and urban design objectives within a limited area."[234] Succeeding Westbeth, special district zoning would "be applied to much larger areas including the theater district and the Lincoln Center area."[235] The special district zoning technique changed the permitted uses from manufacturing (M1-5) to mixed-use (C6-4) and thus for approved development that contained "residences, studios and other facilities for artists engaged in the

[231] Ibid.
[232] Ibid.
[233] Stern, Mellins, and Fishman, *New York 1960: Architecture and Urbanism between the Second World War and the Bicentennial*, 252.
[234] The special district zoning technique was developed by Mayor John V. Lindsay's Urban Design Group of the New York City Planning Commission. See also Office of Lower Manhattan Development, "Lower Manhattan Waterfront," (New York: City Planning Commission, 1975), 13.
[235] Stern, Mellins, and Fishman, *New York 1960: Architecture and Urbanism between the Second World War and the Bicentennial*, 252.

visual or performing arts."[236] When special district zoning allowed residential occupancy of Westbeth's interior spaces, and the open plan didn't signify residency, then the development didn't meet code.

Similar problem occurred at the building department, for which an open plan without enclosed bedroom didn't signify residency.[237] This seemingly mundane way of identifying a residential space had, however, a logical explanation in the code. The New York building code for residency includes what is commonly referred to as 'legal window requirements'. The legal window requirement is contextualized in the problematic history of New York City's public housing, which dates back to the days when Jacob A. Riis photographed the interior conditions of the city's tenement buildings.[238] In his canonical 1890 book, Riis delineates what he refers to as the "dark bedroom" being the key problem of the unhealthy and overcrowded living conditions found in the rooms of the tenement buildings.[239] Small in size and without any windows, the tenement bedrooms generally lacked natural light and ventilation. Riis traces the constituting principles of the 1867 Tenement House Act, which was "the fist step toward

[236] The zoning resolution says that "rezoning together with the approval of an amendment (CP-20185) of the Zoning Resolution concerning special permits for the approval of 'Artists' Centers' would permit the applicant to apply to the Commission for approval of a development which would contain residences, studios and other facilities for artists engaged in the visual or performing arts." See New York City Department of City Planning, "33 (Cp-20183)," in *City Planning Resoluiton* (New York: New York City Department of City Planning, March 13, 1968), 198.
[237] This argument needs to be evaluated in the context of public housing. The problematic history of the tenement building doesn't concern single-family houses. A private residence may or may not have been built in the U.S. prior to the Westbeth Artists' Colony, including an open plan without demarcated bedroom. Such a project, however, would not be required to meet the same code as a public housing project.
[238] Jacob A. Riis used the law to define the tenement building. "The law," he said, "defines [the tenement building] as a house 'occupied by three or more families, living independently and doing their cooking on the premises; or by more than two families on a floor, so living and cooking and having a common right in the halls, stairways, yards, etc'." See Jacob A. Riis, *How the Other Half Lives*, The Barnes & Noble Library of Essential Reading (New York: Barnes & Noble, Inc., 2004), 10-11.
[239] Ibid., 2.

remedial legislation."[240] He says that "[t]he dark bedroom fell under the ban first," thus the Tenement House Act introduced a code to require a window in each bedroom in order to increase natural light and air ventilation.[241] [Figure 2.14] The 1867 Tenement House Act succeeded in improving the amount of light, but failed to improve air ventilation. It is interesting to read Riis's late nineteenth-century analysis of the tenement apartments, in which he says that "no direct through ventilation is possible, each family being separated from the other by partitions."[242] In his analysis we find both the technical requirements of light and air that were enforced by code, but also the aversion of the open plan that subdivided space not by walls but by partitions. In any case, following the 1867 Tenement House Act, "every [room indented for sleeping] in every residence building …shall have one or more windows opening directly upon a street or other open public space" to provide natural light and air ventilation.[243] The legal window code has been valid in New York ever since. When Westbeth's lofts lacked enclosed bedrooms, it was impossible to determine if the sleeping areas included legal windows and thus conformed to the code.

Westbeth's lofts lacked the armatures that both by convention and by code signified residency. Being regulated on the premises of public housing, the open plan didn't meet the code. For the planning department, the absence of bedrooms became a Catch-22 as the upgraded use channeled through the special district zoning was contradicted by the open plan. And for the building department, the open plan of the loft failed to prove that the sleeping function implicit in

[240] Ibid., 8.
[241] Ibid.
[242] Ibid., 11.
[243] Arthur F. Cosby, "Code of Ordinances of the City of New York," (New York: The Banks Law Publishing Company, 1922), 73.

residency conformed to the code for legal windows. As a space without enclosed bedrooms didn't signify residency, the open plan basically didn't meet the requirements for residential use. The open plan had to be injected with new meaning, thus Meier had to conceptualize the loft.

Abstract Lines

The loft was not considered a domestic space back in the late '60s because the open plan didn't signify residency. We have seen that both the City and federal agencies required fixed interior walls to delineate a bedroom. The open plan, hence, described a marginalized space that didn't meet the principles of code. To gain acceptance by universal legislation, and thus be squeezed through the code, the domestic qualities of the loft had to be conceptualized. Before analyzing this procedure, we have to examine the meaning of residency. We can do that by consulting Martin Heidegger's scholarship on dwelling.

Heidegger discusses the nature of dwelling. By theorizing dwelling, he seeks to go beyond the utilitarian discussion about housing shortages and healthy designs to address a consequence of the condition of modern life, which, for Heidegger, complied with the contemporary incapacity to deal with feelings of uprootedness.[244] Heidegger argues that the "search anew for the nature of dwelling" offers a way out of this condition.[245] For Heidegger, dwelling is a process. "When we speak of dwelling," he said, "we usually think of an activity that man performs alongside many other activities," such as work, business, and travel.[246] This activity entails construction, or the

[244] Heidegger, *Poetry, Language, Thought*, 159.
[245] Ibid.
[246] Ibid., 145.

process of assembling objects into something finite.[247] Hence when we dwell, we merely instigate a series of operations that thorough construction strive to put an end to our feeling of uprootedness.

Ignasi de Solà-Morales builds upon Heidegger's discourse when he argues that "[t]he end of dwelling is residence, and the process of construction is thereby to erect a residence."[248] Residency, he said, is "a place that constitutes a spiritual or moral core, and in which *life* engages *things*."[249] Following Heidegger and de Solà-Morales, we can conclude that domesticity is a continuum that starts with dwelling and ends with residency. Residency is fixed -- it is final. Dwelling, on the other hand, is always in flux. Hence it can be argued that the residential interior is something static -- it is the end of a continuum -- it is an object. And for the legal and financial institutions of the '60s, the bedroom was the signifier of that object.

Heidegger's differentiation of dwelling and residency is useful when contextualizing various forms of domesticity. It is not enough, however, if we want to trace the conceptualization of the loft. Heidegger's differentiation conforms to the idea of a location "from which the call to dwelling could be made."[250] This location describes a place and not the realm "within a boundary," which is a space.[251] Hence even if Heidegger might be correct when he argues that "spaces receive their being from locations," the places of domesticity that constitute the foundation of his thesis are simply not enough if we want to extract new meaning from a spatial

[247] Ignasi de Solà-Morales says that construction "is the process by which man, assembled together with others, assemble things or objects." See de Solà-Morales, *Differences: Topographies of Contemporary Architecture*, 47.
[248] Ibid.
[249] Ibid.
[250] Ibid., 46-47.
[251] Heidegger, *Poetry, Language, Thought*, 152.

typology, that is the loft.[252] We have to cross-reference Heidegger with scholarship on the architectural concept. Peter Eisenman offers such scholarship.

Heidegger differentiates between dwelling as process and residency as object, and Eisenman make a conceptual distinction between the two. Eisenman says that "all objects have a structure, that is, a shape which possesses some inherent relationships which in turn suggest some form of meaning."[253] He analyzes the works of Robert Morris and Donald Judd to conclude that each "seems to have a similar purpose: to take meaning away from objects."[254] The architectural plan of a domestic interior can be described as a representational image of residency. Indeed the structure of spatial subdivision and programming, which is represented by the plan drawing, invokes the meaning of residency. For FHA, the meaning of residency was "not the direct result of understanding the formal structure of the [space for habitation], but results from an agreed-upon convention given to a particular structure of form," that is the spatial configuration and programming of a residential interior.[255] If we look at the loft plan through the lens of Eisenman's analysis, it very much complies with Morris and Judd. The loft plan represented domesticity deprived of structure. Thus, meaning had been removed from residency.

Meier had to find a way to meet the requirements of a domestic object. He could do so by reversing Morris and Judd and thus introduce meaning by adding structure to the loft plan. The issue, however, was to introduce structure without altering the spatial intention of the loft. As we

[252] Ibid.
[253] Peter Eisenman, "Notes on Conceptual Architecture: Towards a Definition," *Casabella* 359-360 (November/December, 1971): 51.
[254] Ibid.: 49.
[255] Ibid.

have already seen, it was the presence of a bedroom that signified the meaning of residency, and any such addition would eradicate the significance of the loft space. Eisenman points out that it is the "difference between concept integer and an actual…structure" that is of critical concern to a conceptual architecture.[256] And it was exactly by focusing on the representation of that difference that Meier succeeded to conceptualize the loft.

The concept integer of Westbeth's lofts was to avoid any fixed program and thus to provide the flexible space that the open plan facilitated.[257] Still, the bedroom presence had to be introduced to provide actual structure to the space, which was necessary for the purpose of code. Meier started by indicating an enclosed but unlabeled room in each and every one of Westbeth's 384 loft units. [Figure 27-35] By positioning the generic room within the open plan so it included a legal window, Meier responded to the premises of building code. His generic room provided necessary meaning by introducing the presence of a potential bedroom, but it also created a serious problem as it also added structure to the space and thus inhibited the concept integer of the loft. Meier navigated this problem by using a different line type for the interior walls that delineated the generic room. By representing the interior walls with dotted lines, he made the distinction to the single volume explicit, which was represented with solid lines. [Figure 2.15-2.23] With the differentiation between the two line types Meier abstracted the meaning of residency. By representing the bedroom presence with dotted lines, he manipulated the physical

[256] Ibid.

[257] Richard Meier says that "Creative participation and leadership in the New York and Washington offices by Federal Housing Administration officials were critical in clearing the way for the necessary modification of regulations to permit architectural treatments such as the above, and to allow flexibility in the Westbeth development. New York City Building Department regulations were modified to allow apartments to be designed and built as loft-type spaces… Almost every size apartment thereby provides a large, open loft type space ideally suited to the individual artist's needs." See Richard Meier's own statement about the project in "Westbeth's Rehabilitation Project: A Clue to Improving Our Cities," 106.

reality of the open plan, and thus conceptualized the loft space by turning residency from object to process.

The Westbeth Artists' Colony was permitted by planning regulation on March 13, 1968, and the loft units were squeezed through both the FHA and the Building Department in summer that same year.[258] With approved federal loan guarantees, the ground was broken for construction and the project was completed two years later. The flexible spaces that Meier anticipated with his design met the expectations of integrated live and work environments. Indeed, with "minimum number of interior walls within a unit" the lofts could all be individually arranged according to the artists needs with movable partitions and storage facilities, which was exactly what Meier had planned for.[259] [Figure 2.24] And why shouldn't they work? The spatial typology of the loft had, as we have seen, been widely used in Lower Manhattan for more than fifteen years, thus the typology was well tested. The major effort, however, was Meier's conceptualization of the loft, which was necessary for gaining legal and financial support. By conceptualizing the loft he made it possible for a marginalized space to meet the criteria of universal legislation, which concurrently established a new building type.

[258] For the date of approval by the special district zone, see New York City Department of City Planning, "33 (Cp-20183)." Dixon Bain provides useful information about the proceedings with FHA and the Building department that followed the approval by New York City Department of City Planning. In email correspondence with the author on June 10, 2011, Bain elaborates on "the discussions between Richard Meier and the FHA's Chief architect at the time, Porter Driscoll…which centered on the manner in which Richard fought for the concept of using dotted lines in plan to show where the bedrooms would be…Richard and I divided up the hugely daunting amount of work to be done between our City approvals in March and our financing deadline in June 1968 and each worked to our respective strengths in grappling with the beast. If you've read the piece I did for Jeanne Houck, I sought to convey some of the uncertainty and high tension that surrounded those last few months in the spring of 1968. It wasn't clear until mid-June that we were going to make our goal."

[259] "Westbeth's Rehabilitation Project: A Clue to Improving Our Cities," 106.

When officially opened in May 1970, Westbeth was the nation's largest federally-subsidized artists' colony. Inaugurated the same year as Robert Moses's plans for the Lower Manhattan Expressway were terminated, the project certainly became a turning point for warehouse conversions in Lower Manhattan, and particularly in SoHo. Not having to fear the long-lasting threat of becoming a freeway intersection, the outmoded manufacturing district could begin planning for a new future. And Meier's loft building a few blocks away surely pointed out an appealing direction. Being legalized, projects could become instigated on federal funding, thus loft conversions could become both affordable and spatially significant. Accumulated in one single structure, the Westbeth loft building encompassed the epitome of the '60s idea of creating a community that nurtured its artists. With the Westbeth Artist Colony, hence, the loft went from illegal to legal, introducing a new era for the development of integrated live and work environments in Lower Manhattan. And just a year later, in 1971, the New York City Department of City Planning drew from their Westbeth experiences to make SoHo a special district zone, and thus release the zoning constraints that throughout the postwar period had hampered loft developments.

LOFT ARCHITECTURE

The Power of Types

We have discovered the emergence of the loft through a grassroots revolt against the ideals of Modernist city planning, and we have extracted the spatial typology of the loft through Le Corbusier's *Dom-ino system*. Characterized by this synchronized rejection and celebration of Modernism, we have traced the successive legalization of the loft, which culminated in 1968 when Richard Meier conceptualized Westbeth's lofts. Completed in 1970, Westbeth became the poster child for a new building type, and a prototype for concurrent architectural development. Roaming the realms of urban governance and financing, the prototype signified a new role for architecture in urban renewal processes.[260]

Prior to Westbeth, loft conversions encompassed incremental transformation of interior spaces. Like intrinsic adjustments in disguise, lofts were added to existing buildings through haphazard interventions of domestic use. Drawing from its spatial characteristics, a loft could be inserted in any kind of industrial or commercial building to coexist with the other uses operating within a lot. Hence before Westbeth, the loft treated the city as matrix of operating uses in which certain nodes could be augmented by some traces of the dwelling function.

[260] The loft materialized various city building ideologies predominant in the late 1960s and early '70s, such as the call from the preservation movement to replace the tabula rasa of modernism with adaptive re-use of historic buildings; the call for replacing the distancing aspects of centralized planning with grassroots urbanism; and the call for eradication of functional segregation, which had characterized city building in New York City ever since the famous ordinance was enacted in 1916.

Following the completion of Westbeth, loft conversion expanded from incremental transformations of interior spaces to also encompass uniform transformations of buildings. By targeting entire structures for redevelopment, all spaces within a building could be converted into artists' lofts, or art-related activities, which terminated all other uses within that property. Cleared from non-related industrial or commercial programs, the remaining corpus, often of historical significance, could be reused for lofts. Thus, one single-use activity was replaced by another. Transferring coexistence from architecture to urbanism, the new building type introduced a new era of loft development, where architecture was used by city governance to catalyze the reinvention of mixed-use urbanism.

Westbeth became a benchmark for the subsequent interest in mixed-use urbanism. The converted laboratory proved that a property could be rezoned to permit multiple uses, such as the integration of live and work environments, and that use integration could generate architecture that improved the quality of urban space. This formula worked, however, only because Westbeth instigated comprehensive land use change. Contrary to the piecemeal transformation of space that characterized most previous loft conversions, Westbeth instigated a uniform alteration of space that corresponded to the requirements of zoning. Encapsulated by a building type, Westbeth's lofts met all aspects of code, and thus all criteria for heath, safety, and welfare accustomed universal planning regulation in New York City. Classified as a residential building, Westbeth complied with the regulation of construction and habitability in the New York City

Multiple Dwelling Law.[261] Turning a manufacturing space into a bundle of lofts, Westbeth homogenized the incrementalism of previous loft conversions.

Still, incremental transformation of interior spaces persisted parallel with comprehensive land use change. Adhering to coexistence with various uses within the domains of a lot, the incremental transformation of interior spaces could not comply with comprehensive land use change hence never meet code. Various means of code circumvention continued to be practiced also after Westbeth, such as the A.I.R. certificate, and a second amendment to Article 7-B of the Multiple Dwelling Law was enacted in 1971 to once again simplify artists' certification procedure.[262] Still, the rent control problem previously discussed remained and escalated during the 1970s as loft dwelling became a matter of fashion.[263] In the early 1960s, rising rents on lofts had not been a serious problem as artists "tended to be the only ones interested in them."[264] The popularity of loft dwelling, however, increased during the '60s and when the loft sales in New York City began to be recorded in 1970 -- the same year as Westbeth was completed -- the loft was certainly moving from alternative living environment to real estate commodity.[265] Following the popularity of loft dwelling, landlords increased the rents even when renovation proceeded under the radar of universal legislation. As a consequence of zoning's incapacity to deal with piecemeal land use change within the domains of a lot, illegal conversions remained a frequent practice also after Westbeth.

[261] The loft is an official building class. See, for example, City of New York, "Building Classification," City of New York <http://nycprop.nyc.gov/nycproperty/help/hlpbldgcode.html>.
[262] Zukin, *Loft Living: Culture and Capital in Urban Change*, 53.
[263] Sharon Zukin describes, for example, the SoHo Artists' Tenants'' Association (SATA) advocating in 1968 "a rent stabilization program that could be applied to rents on A.I.R. lofts, but the city administration refused to consider it." See Ibid., 122.
[264] Stratton, *Pioneering in the Urban Wilderness*, 26.
[265] Archival research pursued by the author at the Real Estate Board of New York in New York City indicates that the sales prices of lofts in New York City started to be recorded in 1970.

The legalization of Westbeth didn't solve the problems of safety and insecurity that loft tenants faced when dwelling outside the code. Landlords continued to convert lofts that didn't meet minimum acceptable level of safety and comfort. There are different ways to fix this problem. One way is to control the rents even for the tenants living in lofts that don't meet code. If the landlords are deprived the possibility of raising the rents on instant basis, then the tenants are more likely to invest the means of labor and capital necessary to improve both the safety and the comfort of their living environments. The New York City Rent Stabilization Law of 1969 (RSL) and the New York State Emergency Tenant Protection Act of 1974 (ETPA) were both regulating the rents, but didn't succeed in protecting the increasing number of illegal loft dwellers. The problem that occurred, as previously pointed out, encompassed the discrepancy between the principles of comprehensive zoning and piecemeal land use change within the domains of a lot. When a building was classified for loft dwelling by universal legislation -- as in the case of Westbeth -- then the building was approved a residential Certificate of Occupancy (CO). With issued CO, all lofts within that building became subject for rent control. The buildings that persisted with incremental loft conversions basically didn't meet the requirements of CO hence they remained disconnected from all regulations, including rent control.[266] The trick was to provide residential status also to the buildings with heterogeneous uses. A new building type was needed to classify buildings with incremental loft conversions.

[266] New York Multiple Dwelling Law - Article 7-C - § 286 Tenant Protection says that "[p]rior to compliance with safety and fire protection standards of article seven-B of this chapter, residential occupants qualified for protection pursuant to this article shall be entitled to continued occupancy, provided that the unit is their primary residence, and shall pay the same rent, including escalations, specified in their lease or rental agreement to the extent to which such lease or rental agreement remains in effect or, in the absence of a lease or rental agreement, the same rent most recently paid and accepted by the owner.

This building type was created by an amendment to the New York City Multiple Dwelling Law. Formally known as the Loft Law, the amendment "was intended to be a comprehensive solution to the problems created in the 1970s by the widespread illegal conversion of loft space formerly occupied by commercial and manufacturing tenants, to residential use or to joint commercial-residential use."[267] Enacted on June 21, 1982, the amendment created a building type formally known as Interim Multiple Dwelling, or IMD.

The IMD is a non-residential building that has been used illegally for the purpose of dwelling. Being subject of the Loft Law, the classification of IMB refers to "any building or structure or portion thereof located in a city of more than one million persons which (i) at any time was occupied for manufacturing, commercial, or warehouse purposes; and (ii)lacks a certificate of compliance or occupancy pursuant to section three hundred one of this chapter; and (iii) on December first, nineteen hundred eighty-one was occupied for residential purposes since April first, nineteen hundred eighty as the residence or home of any three or more families living independently of one another."[268] Processing piecemeal land use change within the domains of a lot, the IMB supports loft dwelling in coexistence with other uses. Drawing from the ETPA of 1974, the lofts in an IMB are subjects of rent control.[269]

The IMB building type succeeded in regulating loft dwelling in concurrence with other uses. Overcoming the constraints of universal legislation, the amendment challenged zoning's inability

[267] Stanley Kaufman, "Loft Law Lives on but after 14 Years, Most Novel Issues Have Been Resolved," *New York Law Journal* 216, no. 37 (August 21, 1996).
[268] New York City, "Appendix L Multiple Dwelling Law Article 7-C. Legalization of Interim Multiple Dwelling," (New YorkJune 21, 1982), § 281. Definition of "interim multiple dwelling".
[269] Ibid., § 280. Legislative findings.

to process incremental transformation of interior space. The positive response of the market tells of its success. With two building types, the spatial typology of the loft could flourish and generate live and work environments with different implication on both building and city.

Tracing the Architecture of the Loft

Since Westbeth was completed, loft dwelling has had increased influence on both urbanism and architecture. For urbanism, it became an instrument of neighborhood resurrection that all too often catalyzed gentrification. Introduced to the universal aspects of urbanism, loft developments were used by the structures of economic and political power to stimulate the forces of production and consumption which then and now direct urban change. Even if this trait is too vast to be covered within the framework of this case study, it needs to be recognized. The war "against an impoverished and increasingly isolated local population," which Rosalyn Deutsche and Cara Gendel Ryan so thoroughly take a stance against, has, in fact, to a significant degree, been fueled by loft conversions.[270] The social and cultural problems emerging from this urban condition describe a problematic backlash of the loft story. And for architecture, the loft introduced a new market and an expanded field of practice. Being both a spatial typology and a building type, loft commissions covered various scales and management procedures. A loft could be inserted into any building type, regardless of its historical significance and materiality, or it could be developed as a building type and include all aspects of housing construction. Indeed, Westbeth indicates not only architecture's capacity to catalyze urban change, but also the capacity of urbanism to stimulate the production of new knowledge within the discipline of architecture.

[270] See, for example, Rosalyn Deutsche and Cara Gendel Ryan, "The Fine Art of Gentrification," *October* 31 (Winter, 1984).

We can be critical to the post-Westbeth architectural trait, where loft developments often have erased the gap between urbanism and architecture to spur gentrification. On the other hand, the gradual stabilization of the financial factors of loft development, which started with Mayor Wagner and reached a pivotal moment with Westbeth, certainly have helped to finance architects in their efforts of using the loft as a platform for form and content experiments. It is during the post-Westbeth period that the spatial typology of the loft is included in the production of disciplinary knowledge.[271] With architects like Alan Buchsbaum [Figure 2.25], Michael Schwarting, and Tod Williams, loft architecture became a disciplinary practice.

The loft has transitioned from a marginalized living space to a domestic space with the same comfort and security as any suburban home. Still, the architecture of the loft implies certain characteristics that we shouldn't ignore when criticizing what has today become a rather well-established and middle-class dwelling. The architecture of the loft, Alan Buchsbaum said, is a "free-flowing modern space with occasional rooms for privacy."[272] Buchsbaum's definition serves as a useful framework when formulating some vocabulary to define loft architecture. Expanding on Buchsbaum, we can draw from the research of this case study to formulate a more explicit definition of the intersection of form and content that make up the architecture of the loft.

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[271] Sharon Lee Ryder's article "A Very Lofty Realm" has been recognized as the first article in the professional press that featured "high-style loft design." See Plunz, *A History of Housing in New York: Dwelling Type and Social Change in the American Metropolis*, 369. For Sharon Lee Ryder's article, see Sharon Lee Ryder, "A Very Lofty Realm," *Progressive Architecture* 55 (October, 1974). Significant loft designs were produced, for example, by Alan Buchsbaum, who founded the High Tech style, which became a global trend for architecture and interior design throughout the late 1970s and '80s. See Frederic Schwartz, ed. *Alan Buchsbaum Architect & Designer: The Mechanics of Taste* (New York: The Monacelli Press, Inc.,1996).

[272] Frederic Schwartz, "All Style(s)," in *Alan Buchsbaum Architect & Designer: The Mechanics of Taste*, ed. Frederic Schwartz (New York: The Monacelli Press, Inc., 1996), 14.

Loft architecture draws from Le Corbusier's *Dom-ino* structure to emphasize the premises of circulation and to reject the formation of spatial hierarchies. With the goal of providing maximum flexibility, the spatial continuity of the loft is shaped by series of partitions that avoid any load-bearing capacity. Not able to carry loads from external references, the partitions of the loft create a dialectical relationship to the elements of support -- those being columns, masonry walls, or wooden frames -- as they render the structural integrity of a single volume. Freed from everything but the orchestration of what George Ranalli calls "the relationship between interpersonal interaction and the way space is organized," the partition of the loft adjusts the level of privacy as it celebrates the autonomy of interior space.[273] Structured towards rituals and desires rather than domestic efficiency, the loft exceeds the familiar configurations of residential program to explore the social and cultural realm beyond well established dogmas.[274] Commemorating a high degree of programmatic resilience, the domestic references of the loft are not rendered though any semantics but rather through what Suzanne Stephens calls a *soi-disant* approach to the metaphorical systems of architecture.[275] Always present, never absolute, the traces of dwelling function instigate a memory of place. As an uncanny condition, it provides some necessary stability in the modulation of an evanescent space in which the horizon almost has been captured.

[273] George Ranalli, "Architecture and Domestic Ritual: New York City Loft," *Avant Garde: A Journal of Theory and Criticism in Architecture and the Arts* 1 (Winter 1989): 55.
[274] Sharon Lee Ryder argues that "loft spaces provide some of the only alternatives, which allow the occupants to structure their surroundings to fit the lifestyle, by allocating space to various uses as it suits individual needs." See Ryder, "A Very Lofty Realm," 92.
[275] Suzanne Stephens, "Semiotic Dimensions," *Progressive Architecture* (June, 1978): 85.

CONCLUSION

The conceptualization of the loft that Richard Meier pursued at the Westbeth Artists' Colony in order to fulfill the conversion of the former laboratory building into an artists' colony not only elevated a marginalized space, it launched a new disciplinary practice. When approved by the universal principles of planning regulation, the loft was accepted by the forces of consumption and production, and Meier's strategy was widely adopted to catalyze both urban renewal plans, and the adaptive reuse of historically significant buildings. The conceptualization of the loft opened for the door for the widespread implementation of loft development. Channeled through the modified rules of Aldo Rossi and Jonathan Barnett, the morphology of built form that was legalized by special district zoning paved the way for the emergence of a new building type.[276] Possible to classify, the loft catalyzed the production of new knowledge within a multitude of disciplines and fields, primarily sociology, human ecology, urban geography, cultural studies, and real estate.[277]

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[276] Aldo Rossi's modified rules concern the morphology of built form. See Rossi, *The Architecture of the City*. Jonathan Barnett's modified rules concern the implementation of special district zoning. See Barnett, *An Introduction to Urban Design*.

[277] For sociology, see, for example, Zukin, *Loft Living: Culture and Capital in Urban Change*. See also Zukin using her own loft in the East Village as a lens through which to critically look at Jane Jacob's failure to engage in the universal aspects of neighborhood transformation in ———, *Naked City: The Death and Life of Authentic Urban Places*. For human ecology, see, for example, James R. Hudson, "Organized Groups, Land Use Decisions, and Ecological Theory," *Sociological Perspectives* 31, no. 1 (January, 1988). See also Hudson, *The Unanticipated City: Loft Conversions in Lower Manhattan.* For urban geography, the loft has been used repeatedly as the framework for scholarship on gentrification. Peter Jackson, for example, observes that the gentrification of SoHo "can be seen to have involved a shift from small-scale loft conversion of individual units by existing tenants to large-scale conversion of whole buildings by real estate companies." See Peter Jackson, "Neighbourhood Change in New York: The Loft Conversion Process," *Tijdschrift voor Economische en Sociale Geografie* 76, no. 3 (1985): 206-07. Neil Smith, who also studies the gentrification of SoHo, characterizes the district as "an area of artists' lofts and effete galleries, gentrified in the late 1960s and 1970s, and enjoying an unprecedented boom in the 1980s." See Neil Smith, *The New Urban Frontier: Gentrification and the Revanchist City* (New York: Routledge, 1996), 15. For cultural studies, see, for example, Roslyn Bernstein and Shael Shapiro, *Illegal Living: 80 Wooster Street and the Evolution of SoHo* (Vilnius, Lithuania: Jono Meko Fondas, 2010). See also Kostelanetz, *SoHo: The Rise and Fall of an Artists' Colony*. For real estate, the loft offers an ever-expanding market, both in the U.S. and elsewhere. The real estate sector has, for example, expanded the classification of loft to include hard lofts and soft lofts. See, for example, Joy Paterson, "Hard Lofts, Soft Lofts: What's the Difference?," Real Estate Pro Articles <http://www.realestateproarticles.com/Art/6902/263/Hard-Lofts-Soft-Lofts-What-s-the-Difference.html>. See also

It is interesting to think about what would have happened if Meier didn't conceptualize the architecture of the loft, but rather used his means of design to reconceptualize some specific mechanisms of planning practice. Hence, how would the story have been told today if Meier had developed a way towards legalization not by explaining architecture through the universal mechanisms of code, but rather explaining the code through some specific relationships between the site and its architecture? The loft space would certainly still be inserted into various building types -- it didn't need legalization to flourish. But the conversion of lofts would probably remain a rather marginalized practice, still geared toward a do-it-yourself culture and not toward architectural discourse. Without entry to the universal aspects of urbanism, the loft would, most certainly, either continue to operate in limbo between legality and illegality or, considering the remaining discrepancy between zoning and site that still characterizes universal legislation in the 2010s, loft dwelling would be legalized via ad-hoc solutions mobilized by specific needs of cultural practices. If not conceptualized, the loft would likely remain disconnected from the forces of big capital. Hence, gentrification of cities would have been channeled through other means, and the integration of live and work would have been accomplished through a different occupation. Without the consequence on cities and buildings that followed the legalization of Westbeth's lofts, however, the loft would probably not have become the subject matter of critical scholarship and practice, like that of Sharon Zukin and Alan Buchsbaum, and Westbeth would

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Greg Reitz, "Movin' on Up: Challenges and Opportunities of Vertical, Infill, Mixed-Use Development," *Environmental Design + Construction: The Premier Source for Integrated High-Performance Buildings* (January, 2008).

probably not have been a case study in this dissertation.[278] In any case, the repercussions of Meier's dotted lines cannot be underestimated.

This case study elaborates on some relationships between the loft as a spatial typology, and as a building type. It shows that a spatial typology can be obtained outside the realm of architecture, but that architecture is needed to process the transformation from spatial typology to building type. Within the light of this case study, it is also suggested that this transition would have been difficult to achieve without the architectural manipulation of the codes that govern the making of a city. Indeed, in the light of Westbeth, it was the manipulation of codes that made it possible to introduce the loft to the universal principles of governance and finance, and, ultimately, construction.

This case study also shows that the integration of live and work could only be made legal when the loft had been explained through a building type. Indeed, universal code was capable of processing a spatial typology with integrated live and work environments only when a building form had been produced through comprehensive land-use transformation. When loft conversions continued to be distributed incrementally through site-specific circumstances, then code called for the invention of a new building form. This trinity of content, form, and code, which unfolds with this case study, expands the field of research on code manipulation. It shows that universal code needs form to process content, and it suggests that zoning can be manipulated through

[278] For Sharon Zukin's critical scholarship on the loft, see, for example, Zukin, *Loft Living: Culture and Capital in Urban Change*. For Alan Buchsbaum's critical practice, see, for example, Schwartz, ed. *Alan Buchsbaum Architect & Designer: The Mechanics of Taste*.

careful adjustments of the principles that, ever since Vitruvius, have made up the fundamental core of architecture.

Figure 2.1: Historical façades in SoHo, New York, New York.
Photography: Per-Johan Dahl.

Figure 2.2: Spacious interiors behind historical façades in SoHo, New York, New York.
Photography: Per-Johan Dahl.

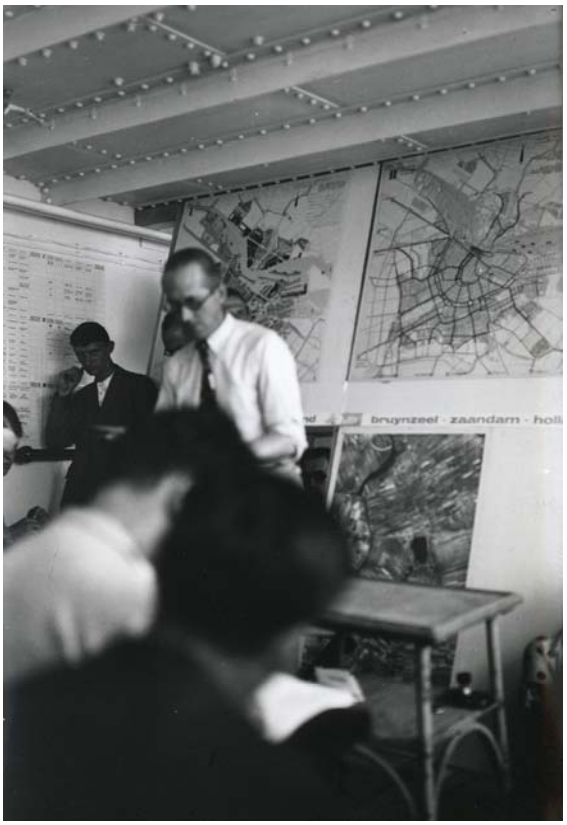

Figure 2.3: Le Corbusier speaking on the Patris II, CIAM 4, 1933.
Courtesy of gta archives, ETH Zurich: CIAM archives.


Figure 2.4: Raw interior.
Danny Lyon, 88 Gold Street, from ‘The Destruction of Lower Manhattan’, 1966-1967.
Photo credit: Danny Lyon/Magnum Photos.

Figure 2.5: The geographical boundaries of SoHo, New York, New York.

Figure 2.6: Narrow historical buildings in SoHo, New York, New York.
Photography: Per-Johan Dahl.

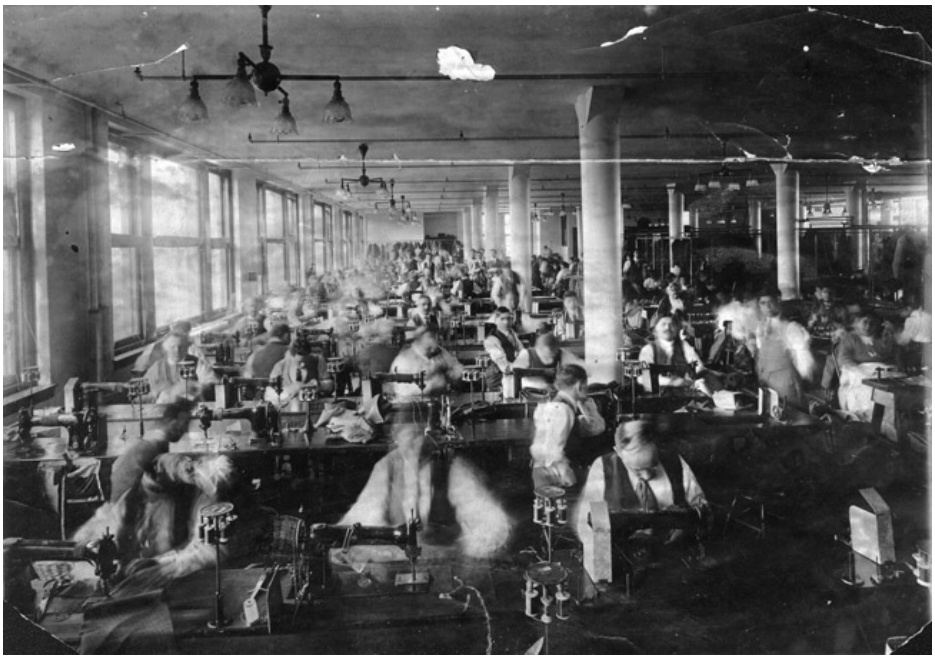

Figure 2.7: Naturally illuminated garment sweatshop in New York, c 1900.

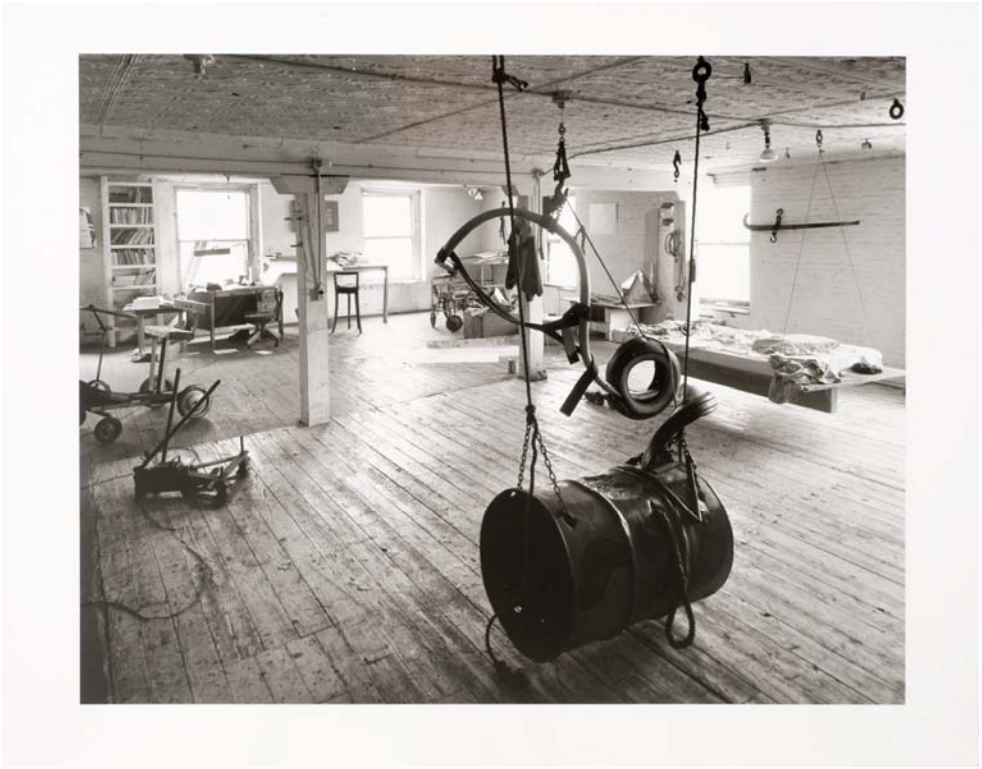

Figure 2.8: The open plan and the dwelling function.
Danny Lyon, Interior of Mark di Suvero's 195 Front Street loft, from 'The Destruction of Lower Manhattan', 1966.
Photo credit: Danny Lyon/Magnum Photos.

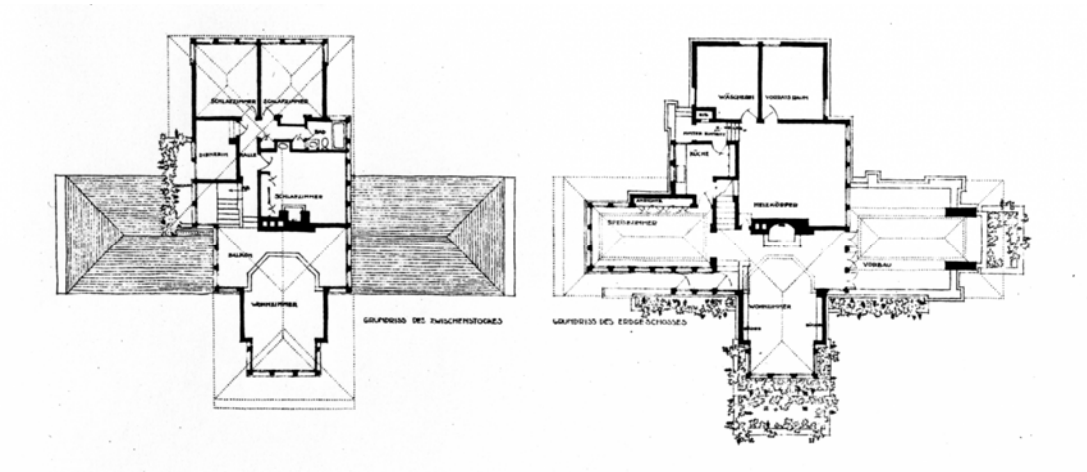

Figure 2.9: Frank Lloyd Wright, Isabel Roberts house, River Forest, Illinois, 1907.

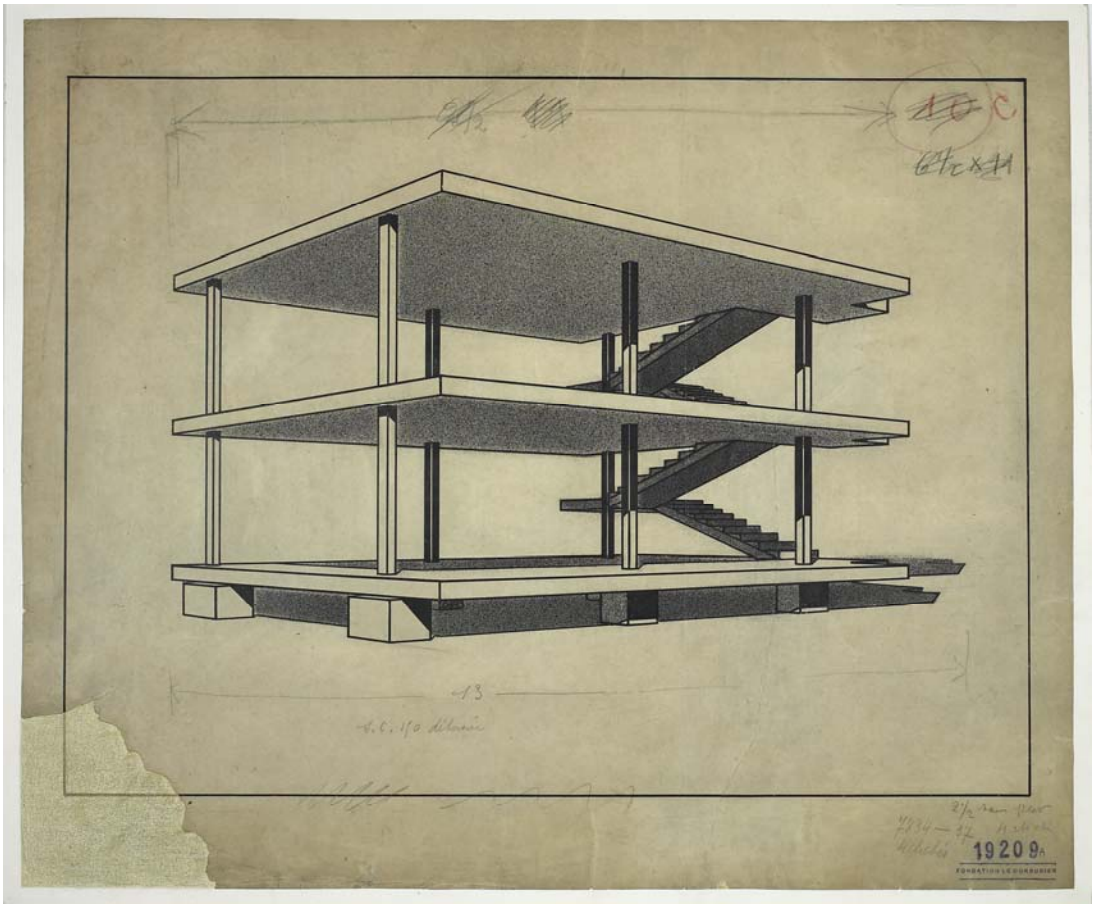

Figure 2.10: Le Corbusier, Maison Dom-ino, 1915.


Figure 2.11: Bell Laboratories, 1934.
Courtesy of AT&T Archives and History Center.


Figure 2.12: The balconies of Westbeth as a second means of egress.
Photography: Per-Johan Dahl.

Figure 2.13: Westbeth's courtyard.
Photography: Per-Johan Dahl.

Figure 2.14: Jacob A. Riis, In Poverty Gap - West 28 Street: an English Coal-Herver's Home, 1888.

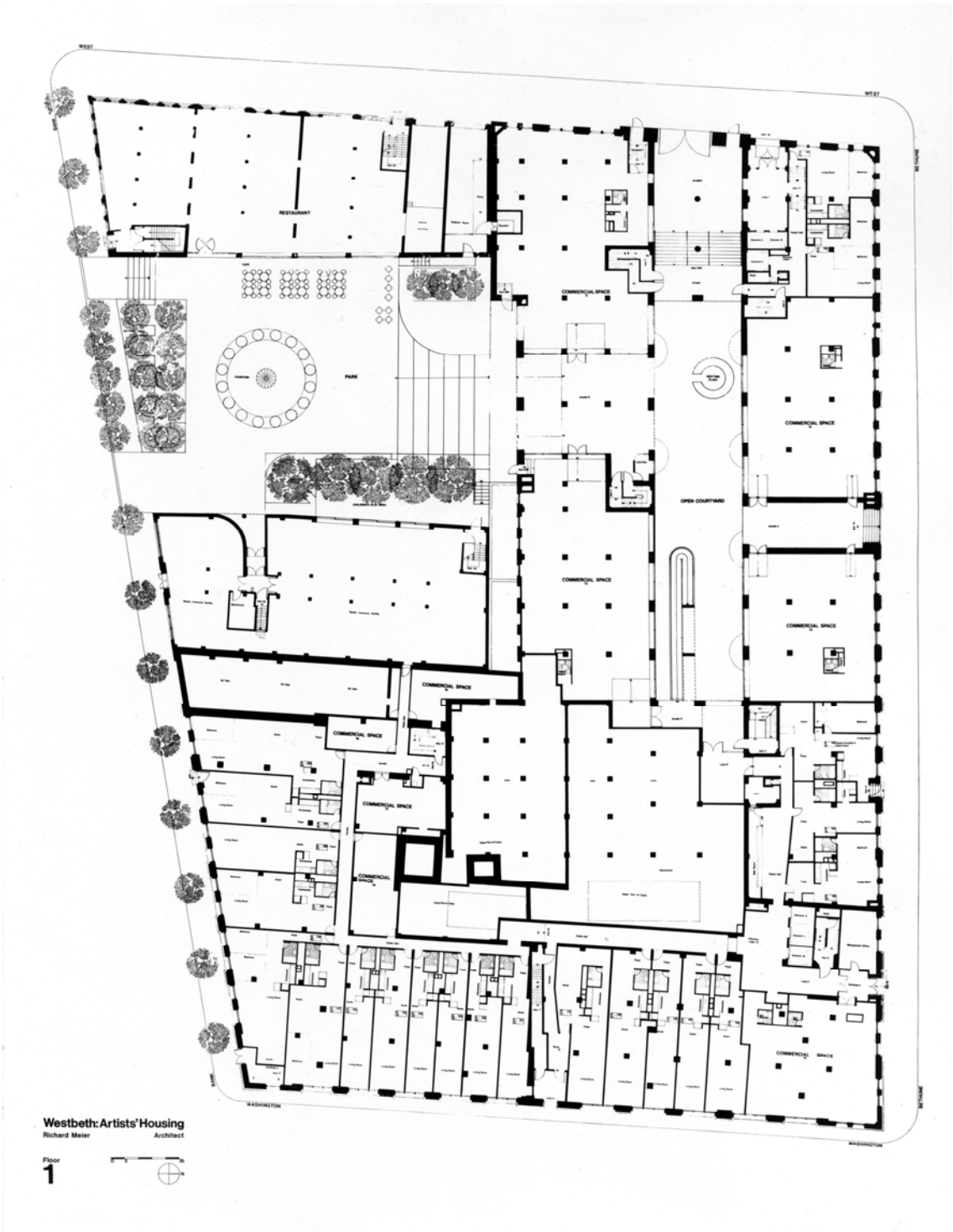

Figure 2.15: Westbeth Artists' Colony. Plan, first floor.
Richard Meier & Partners Architects, Westbeth Artists' Colony, New York, New York, 1967-1970.
Drawing by Richard Meier & Partners Architects. Courtesy of Richard Meier & Partners Architects.

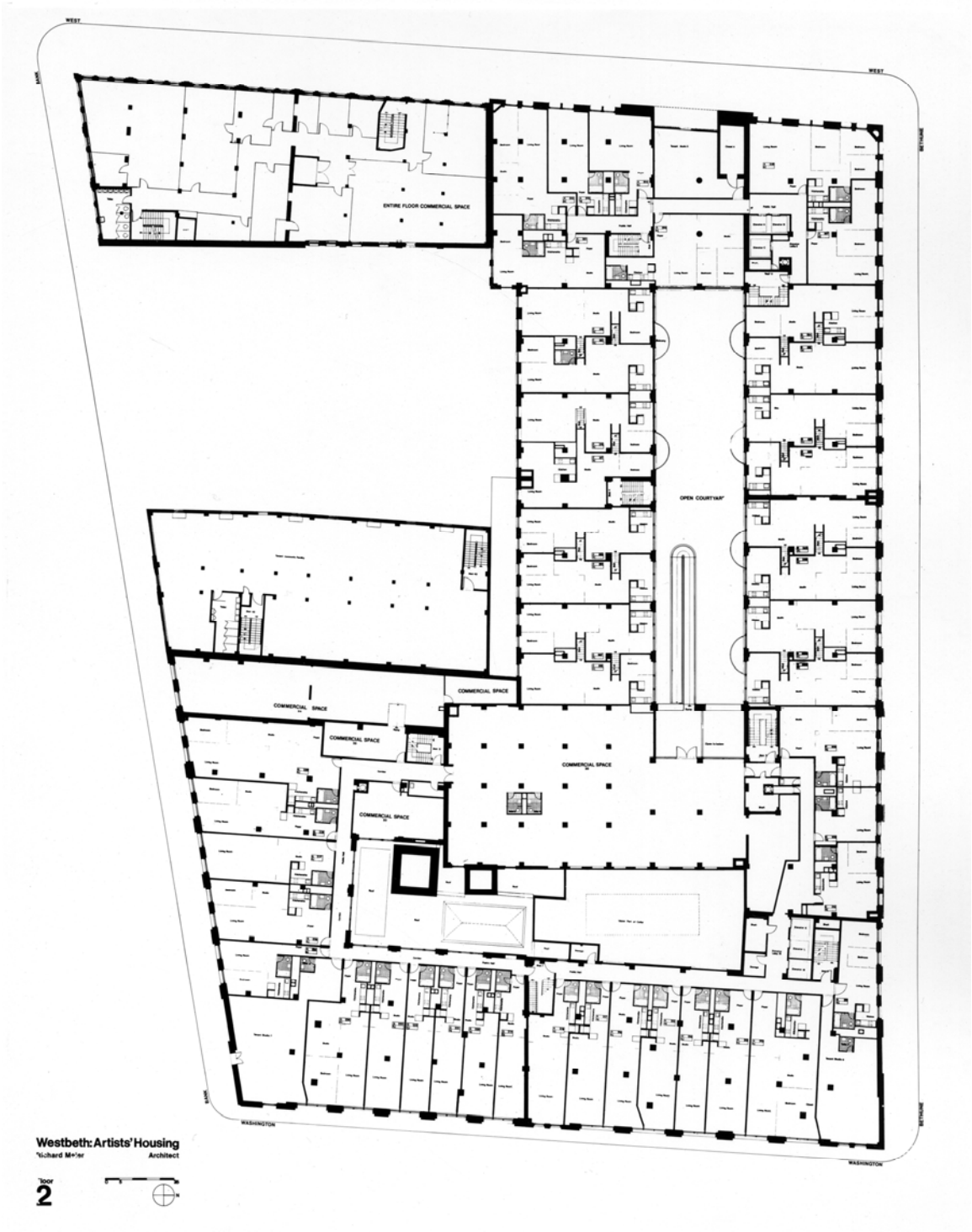

Figure 2.16: Westbeth Artists' Colony. Plan, second floor.
Richard Meier & Partners Architects, Westbeth Artists' Colony, New York, New York, 1967-1970.
Drawing by Richard Meier & Partners Architects. Courtesy of Richard Meier & Partners Architects.

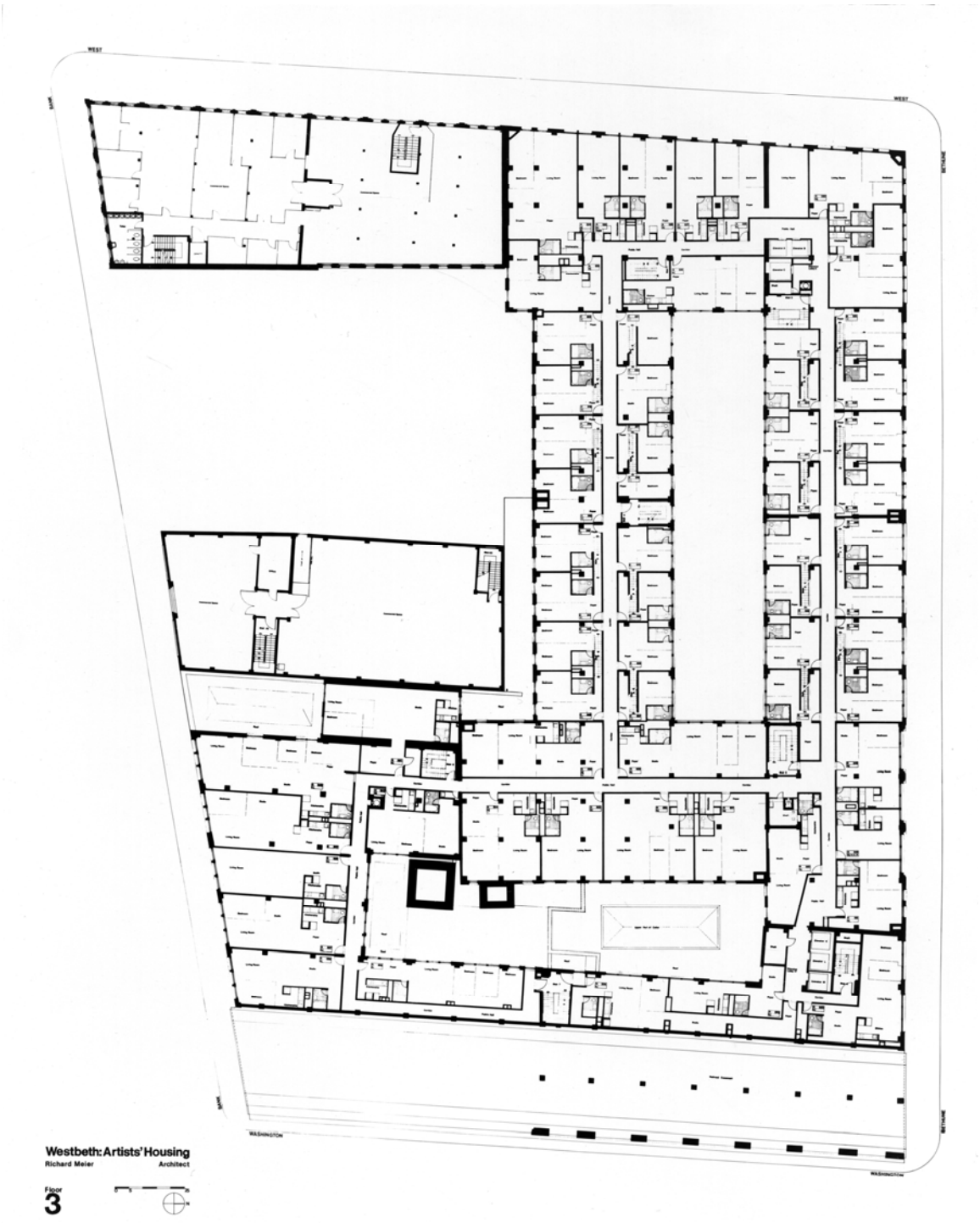

Figure 2.17: Westbeth Artists' Colony. Plan, third floor.
Richard Meier & Partners Architects, Westbeth Artists' Colony, New York, New York, 1967-1970.
Drawing by Richard Meier & Partners Architects. Courtesy of Richard Meier & Partners Architects.

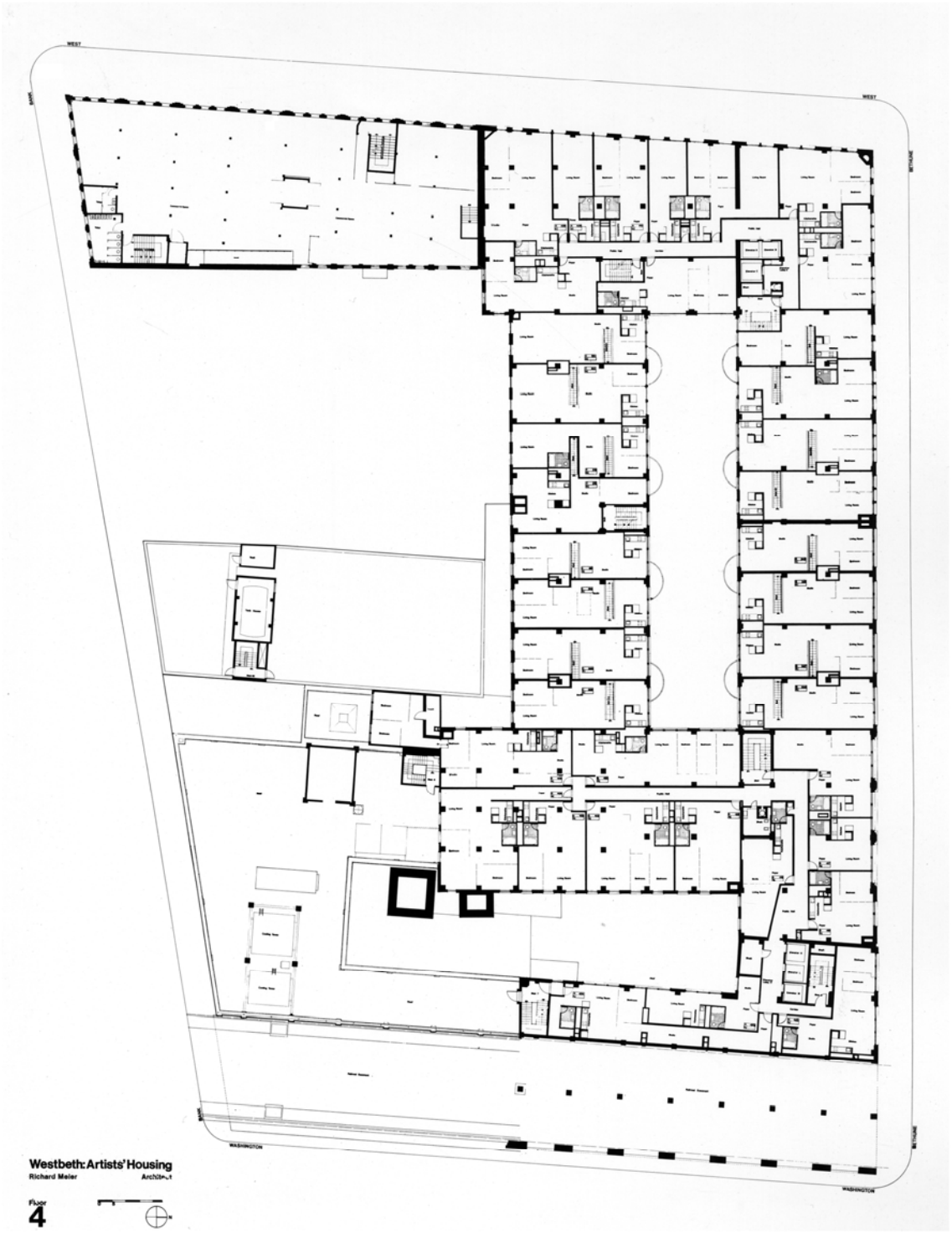

Figure 2.18: Westbeth Artists' Colony. Plan, fourth floor.
Richard Meier & Partners Architects, Westbeth Artists' Colony, New York, New York, 1967-1970.
Drawing by Richard Meier & Partners Architects. Courtesy of Richard Meier & Partners Architects.

Figure 2.19: Westbeth Artists' Colony. Plan, fifth floor.
Richard Meier & Partners Architects, Westbeth Artists' Colony, New York, New York, 1967-1970.
Drawing by Richard Meier & Partners Architects. Courtesy of Richard Meier & Partners Architects.

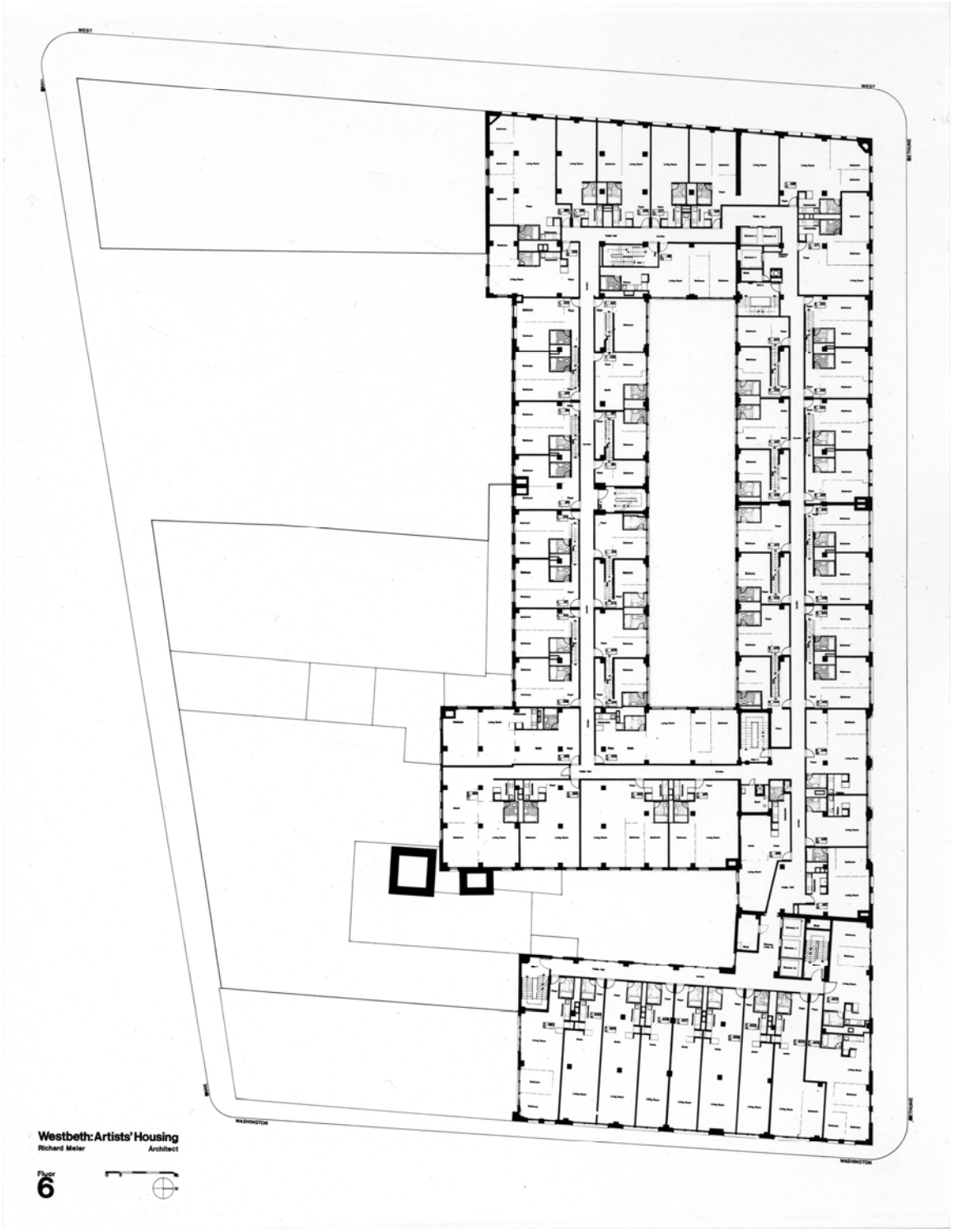

Figure 2.20: Westbeth Artists' Colony. Plan, sixth floor.
Richard Meier & Partners Architects, Westbeth Artists' Colony, New York, New York, 1967-1970.
Drawing by Richard Meier & Partners Architects. Courtesy of Richard Meier & Partners Architects.

Figure 2.21: Westbeth Artists' Colony. Plan, seventh floor.
Richard Meier & Partners Architects, Westbeth Artists' Colony, New York, New York, 1967-1970.
Drawing by Richard Meier & Partners Architects. Courtesy of Richard Meier & Partners Architects.

Figure 2.22: Westbeth Artists' Colony. Plan, eighth floor.
Richard Meier & Partners Architects, Westbeth Artists' Colony, New York, New York, 1967-1970.
Drawing by Richard Meier & Partners Architects. Courtesy of Richard Meier & Partners Architects.

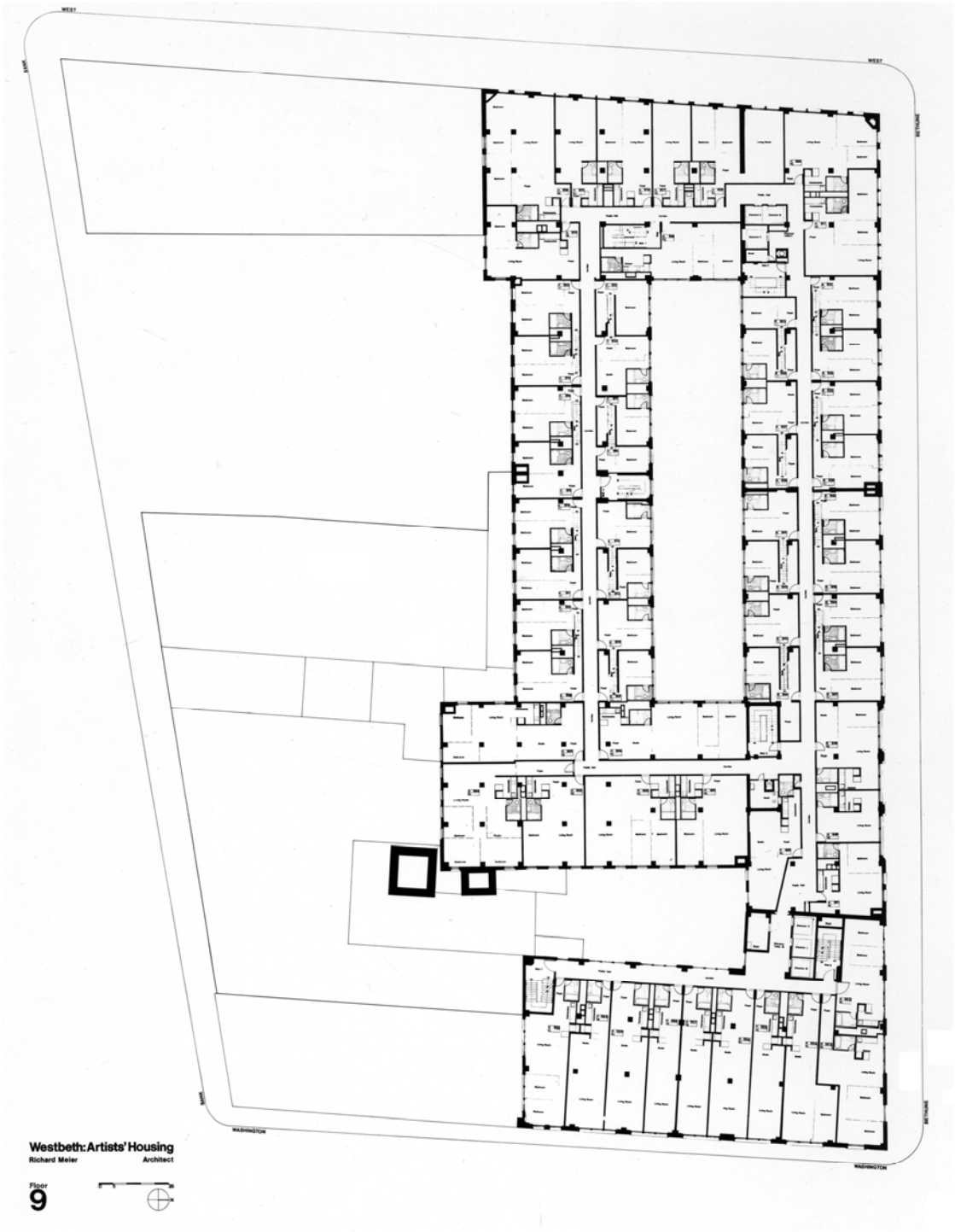

Figure 2.23: Westbeth Artists' Colony. Plan, ninth floor.
Richard Meier & Partners Architects, Westbeth Artists' Colony, New York, New York, 1967-1970.
Drawing by Richard Meier & Partners Architects. Courtesy of Richard Meier & Partners Architects.

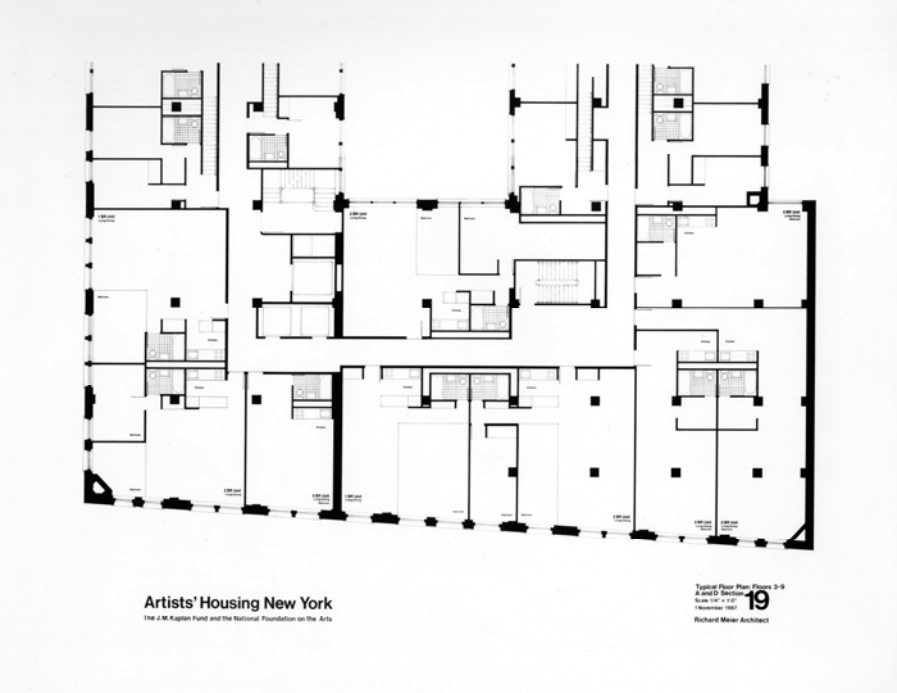

Figure 2.24: Westbeth Artists' Colony. Typical floor plan.
Richard Meier & Partners Architects, Westbeth Artists' Colony, New York, New York, 1967-1970.
Drawing by Richard Meier & Partners Architects. Courtesy of Richard Meier & Partners Architects.

Figure 2.25: Alan Buchsbaum, Krauss Loft, New York, New York, 1976.
Photo credit: Norman McGrath.

CHAPTER 3:

Code Frontiers: Exploring the Backyards of L.A.

Abstract

This case study takes the architecture of the 'Accessory Dwelling Unit' (ADU) as a lens through which to critically evaluate single-family residential zoning (R1). It evaluates the potential of the ADU to reconceptualize the suburban backyard and thus catalyze a new city building model that densifies the R1. This case study draws from Dana Cuff's scholarship on urban crisis to contextualize the discovery of synchronized densification and decay in Pacoima's backyards. It traces the formation of cityLAB's *10K Pacoima* project, and analyzes its urban impacts by cross referencing Michael Bell's voucher housing and Teddy Cruz's tactics of encroachment. And it proposes the ADU as the architectural response to the reconceptualization of Pacoima's backyards, which proceeds on informal basis. Following Pacoima, the case study expands its geographical scope to encompass a larger part of the City of Los Angeles. Photographic works of William Garnett (1950), Julius Schulman (1960) and Andreas Gursky (1998) are used to trace the role of architecture in the making of L.A. The shifting growth patterns of L.A. are contextualized with reference to Michael Dear's scholarship on urban geography and Dana Cuff's discourse on postsuburbia. Drawing from Cuff, the case study proposes a new urban model of interior urbanism. Interior urbanism is examined with reference to Albert Pope's discourse on aggregate urbanism. Reconnecting with the Pacoima discoveries, the case study examines the architecture of the ADU. The legislative requirements of ADU implementation in California cities are examined and evaluated. The architecture of the ADU is theorized though a

series of significant additions to single-family homes in Venice, CA. The ADU is discussed with reference to Daly Genik Architects' experimentation. Kevin Daly's arguments about fabrication and tectonics are used to explain the generative potential of the ADU. The case study recognizes the ADU's failure of challenging single-function urbanism. By cross referencing M. Christine Boyer's scholarship on American land distribution with Michael Dear and Steven Flusty's scholarship on the shifting social and cultural patterns of L.A., the case study sees beyond the spatial possibilities of single-function urbanism.

Framing and Methodology

This case study peruses urban research on the backyards of The City of Los Angeles' single-family residential zones and architectural research on the building type formally known as 'Accessory Dwelling Unit' (ADU). The main research period starts in 2003, when the Assembly Bill 1866 was enacted by the State of California. The research period concludes in 2010, with the publication of cityLAB's report *Backyard Homes LA.*[279]

The case study research follows Robert K. Yin's methods.[280] Data collection includes literary research, interviews, archival research, workshops, and site visits. Literature has been collected at the UCLA libraries in Los Angeles, at the Getty Research Institute in Los Angeles, and online. Interviews have been pursued with Christine Vega of the Youth Policy Institute on August 29, 2008, Kevin Daly of Daly Genik Architects on December 17, 2010, and Steven Shortridge of Shortridge Architects on October 27, 2011. Archival research includes the cityLAB archives and

[279] Dana Cuff, Tim Higgins, and Per-Johan Dahl, "Backyard Homes LA," (Los Angeles: cityLAB UCLA Department of Architecture + Urban Design, 2010).
[280] Yin, *Case Study Reserach: Design and Methods*.

the Frank D. Israel archives. Organization and participation in workshops include Community Workshop at Pacoima Beautiful on February 14, 2008, Development Workshop at UCLA on April 17, 2008, and Asset Map Workshop at ICON on August 13, 2008. Various sites in the City of Los Angeles were visited from the summer 2007 through the summer 2010.

DISCOVERIES AND POTENTIALS

"LA was never planned in the traditional sense of a central, top-down guide for the urban environment. Nor is it unplanned, as is often claimed by those disturbed by its unconventional cosmopolitanism. Instead, it comprises a set of planned increments that are always tactical and often radical in nature, from large scale upheavals to minute local tinkering."[281]

- Dana Cuff

"I only wanted something else to do but hang around."[282]

- Pet Shop Boys

On a drive around in the City of Los Angeles, the rows of 50-foot-wide properties seem endlessly immense. [Figure 3.1] Zoned for single-family residential use, with the generalized zoning code R1, they are populated by one-story single-family houses to comply with the regulatory framework that constitutes the prime construction guidelines of the American Dream.[283] [Figure 3.2] Building after building, the large number of stucco-coated façades seems to embody Reyner Banham's 1971 comment about a city caught up in a state of infinite

[281] Dana Cuff, "Los Angeles: Urban Development in the Postsuburban Megacity," in *Megacities: Urban Form, Governance, and Sustainability*, ed. André Sorensen (New York: Springer, 2010), 280.
[282] Pet Shop Boys, "Suburbia," (Parlophone / EMI, 1986).
[283] In the City of Los Angeles Department of City Planning's "Zone Information & Map Access System" (ZIMAS), zones designated to single-family residential use only are: RE, RS, R1, RU, RZ, and RW1. See ZIMAS map legend at City of Los Angeles Department of City Planning, "Zone Information & Map Access System," http://zimas.lacity.org/. Of totally 457,610 lots in the City of Los Angeles zoned for single-family residential use only, more than 70 %, or 321,637, are zoned R1. For this article, R1 refers generally to single-family residential zoning.

repetition.[284] [Figure 3.3] Like a reflection in Dan Graham's mirrors, the notion of sameness emanating from the sequence of single-family residences reinforces the assessment that conventional domesticity is the prevailing lifestyle in the City of L.A.[285]

When one leaves the streetscape for the birds-eye view, using the spatial perception facilitated by Google Earth technology, a parallel world opens up. [Figure 3.4] Like a twilight zone that challenges all parameters implicit in the R1, the backyards of L.A. reveal a multi-faceted and ever-changing composition of spaces that shoots out the uniformity reflected in Graham's mirrors. Hidden behind the manicured façades of tract houses and McMansions, large areas of land originally intended to host barbeques and birthday parties for middle-class children express a singular condition of synchronized densification and decay. [Figure 3.5] Consisting of ad-hoc mixtures of informal units and *terrain vagues*, the backyards of L.A. express a hodgepodge of un-identified uses and urban voids. [Figure 3.6] Indeed, the once ultra-coherent and controlled spaces, carved out by single-family residential zoning, are instantaneously transformed by a bottoms-up revolt against the constituting principles of Modernist city planning.

The informal land use change that characterizes large areas of L.A.'s single-family residential zones reveals a double-edged condition feasible to support urban and architectural research. For urbanism, they point to the need for new policies to guide city transformation. Single-family

[284] The world's perception of LA as a set of endless repetitions was pointed out by Reyner Banham. See Reyner Banham, *Los Angeles: The Architecture of Four Ecologies* (Berkeley, CA: University of California Press, 1971), 143.
[285] Dan Graham's 1978 piece *Alternation for a Suburban House* is described in Beatriz Colomina, "Beyond Pavilions: Architecture as a Machine to See," in *Dan Graham: Beyond*, ed. Elizabeth Hamilton (Cambridge, Mass: The MIT Press, 2009). And———, "Double Exposure: Alternation to a Suburban House, a Project by Dan Graham," *Prototypo* 3, no. 6 (December, 2001).

residential zoning has been utilized as a tool in Los Angeles since the early twentieth century to regulate urban development. To make a rule, Georges Canguilhem says, "is to impose a requirement on an existence, a given whose variety, disparity, with the regard to the requirement, present themselves as a hostile."[286] When Canguilhem's definition has been reversed, as in L.A.'s R1 zone, and the hostility to the required tends to set the norm, then it's time to critically review the legitimacy of the required. We shouldn't necessary romanticize the reconceptualization of L.A.'s residential backyards, which operate under the radar of planning expertise. On the other hand, however, we shouldn't ignore the fact that these informal activities tell a story about existing discrepancies between current planning praxis and the needs of prevailing lifestyles. Indeed, from the discipline of urbanism, there seems to be a discrepancy between the way urban development is regulated and the way life is cultivated.

And for architecture, they reveal the context for a new housing type. When the backyards of Los Angeles's single-family residential lots are reconceptualized, a new set of premises for concurrent development emerges, which need to be tested and evaluated. Charles Waldheim discusses the financial repercussions of reclaiming the under-utilized land of single-family residential lots, and he observes the effectively reduced "portion of costs associated with [that kind of] land acquisition."[287] When land costs have been condensed, experimental design and fabrication principles are more likely to be utilized to test various ideas of affordability, sustainability, and adaptability. Turned into test sites for complex geometries, digitally managed fabrication, mass customization, integrated systems for logistics and assembly, and performative

[286] Georges Canguilhem, *The Normal and the Pathological* (New York: Zone Books, 1989), 239.
[287] Charles Waldheim, "Urbanism in the Aggregate: Toronto Laneways and the Centrality of Marginal Practice," in *Site Unseen: Laneway Architecture and Urbanism in Toronto*, ed. Brigitte Shim and Donald Chong (Toronto University of Toronto Faculty of Architecture, Landscape and Design, 2004), 31.

designs, the backyards of L.A. could rapidly mutate into a new hybrid of form and program, revealing space construction principles that exceed most current models.

The Unveiled Asset

The vast land stock, which has been unveiled by Google Earth technology, encompasses an asset which, for a long time, has been hidden away by rows of colorful façades. The idea of utilizing this asset for housing is not new. On the contrary, the backyards of single-family residential lots have been used for informal construction for a long time. This chapter, however, aims to expound on the concept of backyard architecture to investigate, and discuss its implications on urban transformation. If the backyard experiments of the twentieth century pointed out the emergence of a new building type, this chapter seeks to channel experimentation through the veins of urbanism to mobilize new means for that building type to steer the making of the city.

This chapter takes a critical position on single-family residential zoning. By doing that, the chapter encapsulates a specific ingredient in urbanism to be utilized as context for research on architecture. Single-family residential zoning derives, like most city planning regulations, from the reform movement of the early twentieth-century. While sanitizing residential development by excluding some sources of public health crisis, other problems occurred that continued to influence urban development in the U.S. The socially and racially segregated, homogenized, and low-density city fabric that instantly is channeled through single-family residential zoning, for example, can be described as such a crisis as it seriously restricts the conditions for diversity,

complexity, and connectivity, which have been targeted by planning scholars Bruce Katz, Andy Altman, and Julie Wagner to encompass the qualities of contemporary urbanization.[288]

This case study seeks to draw from some issues of urban crises to trace architecture's role in the transformation of low-density urbanism. By analyzing the grassroots upheavals we discovered when looking at L.A. from above, various approaches to R1 transformation are analyzed. By tracing the shifting growth patterns that characterize contemporary L.A., the backyard is reconceptualized and alternative city building models are revealed. By looking at the reconceptualized backyard through the lens of architecture, a new building type is recognized. By extracting the significance of backyard architecture, we reconnect with the urban context to propose new means for architecture to engage in the building of the city. Architecture is too often disconnected from the paroxysmal forces of urbanization. With this case study, some interconnections are proposed.

cityLAB's Pacoima

Urban crisis implies a broad theme not possible to cover in this case study. In order to contextualize our research, however, we can target and frame a specific stipulation that historically has been referred to as urban crisis, which complies with housing shortages and sub-standard living conditions. Poor housing was already recognized as an urban ill in the late 1880s, when Jacob Riis photographed the interiors of New York's tenement buildings.[289] More recently, Dana Cuff tells us that the nation's housing problems have been characterized as urban crises

[288] Katz, Altman, and Wagner, "An Agenda for the Urban Age," 477.
[289] For Jacob A. Riis's research, see, for example, Riis, *How the Other Half Lives*.

ever since “World War II and the effects of the Depression were coming to an end.”[290] Often dubbed blight, “substandard conditions that included over-crowding, poor construction, plumbing inadequacies, health-related problems, inappropriate mixtures of land uses, and illegal dwelling units” were identified as urban crisis to which new architectures offered solutions.[291] Legislation was drafted to combat urban ills, hence public bad was engineered into public good. Cuff dwells on the capacity to tackle the post-World War II housing shortage and substandard living conditions, and she comes to the conclusion that “a group of civic leaders is needed to define the problem and its solution in terms that are specifically relevant to architectural innovation.”[292] The constellation of these leaders, she says, “involves an intelligentsia of architects and planners who are ready with a new direction,” and whose internal agreement facilitates the mobilization of “the next wave of architectural thinking [to be] unleashed on the next comprehensive problem.”[293] Drawing from Cuff’s scholarship, the objective to mobilize new means for architecture to engage in the city can be convened if we apply her theorization of blight on the cityLAB project *10K Pacoima*.

10K Pacoima was an urban and architectural research project headed by the UCLA think-tank, cityLAB, between 2007 and 2009. The first idea for the project came from the residents of Pacoima, which is a community located in the north-eastern San Fernando Valley. [Figure 3.7] Annexed by the City of Los Angeles in 1915, the current population of Pacoima is 100,000 of which 85% is Latino. About 30% of the population is under 18, and nearly 20% has an income

[290] Dana Cuff, "Tabula Futura Imperfecta: The Architecture of Disaster," in *Fast-Forward Urbanism: Rethinking Architecture's Engagement with the City*, ed. Dana Cuff and Roger Sherman (New York: Princeton Architectural Press, 2011), 84.
[291] Ibid., 84-85.
[292] Ibid., 85.
[293] Ibid., 85-86.

below the poverty level.[294] In a community planning meeting, Pacoima residents told senior planner Jane Blumenfeld -- former director at the Los Angeles City Planning Department -- that overpriced real estate and continuous population influx have led to a shortage of affordable housing. The community members also described a considerable land stock that exists behind Pacoima's facades, big enough to host construction of affordable housing. Blumenfeld contacted cityLAB Director Dana Cuff, and the two embarked on a motorized *derivé* on which they found numerous extra- large lots scattered throughout the residential neighborhoods of Pacoima. The lots often measured 50 x 300 feet, which is twice the size of a standard L.A. lot. Zoned R1, legislation allowed for only a one-story single-family house plus a garage on each lot. When the house had been pushed back fifteen feet from the street to comply with the setback code, the limited building footprint left a considerable portion of land at the back of each property where a new house might be built. However, as single-family residential zoning prohibits additional construction, affordable housing could not be erected in compliance with the code.

The Pacoima residents proposed to reconceptualize their backyards. By challenging the low-density principles of R1, they envisioned the underutilized land stock not visible from the streets to be deployed for the development of affordable housing. Adding density to the community, the Pacoima residents, however, wanted to maintain the character of their single-family residential neighborhoods. Hence, they asked for architectural solutions that sustained the privacy of their primary houses. The community members knew that their proposal would require zoning amendment, which is why they decided to talk to Blumenfeld. But they were also concerned about the informal construction that present on a majority of the lots, all built under the radar of

[294] Cuff and Dahl, "Rx for the R1: Sustaining the Neighborhood," 28.

planning expertise. Filled with a hodgepodge of garages, amorphous housing additions, and other shacks that had been erected for various uses, among them housing, the Pacoima backyards were already in the process of adding density to the community, though on informal basis. [Figure 3.8] Blending with scattered areas of un-built land, the synchronized densification and decay that characterized the cores of many Pacoima blocks complied with the founding principles of Cuff's theorization on urban crisis. Poor construction, unidentified uses, and the illegality implicit in code violation did, indeed, speak to substandard living conditions reminiscent of the previous eras that Cuff was concerned with.

It was the residents of Pacoima who called attention to the urban crisis. But, as we already concluded, it takes the disciplinary connotation of architects and planners to mobilize scholarship and thus unleash solutions to both the housing shortage and substandard living conditions. When the Pacoima crisis became a cityLAB project, this kind of expertise was added to address the problem. Dubbed *10K Pacoima* (because of the extra large lots, comprised by 10,000 square feet or more), the objective of the project was to team up with community organizations and non-profits to launch an interdisciplinary research process that, headed by cityLAB, connected architectural and planning expertise with the needs of the community.[295] After concluding that 95% of the backyards were already filled with informal units and unidentified structures -- hence not necessarily housing -- the remaining 5% was claimed by the research team as viable land for

[295] The *10K Pacoima* project received funding in 2008 from UCLA's Center for Community Partnerships for a two-year research project. *10K Pacoima* was headed by director Dana Cuff, with Tim Higgins and Bianca Siegl, associate directors. Per-Johan Dahl and Brigid McManama were assigned project leaders in 2007. Other leaders have participated in the project, with special acknowledgment to Jane Blumenfeld of the L.A. City Planning Department, Nury Martinez of Pacoima Beautiful, and Veronica Padilla of ICON. The project emanates from the discovery of a considerable number of extra large lots in Pacoima, exceeding 10,000 square feet, therefore the 10K mark.

the implementation of architecture.[296] [Figure 3.9] Determined not to touch the informal units and unidentified structures already in place, but to focus instead on the transformation of vacant land, cityLAB reached out to local agencies and nonprofit organizations to arrange workshops and seminars with the residents. [Figure 3.10] Seeking to overcome the constraints of R1 through community collaboration, cityLAB complied with Lewis Mumford's suggestion to use zoning as a "communion and rational understanding" of how to organize social life.[297] The idea of turning the under-utilized backyards into construction sites for affordable housing immediately raised a complex set of issues. [Figure 3.11] The one of relevance for this case study concerns the adding of density by undermining the R1.

The R1 has channeled low-density urbanism in the U.S. throughout the twentieth century. Often interconnected with sophisticated and speculative financial mechanisms, the policies that have guided the production of low-density urbanism have often been proven incapable of stimulating architectural or material innovation.[298] Consequently, any attempt by architecture to challenge the low-level commodity and labor practices that characterize the housing industry's instant production of low-density urbanism has to step outside disciplinary autonomy to engage in the praxis of city planning. *10K Pacoima* is not the first project committed to such a procedure.

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[296] cityLAB restricts interventions to sites where no current resident will be displaced. Aerial and field survey has indicated 1021 10K properties, 54 containing vacant land on 50 % or more of the lot.

[297] Mumford, *The City in History: Its Origins, Its Transformations, and Its Prospects*, 48.

[298] Sigfried Giedion traces the history of the Balloon Frame, which "established connection with the conquest of the West from Chicago to the Pacific Coast." Giedion quotes the 'Great Industries of the United States' to exemplify the close interconnection of the balloon frame and prefabricated building technologies: "With the application of machinery, the labor of house building has been greatly lessened, and the western prairies are dotted over with houses which have been shipped there all made, and the various pieces numbered." The balloon frame technology proves close connections to the contemporary techniques used for tract houses and McMansions. Giedion says that "[t]he balloon frame marks the point at which industrialization began to penetrate housing. Just as the trades of the watch-maker, the butcher, the baker, the tailor were transformed to industries, so too the balloon frame led the replacement of the skilled carpenter by the unskilled laborer." See Giedion, *Space, Time, and Architecture: The Growth of a New Tradition*, 347-55.

Michael Bell's idea of merging architecture and policy to engage the "unresolved urban and political crises in housing," for example, deals with similar issues.[299] Not challenging single-family residential zoning but, rather, its underlying politics, Bell's *16 Houses* project focuses on Houston's Fifth Ward. Bell uses the site to reconceptualize the voucher house by merging federally-funded subsidy programs with architectural innovations. [Figure 3.12] Conforming to the American tradition of home ownership, Bell's project seeks to explore "architecture as a means of labor and the production of wealth" to challenge the inherent mechanisms of the building trade.[300] By merging Marxist labor themes, "which are frequently part of the critical discourse of American and European modernism," with the practices of housing production and the racial segregation that characterizes much of the low-density urbanism in the U.S., the *16 Houses* project draws from such similar ideologies as *10K Pacoima* to utilize architecture to engage in the urban crisis of affordable housing.[301] While the two projects build on a shared interest in homeownership, *10K Pacoima*, examines a trajectory parallel to Bell's voucher housing, which unleashes new potential for incremental growth by rethinking property typology. By developing strategies of how to reconceptualize under-utilized land in the backyards of existing residential sites, *10K Pacoima* is less interested in the materiality of architecture than in the multiple ways of how to turn the workforce infill for-sale house into a catalyst for neighborhood improvement.

The concern for neighborhood improvement implicit in *10K Pacoima* is shared by Teddy Cruz's *Casa Familia* project, which seeks to transform an urban neighborhood in the American-

[299] Michael Bell, *16 Houses* (New York: The Monacelli Press, 2003), 15.
[300] Ibid., 31.
[301] Ibid.

Mexican border town of San Ysidro, California. [Figure 3.13] The project merges architecture with city planning expertise to engage in the development of affordable housing. Teaming up with non-profits and bottom-up agencies, Cruz's project seeks to reposition the traditional roles of expertise, market, and community "in order to enable the gradual densification of a 25-block area, and thus avoid large-scale development which would likely displace current residents."[302] Celebrating the existing complexity of San Ysidro's small-home neighborhood, Cruz operates with what he refers to as the "tactics of encroachment," by which he closes the gap between architectural and planning expertise in order to legalize much of the pre-permit construction, and provide design assistance to the homeowners who "take advantage of alternate construction techniques and nonstandard unit layouts."[303] By reconceptualizing shanty urbanism, the *Casa Familia* project shows similarities with *10K Pacoima*, but also significant differences. While Cruz advocates multiple uses, cityLAB focuses solely on housing. This differentiation has not so much to do with different approaches to the concept of land use, but rather to the concept of urban growth. In his Casa Familia, Cruz proposes "to insert a specific zoning process known as an overlay district."[304] For Cruz, this rezoning supports the community's step-by-step redevelopment by instigating a policy that allows non-profit organizations to manage land-use change. With his overlay zone, however, Cruz taps into a similar approach to zoning modification as advocated, for example, by Jonathan Barnett.[305] Even if his approach to land use

[302] William R. Morrish, Susanne Schindler, and Katie Swenson, eds., *Growing Urban Habitats: Seeking as New Housing Development Model* (Richmond, CA: William Stout Publishers,2009), 49.
[303] For Teddy Cruz's tactics of encroachment see Teddy Cruz, "Border Cities: Tactics of Encroachment," ed. The Center for Humanities at the University of California San Diego (You Tube http://www.youtube.com/watch?v=u0saEe0caJ8, April 20, 2006).. For legalization of pre-permit construction and design assistance see Morrish, Schindler, and Swenson, eds., *Growing Urban Habitats: Seeking as New Housing Development Model*, 51.
[304] Morrish, Schindler, and Swenson, eds., *Growing Urban Habitats: Seeking as New Housing Development Model*, 51.
[305] For Jonathan Barnett's zoning modifications, see, for example, Barnett, *An Introduction to Urban Design.*

and city governance produces innovative architecture, his proposal concerns only a demarcated area, and leaves the rest of the city aside. Promoting the enclave to direct urbanization, Cruz's merely traditional rezoning describes the opposite of cityLAB's urbanism, where city growth is managed through incremental densification. Rather conforming to Michael Sorkin's code than to Barnett's zoning modification, cityLAB's *10K Pacoima* turns the workforce infill for-sale house into the DNA of Los Angeles' urbanism.[306]

From Pacoima to L.A.

Though cityLAB's interest in reconceptualizing the backyard began in Pacoima, it was expanded in 2009 to cover a larger portion of Los Angeles. Going from *10K Pacoima* to *Backyard Homes LA*, the project targeted additional cities and communities in the City of Los Angeles to evaluate the status of illegal backyard construction. [Figure 3.14] Being more explicit about residential development, cityLAB was learning from Pacoima to categorize the various uses found in the city's backyards. By framing the dwelling function as a specific research topic, the project could contextualize the informal activities in discourse and extract data to prove its relevance for R1 transformation.

The building type that meets the criteria of the informal housing construction that occupies the backyards of single-family residential lots is commonly referred to as 'Accessory Dwelling Unit', or ADU. Other names frequently used include in-law apartment, cottage-housing, granny flat, second unit, and accessory unit. The abbreviation ADU will, together with the last two

[306] Michael Sorkin's code has been outlined in this dissertation. See "Chapter 1: Positioning Architecture in the Realm of City Planning."

terms, be frequently used throughout this case study. The disciplinary connotation of the ADU is rather vague, which a great portion of this study will pay attention to. Being a secondary and self-contained living unit on a single-family residential lot, its programmatic aspects are, however, adequate when tracing the frequency of informal ADU activity in the City of Los Angeles.

A cityLAB survey made in 2008 located informal ADUs in Cypress Park and Hyde Park. Following similar procedures as the Pacoima research, the survey compiled data via site visits, property information, and commercial imagery. Ten indicators were used to decipher the data.[307] With the study, cityLAB showed that informal ADUs exist in all communities, ranging from 16% probable or definite in Hyde Park properties to 45% in Pacoima and 66% in Cypress Park.[308] The 2008 survey proves that backyard housing is not an isolated phenomenon limited to a few neighborhoods in Pacoima, but rather is a widespread practice which illegally adds density to L.A.'s single-family residential districts on a metropolitan scale.

The ADU describes an alternative to the suburban single-family house. With different premises to guide development, the accessory unit implements a new kind of residential space in the R1. When erected by illegal means, however, the ADU does not necessarily provide a solution to the substandard living conditions that make up the core of urban crisis. Being built under the radar of expertise, no instruments are available to measure the standards of usage and thus reference to

[307] The ten indicators were: Windows and air vents visible; separate access from alley; garage blocked off, locked, or non-operational; ADU in addition to main house and garage; property type listed as duplex or triplex; parcel had two or more street addresses; variations in roof (color and/or style); additional entrance(s) and window(s); footprint inconsistent with reported building size; and set back from sightline of driveway. See Cuff, Higgins, and Dahl, "Backyard Homes LA," 11.
[308] Ibid.

the codes that were set up as indicators to define the premises of urban crisis. Hence the proliferation of informal ADU is not a sustainable solution to any urban crisis. They do, however, point to new urban living conditions. Disconnected from the rest of the city by the walls of single-family homes, the idiosyncratic expression of backyard developments stand in stark contrast to any publicly accessible space, where the concept of exposure has conduced to maintain R1 uniformity. As we will see, this introduces a new urban landscape. We can start to examine the premises of this new urban landscape by tracing the shifting growth patterns of L.A.

POSTSUBURBAN TENDENCIES

Three Photos

Los Angeles has, for a long time, been considered the role model of suburbia. Its low and decentralized urban form is often used to illustrate the characteristics of suburban space. Robert Fishman traces the explosive growth of L.A. to discover that, when the city became a great metropolis, "the history of suburbia reached its climax." Fishman's scholarship on L.A. covers the era between the two World Wars to focus on the altered transportation patterns that fueled the making of metropolitan L.A. From the late nineteenth-century and into the 1910s, he says, the world's largest mass transit system was created in Los Angeles to open the region for development. "When in the 1920s that system appeared to threaten the viability of the singe family house, it was ruthlessly sacrificed and a massive automobile system put in its place."[309] This shift in transportation patterns turned Los Angeles into a real estate machine that for decades cranked out mile after mile of single-family houses. The interesting subject matter for this chapter concerns the relationship between this tremendous expansion and architecture. Drawing from three sets of photographs, we can start tracing architecture's role in the making of L.A.

Dana Cuff shows in his seminal work the exceptional growth that Los Angeles experienced during the years of World War II. She tells us that "[e]mployment increased dramatically, and the gross national product more than doubled between 1940 and 1945."[310] Demographics shifted

[309] Robert Fishman, *Bourgeois Utopias: The Rise and Fall of Suburbia* (New York: Basic Books, Inc., Publishers, 1987), 157.
[310] Cuff, *The Provisional City: Los Angeles Stories of Architecture and Urbanism*, 34.

in an exaggerated fashion as the population "grew by almost 56 percentages" during the ten-year span of 1940 to 1950.[311] It was during this period that L.A. cemented the mode of metropolitan organization that Fishman is concerned about. Nourished by Federal Housing Administration loan guarantees, empty plots of land were rapidly converted into neighborhoods of streets and single-family houses. Prefabricated construction methods were utilized to minimize labor costs. The simplified houses, "both attractive to buyers and uncomplicated to build," abided by planning legislation and shaped a field of generic homes ready to be populated by middle-class families.[312] The construction of this suburban landscape was captured by William Garnett when he photographed the building of Lakewood in 1950. [Figure 3.15 - Figure 3.16] The uncanny quietness -- the peacefulness -- of Garnett's photos suggests an ideal living environment that is perfectly planned and well-protected from surrounding nuisances, these being different functions, cultures, or social configurations. The reiteration of Fordist manufacturing principles, which so obviously had been transferred from the car industry to the housing industry, implies a state of infinite repetition that forms what Gilles Deleuze and Félix Guattari would call a *machinic* territory.[313] Replacing city planning, the housing industry controls the pace of urbanization. Merging the technical and the social, the single-family residential district that unfolds beneath Garnett's airplane codifies suburban architecture. Deprived of singular

[311] Ibid.
[312] Fishman, *Bourgeois Utopias: The Rise and Fall of Suburbia*, 176.
[313] The term *machinic* is used with reference to Gilles Deleuze and Félix Guattari's scholarship on the machine. See, for example, Gilles Deleuze and Félix Guattari, *Anti-Oedipus: Capitalism and Schizophrenia* (Minneapolis, MN: University of Minnesota Press, 1983). By using the term *machinic*, I deliberately conform to Mohsen Mostafavi's use of the same term when, contextualizing landscape urbanism, he observes that the development of modern urbanism is characterized by a shift "from an image-based planning to an operative method." See Mohsen Mostafavi, "Landscapes of Urbanism," in *Landscape Urbanism: A Manual for the Machinic Landscape*, ed. Mohsen Mostafavi and Ciro Najle (London: AA Publications, 2003), 8. See also Peter Eisenman's use of the term *machinic* with reference to architecture in Peter Eisenman, *Written into the Void: Selected Writings 1990-2004* (New Haven: Yale University Press, 2007), 56-64.

expression, architecture in the making of suburbia distributed "specialized functions and [facilitated] human control."[314]

When Julius Shulman photographed Pierre Koenig's Case Study 22 ten years after Garnett immortalized Lakewood's tract houses, Los Angeles had sprawled and formed a vast metropolitan landscape characterized by instant fields of single-family homes. [Figure 3.17] The *machinic* had moved from the housing industry to urbanism, and architecture entered the scene with the purpose to rethink the lay of the land in a city that was swiftly filling with endless rows of low-rise construction. Koenig's house occupied a sliver of soil to situate one of the most spectacular examples of how new building technology can draw from site specific premises to convert space into architecture. Turning waste into profit, it encapsulated the power of architecture to intensify land use and thus engage in the complex procedures of urbanization. Shulman's photo is the perfect representation for this transition. Like the reflections in the windows that blur the division between architecture and space, and even drawing from the shape of the moon to challenge the distinction between inside and outside, the photo obliterates the distinction between authentic and imagined and suggests a new context for the suburban lifestyle. Pointing to city building alternatives beyond the sprawling plains of Id, it reintroduces formal expression as a factual representation of social life. Indeed, with Shulman's photo, architecture in L.A. had become something tangible, able to fill in the forgotten gaps of the

[314] Gilles Deleuze and Félix Guattari's use of the term *machinic* comes out of their scholarship on the machine. Deleuze and Guattari "consider the machine to be the combination of solid elements" and they argue that "[t]he same machine can be both technical and social…" They say "[c]oding the flows implies all these operations [of] transmit[ing] a movement and perform[ing] a task." Deleuze and Guattari's scholarship on the machine is useful when theorizing the complex intersections of scientific management, Fordist economies, and social controls that fueled the construction of suburbia. See Deleuze and Guattari, *Anti-Oedipus: Capitalism and Schizophrenia*, 141. For the scientific management that informed the emergence of Fordist economies, see, for example, Sigfried Giedion, *Mechanization Takes Command: A Contribution to Anonymous History* (New York: Oxford University Press, 1948).

aggressive consumption of land and other natural recourses that characterized the metropolitan expansion of 1960.

When Andreas Gursky shoots Los Angeles in 1998, the transformation is complete. [Figure 3.18] The housing industry has finally been replaced by urbanism and Los Angeles had sprawled to form a vast metropolitan region that covered five counties, occupied an area of more than 30,000 square miles, and hosted a population of almost 17 million.[315] The growth patterns that have founded this fascinating landscape certainly recall the underlying principles of Ildefons Cerdá's theory of urbanization which, published in 1867, used the grid to support endless city expansion. Taking off with the economic up-swing of post-World War II America, the explosive growth of Los Angels that proceeded during the second half of the twentieth-century was fueled by residential construction. The result was a suburban metropolis characterized by auto-dependency, decentralized city governance, and endless rows of single-family homes.

Architecture has vanished from Gursky's photo to search for new grounds of existence in a city that, at the turn of the century, had been forced to halt expansion due to the lack of natural recourses. In his report "Sprawl Hits the Wall," published three years after Gursky snapped his photo, geographer Michael Dear argues that L.A.'s sprawl has been forced to reinvent itself due to the exhaustion of natural recourses and the lack of developable land. In his report Dear says:

[315] The Los Angeles metropolitan region is also called the Greater Los Angeles Area. The Greater Los Angeles Area comprises the five counties: Los Angeles County, Orange County, San Bernardino County, Riverside County, and Ventura County. The United States Census 2000 population for the Greater Los Angeles Area is 16,373,645. The United States Census 2010 population for the Greater Los Angeles Area is 17,877,006. Land area in square miles, 2010, is 33,955. For the United States Census data, see http://quickfacts.census.gov/qfd/states/06/06065.html

> "Today, sprawl has hit the wall in metropolitan Los Angeles. Almost all the natural locations for urban development have been consumed, and most of the remaining areas are constrained by government policy. And at the same time, many of the other resources that have helped fuel sprawl in the past—for example, low-cost water supplies and efficient water delivery systems—appear to be exhausted as well."[316]

Dear continues to describe the progressive population growth of Los Angeles' metropolitan region, and signals the expected increase of six million people over a twenty year period. With no more developable land, Dear says, it is time for L.A. to start "making conscious choices about how land, water, and transportation infrastructure are deployed, so that future growth reinforces existing communities in positive ways and improves our regional patterns rather than destroys them."[317] He concludes: "All these trends mean that metropolitan Los Angeles must accommodate a continually growing population in the decades ahead, but with less water than is now available, and with little room for outward expansion."[318]

The reconceptualization of urban growth that Dear is concerned with requires, among other thing, new approaches to land use. Indeed, if the population of Los Angeles will continue to grow, and no more land is available for residential development, then methods have to be invented to accommodate the already urbanized land for housing construction. The vast land areas that today constitute the metropolitan region have, during the twentieth-century,

[316] Southern California Studies Center, "Sprawl Hits the Wall: Confronting the Realities of Metropolitan Los Angeles," ed. Michael Dear (Los Angeles: The Southern California Studies Center University of Southern California and The Brookings Institution Center on Urban and Metropolitan Policy, 2001), 2.
[317] Ibid., 4.
[318] Ibid., 2.

successively been subdivided and classified for different uses. If we limit our survey to the City of Los Angeles, then we have twelve categories of land use to guide urban development. These twelve categories imply restrictions on how to inhabit not only the land but also the space that has been constructed. Geographically distributed by the zoning map, they regulate the constituting parameters of urban life. All twelve categories are characterized by rigid use definitions. The single-family residential district (called low density housing on the map), however, is the most restrictive.[319] With its low-density principle of only one dwelling per lot, it straitjackets land use transformation. Emerging as early as 1904, "the single-family residential zones in the City of Los Angeles have gradually increased in area."[320] By June 2010, they consisted of 457,610 lots scattered across the city. [Figure 3.19 - Figure 3.20] These almost half a million lots hold viable potential for spatial transformation and updated land-use strategies. Not only providing underutilized land for redevelopment, the single-family residential districts are also responsible for several of the issues that concern Dear, such as social and ethnic segregation, economic polarization, and disintegrated life patterns.[321] Dear is never explicit about single-

[319] Richard F. Babcock supports the argument that the single-family residential district is the most restrictive. Babcock shows that the origins of zoning was cumulative. He says that "if a community had four districts -- single-family, multiple-family, business, and industrial -- the first was the 'highest', the last was the 'lowest'. All uses permitted in the 'highest' single family district were also permitted on the other three districts. Uses permitted in the 'second', multiple-family district, were also permitted in the business and industrial zones until the industrial zone became the garbage pail for all uses, including residences." See Babcock, *The Zoning Game: Municipal Practices and Policies*, 127.

[320] The concept of single-family residential zoning was introduced to Los Angeles in 1904. In 1908 single-family residential zoning became planning praxis when the City passed the Residence District Ordinance. See, for example, Cuff and Dahl, "Rx for the R1: Sustaining the Neighborhood," 26. Kathy A. Kolnick, "Order before Zoning: Land Use Regulation in Los Angeles 1880 - 1915" (University of Southern California, May, 2008). Bassett, *Zoning*, 9. See also Cuff, Higgins, and Dahl, "Backyard Homes LA," 8.

[321] For social and ethnic segregation, Michael Dear discovers that the "ethnic diversity is spreading to all parts of the [Los Angeles metropolitan] region, but a pattern of ethnic enclaves are emerging." He shows that the diversification that has characterized the ethnic constellation of Los Angeles' metropolitan region since the 1980s has proceeded parallel with a pattern of "increasing segregation at the municipal level." He shows, for example, that many older cities that attained a Latino majority in 1980 "had become decisively Latino by 1990 and are likely to show almost a 100 percent Latino population in the 2000 Census." See Southern California Studies Center, "Sprawl Hits the Wall: Confronting the Realities of Metropolitan Los Angeles," 13-14. Single-family residential zoning has been a tool for

family residential zoning in his report. However, as we have seen, his arguments entail the topic in multiple ways.

Interiorized Urbanism

Reading Dear's report through the lens of Dana Cuff's scholarship on convulsive urbanism, cityLAB's enthusiasm for Los Angeles' backyards is contextualized. Cuff, who examines the disruptive growth of post-World War II L.A. to trace shifting perceptions on housing, develops a theory about the city that goes beyond the comprehensive nature of Modernism. Examining alternatives to the master plan, she utilizes architecture as a device to propose new means for

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ethnic segregation throughout the twentieth-century. Richard F. Babcock traces the use of zoning to oppose the implementation of public housing in Chicago's suburbs. Public housing was stopped because the white majority fears "it will bring poor blacks into their community." See Richard F. Babcock and Charles L. Siemon, *The Zoning Game Revisited* (Boston, Mass: Oelgeschlager, Gunn & Hain, Publishers, Inc., 1985), 159-81. For economic polarization, Michael Dear traces the gap in fiscal capacity. He says that "[o]ver the last two decades, the gap in fiscal capacity across the region has grown. In 1982, the wealthiest 20 percent of cities in the region had a local fiscal capacity that was 2.6 times that of the poorest 20 percent. By 1997, that ratio had grown to 3.7. In particular, local governments have fallen behind in Riverside and San Bernardino Counties, where single-family housing construction has been strong but commercial development has not kept pace." See Southern California Studies Center, "Sprawl Hits the Wall: Confronting the Realities of Metropolitan Los Angeles," 38. The gap in fiscal capacity can be maintained by exclusionary zoning. Daniel M. Mandelker shows that "[p]rotective environmental controls are a sharp break with traditional land-use planning and regulation," hence zoning. Protective environmental controls have different purpose than zoning because they "consciously select environmental preservation as their dominant priority." Mandelker recognizes, however, that protective environmental controls attract a "vocal opposition whose ideological base has deep roots in American tradition." He says that protective environmental controls "protect environmental areas in order to preserve their environmental qualities." If they are excessively prohibitive they are exclusionary. When combined with land use regulation they become "exclusionary zoning." Mandelker says that "[t]he exclusion of lower-income groups from housing in protected environmental areas is one example. This problem also arises in suburban zoning, which can exclude lower-income groups from housing in suburban areas. Some state courts hold suburban exclusionary zoning unconstitutional." See Daniel R. Mandelker, *Environment and Equality: A Regulatory Challenge* (New York: McGraw-Hill Book Company, 1981), 1-2. For disintegrated life patterns, Michael Dear says that it is possible for Los Angeles to adopt and alternative vision for its future that "takes advantage of the region's assets in a more thoughtful way. In so doing, it is possible to provide a better life for the region's residents, one that is based on a smart and sustainable approach to growth, rather than one that seeks to replicate -- with little chance of success -- the suburbia of yesteryear." See Southern California Studies Center, "Sprawl Hits the Wall: Confronting the Realities of Metropolitan Los Angeles," 46. Modern city planning disintegrated urban life, using zoning to respond to Le Corbusier's hierarchy of four functions. The reintegration of urban live was channeled in the 1960s and the '70s through the renewed interest in the street. The street was used as a critical response to modern city planning by, for example, Jane Jacobs, Bernard Rudofsky, Colin Rowe and Fred Koetter, and Stanford Anderson. See Jacobs, *The Death and Life of Great American Cities*. Bernard Rudofsky, *Streets for People: A Primer for Americans* (New York: Doubleday and Company, 1969). Colin Rowe and Fred Koetter, *Collage City* (Cambridge, Mass: The MIT Press, 1978). Stanford Anderson, ed. *On Streets* (Cambridge, Mass: The MIT Press,1978).

how to direct city building. By embracing the fragmentation of postmodern urbanism, while still conforming to the urban whole, her scholarship presents a viable alternative to common city building models.[322] Cuff, on the one hand, complies with Rem Koolhaas's theory of Bigness when she argues that "urban plans [are] comprised of many buildings."[323] On the other hand, she investigates an alternative path to Koolhaas that recognizes both the opportunities and the constraints that architecture faces at the scale of community and site.[324] By proclaiming urban theory that implies both large-scale interventions and small-scale aggregations, Cuff moves beyond postmodern approaches to city building to instigate scholarship on metropolitan change that draws from the paroxysmal conditions of urbanization. And it is exactly the transition from comprehensive to convulsive that unleashes new potentials for architecture in L.A. When the top-down governance of city building is amplified by incremental variations, then new strategies for land use distribution emerge.

The large number of under-utilized backyards that have been discovered in L.A. reveal a previously hidden land stock viable to support the reconceptualization of urban growth that Dear so desperately calls for in his report. Focusing on implosion rather than expansion, the discovery supports a new model of urbanization that complies with Cuff's scholarship to proceed through

[322] Dana Cuff says that her scholarship is an "excavation into material culture deposited continuously sporadic manner, and as such it is a decidedly postmodern look at cities." Cuff deploys the architecture of the house as the starting point for her thesis on convulsive urbanism because "our [residential] neighborhoods may seem like the urban zone most deserving of stability, they are, in fact, a part of the city that is highly vulnerable to large-scale change." See Cuff, *The Provisional City: Los Angeles Stories of Architecture and Urbanism*, 41, 45. The term *urbitecture* was invented by Dana Cuff in a cityLAB meeting, April 14, 2010.
[323] Ibid., 11.
[324] Dana Cuff complies with Rem Koolhaas's claim that architecture needs "a theory of Bigness – what is the maximum architecture can do?" But she also introduces a critical reflection to Koolhaas by calling for a theory of large-scale operations, thus posting the question: "how much architecture can we or should we plan at one time to shape the city?" See Ibid., 14. For Koolhaas's theory of Bigness, see his article Rem Koolhaas, "Bigness: Or the Problem of Large," in *S, M, L, XL*, ed. Jennifer Siegler (Rotterdam: 010 Publishers, 1995).

incremental densification rather than through the more traditional means of master planning. This concept acknowledges the emergent tendencies of bottom-up tactics and ad hoc citizen actions, which, as we already have seen, have become a substantial factor for land use change in L.A. Cuff argues that Los Angeles is slowly reinventing itself as a postsuburban metropolis. She says that postsuburbanism is "a form of metropolitan transformation that redefines the urban-suburban dichotomy and restructures the suburban pattern."[325] Hence, the informal densification that has been unveiled in L.A. points to new growth patterns which support her thesis. And the under-utilized backyards provide an incentive for how to make use of architecture to systematize such a transformation.

When urban growth has been reconceptualized, the perception of the city is altered. The informal conversion of backyard space that persists throughout L.A. suggests the definition of a new urban landscape. The recognition that instant rows of conformist single-family homes, which constitute the foundation of L.A.'s fabric, operate as series of closed walls to the regulated city, proposes a reconceptualization of Los Angeles' generic city block. Like endless honeycombs that cover Banham's plains, the blocks of L.A.'s single-family residential zones can be described as a field of hollow cells where the concept of exposure generates a distinct differentiation between the inside and the outside. Having lobotomized the inside from the outside, using Koolhaas's words, the blocks of L.A.'s R1 have become semi-autonomous constructs manageable to obtain a certain level of self-governing principles. The street network that outlines the edges of the blocks abides by regulation. For the inside of the blocks, however, a societal wilderness can be maintained and cultivated. Spared from the gaze of the public realm, these

[325] Cuff, "Los Angeles: Urban Development in the Postsuburban Megacity," 281.

core conditions describe a set of urban interiors that, due to the limited visual connection to the outer world, can operate as interiorized environments to mix various formal and informal activities.

Modernist urbanism strove to create what Anastasia Loukaitou-Sideris describes as a "coherent, functional whole."[326] Using the master plan as a primary tool, Modernist urbanism cranked out single-family residential districts over Los Angeles' plains to regulate the construction of a comprehensive and low-density cityscape. The result is certainly visible when we roam the streets of L.A. But our interiorized environments conform to the successive introduction of a new spatial organization that explicitly counters the preconceived totality of Modernist urbanism. Albert Pope discusses "aggregate urbanism" as the opposite of master planning. In aggregate urbanism, he says "the whole is guided by the part alone."[327] Differing from the postmodern developments that "tended to produce disjointed and discrete projects," Pope's aggregate urbanism is still concerned with an urban whole. He argues that it is the repetitive aggregation of similar parts that "construct a tentative whole that makes [aggregate urbanism] something more than a random sprawl."[328]

If we look at the interiorization of L.A.'s single-family residential districts through the lens of Pope's urbanism, we can prove the obsolescence of R1. Single-family residential zoning is concerned with a singular outcome of urban development. It regulates the city as a whole with no

[326] Loukaitou-Sideris and Tridib Banerjee, *Urban Design Downtown: Poetics and Politics of Form*, 64.
[327] Albert Pope, "From Form to Space," in *Fast-Forward Urbanism: Rethinking Architecture's Engagement with the City*, ed. Dana Cuff and Roger Sherman (New York: Princeton Architectural Press, 2011), 149.
[328] Loukaitou-Sideris and Tridib Banerjee, *Urban Design Downtown: Poetics and Politics of Form*, 67. Pope, "From Form to Space," 144.

concern for its individual parts, and it demands sovereign power to fix its final form. When the city resists comprehensive definition of form, and challenges authority by initiating a differentiation between interior and exterior, then a new doctrine seems to be rising. Indeed, the bottom-up revolt in Modernist city planning that has been discovered in L.A. challenges the constituting principles of single-family residential zoning. It adds density by undermining the R1. L.A.'s backyards form a new urban landscape. Like a series of voids demarcated by bands of single-family residences, they point to the obsolescence of low-density urbanism.

The Prototype

The ADU is an example of the architectural approach of backyard transformation. Likely to have been practiced ever since single-family residential zoning prohibited certain levels of density in the early twentieth-century, the ADU, as we already have seen, has often been -- and still is -- erected on an informal basis and under the radar of planning expertise. With the call for new city building models in the 1970s to counter the continuous sprawl of American cities, the disciplines of architecture and urban design, however, recognized the accessory unit as a small-scale building type feasible to support urban consolidation projects.[329] When Barton Myers and George Baird in 1978, for example, explored the forgotten parcels found in the backyards or along the alleys, they contextualized the power of the ADU to add density to the American city

[329] George Baird argues about the interest in concepts of typology and morphology that, before 1980, established the interest for laneway architecture and urbanism. See George Baird, "Foreword," in *Site Unseen: Laneway Architecture and Urbanism in Toronto*, ed. Brigitte Shim and Donald Chong (Toronto: University of Toronto Faculty of Architecture, Landscape and Design, 2004), 8. George Baird's argument can be contextualized in his own 1974 design guidelines for the core area of Toronto. As the head of the Design Guidelines Study Group, Baird's guidelines build upon the "basic land use and density designated for the site…to act as a basis for the review and direction of specific development proposals." In his report, Baird lists some points of departure which, next to the historical context of the Core Area, "have influenced the formation of [the] guidelines." One of these is the "Existing Publicly-owned Lanes and Alleys." See ———, "On Building Downtown: Design Guidelines for the Core Area," (Toronto: Design Guidelines Study Group, September, 1974), 3, 15.

and thus support mixed land use and lessen dependence on the car.[330] Scholarly interest on the ADU has been rather modest since the early '80s. We lack, for instance, adequate theory on ADU architecture. Baird explains this lack of interest as the "decline in influence of the concepts of typology and morphology after 1980."[331] This reduced interest was a result, he says, not so much of the concepts themselves but of the "increasingly historicist urbanism that being practiced by designers such as Leon and Rob Krier."[332] Despite modest interest, some definitions have arisen.[333] Richard Yukubousky, for example, examines the programmatic aspects of the ADU when he defines it as "a separate additional living unit, including separate kitchen, sleeping, and bathroom facilities, attached or detached from the primary residential unit, on a

[330] Barton Myers and George Baird co-edited the 1978 issue of *Design Quartely* titled Vacant Lottery. Myres said that "[l]ow-density cannot support mixed land use. Expensive freeways are necessary to move people in and out of the core, and these in turn have a traumatic impact on inner city neighborhoods that stand in their way. The overall view of this new urban pattern is one of extreme inefficiency and wastefulness. Increased public awareness of the cost of this prototype, coupled with continued increases in the cost of energy, force a reassessment to continued urban sprawl." See Barton Myers, "Urban Consolidation," *Design Quarterly* Vacant Lottery, no. 108 (1978): 11.
[331] Baird, "Foreword," 8.
[332] Ibid.
[333] Samuel J. Hodges and Ellis G. Goldman describe the ADU as "self-contained dwelling units created from existing space. They include separate kitchen and bath facilities and a separate entrance." See Samuel J. Hodges and Ellis G. Goldman, "Allowing Accessory Apartments," (Washington, DC October, 1983), 3. The City of Santa Cruz says that "[a]n Accessory Dwelling Unit (ADU) is an additional, self-contained housing unit that is secondary to the main residence." See The City of Santa Cruz, "Accessory Dwelling Unit Manual," (Santa Cruz, CA: The City of Santa Cruz, 2003), 1. The Institute for Local Government says that the "ADU, commonly known as a "granny flat," is an additional rental unit on a single-family lot. It may be attached or detached from the primary residence." See Institute for Local Government, "Santa Cruz Implements "Granny Flat" Program," http://www.ca-ilg.org/node/633. David Moffat says that "accessory units take the form of garage conversions, small backyard cottages, or basement apartments where sloping sites permit separate access." See David Moffat, "Accessory Dwelling Units - Santa Cruz, California [Edra / Places Awards, 2004 -- Planning]," *Places* 16.3(2004): 26. William R. Morrish, Susanne Schindler, and Katie Swenson say that "[m]ore commonly known as in-law units, secondary apartments or granny flats, Accessory Dwelling Units (ADUs) are a mechanism for providing affordable housing within existing neighborhoods without dramatically altering their character. They frequently take the form of a garage conversion or a cottage-style structure behind the main building." See Morrish, Schindler, and Swenson, eds., *Growing Urban Habitats: Seeking as New Housing Development Model*, 119. Karen Chapple, Jake Wegmann, Alison Nemirow, and Colin Dentel-Post describe the ADU as "[s]elf-contained, smaller living units on the lot of a single-family home, secondary units can be either attached to the primary house, such as the above-the-garage unit or a basement unit, or detached (an independent cottage)." See Karen Chapple et al., "Yes in My Backyard: Mobilizing the Market for Secondary Units," (Berkeley, CA: The Center for Community Innovation, September, 2011), 1.

single-family lot."[334] However, we need a more rigorous theoretical framework on the architectural qualities of the ADU housing type. More frequently being the subject-matter for debate on shadow housing and inadequate planning regulation, urban scholarship seems to be more successful in describing the ADU.[335] By examining the urbanism of the ADU we can successively theorize its architecture.

The story of the ADU reveals an extensive battle against single-family residential zoning. Various attempts have been made to update the R1, which instantly counteracts the implementation of second units. The State of California, for example, has since 1982 proactively passed laws to encourage the ADU as a complementary unit to traditional single-family homes. With their 'Second Unit Law', state legislators authorized local governments to approve the creation of ADUs by enacting local ordinances.[336] By promoting the ADU, the State of California has tried to respond to the changing conditions of urban life that many cities face,

[334] Richard Yukubousky, "Accessory Dwelling Units: Issues & Options," (Seattle, WA: Municipal Research & Services Center of Washington, 1995), 1.

[335] Dolores Hayden seeks ways to reconstruct the concept of domesticity in America. She is concerned about escalating real estate prices and the lack of alternatives to common housing models. Se proposes the joint force of "replanning single-family neighborhoods where there is pressure for accessory apartments [and facilitate] improvements in the programming of new housing for new household types as well as rehabilitation of the existing public housing stock." See Dolores Hayden, "Reconstructing Domestic Space," in *Redesigning the American Dream: The Future of Housing, Work, and Family Life* (New York: W.W. Norton & Company, 1984), 175. John Kaliski traces new meaning of the American Dream. He says that "the reinvention of the dream will necessarily have to provide more urban housing for more people in less space while maintaining a sense of privacy and the presence of the individual homestead set within a garden. He points to the "loosening of codes to encourage the construction of backyard or over-garage 'granny flats'." See John Kaliski, "Re-Visualizing the Dream: Los Angeles and the Future of Single-Family Homes," in *Re: American Dream: Six Urban Housing Prototypes for Los Angeles*, ed. Roger Sherman (New York: Princeton Architectural Press, 1995), 22. Per-Johan Dahl traces the history of single-family residential zoning to flesh out the context for cityLAB's discovery of illegal ADUs in Pacoima. See Per-Johan Dahl, "The Shadows of L.A.," *Critical Planning* 17 (Summer, 2010).

[336] The 'Second Unit Law', or California Government Code 65852.2, was enacted in 1982. The code says that "[l]ocal governments may allow for the creation of second-units in residential zones, set development standards (i.e., height, setbacks, lot coverage), require minimum unit sizes and establish parking requirements. However, State standards apply if localities do not adopt a second-unit ordinance in accordance with the intent of second-unit law." See Cathy E. Creswell, "AB 1866 Section 65852.2 (Second-Unit Law)," ed. Division of Housing Policy Development (Sacramento, CA August 6, 2003), 2.

such as the increasing number of one-person households, sharply rising housing costs, and shifting demographics.[337] Although encouraged by the State, implementation of ADUs has been proven difficult as the second unit challenges single-family residential zoning. Lacking not only proper architectural definition, a comprehensive legislation of ADU has proven difficult to obtain since California Cities have amended their single-family residential zoning in different ways. El Cerritos, for example, imposes hardened setback requirements for second units, which hampers implementation by lot size, and South Gate requires that all ADUs include a washing machine, which increases the financial commitment for any homeowner interested in implementation. California legislation in the form of AB 1866, enacted in 2003, requires "that each city in the state have a ministerial process for approving secondary units."[338] Being more explicit about the criteria for ADU development, AB 1866 "requires municipalities without ordinances to approve second dwelling unit variances without setting additional requirements."[339]

These two California amendments prove that the reconceptualized backyard required for ADU implementation doesn't merely affect the character of single-family residential districts. The

[337] The number of one-person households is steadily increasing in the U.S from 18,296 in 1980 to 31,132 in 2007. See U.S. Census Bureau, "Current Population Survey, March and Annual Social and Economic Supplements, 2007 and earlier." The U.S. household size has steadily decreased from 2.76 in 1980 to 2.57 in 2007. See U.S. Census Bureau, "Current Population Survey, March and Annual Social and Economic Supplements, 2007 and earlier." See also the graph in Cuff and Dahl, "Rx for the R1: Sustaining the Neighborhood," 27. The median sales price of a new home sold in the United States increased from $64,600 in 1980 to $247,900 in 2007. The median sales price dropped to $216,700 in 2009 to reach $221,800 in 2010. See U.S. Census Bureau, "Median and Average Sales Prices of New Homes Sold in United States," http://www.census.gov/const/uspriceann.pdf. Dowell Myers and Elizabeth Gearin's research points to interconnections between the changing conditions of urban life in the U.S. and the shifting demographics, such as growing interest "in more densely configured homes in more central locations" among households older than forty-five, and the general acceptance among homeowners to downscale hosing in concurrence with shifting needs. See Dowell Myers and Elizabeth Gearin, "Current Preferences and Future Demand for Denser Residential Environments," *Housing Policy Debate* 12, no. 4 (2001).
[338] Chapple et al., "Yes in My Backyard: Mobilizing the Market for Secondary Units," 1.
[339] Cuff, Higgins, and Dahl, "Backyard Homes LA," 7.

ADU even seems to meet the criteria for public good implicit in the origins of R1. Still, state initiatives remain largely ineffective in stimulating ADU, both in the State of California and in Los Angeles. Between 2003 and 2010, for example, "only eleven units…received permits in the City of Los Angeles."[340] So far, among California cities, Santa Cruz seems to have adopted the ADU most successfully. Drawing from zoning changes that preceded the Assembly Bill by one year, the City published an Accessory Dwelling Unit Manual in 2003 with "the purpose of assisting homeowners with the process of developing an ADU."[341] Offering a comprehensive package of altered legislation, guidelines on code navigation, and low-interest loan programs, Santa Cruz had by 2005 -- three years after the implementation of the manual -- an average of eight ADU permits per quarter.[342]

The ADU provides generative material to challenge the constituting principles of low-density urbanism. Indeed, all ADU implementations add density by undermining the R1. By encouraging more compact land-use, the ADU conforms to the prime strategy of the California State Senate Bill 375, which is to reduce greenhouse gas emission.[343] A second tendency that supports higher density has to do with altered lifestyles and demographics. In their study on "changes in demand for denser, more walkable environments," Dowell Myers and Elizabeth Gearin show that the

[340] Ibid.
[341] Santa Cruz changed zoning regulations in 2002 to stimulate implementation of ADUs. For Santa Cruz and AUDs, see, for example, Dahl, "The Shadows of L.A.," 137; The City of Santa Cruz, "Accessory Dwelling Unit Manual."
[342] Dahl, "The Shadows of L.A.," 137; Martin C. Pedersen, "The Granny Flat Grows Up: A Santa Cruz Program Promotes Garage Conversions as an Alternative to Sprawl," http://www.metropolismag.com/cda/story.php?artid=1597.
[343] In the 2008 Bill analysis Darren Steinberg says that "one of the potential strategies for reducing greenhouse gas emissions is to promote more compact land use that reduces the number and length of vehicle trips." See Darrell Steinberg, "Bill Analysis," ed. Senate Transportation & Housing Committee (http://leginfo.ca.gov/pub/07-08/bill/sen/sb_0351-0400/sb_375_cfa_20080903_100317_sen_comm.html: Transportation and land use planning and the California Environmental Quality Act (CEQA), August 2008).

increasing numbers of households without children, and households of retirement-age are more amenable to smaller lot and house sizes. They also value proximity to public transportation, shopping, and work.[344] Similar tendencies were already recognized in the mid-1980s, when Dolores Hayden called for "replanning [of] single-family neighborhood where there is pressure for accessory apartments."[345] "At the same time as the elderly are seeking smaller units," she says, "the demand for smaller homes is also increasing among the younger."[346] In her scholarship on domestic space, Hayden raises other arguments to encourage relaxed zoning ordinances and simplify ADU implementation. She recognizes the economic potential associated with the possibility of extra units.[347] If the single-family zone is altered and the ADU legalized, then "short-term private investments of time and money can be used to support homeowners' long-term investments."[348] Hence, with standards for ADU development, homeowners are eligible for loan programs to finance design and construction. Hayden's recognition is augmented by Charles Waldheim some twenty years later. The ADU, he says, "promises a kind of architectural sleight-of-hand, producing prime buildable lots [sometimes] in the most desirable districts of the city."[349] Waldheim points to the fact that the "combination of modest cost, reduced size, and unconventional land acquisition tends to highlight precisely the role of professional architectural design services, adding value through design."[350] If we cross-reference Hayden and Waldheim

[344] Myers and Gearin, "Current Preferences and Future Demand for Denser Residential Environments," 633-34.
[345] Hayden, "Reconstructing Domestic Space," 175.
[346] Ibid., 174.
[347] The economical dimension of ADUs has also been recognized by the Department of Housing and Community Development's California Division of Housing Policy Development. The amendment to AB 1866 states that "[h]omeowners who create second units benefit from added income." See Cathy E. Creswell, "Ab 1866 Section 65852.2 (Second-Unit Law)," 2.
[348] Hayden, "Reconstructing Domestic Space," 181.
[349] Waldheim, "Urbanism in the Aggregate: Toronto Laneways and the Centrality of Marginal Practice," 31.
[350] Ibid.

therefore, it can be argued that the legalized ADU provides additional income to the homeowner while developing new markets for architectural practices.

Hayden also touches on the backside of ADU proliferation, which has to do with ballooning housing prices through speculation. Her rather strong belief in local economic development is not adequate when profit-making possibilities not only are accustomed to "big corporations, national franchises, and their stockholders" but also to individual stakeholders who amp up housing prices by dabbling in speculation.[351] Santa Cruz recognized this dilemma in their ordinance by prohibiting subdivision of properties with ADUs and requiring that the "property owner must occupy either the primary or accessory dwelling."[352] The gentrification that often complies with rapidly increasing real estate may also postulate a problem for ADU proliferation. Social and cultural homogenization through mixed use does not support the vibrant urbanism that Myers and Baird were concerned with. Still, the ADU has not had the same impact on urban revitalization as has, for example, the loft. While being a building type that emerged as a grassroots revolt against Modernist city planning, the loft also fought zoning for more than two decades before being legalized. Hence, it is not clear whether the accessory unit has become a conduit for gentrification. In any case, reconceptualization of backyards instigates renovation of architecture and urban space, which tend to trigger gentrification. Any architect and urban planner promoting the ADU should be aware of implicit consequences.

[351] Hayden, "Reconstructing Domestic Space," 177.
[352] The City of Santa Cruz, "Adu Zoning Regulations Title 24 Zoning Ordinance of the City of Santa Cruz," (Santa Cruz: The City of Santa Cruz, 2003), 24.16.160-8.

In California, the definition of the ADU is still pretty vague. We have, for example, already seen that legislation shifts from City to City. This fuzziness is, on the one hand, a problem as it restrains implementation through Kafkaesque bureaucracies and miniscule loan opportunities. On the other hand, it offers rare opportunities for any architect interested in experimental theory and practice. Liberated from the constraints often imposed by the normalization of typology, the ADU offers fertile ground for design practices to develop new concepts on the issues that occupy the forefront of contemporary discourse, such as fabrication, customization, affordability, and sustainability. By abandoning commonly deployed construction principles and instead embracing the specific challenges proclaimed by the concept, the ADU could become a prototype for a new generation of housing. However, the ADU needs to be contextualized in architectural discourse. Yukubousky's definition, as previously cited, is not enough if we want to draw from the disciplinary production of knowledge to mobilize the architecture of the ADU. Indeed, the accessory unit has the potential to update not only urbanism, but architecture as well. By extracting the architectural characteristics of the ADU, we can point to its capacity to guide the principles of social and cultural production.

EXCEEDING THE CONVENTION

Learning from the R2

The ADU raises several issues common to the update of disciplinary practices. Parameters that call for alternative solutions to common design and manufacturing processes are, for example, the reduced access to any building site located in the rear of existing houses; the infinite, and often interlocked, variables of site configurations; and the limited building scale in correlation with issues of privacy and exposure. Still, most scholarship on the ADU seems to follow, not guide, the principles of social and cultural production. Little effort has been made to investigate the generative aspects of the ADU. Sylvia Lavin argues that "[e]very socio-historical field produces a building type that singularly expresses the multiple forces that combine to produce the field itself."[353] Following Lavin's argument, we can start to trace the spatial premises of the accessory unit. If the ADU describes a new building type in contemporary culture, then it seems that the multiple forces that guide production still lack expression.

The ADU housing type can be contextualized in two different cultures. On one hand, it complies with a bottom-up and Do-It-Yourself (DIY) approach to the design and construction of houses. [Figure 3.21] Remnants of the loft conversions of the 1950s and '60s New York City that were carried out through grassroots initiatives, and thus under the radar of planning expertise, this part of the contemporary ADU culture is positioned in-between the informal and the regulated. The DIY culture of the ADU generally addresses the immediate social, cultural, and ecological issues that often are associated with the failure of single-family residential zoning. However, deprived

[353] Lavin, "Order in the House," 9.

of any architectural significance, they often fail to use the concept of the ADU as an intellectual construct to advance the generative aspects of the new building type. Signified by a conformist approach to architectural production and expression, most homemade ADUs lack any means of articulating the socio-historical field that have shaped the needs for accessory units.

On the other hand, part of the contemporary ADU culture draws from architecturally significant projects to experiment with housing design and construction, and evaluates new strategies for architectural form, land use, and legislation. Emerging in the U.S. as well as in Canada and Europe, several non-conformist architectural projects that comply with contemporary life-styles, and which investigate the generative aspects of a new housing type, have been erected. In Europe, Kortknie Stuhlmacher Architecten of Rotterdam and Studio Aisslinger of Berlin have designed small-scale residential projects that capitalize on the under-utilized roofscapes of industrial buildings and multi-family houses.[354] Though they don't address the single-family residential district, these projects, however, comply with the ADU concept by proposing densification of single-function urbanism, and by reconceptualizing land use. Developed for exhibitions, they both draw from the historic precedent of module and capsule architecture, which, as we will see, can be utilized to contextualize the architecture of the ADU.

Kortknie Stuhlmacher Architecten's "Parasite Las Palmas" was built in 2001 "on top of the elevator shaft of a former industrial building." Adopting 'Parasite' as an "acronym for 'Prototype for Advanced Ready-Made Amphibious Small-Scale Individual Temporary Ecological'

[354] Robert Klanten and Lukas Feireiss, eds., *Space Craft: Fleeting Architecture and Hideouts* (Berlin: Gestalten Verlag,2007).

dwelling," the module house was constructed out of prefabricated wooden elements and assembled on site in a few days.[355] Including separate kitchen and bathroom facilities, the Parasite unit was attached to a primary structure to provide spaces for live and work.[356] Studio Aisslinger's "Loftcube Project" was first produced 2005 for the exhibition Woonmecca in Maastricht and later developed 2007-2010 for outdoor location. Drawing from the capsule tradition, the Loftcube complies with the Parasite by proposing an architecture that infiltrates pristine urban contexts without compromising the character of the neighborhood.

On the American continent, several significant ADU projects have been erected. In the Canadian city of Toronto, for example, scholarly mobilization has promoted the ADU, and various projects have been designed and realized. In Toronto, the regulatory framework has offered "a level of adjustability for compliance."[357] Hence, architectural firms like Shim-Sutcliffe Architects, superkül inc | architect, and Diamond + Schmitt Architects have realized a number of fine ADU projects by continuously testing the "codes and guidelines, tentatively maneuvering through the process."[358] [Figure 3.22] With their focus on the laneway lot, Toronto's joint forces have created a ripple effect among various cities in the American Northwest. Vancouver, for example, adopted Municipal Code 20.91.202 to allow "accessory dwelling units in many single family zones [without requirement for] additional parking". The City of Seattle, through the Seattle

[355] Giampiero Bosoni, "Parasitic Architecture," *Lotus International* 133 (2008): 125; "Korteknie Stuhlmacher Architecten: Parasite Las Palmas, Wilhelminakade, Rotterdam, 2001.," *Lotus International*, no. 133 (2008).
[356] "Korteknie Stuhlmacher Architecten: Parasite Las Palmas Rotterdam, the Netherlands 2001," *A + U. Architecture and Urbanism* 403, no. 4 (2004).
[357] Brigitte Shim and Donald Chong, eds., *Site Unseen: Laneway Architecture and Urbanism in Toronto* (Toronto: University of Toronto Faculty of Architecture, Landscape and Design,2004), 20.
[358] Ibid.

Planning Commission and the Department of Planning and Development, released in June 2010 its *A Guide to Building a Backyard Cottage*.[359]

The City of Los Angeles, as we already have seen, doesn't show a considerable amount of architecturally designed ADUs. There are, however, a number of significant projects in Venice, CA, viable to use when theorizing the architecture of the ADU. Erected on R2 lots, they don't comply with the urban dimensions of the ADU, which has to do with adding density by undermining the R1. On the other hand, their inhabitation of the site, their reconceptualization of land use, and their temporal expression comply with the qualities that characterize the ADU housing type. Morphosis' 2-4-6-8 House from 1978, for example, encompasses one of these R2 projects that can be utilized to contextualize the architecture of the ADU. [Figure 3.23] Drawing from an intellectual exercise of geometrical modulation, the idiosyncratic expression of the house blends in with the diverse character of the surrounding neighborhood. "Conceived of as a one-volume detached house placed over a two-car garage behind the existing residence," the 2-4-6-8 House adds new quality to the aligning alley space by demarcating the rear entrance to the property.[360] [Figure 3.24] As the client served as the builder of the project, the architectural precedent of the 2-4-6-8 House meets with the DIY tradition that, as we have seen, often is accustomed the ADU building type. Morphosis' Revell-like drawing kit "documented the project

[359] For Vancouver's Municipal Code, see The City of Vancouver, "West Coast Environmental Law Municipal Code 20.91.202," http://wcel.org/city-vancouver-washington. For Seattle's guide, see The City of Seattle, "A Guide to Building a Backyard Cottage," ed. Seattle Planning Commission and Department of Planning and Development (The City of Seattle, June, 2010). For the recognition of ADU architecture in the Pacific Northwest, see, for example, Brute Force Collaborative, "Dadus | Laneway Housing," http://bruteforcecollaborative.com/wordpress/2010/02/27/dadus-laneway-housing/.
[360] Peter Cook, *Morphosis: Buildings and Projects* (New York: Rizzoli, 1989), 54.

in a familiar format that could be understood by a layperson, and could help to alleviate some of the fear and confusion inherent in undertaking" the task of construction.[361]

Another R2 project in Venice, CA, useful to look at when contextualizing the architecture of the ADU, is Frank D. Israel's Baldwin Residence from 1992. Proposed for a 4,500 square feet lot on Brooks Avenue, the un-built project complies with the architectural characteristics of the attached ADU by consisting of a single volume that includes a prosperous living unit and "a two-bedroom rental unit."[362] [Figure 3.25 - Figure 3.26] Steven Shortridge was the project architect for the Baldwin Residence. He describes the project as a residential house that "looks like one, the roof folding over the top…to find the two units together in one form."[363] Separated by a masonry wall, the main unit is clearly superior the second unit by means of size and volume.[364] Reaching a height of three stories, the main unit wraps the three car garage to anchor the folded roof that shoots out and exceeds the exposed masonry wall when rising towards the northwest. Compressed between the garage and the folded roof, the accessory unit that looks over the backyard is camouflaged by the façade composition, hence made invisible by architecture. [Figure 3.27] Provided with a separate entrance from the alley, the second unit describes an autonomous living environment that faces "a private garden in the rear of the site."[365] [Figure 3.28] With the masonry wall as an explicit divider, the Baldwin Residence uses the entire building volume to facilitate a sense of privacy for both units. [Figure 3.29]

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[361] Ibid., 53.
[362] The lot is listed by ZIMAS with the address 303 E Brooks Ave, Venice, CA 90291 and the calculated lot area of 4,484.2 square feet. See City of Los Angeles Department of City Planning, "Zone Information & Map Access System." See also Hines, *Franklin D. Israel: Buildings + Projects*, 174.
[363] Steven Shortridge, interview by Per-Johan Dahl, October 27, 2011.
[364] Building form and program interconnects the main unit with the garage. Square footage; Main unit, 1,370 square feet; garage, 1,300 square feet; and second unit, 1,275 square feet. Total, 3945 square feet.
[365] Hines, *Franklin D. Israel: Buildings + Projects*, 174.

Palms Residence

Building on the disciplinary trajectory of Morphosis and Frank D. Israel, Daly Genik Architects remodeled the Palms Residence on Palms Boulevard in Venice, CA, which included the up-date of an accessory unit. [Figure 3.30] Completed in 2009, the project encompassed a major restructuring of the primary building, which included the implementation of a new interior courtyard, redirecting light conditions, adding spaces for bedrooms and storage, and "establishing some levels of privacy [between the accessory unit and the primary building by] pushing the proximities between invariable and change."[366] Kevin Daly of Daly Genik Architects explains that the property included the primary house and an existing apartment on top of a garage when Daly Genik Architects were commissioned for remodeling. The apartment was used as a living unit by the client's parents when they visited Los Angeles, and thus included the separate kitchen and bathroom facilities with which Yukubousky is concerned. Conforming to the programmatic aspects of the ADU, Daly Genik Architects deployed their concept of "structuring the envelope into a space that can be occupied."[367] [Figure 3.31] They used design to carve out an outdoor terrace and to enhance the notion of privacy. By wrapping the 400-square-foot unit with a second skin of factory painted perforated steel, light was harvested and gaze controlled.[368] [Figure 3.32]

Daly confirms that the Palms project lacks some of the urban dimensions of the ADU concept because it was regulated by R2 zoning. "We didn't really add density to the site," he says. "There

[366] Kevin Daly, interview by Per-Johan Dahl, December 17, 2010.
[367] Ibid.
[368] The Palms Residence accessory unit is the same size as the garage, around 400 sf. There is an additional 150 square feet of deck in front of the unit and a 200 square-foot roof deck.

[were] already two units on it."[369] He does, however, raise another issue about land use, which seems to be symptomatic of the accessory unit concept. Always claiming underutilized resources of land or structure to demarcate site, and thus situate construction, the ADU, however, never compromises the character of the residential neighborhood. Adopting the capability of the chameleon, the formal expression of the ADU might be explicit, but its presence is always camouflaged with reference to the surroundings. Daly explains that a successful ADU "has to be invisible because that is what allows the scale and existing nature of a neighborhood to stay intact, which makes it that less people are likely to object the increasing density."[370] [Figure3.33] Adding a second layer of meaning to John Kaliski's argument that densification of L.A. must to proceed "while maintaining a sense of privacy and the presence of the individual homestead set within a garden," Daly continues to explain that "[y]ou should be able to make a case that adding the unit doesn't really change the neighborhood in a way that anyone outside that particular site would know that."[371]

With the Palms project, the accessory unit used the roof of a garage to give new meaning to under-utilized structure. Particularly interesting is the reversed location of primary house and accessory unit that characterizes the Palms site. With the main building pushed back on the property, the garage had been erected at the front yard and the apartment built on top of that. [Figure 3.34] Given this unusual situation, Daly Genik Architects used the concurrent remodeling of primary house and accessory unit to create aesthetic references between the two structures that, on the one hand, unify the housing pair and, on the other hand, establish a clear

[369] Kevin Daly, interview by Per-Johan Dahl, December 17, 2010.
[370] Ibid.
[371] Kaliski, "Re-Visualizing the Dream: Los Angeles and the Future of Single-Family Homes," 22. Kevin Daly, interview by Per-Johan Dahl, December 17, 2010.

hierarchy between the two. With a design strategy that complies with existing trees and bamboo hedges, the accessory unit draws from its subordinate position on the property to camouflage itself with reference to the surrounding neighborhood. The Palms project proves that the dichotomy of front and back is irrelevant for the ADU concept. The invisibilities and spatial hierarchies that often are accustomed the dichotomy of front and back derive more from aesthetic relationships and sensitivity to site-specific conditions than from preconceived ideas of land-use arrangements.

With Palms as a reference, Daly points to the possibility of utilizing the ADU as a device to explore material practices that go beyond the conformist modes of design and fabrication. He confirms that the Palms accessory project is yet "another experiment in the mediating skin." Daly Genik Architects, he says, "is interested in the issue of the envelope in general and making it something that, instead of being a technical issue, can become something to be experienced."[372] For Daly, the capacity of the ADU to stimulate non-conformist design and fabrication processes neither complies with the architectural components of the edifice, such as scale or program, nor with the socio-economic aspects of accessory units, such as reduced land costs or shifting demographics, but rather with the legislation that oversees construction. He argues that "a house design is not as governed by codes and regulations as, for example, a public building."[373] Being defined as housing in ordinances, Daly says that the ADU "is more flexible in terms of design than other building types, just because of reduced impact of codes."[374]

[372] Kevin Daly, interview by Per-Johan Dahl, December 17, 2010.
[373] Ibid.
[374] Ibid.

When we cross-reference the urban dimensions of the accessory unit with our analysis of R2 examples, then we can build upon Yukubousky's definition to formulate the constituting principles of ADU architecture. Coded as a building type, the ADU offers an opportunity to increase density through non-conformist infill projects by undermining the low-density principles of R1. Being a result of a socio-economic culture that alters the lifestyles that got it started in the first place, the ADU is accustomed to idiosyncratic solutions and temporal expressions. The ADU claims the underutilized resources of land or building structure as site for construction, without compromising the character of single-family neighborhoods. Being subordinate to the primary house by means of size and aesthetics, it sets up a dialectical relationship with the main structure to conform to the privacy of the primary house and thus render spatial arrangement in terms of circulation, privacy, light, and exposure.

The Backyard Home

Drawing from their design philosophy and R2 experience, Daly Genik Architects were commissioned by cityLAB in 2009 to expand on second unit research by means of design. Starting out by investigating the L.A. alley space in terms of access and frontality, Daly Genik Architects moved on to utilize the non-conformist qualities implicit in the ADU concept to explore the realm of site specificity instead in terms of transportation and assembly, rather than by the more traditional means of composition and arrangement. [Figure 3.35] Utilizing new means of materiality and fabrication, their Squeeze module established new relationships between architecture and site. [Figure 3.36]

Daly explains his approach on the non-conventional parameters implicit in the ADU concept. For Daly, a key issue to maximize the innovative potentials of the ADU is to proceed with the premises that "you shouldn't have anything bigger than what you could bring through a side yard."[375] Daly argues that the failure to develop designs that challenge the established modes of transportation and site assembly is one of the reasons why most ADUs still conform to conventional means of fabrication and expression. Daly argues that "[t]he available pool of labor, the availability of material, but also the transportability of material ends up conventionalizing construction. So, unless you have a system that allows you to challenge that, you'll add continuity to the convention."[376]

With their Squeeze modular home, Daly Genik Architects have experimented with structural systems and materiality to develop an ADU that meets their requirements on reduced weight and rapid construction. With the intention of turning their experiment into an off-the-shelf product, Daly Genik Architects' Squeeze module consist of a frame made of stretch-formed aluminum that nested into collapsed configuration for shipment, and allows for the assembly to fit through side yard spaces. [Figure 3.37] Once the collapsed frame reaches the backyard, it expands and encloses by a multilayer performative fabric that gains rigidity by partial vacuum. Having more in common with tensile structures than with the conventional systems of residential construction, Daly Genik Architects highlight one direction where the ADU is deployed as incentive for architectural innovation to turn the underutilized backyards of LA into sites for a new generation of housing.

[375] Kevin Daly, interview by Per-Johan Dahl, December 17, 2010.
[376] Ibid.

With their interest in issues of fabrication and assembly, Daly Genik Architects contextualize their prototype in the culture of tectonics. Indeed, their way of describing their modular unit, from the three architectural elements of floor, frame, and fabric, certainly resembles Gottfried Semper's discourse.[377] By describing the unit from the parts rather than the whole, with specific focus on the members and joints of low-weight structures, Daly Genik Architects' ADU has adapted to fit the low-tech and low-skilled labor transportation system of carrying pieces by man power through the side yard space. Hence, advanced design and materiality meet the interim solution that characterizes housing construction in L.A. Los Angeles has a long tradition of low-tech building construction. Mike Davis argues that the frequent cycle of natural disasters has resulted in a provisional quality to the buildings in L.A., while Dana Cuff argues that "the mild climate permitted the most minimal shelter…constructed by inexperienced builders."[378] Daly Genik Architects' approach to architectural innovation is to challenge the established modes of site assembly and transportation. Using advanced design and sophisticated materiality, they depart from the established modes of site assembly and transportation by relinquishing any need for construction expertise. Their Squeeze module can be purchased as an off-the-shelf product, transported on a U-Haul truck, and carried to the site by manual labor through the side yard. The foundation that is needed hardly requires any expertise, and the tensile assembly process is lightweight and can be done through manual labor.

[377] Daly Genik Architects describes their modular unit by dissembling its architectural form into three elements: the floor, frame, and fabric. See Cuff, Higgins, and Dahl, "Backyard Homes LA," 23-25. Gottfried Semper described the tectonic through "the four elements generating architectural form: the hearth, roof, enclosure and mound." See, for example, Gottfried Semper, *Gottfried Semper: The Four Elements of Architecture and Other Writings*, trans. Harry Francis Mallgrave and Wolfgang Herrmann (Cambridge, Mass: Cambridge University Press, 1989), 24.
[378] Mike Davis refers to earthquakes, fires, and mudslides. See Mike Davis, *Ecology of Fear: Los Angeles and the Imaginaiton of Disaster* (New York: Metropolitan Books, 1998). For Dana Cuff, see Cuff, *The Provisional City: Los Angeles Stories of Architecture and Urbanism*, 35.

By using the architectural unit as the key element of urban development, Daly Genik Architects bears a resemblance to Peter Cook's plug-in urbanism of the early 1960s. Indeed, they both reconceptualize architecture's role in city building by exploring the intricate relationships between design, site assembly, and transportation. Inverting Modernist procedures, both Daly Genik Architects and Cook challenge comprehensive planning, which encourages "contemplation of the fixed and ideal architectural object," to propose a new mode of planning practice that promotes "architecture as an event that only [can] be realized by the active involvement of its inhabitants."[379] Despite similar approaches to architecture's role in city building, their concepts for site assembly and transportation, however, are at two ends of a spectrum. When Cook draws from the principles of vertical urbanism to propose his units to be "inched into place by all-surveying cranes on a circular rail above [the city]," Daly Genik Architects adapts to Los Angeles' horizontal urbanism to mobilize the informal structures of transportation and site assembly already in place.[380] Opposing urbanisms require divergent concepts for site assembly and transportation, which call for different design cultures when developing the architecture of the unit. Cook's capsule design can be discussed with reference to a single entity, which is vacuum-formed and installed without site-specific adjustments. Daly Genik Architects' modular design consists of tectonic elements which, aggregated through members and joints, are customized for site-specific conditions. The utopianism of Cook's city is replaced by the pragmatism of American urbanism.

[379] Simon Sadler, *Archigram: Architecture without Architecture* (Cambridge, Mass: The MIT Press, 2005), 16.
[380] Ibid., 14.

Rs and 1s

The ADU challenges the low-density principles implicit in the R1. Hiding in the backyard of single-family residential lots, it seeks to "maintain the scale of existing neighborhood fabric while encouraging increased intensity of use."[381] Hence the ADU never suggests that R1 become R2, but instead something like R1.5. By focusing solely on amplifying residential use, the ADU interventions comply with the character of single-family urbanism. Still responding to the functional premises of the single-family residential district, the ADU updates the 1 but not the R.

The R of R1 describes the epitome of single-function urbanism, which is obsolete. This is particularly true for Los Angeles where, as we will see, demographic transformations require a more flexible arrangement of space. Hence, it can be argued that the rigid use categorizations implicit in comprehensive zoning must be eradicated and replaced by a much more elastic approach on land use distribution. We can examine this argument by cross-referencing M. Christine Boyer's scholarship on the origins of land use distribution in American cities, with Michael Dear's scholarship on the shifting social and cultural patterns of contemporary Los Angeles.

M. Christine Boyer maps the intricate relationships between the institutionalization of zoning and the political economy of housing development that characterized the urbanization of post-World War I America. Boyer's scholarship is particularly relevant for the purpose of this research because she focuses on the founding principles of land-use distribution through the means of zoning. Boyer contextualizes the scientific tone that comprehensive zoning took on

[381] Cuff, Higgins, and Dahl, "Backyard Homes LA," 22.

from its introduction in 1916. Drawing from the general faith in scientific management of labor productivity and corporate administration that characterized American society in the wake of Frederik W. Taylor's 1911 *The Principles of Scientific Management*, the introduction of zoning in the U.S. complied with the transition of Taylor's system from "the business to the social sphere."[382] With Tayler as a model, "engineers would [after 1911] discuss and apply scientific laws to the solution of social problems."[383]

Zoning became the perfect mechanism to use when introducing Tayler's efficiency to socially related issues, such as how to use the city. Boyer writes:

> "Zoning, the practice of boundary management, depended upon the separation of conflicting functional uses that took place in the same environment. Its main procedures were based upon defining land-use districts in a manner analogous to the steps of scientific management, steps that separated a job into elementary movements before synthesizing these operations into a correct sequence of timing and motion for performing the task. The basic value was one of economic utility: achievement of a perfectly efficient and functional machine. The quality of the product, the end purpose of the American city, was lost in the details of technical efficiency…"[384]

Following the same logic of scientific management and administration that influenced Henry Ford's perfection of the assembly line, zoning designated the land use categorizations of

[382] Boyer, *Dreaming the Rational City: The Myth of American City Planning*, 163.
[383] Ibid.
[384] Ibid., 164.

American urbanism to the demarked plots that concurrently shaped the twentieth-century metropolis.[385] The distribution of residential districts through the means of zoning was intensified after the first Word War, and ballooned after the second. Zoning was fueled by the Fordist economy, which throughout the 1950s and into the '60s created some of the most prosperous living conditions in American history, and rolled out mile after mile of residential areas. Building on the spatial logic of Fordism, land use was distributed through the means of zoning to create the horizontal suburbanization of the American landscape.[386]

The breakdown of Fordist economies that followed the advent of postmodernism is too broad a subject to be covered in this case study. Various scholars have argued, for example, about its effects on the emergence of new social formations; on the restructuring of economical systems; and on the commodification of social life.[387] Of specific interest for this research, however, is Michael Dear and Steven Flusty's recognition of the changing life styles that, in the wake of Fordist economies, are emerging in L.A. Dear and Flusty trace the characteristics of a postmodern urbanism. They point to new economic and cultural patterns that rapidly redirect production and consumption in Los Angeles. Dubbed *flexism*, these patterns coincide to merge

[385] Sigfried Giedion describes the overlaps of Frederick Winslow Taylor's methods of analysis and organization with Henry Ford's perfection of the assembly line. See Giedion, *Mechanization Takes Command: A Contribution to Anonymous History*.

[386] Sigfried Giedion describes that "[t]he horizontally traveling crane forms a step toward the overhead-rail systems that appeared on a large scale in American slaughterhouses of the Middle West during the late 'sixties and finally came into use in the mass fabrication of automobiles." See Ibid., 78.

[387] For new social formations, Fredric Jameson observes a break with Marxist tradition and argues that "the new social formation [of postmodernism] no longer obeys the laws of classical capitalism, namely the primacy of industrial production and the omnipresence of class struggle." See Fredric Jameson, *Postmodernism, or, the Cultural Logic of Late Capitalism* (Durham: Duke University Press, 1991), 3. For the restructuring of economical systems, Edward W. Soja develops scholarship on the economies of the post-Fordist industrial metropolis. See, for example, Soja, *Postmetropolis: Critical Studies of Cities and Regions.* For the commodification of social life, Guy Debord observed the transition from an industrial society to a new configuration called the Society of the Spectacle. Debord said that "[t]he spectacle corresponds to the historic moment at which the commodity completes its colonization of social life." See Guy Debord, *The Society of the Spectacle* (New York: Zone Books, 1995), 29.

and mutate previously opposing socio-economic and cultural characteristics. Dissolving the commonly applied categorizations of how to use urban land, they accelerate the principles of a new metropolitan landscape. Dear and Flusty show, for example, that "the flexist imposition of global imperatives on local economies and cultures [has altered] the spatial logic of Fordism."[388] They observe that traditional models of urban development have "given way to a seemingly haphazard juxtaposition of land uses" and they call for a greater degree of metropolitan elasticity to meet the needs of shifting economic and cultural patterns.[389] "The apparently-random development and redevelopment of urban land," they say, "may be regarded as the outcome of exogenous investment processes inherent to flexism," thus creating a new socio-economic doctrine.[390]

The greater degree of flexibility inherent in the new urbanization processes that Dear and Flusty discover basically won't meet the land use distribution exercised by single-function urbanism. Indeed, our cities won't enable to adapt to the rapid pace of change that characterizes postmodern urbanization if we continue to comply with the spatial logic of Fordism. The ADU have, thus far, not stimulated development of new legislation that challenges the R. As we have seen, policies are still written, and accessory units are still designed, on the spatial logic of Fordism. The ADU concept, however, does not require single-function but can adapt to multiple land use patterns. Daly Genik Architects suggests such a procedure when they argue that their Squeeze module "responds to changing household dynamics: it can be a guestroom, a mother-in-

[388] Michael Dear and Steven Flusty, "Los Angeles as Postmodern Urbanism," in *From Chicago to La: Making Sense of Urban Theory* (Thousand Oaks: Sage, 2002), 75.
[389] Ibid.
[390] Ibid., 75-76.

law unit, an office, or an empty-nester's more compact home."[391] By gradually adding densities, the ADU encourages increased intensity of uses, which updates transportation patterns and provides for mixed land uses.[392] Perhaps the legal densification of Los Angeles, fueled by the ADU, will spur the proliferation of illegal use patterns that concurrently breed new economies and thus force legislation to explore the spatial possibilities beyond Fordism.

[391] Cuff, Higgins, and Dahl, "Backyard Homes LA," 25.
[392] Barton Myers observed that as early as 1978 "gradual increase of densities in suburbia would not only support an efficient public transit system, thus eliminating dependence on the automobile, but would provide for mixed land uses other than gigantic shopping centers." See Myers, "Urban Consolidation," 14.

CONCLUSION

The synchronized decay and densification discovered in Pacoima, California, unveils an under-utilized land stock viable to use when exploring ways to challenge the low-density urbanism that, throughout the twentieth-century, has been channeled through single-family residential zoning. We shouldn't underestimate the importance of such an undertaking, as low-density urbanism basically won't meet the "wide range of economic, residential and social activities, which," according to planning scholars Bruce Katz, Andy Altman, and Julie Wagner, can "realize the promise of the urban age."[393] When the norms implicit in Eucledian single-family zoning continue to hamper these activities, then Emily Talen's advocacy for "predictable zoning" appears misguided.[394] The single-family residential district, which is scrutinized throughout this case study, represents the epitome of low-density urbanism. As urban planning has failed to densify the R1, architecture offers new potentials.

ADU implementation signifies the architectural response to densification and intensification of the R1. By reconceptualizing the suburban backyard, ADU proliferations transform the form of single-family residential neighborhoods. Introducing an incremental approach to city building, ADU proliferations not only serve to upgrade the R1 by challenging master planned urbanism, they also propose a solution for how to tackle the shifting growth patterns of L.A. As the majority of ADUs are still erected on informal grounds in the City of Los Angeles, the accessory

[393] For the premises of the urban age, see Katz, Altman, and Wagner, "An Agenda for the Urban Age," 474, 80.
[394] Urban farming describes an activity that was hampered by Eucledian zoning in Los Angeles. See, for example, Martha Groves, "Pocket Farm Could End up Dying on the Vine," *Los Angeles Times* July 31, 2009. For Eucledian zoning, Eric Damian Kelly tells us that traditional zoning is "often called Euclidean zoning after the village in the case." He continues to describe that "[l]ike most early zoning, the plan in effect in Euclid was designed to protect neighborhoods of single-family detached houses. The Euclid decision upheld not only the plan but also its broader social and economic implications…" See Kelly, "Zoning," 252. For Emily Talen's predictable zoning, see Talen, *City Rules: How Regulations Affect Urban Form*, 184-92.

unit has yet to prove its capacity to become a building type, and thus a viable alternative to the suburban home. Due to the numerous amendments enacted in California since 1982, the accessory unit seems to meet the most archaic perceptions of public good, which are imbedded in the R1. Hence, there shouldn't be any barriers to wide implementation.

The proliferation of ADUs in the City of Los Angeles shows some fascinating -- almost stunning -- similarities with the proliferation of lofts that Lower Manhattan experienced in the 1950s and '60s. Also emerging as a grassroots revolt against zoning, and under the radar of planning expertise, the loft culture challenged the M1, instead of the R1, to facilitate a new space, and eventually a new building type, capable of supporting some emergent economic, residential, and social activities. And just as Richard Meier catalyzed the implementation of a new zoning technique through his conceptualization of the loft at the Westbeth Artists' Colony in Greenwich Village, the ADU has catalyzed zoning amendment through its reconceptualization of the suburban backyard. Hence, it seems that the loft story offers insights to be deployed when predicting future scenarios for the ADU.

The loft proliferated in a gray area between legality and illegality throughout the '60s. It was legalized in the span between the early '70s and early '80s; and it became a smashing real estate success, and sometimes a gentrifier-machine, in the '90s and 2000s. If we look at this trajectory through the code, the ADU of the 2010s seems to correspond with the loft of the early 1970s. The ADU has been proven legal by the apparatus of exercising powers. Still it continues to fight the repercussions of not being a fully normalized alternative to common residential models. A major difference between the loft building of the early '70s and the ADU of today, however, is

the vague disciplinary classification that still characterizes the accessory unit, which, as we have seen, was not the case of the post-Westbeth loft building. On the contrary we have experienced that the considerable scale of Meier's conversion produced a powerful impact on the urban transformation of Lower Manhattan. This made Westbeth a signifier, not only for a new building type, but also for the wider interest in adaptive reuse that flourished among several fields and doctrines of the era. Perhaps, the ADU needs a similar recipe -- a considerable number of architecturally significant objects that, taken together, prove substantial change and improvement for concurrent economic, residential, and social activities.

In her scholarship, Dana Cuff builds an argument upon Daniel Burnham's famous quote on the vitality of big plans.[395] She says that "[l]arge scale urban projects produce civic upheavals as they lurch into existence."[396] The success of Westbeth points to the accuracy of Cuff's argument. Perhaps, her argument can be used also to sketch out a direction for the ADU. We have seen a number of architecturally significant ADUs being built in Venice, California. However, they have never acted with a common purpose to spur major urban change. What if a large number of ADUs were implemented in a rather limited area to support some explicit economic, residential, or social activities? Perhaps, such initiative would unleash the means necessary of making the ADU a powerful companion to the loft.

The vague definition of the ADU offers a rare opportunity for architects to experiment on space construction principles. By using the ADU as a generative material, design can be deployed to

[395] Dana Cuff opens her book with Daniel Burnham's quote, which says that we shall "[m]ake no little plans [because] they have no magic to stir man's blood..." See Cuff, *The Provisional City: Los Angeles Stories of Architecture and Urbanism*, 4.
[396] Ibid., 5.

test various interpretations and responses to the technical, social, and cultural issues that occupy the core of contemporary discourse. Still, as ADU proliferation continues to proceed on informal basis, thus outside the realm of universal practices, the financial mechanisms necessary for stimulating such experimentation are rare. They might exist in areas with high development pressure, as investments there are covered by the value added through architecture. But development pressure is uneven in L.A.'s single-family districts, as any real estate investments in those areas are rather uncertain. Perhaps, new financial mechanisms will be encouraged in the long run as informal reprogramming of land use slowly but surely challenges single-function urbanism, and thus stimulates the emergence of new economies.

We have seen, through Dana Cuff's scholarship, that the transformation of land into property is rendered without any recognition of the intrinsic qualities of site.[397] With Daly Genik Architects' Palms Residence, we can cross-reference this observation with the premises of universal zoning to elucidate some formal relationships between, on the one hand, the primary and the secondary unit, and, on the other hand, the secondary unit and the site. The Palms accessory unit showed us that the dichotomy of front and back is irrelevant for the ADU concept, and that a successful accessory unit elaborates on aesthetic relationships and sensitivity to site-specific conditions, rather than on preconceived ideas of land-use arrangements. Because single-family residential zoning primarily concerns itself with the density or intensity of buildings on the property, as Eric

[397] Dana Cuff's scholarship on the transformation of land into property is outlined in the first chapter of this dissertation. Zoning concerns property, not site. Hence, Cuff is backed up by Jonathan Barnett, who argues that zoning takes "no account of topography, orientation, or the nature of existing buildings in the area; nor does the land-use separation enforced by zoning generally take into account the possibilities created by modern construction, air conditioning, artificial illumination." See Barnett, *An Introduction to Urban Design*, 66.

Damian Kelly explains, it hampers the implementation of a second unit.[398] However, when the code has been amended, as in the case of California's AB 1866, then the increase in density has to be orchestrated and managed by what Michel de Certeau refers to as the "representations of a society…and its modes of behavior."[399] Indeed, only by gaining acceptance in the neighborhood will the second unit be successfully squeezed through local planning administration. In other words, the representation of density goes beyond the legal circumstances of code, and becomes an architectural exercise. And, it is exactly by activating Michael Sorkin's feed-back loop between the memory of site and the evolution of the neighborhood that architecture can propose a new code beyond the R1.[400] Therefore, the ADU opens up a field of research, whereby experiments on the architecture of the site can stipulate various formal relationships between the primary and the secondary unit, and between the secondary unit and the site, to point to successful ways of camouflaging amplified density. By instigating associative relationships between these three components -- the primary unit, the secondary unit, and the specific circumstances of site -- iterations of formal relationships could be produced and tested. This may increase our knowledge, not only of the representation of built form, but also of the relationship between the specific aspects of site and the universal premises of urbanization. This field of research could expand upon the opportunity for experimentation previously discussed to convey the shape of layouts and volumes for one or many buildings.

[398] The R1 can be read through Eric Damian Kelly's explanation that the zoning code specifies "the intensity or density of…the allowed used of land and buildings…" Kelly, "Zoning," 251. As any ADU concerns ownership, we can cross reference Kelly with Dana Cuff's argument that "land is converted to property when ownership comes into play…" See Cuff, *The Provisional City: Los Angeles Stories of Architecture and Urbanism*, 62.
[399] Certeau, *The Practice of Everyday Life*, xii.
[400] Michael Sorkin's feedback loop is outlined in the first chapter of this dissertation.

The discipline of architecture faces a new role in becoming the driving force of city building in Los Angeles. However, the low-density principles of R1 have to be terminated. Single-family residential zoning holds a strong position as a land use determinant in L.A. and elsewhere. The efforts to undermine its authority do require shared initiatives from different disciplines and professions. The integration of previously polarized conceptions of management and governance can respond to a larger constellation of ecologies, economies, and lifestyles. By challenging the hardened categories of administration, expertise, and resources, projects like cityLAB's *10K Pacoima* and *Backyard Homes LA* open up new paths to turn the postsuburban landscape of Los Angeles into a frontier of twenty-first century urbanization.

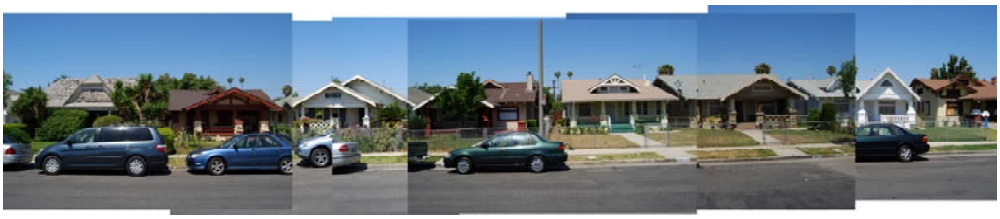

Figure 3.1: 3rd Ave. Jefferson Park, CA 90018.
Collage by Per-Johan Dahl.

Figure 3.2: Chamberlain St. Pacoima, CA 91331.
Collage by Per-Johan Dahl.

Figure 3.3: Tilden Ave. Palms, CA 90034.
Collage by Per-Johan Dahl.

Figure 3.4: Typical block in Pacoima zoned R1.
Courtesy of cityLAB.

Figure 3.5: Example 10537 El Dorado. Pacoima, CA 91331.
Courtesy of cityLAB.

Figure 3.6: Example 10464 Telfair. Pacoima, CA 91331.
Courtesy of cityLAB

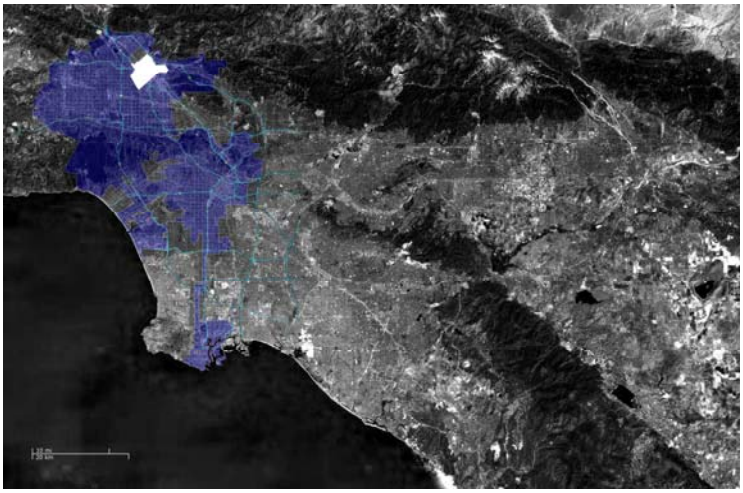

Figure 3.7: Pacoima and the City of Los Angeles.
Courtesy of cityLAB.

Figure 3.8: Informal backyard house in Pacoima.
Collage by Per-Johan Dahl.

Figure 3.9: 10K site and three housing types.
Courtesy of cityLAB.

Figure 3.10: Developer workshop at UCLA, April 7, 2008.
Courtesy of cityLAB.

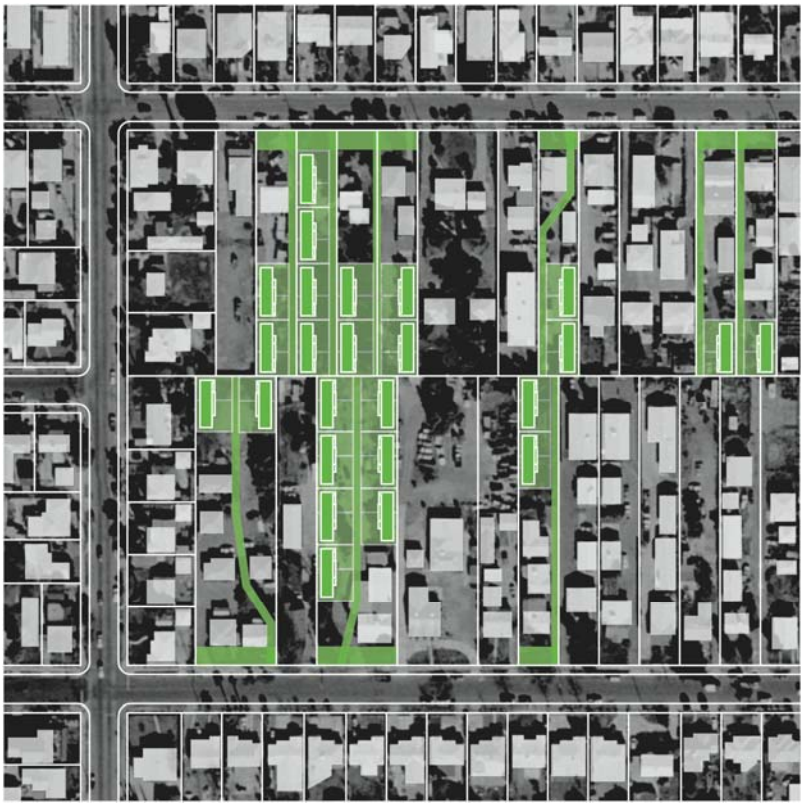

Figure 3.11: Proposed implementation of workforce infill houses in Pacoima.
Courtesy of cityLAB.

Figure 3.12: 16 Houses: Owning a House in the City, DiverseWorks, Houston, 1998.
Exhibition curated by Michael Bell.
Photographer: Ben Thorne. Courtesy of Michael Bell.

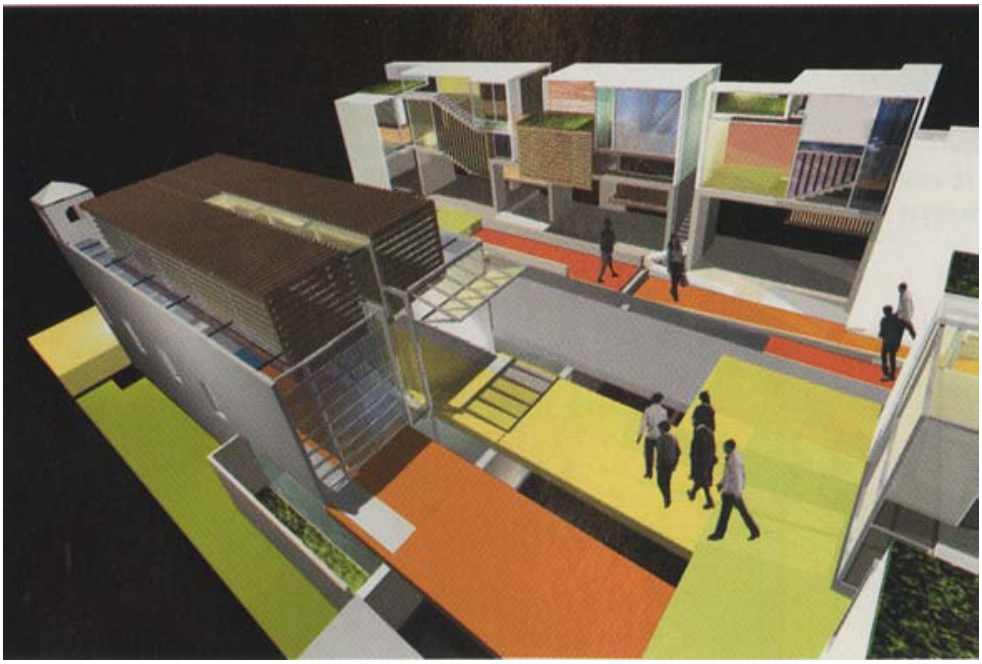

Figure 3.13: Teddy Cruz, Casa Familia, San Diego, California, 2003-present.
Courtesy of Casa Familiar: Living Rooms at the Border, Estudio Teddy Cruz.

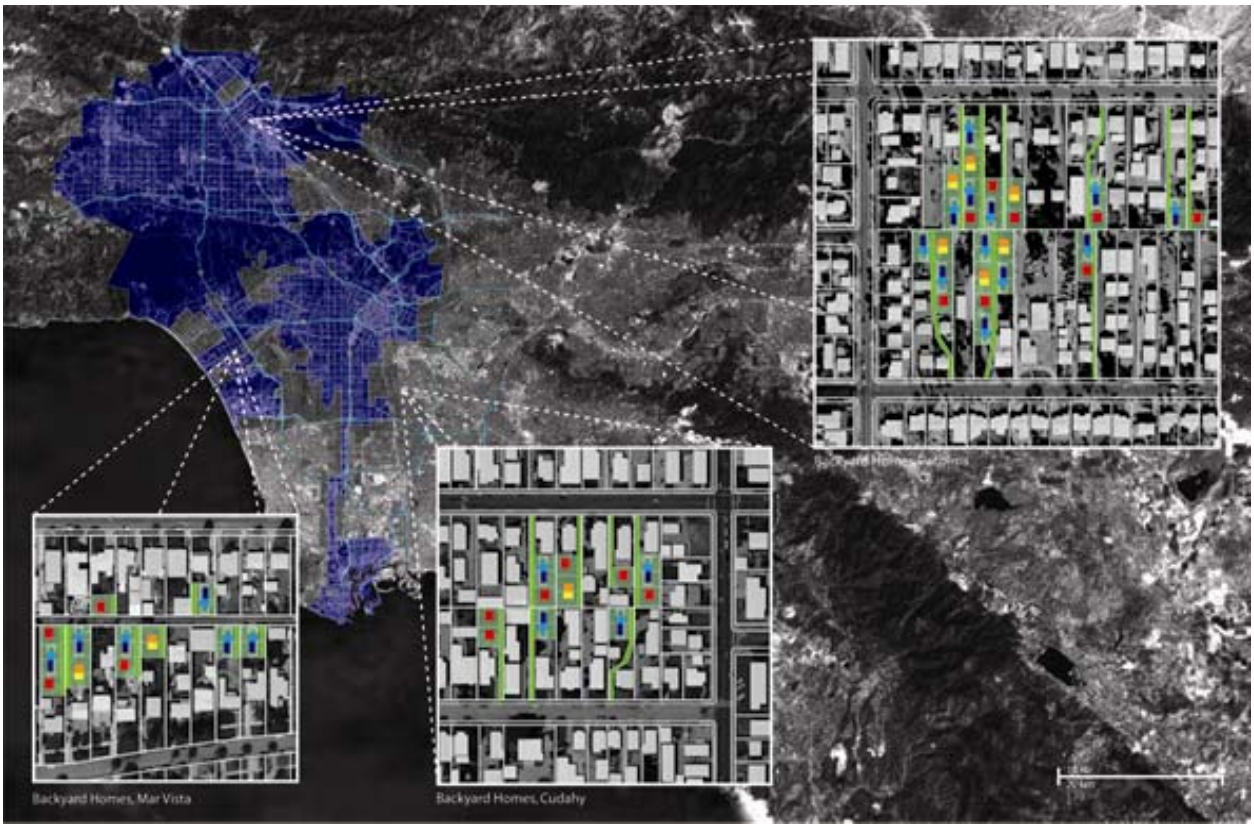

Figure 3.14: From Pacoima to the City of L.A.
Courtesy of cityLAB.

Figure 3.15: William A. Garnett, Foundations and Slabs, Lakewood, California, 1950. Gelatin silver print, 18.9 x 23.8 cm. The J. Paul Getty Museum, Los Angeles.

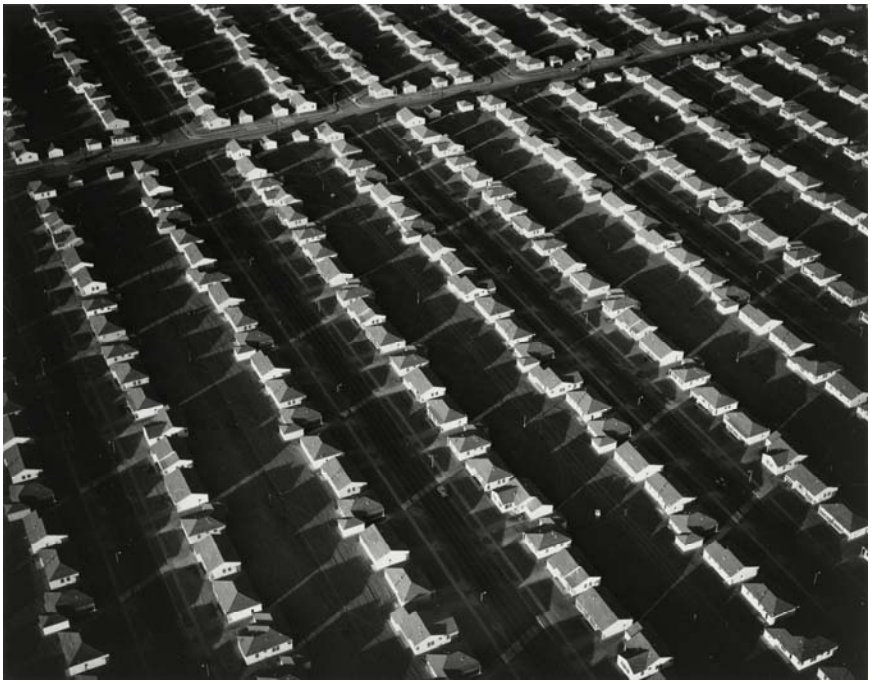

Figure 3.16: William A. Garnett, Finished Housing, Lakewood, California, 1950. Gelatin silver print, 18.7 x 24 cm. The J. Paul Getty Museum, Los Angeles.

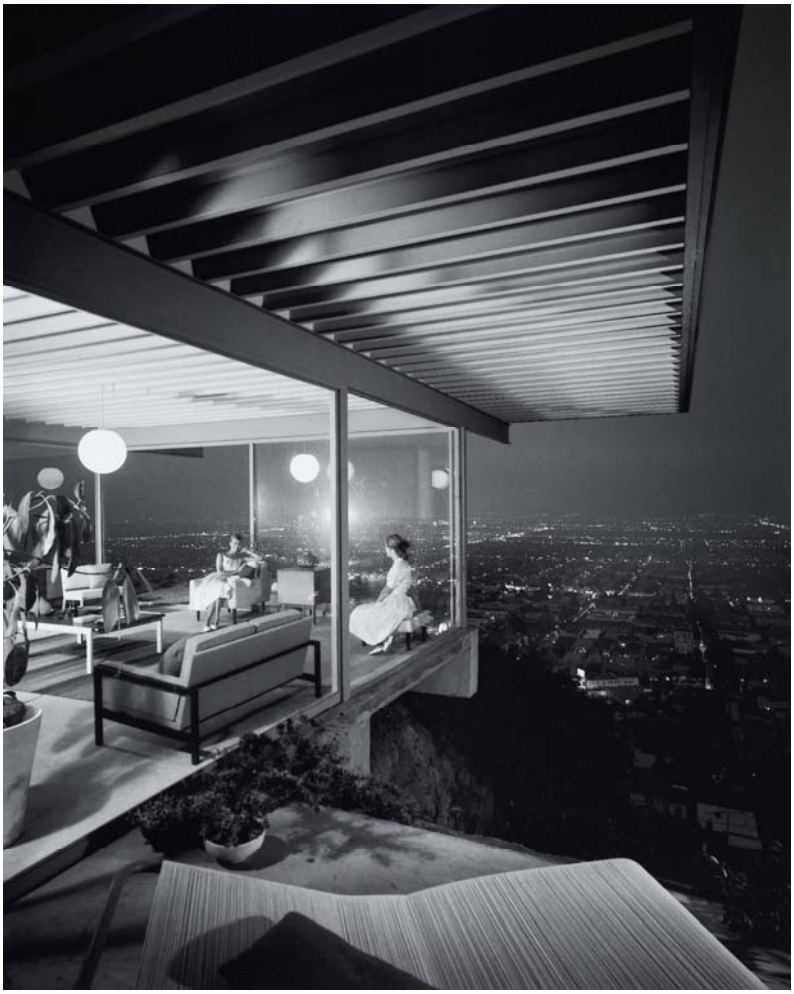

Figure 3.17: Pierre Koenig and Julius Shulman, Case Study House No. 22 (Los Angeles, Calif.): iconic girls, 1960.
Gelatin silver. © J. Paul Getty Trust. Used with permission. Julius Shulman Photography Archive, Research Library at the Getty Research Institute (2004.R.10)

Figure 3.18: Andreas Gursky, Los Angeles, 1998.
C 2012 Andreas Gursky / Artists Rights Society (ARS), New York / VG Bild-Kunst, Bonn.

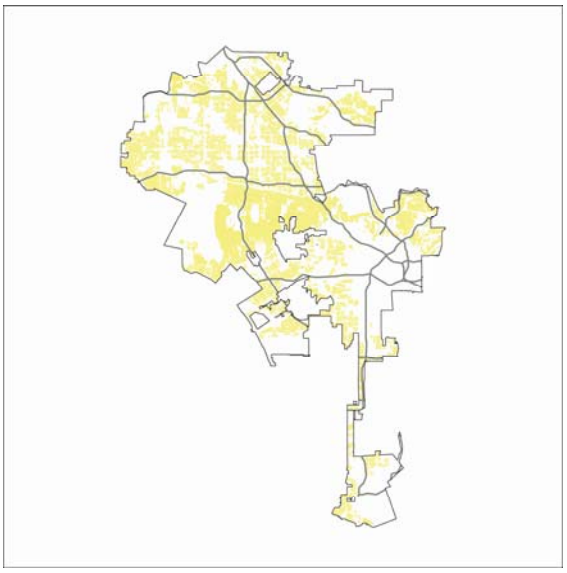

Figure 3.19: Single-family residential zones in the City of L.A. (including R1, RE, RE11, RE15, RE20, RE40, RE9, RS, RU, RW1, RZ2.5, RZ3, RZ5), June 2010: 457.610 lots.

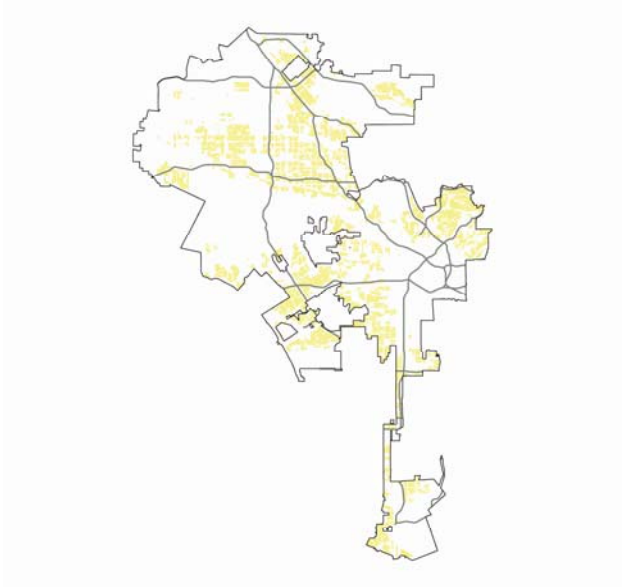

Figure 3.20: R1 zones in the City of L.A., June 2010: 321.637 lots.

Figure 3.21: Accessory unit in Venice, California.
Photographer: Per-Johan Dahl.

Figure 3.22: superkül inc | architect, 40R_Laneway House, Toronto, 2008.
Photographer: Tom Arban. Courtesy of superkül inc | architect.

Figure 3.23: Morphosis, 2-4-6-8 House, Venice, California, 1978.
Courtesy of Thom Mayne and Morphosis Architects.

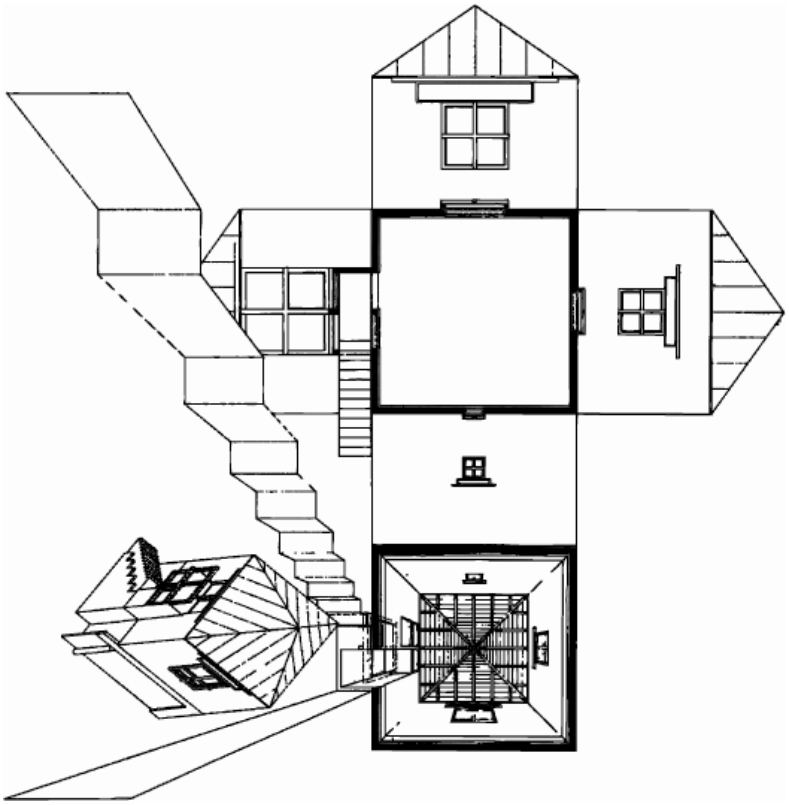

Figure 3.24: 2-4-6-8 House. Conceptual Drawing.
Courtesy of Thom Mayne and Morphosis Architects.

Figure 3.25: Frank D. Israel, ¼ inch scale model of Baldwin Residence, 1992. Courtesy of Shortridge Architects.

Figure 3.26: Frank D. Israel, ¼ inch scale model of Baldwin Residence, 1992. Courtesy of Shortridge Architects.

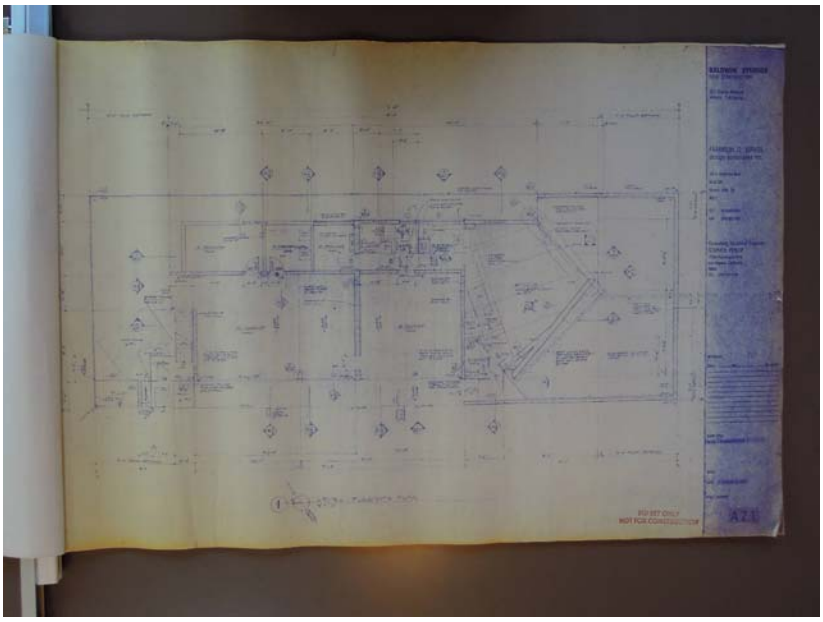

Figure 3.27: Baldwin Residence. Plan, first floor, blueprint. Courtesy of Shortridge Architects.

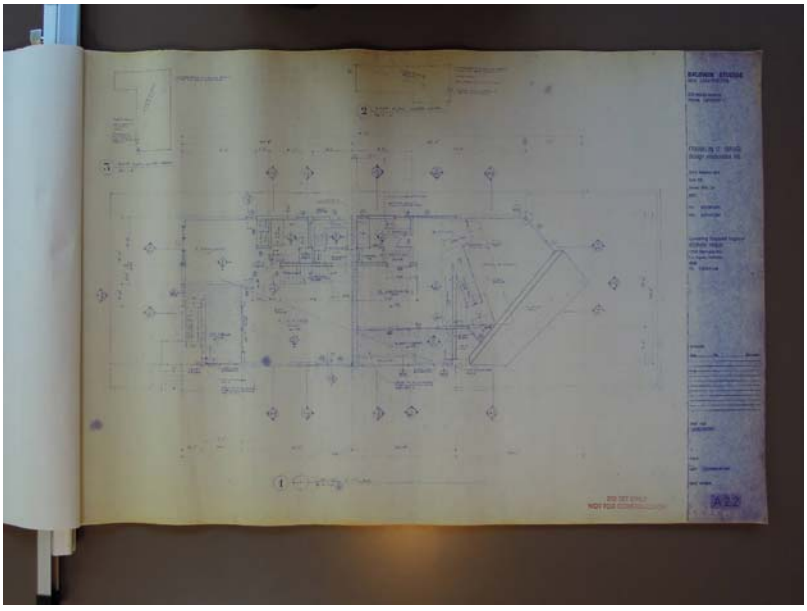

Figure 3.28: Baldwin Residence. Plan, second floor, blueprint. Courtesy of Shortridge Architects.

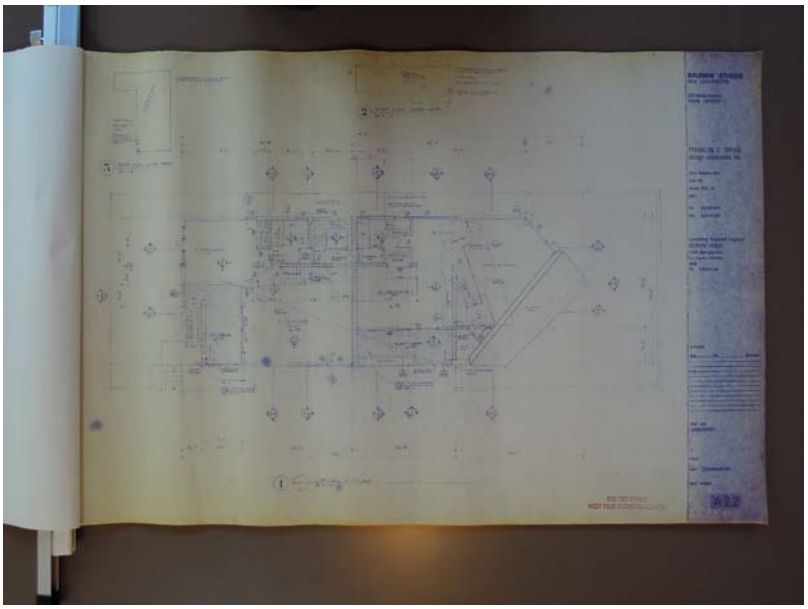

Figure 3.29: Baldwin Residence. Plan, third floor, blueprint.
Courtesy of Shortridge Architects.

Figure 3.30: Daly Genik Architects, Palms Residence, Venice, California, 2006-2009.
Photo credit: Benny Chan/fotoworks.

Figure 3.31: The inhabitable envelope of the accessory unit at Palms Residence.
Daly Genik Architects, Palms Residence, Venice, California, 2006-2009.
Photo credit: Benny Chan/fotoworks.

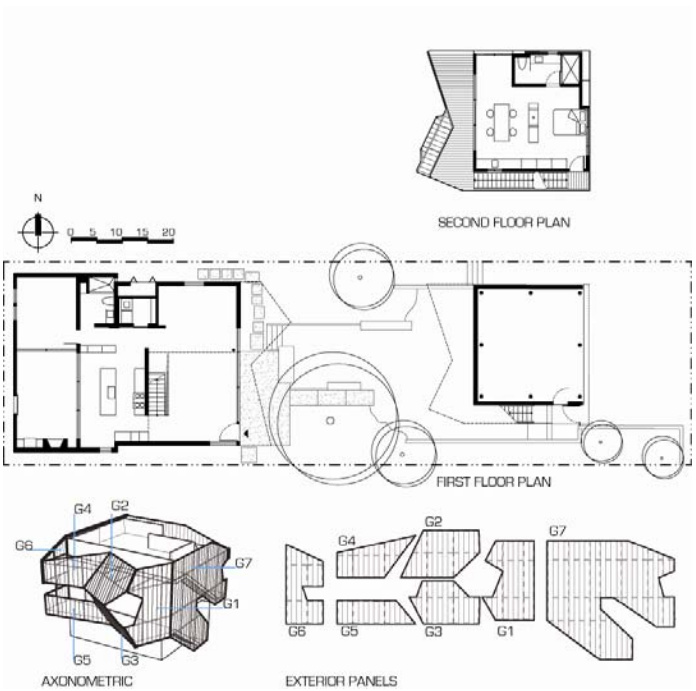

Figure 3.32: The accessory unit at Palms Residence. Floor plans and envelope drawings.
Daly Genik Architects, Palms Residence, Venice, California, 2006-2009.
Image: Daly Genik Architects.

Figure 3.33: The accessory unit at Palms Residence in Venice, CA, October 28, 2011.
Collage by Per-Johan Dahl.

Figure 3.34: Palms Residence. The main house (left) and the accessory unit (right).
Daly Genik Architects, Palms Residence, Venice, California, 2006-2009.
Photo credit: Benny Chan/fotoworks.

Figure 3.35: Daly Genik Architects, Rendering of ADUs with alley access, 2009.
Image: Daly Genik Architects.

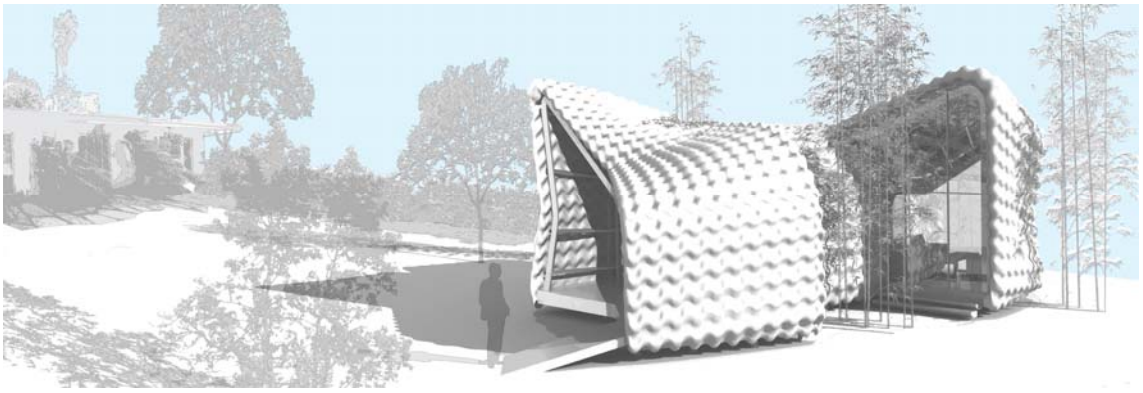
Figure 3.36: Daly Genik Architects, Squeeze module, 2010.
Image: Daly Genik Architects.

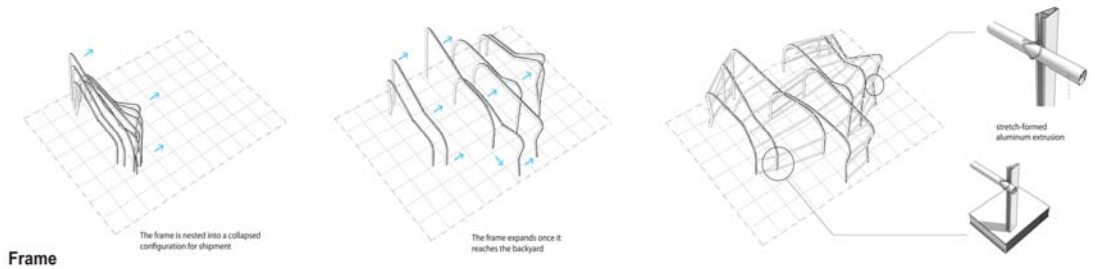

Figure 3.37: The structural concept of the Squeeze module.
Image: Daly Genik Architects.

CHAPTER 4:

Code Invaders: HL23 and the Flexible Envelope

Abstract

On May 24, 2006, the City Planning Commission approved Neil M. Denari's proposal for a 14-floor condominium tower to be erected at the intersection of the High Line Park and West 23rd Street in the West Chelsea District of New York City. Hovering over the linear park, the project -- formally known as HL23 -- manipulated the zoning resolution that had been enacted just one year earlier, in order to prevent development from obstructing light and air. Completed in 2011, the nonconformist architecture of HL23 creates a formal relationship with the High Line Park and stimulates new real estate economies.

This case study uses Neil M. Denari's HL23 condominium tower in West Chelsea, New York City, as a lens through which to critically evaluate the interlocking aspects of the zoning envelope. By drawing from Lewis Tsurumaki Lewis's argument that "beneath the surface of the normal or familiar exists the strange or the unfamiliar," this case study uncovers an architectural design methodology viable for exploring the cracks in city planning regulation.[401] This case study uses Gilles Deleuze and Félix Guattari's rhizome to re-conceptualize the structural configuration of the zoning envelope. It frames the setback codes of the High Line Transfer Corridor to problematize the interface between zoning and site. It focuses on the waiver as subject matter to examine the generative aspects of regulation. It consults Michel de Certeau's

[401] Lewis Tsurumaki Lewis, "snafu," in *Situaion Normal... (Pamphlet Architecture 21)* (New York: Princeton Architectural Press, 1998), 4.

differentiation between tactics and strategies to map a pathway through the code. And it utilizes Aldo Rossi's discourse on urban artifacts to explain the City's support for the project. By celebrating HL23's resistance to the universal principles of the zoning envelope, this case study seeks to outline a methodology that architectural practices can emulate when fighting the repressive forces of rigid regulation.

Framing and Methodology

This case study peruses urban research on the West Chelsea Special District in New York City, and architectural research on the project site for HL23 at 513-515 West 23rd Street in Manhattan. The main research period starts with the twin events of 1999, which are the formal formation of the non-profit *Friends of the High Line,* and the enacted zoning amendment that changed permitted residential densities in Chelsea. The research period concludes with the approval of the HL23 project by the City Planning Commission on May 24, 2006.

The case study research follows Robert K. Yin's methods.[402] Data collection includes literary research, interviews, archival research, and site visits. Literature has been collected at the UCLA libraries in Los Angeles, at the Getty Research Institute in Los Angeles, and online. Interviews have been conducted with architect Neil M. Denari on October 19, 2010 and February 17, 2011, and with Kenny Ramnarine and Erika Sellke of the New York City Department of City Planning on March 30, 2011. Archival research includes the NMDA archive in Los Angeles (2011), the New York City Department of City Planning (2010-2011), and the Real Estate Board of New York in New York City (2011). The project site was visited in July 2010 and in March 2011.

[402] Yin, *Case Study Reserach: Design and Methods*.

THE INTERLOCKING ASPECTS OF ZONING

"This is the rule, the structuring principle of architecture."[403]

- Aldo Rossi

"What you must learn is that these rules are no different than the rules of a computer system...some of them can be bent. Others...can be broken."[404]

- Morpheus

Walking north on the converted railroad formally known as the High Line Park, the city seems remarkably well-preserved. In the former warehouse district of Manhattan's West Side, the image of the city is still composed by the building types and the spatial attributes which, throughout the twentieth-century, took root in American cities through manufacturing zoning. On our northbound stroll, we pass numerous brick buildings, all restored to augment the impact of their historical significance. In the distance, we spot the new developments of Frank Gehry, Jean Nouvel, and Shigeru Ban, which have been pushed back so as to not disturb the experience of our walk. Freed from contemporary architecture, the former railroad offers the illusion that nothing is happening -- that the escalating retail and real estate activities rapidly transforming the neighborhoods around us are disconnected from the manicured space we experience on our stroll. Forced by zoning to reside in conservation mode, the spatial typology of our walk offers up a nostalgic image of mid-twentieth century manufacturing zones, rather than the aggressive

[403] Rossi, *The Architecture of the City*, 40.
[404] Larry and Andy Wachowski, "The Matrix," (USA1999).

forces of contemporary urbanization, which instantly generate new conditions for urban life in our vicinity.

When we reach the branch on West 17th Street, and enter West Chelsea, a building appears in our visual cone that utterly resists all attempts of spatial preservation. [Figure 4.1] Hovering over the public park, this building makes a bold gesture that is counter to the sense of open space otherwise so successfully maintained by the City's code. Rising above the High Line bed, the height of the building is successfully integrated into the neighborhood roofscape. Like a gyroscope, it references the pinnacles of surrounding high rises. But the bulk we experience when moving toward the building inverts the formal approach instigated by legislation. Clearly challenging the setback codes, the eastern façade that juts over the High Line Park stands in stark contrast to the surrounding buildings. Cocky yet delicate, the high-rise in our visual cone so obviously violates the City's planning regulations, it adjoins rather than distances itself from the former rail road, and creates an alliance between building and park that enhances the experience of both.

The building we've just spotted is the HL23, located at the intersection of the High Line and West 23rd Street, in the heart of West Chelsea. Designed by the Los Angeles architect Neil M. Denari and completed in 2011, the project introduces a spatial topology that differs from planning policy. Countering the shape of the zoning envelopes, which guides the redevelopment of West Chelsea, the tower offers a critical commentary on the relationship between city planning regulation and the development of architectural form.

Code Manipulation and the Shape of Real Estate

The HL23 condominium tower was only possible to realize through code manipulation. Indeed, the project violated the epitome of the zoning amendment, which was adopted by the City Planning Commission at the same time as Denari was shaping the edifice. Thus any attempt of Denari to modify the code is likely to have failed. Forced by real estate interest to succeed code manipulation, Denari marked out a route through the zoning ordinance by adhering to Alex Lehnerer's argument that zoning codes "are precise and unambiguous formulations, yet they produce a multiplicity of alternative realities."[405] Building upon Dana Cuff's research on the interaction between site and property, he expanded on the specific qualities of a site to implement an edifice that pushed universal legislation and amplified proceeding urbanization. Sampling architectural design culture, Denari used code manipulation to invent a building form that proved prosperous solutions beyond the constraints of the newly adopted city planning regulations.

The Site

HL23 is a 14-story condominium tower with an art gallery on the ground floor, and community amenities on the second. The building is Denari's first realized high-rise, and his first architectural project to be built in New York City. Well-known since the 1980s for his commitment to architectural experimentation, Denari has produced a number of significant projects, primarily in Los Angeles and Tokyo, ranging from exhibitions and showrooms to

[405] Alex Lehnerer, *Grand Urban Rules* (Rotterdam: 010 Publishers, 2009), 58.

commercial interiors and housing additions.[406] When he was commissioned to design the HL23 in early spring 2005, he was given not only the opportunity to design a prestigious tower in the heart of Manhattan, but also to work on a project site which, located in the shadows of the High Line, was rapidly altered by new social and cultural expectation, vivid real estate speculation, and hardened city planning regulations.

The developer behind HL23 is Alf Naman. Working in the real estate sector since the early 1990s, he has expanded on a business model "of creating the best quality architecture in the hope of attracting the unique buyer capable of paying for it."[407] Naman paid attention to the potential of Chelsea already in the late 1990s, and his oeuvre consists of several projects in the area, including the Jean Nouvel-designed tower on 100 11th Avenue. When Naman gained control of the project site for HL23 in 2004, he wasn't sure what to make out of it. Located in the heart of a delinquent warehouse district, the site had been rezoned in 1999 to accommodate mixed-use development. [Figure 4.2] Converted by the New York City Department of City Planning to meet the more profitable standards of residential real estate, the development's potential was, nonetheless, still severely limited. The project site encompassed a "midblock, through lot traversed by the High Line, with frontage on both West 23rd and West 24th Streets."[408] [Figure 4.3] It comprised three separate lots which measured a total of almost 12,350 square feet.[409] Despite the considerable size, 56% of the profitable land was concealed by the elevated railroad

[406] Neil M. Denari participated in Lebbeus Woods's first conference for the Research Institute for Experimental Architecture. See RIEA, *Reseach Institute for Experimental Architecture: The First Conference*, ed. Peter Cook et al. (New York: Princeton Architectural Press, 1990).
[407] Aaron Seward, "Profile: Alf Naman," *The Architect's Newspaper*(July 30, 2008).
[408] Philip Habib & Associates, "Environmental Assessment Statement High Line 23 Authorization," (New York: New York City Department of City Planning, February, 2006), 1.
[409] The location attributes for the project site includes: Borough Manhattan; Block 695; and Lot 27, 28, and 43. Cumulative lot sizes calculate: Lot 27 is 3950 square feet; Lot 28 is 3456.25 square feet; and Lot 43 is 4937.50 square feet. The total lot area is 12,343.75 square feet. See Ibid., Figure 3b.

bed. With less than half of the project site having sky contact, real estate development seemed rather problematic. [Figure 4.4]

Small and large project sites in New York City tend to be mutably profitable. Hence, Naman's caution about real estate development in West Chelsea must be historically contextualized. Today, in the second decade of the twenty-first century, every cubic foot of habitable space in Naman's site is a reliable investment. In 2004, however, that was not the case. The area still suffered from the consequences of being an outmoded manufacturing district. Flourishing in the 1930s, West Chelsea faced serious problems in the '50s and '60s due to the economic restructuring processes of post-World War II America. Businesses still operated during the '70s, but when the High Line closed for traffic in 1980, the decline of West Chelsea was inevitable. The elevated railroad, built between 1929 and 1934 in order to separate freight trains and street-level traffic, signified the economic and cultural precedence of the area. Lacking its main artery of income and exchange, the economic vitality of West Chelsea was seriously impaired. The scene transformed from trading and light manufacturing businesses to "a cultural wilderness of trucking companies, drug dealers and strip bars."[410]

Land-use was starting to change when Naman discovered the project site. The eventual outcome of that transition, however, was unclear. The widespread reputation as "a hang-out for drug dealers and hookers" continued to sully the reputation of West Chelsea, and the necessary infrastructure of retail, service, and transit that support a steady pace of urban change, were

[410] Michele Ingrassia, "SoHo in Chelsea: An Unlikely Neighborhood Is Suddenly the Epicenter of the Art and Club Scene," *Daly News* July 1, 2001.

missing.[411] Real estate investment consequently, was risky. Two events, however, would very soon clarify the outcome of transition, and thus catalyze new real estate economies. These events were the geographical relocation of the art market, and a shift in planning policy.

The art market has been a catalyst for real estate economies in the U.S. ever since SoHo became a tremendous success in the early 1970s. Following the SoHo recipe, booming art scenes have incubated markets all over the nation, including San Francisco's South of Market neighborhood (1970s to '90s), Philadelphia's Center City (1980s to '90s), and Los Angeles' Chinatown (1990s to 2000s).[412] This process was taking place again when commercial galleries clustered in West Chelsea at the turn of the millennium. Relocating from the up-scaled and gentrified SoHo, they turned the abandoned warehouses north of the Meatpacking district into profitable gallery spaces.[413] Influenced by the "big spaces and groundbreaking exhibits" of the Dia:Chelsea, the migration rapidly transformed both the face of New York's art market and the land-use of West Chelsea.[414] Dia:Chelsea, which was a branch of the Dia Center for the Arts, moved to a warehouse at 548 West 22nd Street in 1987 to launch an exhibition program "dedicated to single-

[411] Choire Sicha, "Hanging Garden of Babble-On," *The New York Observer* (November 16, 2003). Ingrassia, "SoHo in Chelsea: An Unlikely Neighborhood Is Suddenly the Epicenter of the Art and Club Scene."
[412] Chester Hartman contextualizes his critique of the urban redevelopment of the South of Market area in the plans of the Yerba Buena Center. See Chester Hartman, *Yerba Buena: Land Grab and Community Resistance in San Francisco* (San Francisco: Glide Publications, 1974). Brian J. Godrey builds on Hargtman's scholarship to trace the role of the art market in the redevelopment of the South of Market area. See Brian J. Godrey, "Urban Development and Redevelopment in San Francisco," *The Geographical Review* 87, no. 3 (July, 1997): 323-27. Elizabeth Storm writes on Philadelphia using the arts to anchor new economic activity in Center City. See Elizabeth Strom, "Converting Pork into Porcelain: Cultural Institutions and Downtown Development," *Urban Affairs Review* 38, no. 1 (September, 2002): 8. Jan Lin discovers new economies emerging in Los Angeles' Chinatown when "new bohemian arts and entertainment scene began to emerge along the Chung King Road." See Jan Lin, "Los Angeles Chinatown: Tourism, Gentrification, and the Rise of an Ethnic Growth Machine," *Amerasia Journal* 34, no. 3 (2008): 113.
[413] 257 galleries were residing in Chelsea in 2005. See Harvey Molotch and Mark Treskon, "Changing Art: SoHo, Chelsea and the Dynamic Geography of Galleries in New York City," *International Journal of Urban and Regional Research* 32.2 (June 2009): 524.
[414] Ibid.: 524-25.

artist projects, produced on a substantial scale and with a commitment to site specificity."[415] The gallery space was remodeled by architect Richard Gluckman, and the first exhibition featured Joseph Beuys.[416] The spaciousness of the Dia:Chelsea, in concurrence with the affordability ratio of West Chelsea, attracted gallery owners from SoHo and elsewhere.

The number of commercial art galleries in Chelsea increased tremendously during the turn of the twentieth century, rising from 12 in 1995 to about 250 in 2004.[417] If not a guarantee for resolute transformation of urban space, the booming art market was profitable enough to support minor real estate investments. With his tricky site in West Chelsea, Naman begun to investigate the possibilities of building an art gallery underneath the High Line bed. He was introduced to Denari in 2004 through a friend and potential business partner. Denari, who was commissioned by the Casey Kaplan Gallery to remodel a warehouse on 525 West 21st Street, was working just a few blocks away from Naman's site. [Figure 4.5] When Denari was hired by Naman to develop schemes for a gallery building, he initiated the first investigation into HL23.

The Amendments

In the mid-1990s, when art galleries proliferated in West Chelsea, land-use and building mass were regulated in accordance with the 1961 zoning ordinance.[418] Still conforming to Voorhees' ideologies, the area was zoned mainly for light manufacturing and commercial uses, with little

[415] Dia Art Foundation, "The Dia Art Foundation Webpage," The Dia Art Foundation http://www.diacenter.org/.
[416] Molotch and Treskon, "Changing Art: SoHo, Chelsea and the Dynamic Geography of Galleries in New York City," 524. See also Dia Art Foundation, "The Dia Art Foundation Webpage," The Dia Art Foundation http://www.diacenter.org/.
[417] According to data from Art of America, 12 galleries resided in Chelsea in 1995 and 257 in 2007. See Molotch and Treskon, "Changing Art: SoHo, Chelsea and the Dynamic Geography of Galleries in New York City." In 2003 "200-plus [resided on] the skinny West Chelsea strip." See Sicha, "Hanging Garden of Babble-On."
[418] City Planning Commission City of New York, "C 990453 Zmm," (New YorkJuly 21, 1999), 9.

room for residential developments. Unchanged for more than a quarter of a century, the zoning codes that guided the development of West Chelsea in the mid '90s certainly called for updates.

The disconnect between rapid urbanization and rigid regulation is a well known subject matter frequently discussed by architects and urban planners. Indeed, the conflicts between shifting urban life styles and slow policy-making have been recognized in New York City throughout the twentieth century. Edward Bassett -- the father of American zoning -- discussed the problem of rigid regulations as far back as 1932, when he argued that "the zoning plan must be capable of change."[419] Still, zoning proved to be a sluggish mechanism. Its failure to keep up with new urban needs became the prime incentive for the first comprehensive reassessment of the 1916 ordinance, which was enacted in 1961.[420] Following the '60s and the rise of postmodernism, the concept of zoning fragmented and proliferated into sub-zones, which were drafted to "respond to specific geographic interests and conditions."[421] The concept of the special zoning district, for example, describes such a sub-zone. Invented in the late 1960s by Mayor John V. Lindsay's Urban Design Group, which was headed by Jonathan Barnett, and used for the first time to approve Richard Meier's Westbeth Artists' Colony in Greenwich Village, the purpose was to "achieve specific planning and urban design objectives within a limited area."[422] The special

[419] Bassett, *Zoning*, 17.
[420] Bassett said that "zoning encourages growth while at the same time it prevents too rapid change. Every vital growing city must change and the zoning plan must be capable of change." See Ibid. For the background of the 1961 zoning ordinance, see, for example, Voorhees Walker Smith & Smith, *Zoning New York City: A Proposal for a Zoning Resolution for the City of New York.*
[421] Cuff and Dahl, "Rx for the R1: Sustaining the Neighborhood," 26.
[422] The first Special Zoning District was enacted on 13 March 1968 to support Richard Meier's adaptive reuse of the Westbeth Artists' Colony in Greenwich Village. See Stern, Mellins, and Fishman, *New York 1960: Architecture and Urbanism between the Second World War and the Bicentennial*, 252. Office of Lower Manhattan Development, "Special Greenwich Street Development District," (New York: City Planning Commission, 1971), 3. The office of Lower Manhattan says that "[t]he special district is a zoning technique that has been developed to achieve specific planning and urban design objectives within a limited area." See ———, "Lower Manhattan Waterfront," 13. The

zoning district has been widely used in New York and elsewhere ever since. In the mid 1990s, the New York City Department of City Planning proposed such a sub-zone for the Chelsea area. The objective was to alter prevailing regulations to better conform to one of New York City's most pressing needs, which was, and still is, the creation of new housing.[423]

The resolution "The Chelsea Plan: A Contextual Zoning Proposal to Create Housing Opportunities" was approved by the City Planning Commission on April 10, 1996. The resolution did not focus solely on the western parts of Chelsea, but on a larger area bounded by West 14th Street, Sixth Avenue, West 31st Street, and 11th Avenue.[424] Presented by the Department of City Planning, the resolution proposed to adopt contextual zoning to "rezone a substantial portion of the residential core of the Chelsea neighborhood in Manhattan, as well as several adjacent commercial and manufacturing districts."[425] The idea was to create new guidelines to balance the often-contradictory interests of real estate development and historic preservation.[426] The use of contextual zoning, or down-zoning, complies with the overall objective of the resolution, which was to meet development pressure while still controlling residential density and preserving neighborhood character.[427]

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first special zoning district was enacted in March 1967 to support the adaptive reuse of the Bell Laboratories in Greenwich Village and thus the creation of the first legal loft building in the U.S. that was Richard Meier's Westbeth Artists' Colony. See Stern, Mellins, and Fishman, *New York 1960: Architecture and Urbanism between the Second World War and the Bicentennial*, 252.

[423] City Planning Commission City of New York, "N 050161(a) Zrm," (New YorkMay 25, 2005), 69.

[424] ———, "C 990453 Zmm," 7.

[425] Ibid.

[426] The area contained neighborhoods with historic value, such as the Chelsea Historic District and the Ladies Mile Historic District.

[427] Bruce F. Berg, *New York City Politics: Governing Gotham* (New Brunswick, N.J.: Rutgers University Press, 2007), 29.

The 1996 resolution proposed the first rezoning of Chelsea since 1961. Approved by City Counsel on September 9, 1999, the zoning amendment complied with the concept of a special zoning district, which updates rather than replaces prevailing regulations. Hence, new codes were overlaid in most of the Chelsea neighborhoods, with little impact on the western area. [Figure 4.6] There was, however, a small part of the revision that pierced through the West Chelsea area. This part affected the blocks with frontage on West 23rd Street, which included the property that Naman would turn his attention to some five years later. With a strong focus on historic preservation, the amendment reinforced the historic character of West 23rd Street as one of Manhattan's major cross-town thoroughfares. The idea to designate the thoroughfare is an old concept used in Manhattan to improve transportation patterns and to maintain the connection with water across the peninsula. The concept dates from the early 1700s, when "major thoroughfares [were] covered with cobblestone" to secure sufficient cross-transportation. It has been used repeatedly throughout history, for example in the early 1970s to secure visual corridors in the rezoning of the Lower Manhattan Waterfront.[428] Valid for more than three-hundred years, the thoroughfare concept seems to be a rather successful model for the space planning of Manhattan.

The thoroughfare concept was used in the 1999 amendment to create a new zoning district formally referred to as the West 23rd Street Corridor. By denoting the spatial significance of the Corridor, the amendment aimed to replace single-function urbanism with a combination of "mixed manufacturing and residential uses," thus changing the land use of the blocks with

[428] Edwin G. Burrows and Mike Wallace, *Gotham: A History of New York City to 1898* (New York: Oxford University Press, 2000), 111. See Office of Lower Manhattan Development, "Lower Manhattan Waterfront."

frontage on West 23rd Street from manufacturing (M1-5) to mixed-use (M1-5/R9A and M1-5/R8A).[429] The sectional quality of the thoroughfare was also amended by new codes to allow taller buildings with streetwalls of a maximum of 102 feet, and building heights of a maximum of 145 feet.[430] As a response to the 1999 amendment, "three new 14-story residential buildings [were] constructed along West 23rd Street" during the following six years.[431] One was additionally initiated -- the HL23.

Urban change spurs economic vitality. Real estate economies need incentive to flourish. The booming gallery scene of the late '90s certainly indicated the emergence of new markets in West Chelsea, but the 20% increase in property value that immediately followed the 1999 amendment tells us not to underestimate the role of planning policy.[432] [Figure: 4.7] When zoning was altered to include residential use, the market value of West Chelsea properties boomed. The year 1999 was certainly important in the transformation of West Chelsea. A second initiative was formed next to the amended legislation, which subsequently would catalyze land-use change. With their plan to renovate the High Line in mind, Joshua David and Robert Hammond formed the non-profit *Friends of the High Line* in 1999 to save the industrial landmark. Drawing from former Chelsea resident and activist Peter Obletz's efforts to oppose demolition, David and

[429] New York City Department of City Planning, "West Chelsea Zoning Proposal - Approved: Background & Existing Conditions (Existing Zoning)," New York City Department of City Planning http://home2.nyc.gov/html/dcp/html/westchelsea/westchelsea2d.shtml.
[430] "The M1-5/R9A district [which included the West 23rd Street Corridor] would allow 7.52 FAR for residential development and require, for all development, a streetwall with a maximum height of 102 feet and limit building heights to 145 feet." See City Planning Commission City of New York, "C 990453 Zmm," 22.
[431] ———, "N 050161(a) Zrm," 4.
[432] The final actual assessed value of lot 27 on block 695, which is 515 West 23rd Street in the West 23rd Street Corridor, was $280.350 in 1998 and $343.800 in 1999.

Hammond formalized the idea of preserving the railroad structure by altering its use.[433] Referring to the Promenade Plantée -- a disused railroad viaduct in central Paris that was converted to a public park in the late '80s -- the *Friends of the High Line* not only contextualized their idea in discourse but they also branded their scheme by proposing the world's second elevated park to be developed in New York City.[434]

With the idea of preserving the High Line, the *Friends of the High Line* suggested a new open public space in the middle of Manhattan, which coincided with the main objectives of American city planning dating back to Bassett's concerns of access to light and air. Due to a rather unique combination of historic preservation and land-use change, they also proposed a new landmark for the West Chelsea area. To raze an outmoded structure with any indication of historical value has been a controversial subject matter in New York ever since the demolition of Penn Station lit up the historic preservation movement in 1963. Following Penn, the drafting of historic preservation codes in the '60s and the '70s, plus the introduction of participatory planning in the '80s and the '90s, transformed the concept of historic preservation into planning policy. Characterized by a tendency to obstruct the implementation of non-conformist architecture while at the same time hampering the capricious whims of capitalist speculation, historic preservation has had, and still has, tremendous impact on urban transformation in New York and elsewhere.

The High Line is not mentioned as an asset in the 1999 amendment. The idea of preserving the abandoned structure was still a controversial subject and thus widely disputed. As no real

[433] The idea of preserving the High Line was launched in the mid 1980s when Chelsea resident and activist Peter Obletz challenged the first wave of demolition efforts. See The official Web site of the High Line and Friends of the High Line, "High Line History," Friends of the High Line http://www.thehighline.org/about/high-line-history.
[434] Ibid.

incentives were put forward to guarantee execution, the idea was more of a vision than a project. The Giuliani administration, for instance, signed two years later "an agreement joining the property owners' move to demolish the High Line."[435] Support for the project improved in 2002 however, when a study done by the *Friends of the High Line* showed that "[n]ew tax revenues created by the public space will be greater than the costs of construction."[436] The international design competition "Designing the High Line" was launched in July 2003 and attracted 720 teams from 36 countries. The winning proposal by Field Operations and Diller Scofidio + Renfro was announced in the New York Times on August 12, 2004.[437] The successful fund-rising and the international design competition mobilized public support and in 2004, with Michael R. Bloomberg as the new mayor of New York City, the "government committed $50 million to establish the proposed park."[438]

With support from both the public and the government, and with a financial plan that not only proved the project to be economically self sufficient but also able to generate new cash flow, the idea of a High Line Park went from vision to project. The more than 25% increase in West Chelsea property values between 1999 and 2004 goes hand-in-hand with the improved odds of realization.[439] Standing before the creation of a new landmark, the Department of City Planning was urged to overlook the regulations of West Chelsea once again. During the five years that had passed since the 1999 amendment was enacted, the area had been established as the prime

[435] Albert Amateau, "High Line Reuse Picks up Steam," New York Architecture <http://www.nyc-architecture.com/CHE/CHE029-TheHighLine.htm>.
[436] Ibid.
[437] Nicolai Ouroussoff, "An Appraisal; Gardens in the Air Where the Rail Once Ran," *New York Times* August 12, 2004.
[438] New York Architecture, "The High Line," nyc-architecture.com http://www.nyc-architecture.com/CHE/CHE029-TheHighLine.htm.
[439] Archival research at the Real Estate Board of New York show the market value increase for the property that later would host the HL23 project, from $764,000 in 1999 to $951,000 in 2003.

gallery scene of New York. Following the art market, real estate and retail businesses were impending. New legislation was needed to guide development interests. The call for land-use change had to be filtered through planning policy to support a mixed-use development that both encouraged the continuous influx of art-related businesses, and secured the open space character of the forthcoming High Line Park.

On June 23, 2005, the City Council approved the creation of a Special West Chelsea Distinct zone. [Figure: 4.8] Conforming to the land-use changes introduced to the area six years earlier with the West 23rd Street Corridor, the new district was "established between Tenth and Eleventh avenues, and 18th and 30th Streets [with an additional extension of] 425 feet east of Tenth Avenue between 16th and 17th Streets and for 400 feet east of Tenth Avenues between West 17th and 18th Streets."[440] Prime missions of the new amendment were, for example, to rezone most of the area from manufacturing to mixed-use, to create new bulk controls, and to assist the restoration and re-use of the High Line as an accessible and open public space.[441] With this geographical outline, West Chelsea was formally established as a new district north of the well-known Meatpacking District.

The Special West Chelsea Distinct amendment is a comprehensive rezoning of West Chelsea. The plan contains provisions intended to guide historic preservation, to stimulate development of

[440] City Planning Commission City of New York, "N 050161(a) Zrm," 9.
[441] The resolution lists eight General Purposes. The ones referred to here are: "a) to encourage and guide the development of West Chelsea as a dynamic mixed use neighbourhood; d) to facilitate the restoration and reuse of the High Line elevated rail line as an accessible, public open space through special height and setback regulations, High Line involvement bonuses and the transfer of development rights from the High Line Corridor; e) to ensure that the form and use of new buildings relates to and enhances neighbourhood character and the High Line open space." See New York City Department of City Planning, "West Chelsea Special District (N 050161(a)Zrm)," (New York: New York City Department of City Planning, 23 June 2005), 98-00.

affordable housing, and to direct transition to the eastbound Chelsea Historic District and to the northbound Hudson Yards.[442] More relevant for this case study, however, is the intent "to ensure that the form and use of new buildings relates to the enhanced neighborhood character and the High Line open space."[443] Hence for the following discussion on the Special West Chelsea Distinct amendment, only this goal will be considered.

With the preservation of the structure came the conservation of urban space. Not only was the High Line saved for restoration and reuse; the open space character instigated by the former use of the freight rail was also becoming subject to regulation. The City drafted new codes to "encourage preservation of light and air around the High Line."[444] Committed to "maximize a sense of openness," a one-hundred foot- wide corridor was outlined, which encapsulated the entire structure from south to north and thus dissected the West Chelsea area.[445] The demarcated corridor was assigned hardened bulk controls with new setback codes and easements to safeguard maintenance. Due to the hardship of concurrent regulation, the rezoning allowed "development rights to be transferred from High Line properties to designated receiving sites within the Special West Chelsea District."[446] [Figure: 4.9] Dubbed the High Line Transfer Corridor (HLTC) in the 2005 amendment, the provision required all buildings with park frontage

[442] City Planning Commission City of New York, "N 050161(a) Zrm," 69.
[443] New York City Department of City Planning, "West Chelsea Special District (N 050161(a)Zrm)," 98-00.e.
[444] City Planning Commission City of New York, "N 050161(a) Zrm," 89.
[445] Ibid., 84.
[446] The City Planning Commission report explains "The Special District provisions contain unique regulations related to High Line properties. To maximize a sense of openness and access to light and air from the High Line open space, properties within the High Line Transfer Corridor (HLTC) would be permitted to transfer floor area from the zoning lot within the HLTC to designated receiving sites within the Special District. Receiving sites may increase their base density to a maximum density by purchasing these HLTC property development rights." See Ibid.

to step back 15 feet and more. [Figure: 4.10] With new bulk control, the open space character was preserved.

Site Specific Envelopes

The two zoning amendments overlaid Chelsea near at hand signify the City's intent to transform the area. When enacted by city governance, the updated codes formalize the guidelines for urban transformation. Urbanization is not only guided by the changing socio-economic premises of the city, but also by the regulation of architecture, which certainly plays a significant role. In their position to assist government agencies, The New York City Department of City Planning says that "[a]long with the city's power to budget, tax, and condemn property, zoning is a key tool for carrying out planning policy."[447] Thus with zoning, the City's socio-economic and political incentives meet the disciplinary objectives of architecture.

Ever since zoning was turned into law with Edward Bassett's 1916 ordinance for New York, architecture has been a subject matter for limitation. Bassett conformed to the ideals of the early twentieth-century reform movement.[448] Committed to contributing to healthy city building, he set out to regulate the real estate speculation that cloaked New York. The main tool used to succeed with his mission was to constrain the development of architecture. By ordaining a

[447] New York City Government, "About Zoning," New York City Government http://www.nyc.gov/html/dcp/html/zone/zonehis.shtml.
[448] Bassett said that "zoning must be done with relation to the public health, safety, morals and general welfare." See Bassett, *Zoning*, 8.

comprehensive control over the use and form of buildings, Bassett was able to tame the city's growth and thus unzip its fabric for greater access to light and air.[449]

Bassett's zoning followed the same logic as the gridiron, which had been rolled out on the Manhattan peninsula more than a century earlier to convert land to property.[450] Enacted in 1811 as a system to systematize the management of space, the Manhattan gridiron created city form by the "laying out of streets and blocks into even rectangles."[451] The rectangular geometry was chosen rather than the checkerboard squares because it provided narrow blocks with "miles of street frontages."[452] By complying with the premises and constraints of the Cartesian grid, Manhattan was transformed into a field of right-angled blocks ready to become sites for concurrent development.

The uniform grid that formed Manhattan was a real estate machine. Its prime purpose was to support the rapid expansion of the city's area by facilitating the buying and selling of property, and to minimize public regulation or governmental decision making in the process.[453] Peter Marcuse defines three basic relationships between the grid and city type. The Manhattan grid, he says, "exemplifies the second of these phases," which is the city of *laissez-faire* capitalism. In

[449] Regulation of skyscraper form was a main incentive for zoning. Bassett wanted to prevent skyscrapers "to be built to unnecessary height [because] their cornices [were] projecting into the streets and shutting out light and air." See Ibid., 3.
[450] Read about the transformation of land to property in Cuff, *The Provisional City: Los Angeles Stories of Architecture and Urbanism*.
[451] Jonathan Barnett says that "[t]he gridiron plan produces large numbers of lots of similar size that can readily be located on a map and meet various bureaucratic requirements for access, utility lines, and so on." See Barnett, *An Introduction to Urban Design*, 65. See also Peter Marcuse, "The Grid as City Plan: New York City and Laissez-Faire Planning in the Nineteenth Century," *Planning Perspectives* 2, no. 3 (1987): 295.
[452] Edward K. Spann, "The Greatest Grid: The New York Plan of 1811," in *Two Centuries of American Planning*, ed. Daniel Schaffer (Baltimore: The Johns Hopkins University Press, 1988), 20.
[453] Marcuse, "The Grid as City Plan: New York City and Laissez-Faire Planning in the Nineteenth Century," 293.

this city, the grid is an open system platted to support infinite expansion and real estate speculation. Marcuse contrasts this second phase with the first phase, which he calls the pre-capitalist city. This city, he says, used a closed grid as one of many forms to manage space with "clearly defined boundaries and streets with visible terminals."[454] Hence, by distinguishing the open grid of *laissez-faire* capitalism from the closed grid of pre-capitalism, Marcuse sets up a dialectical relationship of the spatial conditions generated by the grid.

My attempt at reading Bassett's zoning through the logic of the grid does not necessarily require a critique of Marcuse's dialectical definition. Operating on a meta-level, Marcuse's definition provides useful insights for the discipline of urbanism. If we want to use the inherent qualities of the grid to understand the relationship between zoning and the architecture of the site, however, we have to look beyond Marcuse's meta-level and challenge his dialectical definition. We can do that by consulting Rosalind Krauss's discourse on grids.

In her seminal work on grids, Rosalind Krauss explains the schizophrenic impulses of the grid. "Because of its bivalent structure," she says, "the grid portends the centrifugal or centripetal existence" of space. The centrifugal reading of the grid posits the experience of infinite space, whilst the centripetal reading concentrates "on the surface…as something complete and internally organized."[455] From Krauss's discourse we understand that the bivalent structure of the grid is concurrently centrifugal and centripetal – both open and closed. Her model can be used to

[454] Ibid.: 293-94.
[455] Rosalind Krauss, "Grids," *October* 9 (Summer, 1979): 63.

develop a new way to think about the inherent quality of the grid, but also about the premises of zoning.

Bassett's zoning represents the logic of Krauss's grids. Bassett tells us that "zoning of a city is commonly understood as the creation of different districts for different purposes, and for different kinds of buildings."[456] By assigning a specific use to each district, Bassett capitalized on the Cartesian geometry of the grid to generate an abstract classification of districts. This centrifugal aspect of the grid, however, has a centripetal counterpart, which has to do with Bassett's focus on regulating property, not site.

Dana Cuff tells us that "[t]he grid had little to do with local geography, ecology, or demography; instead it had everything to do with neat subdivision and subsequent speculation, that is, the conversion of land into property."[457] She also tells us that "land is converted to properly when ownership comes into play; property is transformed into site when some development is intended."[458] The transformation of land to property, hence, is made without the recognition of the local circumstances that in multiple ways affect the premises of all development, such as topography, geology, or natural boundaries and edges. The local circumstances that affect any development become specific only when property is turned into site.

It is exactly in the transition from property to site that the centripetal aspects of the grid become centrifugal. When the abstract idea of exchange value, which characterizes the natural law of

[456] Bassett, *Zoning*, 7.
[457] Cuff, *The Provisional City: Los Angeles Stories of Architecture and Urbanism*, 78.
[458] Ibid., 62.

property, meets the specific conditions of a site, then the lot becomes something reclusive to control development.[459] Hence the Cartesian geometry that constitutes the outer boundaries of the site is transformed from an open nonhierarchical spatial system into a protective framework that interlocks all aspect of site specificity.

Bassett's ordinance capitalized on the systematizing principles of Manhattan's gridiron. By extruding the gridiron to encompass the sky exposure plane, he turned the two-dimensional categorization of property into a three-dimensional index of use and form. Bassett's objective with his zoning of New York was to rein in the spread of *laissez-faire* capitalism and thus challenge the forces of real estate speculation which, as discussed earlier, are implicit in the grid. His mission may have succeeded on the one hand. On the other hand, however, he unleashed new guidelines for capitalist behavior. When Bassett's index met the premises of real estate, his regulated properties were transformed into volumetric sites. Rem Koolhaas discusses the architectural implications of the ordinance by arguing that it "describes on each plot or block of Manhattan's surface an imaginary envelope that defines the outlines of the maximum allowable construction."[460] Dubbed the zoning envelope, the maximum allowable construction distinguished itself from the actual building envelope to produce an intermediate space between legislation and architecture. Signifying the collision between property and site, this space unleashed a new set of design variables. And, like Hugh Ferris argued, it "seemed…wise to

[459] Dana Cuff says that "In terms of property, the distinction between natural law and the invention of money parallels the distinction between use value and exchange value." See Ibid., 83.
[460] Koolhaas, *Delirious New York*, 107.

explore them."[461] From Ferriss to Koolhaas and beyond, the limiting three-dimensional parameters of the zoning envelope instigate a legal document, but also a design project.[462]

The zoning envelopes that covered the entire surface of Manhattan after 1916 established a new urban landscape. Like agglomerations of invisible structures, they delineated immaterial volumes to be filled up with architecture. To avoid uniform building mass, Bassett invented the form variables of height and setback regulations. These variables, which made it possible to create different envelopes for different districts, outlined the invisible structures.[463] When we look at the zoning envelope through the lens of the structure, it can be theorized with reference to Gilles Deleuze and Félix Guattari's scholarship. In their seminal text, Deleuze and Guattari counterposition the structure with the rhizome. The structure, they say, "is defined by a set of points and positions, with binary relations between the points and biunivocal relationships between the positions."[464] For Deleuze and Guattari, a structure is made up of "lineages of the arborescent type," that are localizable lineages defined by a set of totalizing principles and dual relations.[465] Hence, even if Bassett's variables were indented to provide a certain degree of flexibility, the formal characteristics of the structure imply the opposite. Turned into a vast number of rigid constructs, Bassett's zoning envelopes shaped the content of Manhattan.[466]

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[461] Hugh Ferriss, *Power in Buildings: An Artist's View of Contemporary Architecture* (Santa Monica: Hennessey + Ingalls, 1998).
[462] Rem Koolhaas says that the "Zoning Law is not only a legal document; it is also a design project." See Koolhaas, *Delirious New York*, 107.
[463] Bassett said that "[t]he usefulness of zoning regulations consists in their being different for different districts." See Bassett, *Zoning*, 6.
[464] Gilles Deleuze and Félix Guattari, *A Thousand Plateaus* (New York: Continuum, 2004), 23.
[465] Ibid.
[466] Edward Bassett's three use taxonomies for Manhattan were residency, business, and industry. See Bassett, *Zoning*, 12.

Ever since Bassett's ordinance was enacted in 1916, height and setback regulation have been interlocked to protect access to light and air in New York's canyons. New ordinances and numerous amendments have been introduced to update the parameters, and to promote new architectural ideologies to maneuver the flow of light and air. The 1961 ordinance, for example, drew from SOM's Lever House of 1952 to revise bulk controls; various sub-zones were developed in the late '70s and early '80s to slow the rapid proliferation of bulk in Midtown; and the 1996 zoning amendment altered the standards for urban plazas to "to encourage 'tower-on-a-base' rather than 'tower-in-a-plaza' development."[467] Still, the ordinances and amendments have regulated properties rather than sites, and thus maintained the rigid form variables of height and setback.

Zoning, as we have seen, deals with property, not site. Hence, universal zoning ordinances ignore all specific conditions that encompass any lot.[468] They do so by adhering solely to the centrifugal aspects of urbanism. Indeed, by failing to recognize the site as something complete and internally organized, zoning overlooks the need for intrinsic adjustments. If we want to obtain a higher degree of flexibility in city planning regulation, then the zoning envelope must be

[467] For SOM's Lever House of 1952, see Jerold S. Kayden, *Privately Owned Public Space: The New York City Experience* (New York: John Wiley & Sons, 2000), 11-12. Voorhees Walker Smith & Smith, *Zoning New York City: A Proposal for a Zoning Resolution for the City of New York*, 127-29. For the rapid proliferation of bulk in Midtown, see Richard F. Babcock and Wendy U. Larsen argue that the architecture of projects such as Edward Barnes's IBM (1983), Der Scutt's Trump Tower (1983) and Philip Johnson's AT&T (1984) reversed "daylightning to pre-1916 standards." See Richard F. Babcock and Wendy U. Larsen, *Special Districts: The Ultimate in Neighborhood Zoning* (Cambridge, Mass: Lincoln Institute of Land Policy, 1990), 74-75. For 'tower-on-a-base' development, see Kayden, *Privately Owned Public Space: The New York City Experience*, 19. Tower-on-a-base development can be exemplified by Frank Gehry's Spruce Street project of 2011. See, for example, Nicolai Ouroussoff, "Downtown Skyscraper for the Digital Age," (February 9, 2011).

[468] This argument is further supported by Daniel M. Mandelker who says that "[b]ecouse land pricing mechanisms do not take account of externalities resulting outside the site, zoning is thought to be needed to curb and, if necessary, prohibit land development decisions that produce externalities considered undesirable." See Daniel R. Mandelker, "The Basic Philosophy of Zoning: Incentive or Restraint?," in *The New Zoning: Legal, Administrative, and Economic Concepts and Techniques*, ed. Norman Marcus and Marilyn W. Groves (New York: Praeger Publishers, 1970), 14.

re-conceptualized to better meet with site-specific conditions. A viable means of altering universal zoning envelopes could be to unlock the rigid relationship between legislation and bulk. If the inherent configuration of prevailing zoning conforms to the dimensions of the structure, then a reconfiguration of the dimensions of the rhizome would open up new possibilities to master the space in-between property and site. With Deleuze and Guattari's scholarship, we can conclude that by changing the dimensions of the envelope from lines of the arborescent type to "lines of segementarity and stratification," the interlocking aspects of zoning would be challenged, and a new mode of flexibility would be created.[469] As we will see, the HL23 building can be regarded as a prototype for such a procedure.

[469] Deleuze and Guattari, *A Thousand Plateaus*, 23.

SETBACKS AND WAIVERS

Setbacks

The HL23 project goes hand-in-hand with the growing support for the preservation of the High Line. The idea of a restored landmark in West Chelsea spurred economic vitality, and property values increased. With a new real estate market underway, Denari's commission changed in early 2005 from schemes for an art gallery space underneath the High Line bed, to schematic designs for a condominium tower.

All project sites contain specific preconditions that direct the premise of design. For HL23, the street frontage measure was such a stipulation. The distance from which a piece of real estate stands from the street has always been a critical factor in New York. For the Commissioners, it was the concept of street frontage that determined the geometry of the grid. In his article on the New York plan, Edward K. Spann explains the measurements that regulated the plan. Spann says that the most distinctive character of New York's grid is "the narrow rectangular blocks created by 155 cross streets, only 200 feet apart."[470] With the standardized block size, the "metropolitan territory [was divided] into maximum increments of control" hence land was converted to property.[471] By splitting the blocks in two, miles of street frontage were created "to satisfy the well-established demand for orderly property line and access to property which dominated the city's planning concerns."[472] The Commissioners' system limited the property depth to one-hundred feet. Spann points to the real estate factor of this measure, which, however, doesn't tell

[470] Spann, "The Greatest Grid: The New York Plan of 1811," 20.
[471] Rem Koolhaas and Bruce Mau, *S, M, L, XL*, ed. Jennifer Siegler (Rotterdam: 010 Publishers, 1995), 592.
[472] Spann, "The Greatest Grid: The New York Plan of 1811," 20-21.

the whole story. When the 100-foot properties were subdivided into parcels for development, sufficient street frontage was crucial for the design of well functioning buildings. Prior to the introduction of artificial climate control systems, the plan configurations of any building in dense urban environments capitalized on the street frontage for access to light and air.[473] Hence, limited building depth and a certain length of street frontage were crucial factors for the illumination and ventilation of interior space, which set the standard for the geometry of Manhattan properties.

With the introduction of artificial climate control systems, interior space was separated from the exterior environment and New York's street frontages were reconceptualized.[474]
If a nineteen-century building required a certain length of street frontage to facilitate horizontal distribution of light and air, and eventually also of goods, then a modern building required similar means to assist the vertical distribution of mechanical networks and transportation systems. This is particularly true for the tower whose floor area includes an extensive amount of utility space allocated to accommodate technical inventions such as HVAC systems and elevators, as well as shafts for "telecommunication, fire detection and sprinkling, emergency lightning…signals, and alarms."[475] Rem Koolhaas recognizes that the introduction of "supporting technologies [required] structures taller and deeper…than ever before conceived."[476]

[473] Iñaki Ábalos and Juan Herreros use the history of office space to trace the developments in artificial climate controls which made the interior space independent of the exterior environment. See Ábalos and Herreros, *Tower and Office: From Modernist Theory to Contemporary Practice*, 39-40.
[474] Rem Koolhaas uses the term "lobotomy" to discus the separation of exterior and interior architecture. See Koolhaas, *Delirious New York*, 100-01.
[475] Ábalos and Herreros, *Tower and Office: From Modernist Theory to Contemporary Practice*, 150-51. Read also about required spaces for "elevator shafts and utility rooms" in Carol Willis's research on the plan efficiency of post-1916 towers. Willis explains that "[a] plan was considered efficient if the area of rental space was sixty-five to seventy percent of gross floor area." See Carol Willis, *Form Follows Finance: Skyscrapers and Skylines in New York and Chicago* (New York: Princeton Architectural Press, 1995), 85.
[476] Koolhaas and Mau, *S, M, L, XL*, 498.

With Manhattan's designated property depths of one-hundred feet, the importance of street frontage continued following the introduction of the modern tower.

If a tower is intended, the forty feet that make up the HL23's street frontage is pretty tight. It is, however, not an impossible measure to work with. The street frontage of Raimund Abraham's tower for the Austrian Cultural Forum on 11 East 52nd Street, for example, measures only twenty five feet.[477] [Figure: 4.11] For Denari, however, a number of setback codes reduced both the street frontage and the building depth dramatically, which made floor area problematic. The 2005 amendment says that 60% of the building's High Line frontage has to set back a minimum of fifteen feet.[478] [Figure: 4.12] As the High Line runs perpendicular to West 23rd Street, these setback requirements had a direct impact on Denari's street frontage, which would partially measure only twenty-five feet -- the same as Abraham's. For Denari, however, the rear setback code reduced the floor area even more. Originally drafted to safeguard access to air, the rear setback has occasionally been used in Manhattan throughout the twentieth-century to prevent buildings from occupying the centers of blocks, and thus obstructing cross-ventilation. Used in the 2005 amendment, the rear setback code required Denari to step back 30 feet from the northern lot line, which reduced the floor area to 25x70 feet. With required utility spaces for

[477] Schüco, "Austrian Cultural Forum Manhattan, New York," Schüco http://www.schueco.com/web/us/commercial/fassaden/references/reference_projects/manhatten_ny.

[478] The Resolution says "For any #zoning lot#, or portion thereof, with more than 60 feet of width measured perpendicular to the west side of the #High Line#, the following rules shall apply to any #building# containing #residences#: (a) At least 60 percent of the aggregate length of the portion of the #building# located above a height of 3 feet, 6 inches above the level of the #High Line bed# and facing the #High Line# shall be located between 15 and 20 feet of the west side of the #High Line# and extend up to at least the applicable minimum base height specified in the table in Section 98-423; and (b) No #building#, or portion thereof, that exceeds the applicable maximum base height specified in the table in Section 98-423 shall be located within 30 feet of the #High Line#." See New York City Department of City Planning, "West Chelsea Special District (N 050161(a)Zrm)," 98-52.

vertical distribution of mechanical networks and transportation systems, the zoning envelope carved out by the setback codes seemed rather difficult to comply with.

As we will see, however, it was not architecture but real estate incentives of HL23 that made the final call for code manipulation. Indeed, the most critical aspect of the project was the financial repercussions of the setbacks. With a building footprint of 25x70 feet, and a zoning code that limited the base height to 102 feet and the building height to 145 feet, profitable real estate seemed impossible.[479] Naman knew from the very beginning that the architecture of HL23 had to add floor area to the right-of-way. A tower project as-of-right was basically never an option. Denari was told from the start to challenge the zoning code and thus to make the project bigger. "You tell me how far you think the rules can be broken," Denari interprets Naman arguing. "And if you can break the rules…and go through City Planning and figure out the reasons why this building should be accepted, because it can't be a new precedent…basically the zoning opposes that kind of building…the building that sets out."[480] Denari basically didn't have any choice but to find a way to manipulate the code. If he failed, he would lose the project. Denari was hired to use architecture as an instrument that measures the critical point of code violation. And, as we will see, it was the reconceptualization of the envelope that paved the way to success.

[479] Ibid., 98-423 (Table).
[480] Neil M. Denari, interview by Per-Johan Dahl, October 19, 2010.

The Alternative

New York's bulk controls have been widely criticized for its tendency to strait-jacket architecture.[481] The critique generally concerns the building typologies promoted by Resolution.[482] Suzanne Stephens, for example, discusses New York's "wedding cakes" and "shoe boxes" in her 1981 article on Midtown zoning and Asymptote's residential building on 166 Perry Street has been used to exemplify "how…much you can do within the buildable envelope…that is New York City zoning."[483] Hence, the plethora of specific building typologies that make up a significant part of New York City's architecture have often been referenced to support the argument that city planning regulation hampers architectural innovation.

Zoning, however, is only half of the story. Real estate interests are equally responsible for hampering architectural innovation, "as developers usually build to the street line to maximize their building bulk."[484] Indeed, ever since the 1811 subdivision of Manhattan, the form of any building footprint has yielded to the property outline and thus conformed to the logic of the grid. The zoning envelopes that gave three-dimensional form to Manhattan's street network defined the largest shape possible to build, which certainly implies limitation. But the zoning envelope is only concerned with architecture that maximizes building mass. In fact, the code in New York is not concerned about architecture that stays within the zoning envelope. A classic example is the

[481] Voorhees Walker Smith & Smith says, for example, in their 1958 report on New York City zoning that "[t]he strait jacket imposed on the work of the architect by these complicated and rigid regulations [i.e. the bulk control of 1916] is also widely recognized." See Voorhees Walker Smith & Smith, *Zoning New York City: A Proposal for a Zoning Resolution for the City of New York*, 49.
[482] The 1916 Zoning Resolution promoted the "wedding-cake" or "ziggurat" typology and the 1961 Zoning Resolution promoted the "tower-in-the-park" or the "shoe box" typology. See, for example, Kayden, *Privately Owned Public Space: The New York City Experience*, 7-11. and Voorhees Walker Smith & Smith, *Zoning New York City: A Proposal for a Zoning Resolution for the City of New York.*
[483] Stephens, "The Sky Is Not the Limit: Midtown Zoning." Triple Mint, "166 Perry Street - Asymptote."
[484] Kayden, *Privately Owned Public Space: The New York City Experience*, 9.

Seagram building, which got its plaza because Mies van der Rohe refused to compromise the shape of the building and thus decided to operate with a safe distance to the zoning envelope.[485] [Figure: 4.13] It can be argued, hence, that the factors that strait-jacket architecture operate on two ends of a spectrum -- on the one hand we have the Zoning Resolution, and on the other hand we have the profit-driven real estate business. Incentive from either one of them is required to promote innovation.

For HL23, it was zoning that prompted real estate to ask for a nonconformist solution. As Naman knew that the combination of a limited building footprint and the complex relationship with the High Line counteracted the development of any architecture with sufficient floor area, he also knew that the building form had to exceed the zoning envelope to generate revenue. Naman argues that HL23 "was built to have a discourse with the High Line" and that the "unique set of challenges," generated by the project site, "gave the building a more interesting geometric shape."[486] What he never talks about, however, is the means he used to assure that the nonconformist building could be squeezed through the code.

Naman's opportunity to overcome the regulations was to be found in the Special West Chelsea District amendment. In line with the City's objective to "conserve the value of land and building," alternative paths were drafted to keep property owners from suffering unnecessary hardship. Knowing that various locations would endure the rezoning, the New York City

[485] Franz Schulze, "Introduction," in *Ezra Stoller: The Seagram Building*, ed. Mark Lamster (New York: Princeton Architectural Press, 1999), 5.
[486] Shazia Khan, "Distinct New High-Rise Springs up Beside High Line Park," *NY1.COM* (March 5, 2010).

Department of City Planning came up with section 98-424 of the zoning resolution, also called "authorization to modify height and setback regulations." The section says:

> "For #zoning lots# located entirely within 75 feet of the west side of the #High Line#, the City Planning Commission may authorize the modification of height and setback regulations set forth in Section 98-40 and 98-50, inclusive, and the transparency requirements set forth in Sections 98-141 and 98-54. The Commission shall find that such modification will result in a better distribution of #bulk# on the #zoning lot# and will not adversely affect access to light and air for surrounding public areas. The Commission may prescribe appropriate conditions and safeguards to enhance the character of the surrounding area."[487]

This short text in the zoning amendment made it possible to challenge the setback codes that so dramatically reduced the zoning envelope of Naman's site. Kenny Ramnarine of New York City Department of City Planning verifies that Denari's design would have been difficult to approve without section 98-424. Ramnarine says that "I am not quite sure the BSA [the Board of Standards and Appeals] would have allowed this design. They would have been sympathetic to the fact that he couldn't do as much because of the restrictions of the High Line, but I am not sure they would have allowed him to violate the High Line regulations to the extent what has been done here, if not at all."[488] With the section 98-424, the City constructed an alternative in

[487] New York City Department of City Planning, "West Chelsea Special District (N 050161(a)Zrm)," (New York: New York City Department of City Planning, June 23, 2005), 98-424.
[488] Kenny Ramnarine, interview by Per-Johan Dahl, March 30, 2011.

the law for Naman to utilize.[489] As the zoning text clearly stated that modification may be granted if sufficient access to light and air was sustained, form innovation was needed to prove that bulk could be increased without obstructing the qualities of public space. The City provided Naman with the means to challenge the code, and the alternative became the incentive for the architecture of HL23.

The Geometry of Envelopes

The prime objective of HL23 was to develop building mass that added floor area to the right-of-way without expanding the footprint. Hence, the zoning envelope was to be ballooned by architecture. The two strategies to accomplish this are either height modification or setback modification. Height modification yields the firmness of building footprint by extruding the zoning envelope vertically. We can call it the default mode because it represents the most common way to expand building mass, which is to stack units on top of one other. Setback modification, on the other hand, expands building mass by extruding the zoning envelope horizontally. This procedure is more intricate, as it introduces the cantilever to challenge both the effect of gravity and the firmness of solid and void. Both procedures can be used to modify the geometry of regulation. They won't help us, however, if we want to reconceptualize the zoning envelope. As height and setback restrictions make up the epitome of planning regulation, they will hardly support our effort to re-think the premises of their origin. We have to find a different

[489] The section 98-424 was developed prior to Neil M. Denari's commission. Erika Sellke of New York City Department of City Planning confirms in email correspondence, dated 11 July 2011, that the section 98-424 was part of the original zoning text and that it was included in the December 2004 proposal, when the application was officially filed. Denari was commissioned in spring 2005. Erika Sellke, interview by Per-Johan Dahl, March 30, 2011.

geometrical approach to how to alter the code. We can do so by analyzing the default and the intricate via architecture.

The default relies on the process of stacking. This process is not so much about vertical extrusion as it is about adhering to what Adolf Heinrich Borbein refers to as "the art of joining."[490] Kenneth Frampton elaborates on Borbein's scholarship when he traces the scope of the tectonic. In his 1982 study, Borbein reconceptualizes the tectonic to aspire to an aesthetic rather than a technological category. The tectonic, Borbein says, indicates "assemblage not only of building parts but also of objects."[491] When we look at the modification of the zoning envelope through the lens of Borbein's tectonic approach to design culture, the process of stacking is no longer limited to the default mode of verticality. It can also be utilized to describe the intricate mode of horizontality. One example is MVRDV's Wozoco apartments in Amsterdam-Osdorp, the Netherlands (1997), where the spatial experience is rendered through a series of double story cantilevers that jut out from the glazed body of a primary building block. [Figure: 4.14] When looking at Wozoco's northern façade, in which the wooden cladding of the cantilevers stands in stark contrast to the transparency of the block. The formal hierarchy between the cantilevers and the block correlates with the differentiation of materiality to divide the building in two basic elements, which are the units and the block. This formal strategy resembles Kenneth Frampton's description of Gottfried Semper's primordial dwelling, which also used the taxonomy of basic elements to describe architecture. [Figure: 4.15] Even if MVRDV inverts what Semper would

[490] Kenneth Frampton, *Studies in Tectonic Culture: The Poetics of Construction in Nineteenth and Twentieth Century Architecture* (Cambridge, Mass: The MIT Press, 1996), 4.
[491] Ibid.

refer to as “the material as physical matter,” they still conform to the same tradition of generating form through the assemblage of taxonomies.[492]

A different approach to creating form is rendered through Coop Himmelb(l)au’s apartment building for the Gasometer city in Vienna, Austria (2001). [Figure: 4.16] Drawing from Le Corbusier’s structural concept of *les pilotis*, the project describes a housing block that has been elevated on a set of angulated columns to free the ground for circulation. The dynamic shape of the elevated block, which cantilevers on both ends, is comprised of various building elements, such as staircases, structural glazing, and window framing. [Figure: 4.17] These building elements, however, are not assembled through tectonic operations, but rather through the shaping of an edifice which, using Sylvia Lavin’s words, “conflate its fluidity with the rigidity of building to form a single…medium.”[493] [Figure: 4.18] Hence the geometry of the Gasometer apartment building can be described as “a continuum unbroken and indistinct from solid objects.”[494] Using Stanford Kwinter’s scholarship, we can call it plasticity.[495] Kwinter draws from Adolf Hildebrand, who said that “no work of art can result from a simple addition of invariable proportions in details.”[496] Hildebrand argued that space is the production of movement, vision, and touch rather than the genesis of material conditions.[497] Referring to the

[492] Gottfried Semper writes “there is the material to be treated, the formless mass to be transported into form. In the first place, every work of art should reflect in its appearance, as it were, the material as physical matter. Thus, for example, the Greek temple in marble differs in style from an otherwise, almost identical Greek temple in porous stone.” See Semper, *Gottfried Semper: The Four Elements of Architecture and Other Writings*, 269.
[493] Sylvia Lavin, "Fire Rated," in *Coop Himmelb(l)au: Beyond the Blue*, ed. Peter Noever (Munich/Vienna: Prestel/MAK, 2007), 179.
[494] Stanford Kwinter, "La Città Nuova: Modernity and Continuity," *Zone* ½ (May, 1986): 89.
[495] Stanford Kwinter draws from Boccioni’s writing on Plastic Dynamism to extract the plastic qualities of form. See Ibid.
[496] Adolf Hildebrand, *The Problem of Form in Painting and Sculpture* (New York: G. E. Stechert & Co., 1907), 46.
[497] Ignasi de Solà-Morales, "Place: Permanence or Production," in *Differences: Topographies of Contemporary Culture*, ed. Sarah Whiting (Cambridge, Mass: The MIT Press, 1997), 94-95.

morphological attributes of form, his discourse goes beyond the idea of the assemblage, and introduces the kinetic.

Semper's tectonics and Hildebrand's continuum assist investigation of the envelope beyond Cartesian geometry. When the Eucledian conception of space is challenged, the distribution of bulk can be rendered through design morphologies to generate a building form that blurs the dichotomy of vertical and horizontal. Indeed, both taxonomy and plasticity support elaboration on the zoning envelope. As we will see, it is not one or the other that generate successful plan-check but rather the skills to draw from different design culture when exploring the space between building mass and bulk regulation. At the end of the day, what matters is the ability to prove that site-specific conditions yield the universal aspects of zoning.

Considering this, it wasn't a coincidence that Naman commissioned Denari for the HL23 project. Denari's oeuvre showed various examples of residential projects where form has been invented to overcome development constraints imposed by property conditions. The street-wall facade of the Tokyo Minimum High-Rise Housing, for example, utilizes the concept of branching to expand as it rises towards the sky, which minimizes assessment.[498] [Figure: 4.19] Other housing projects, such as Prototype House from 1992-93 and Vertical Smoothouse from 1997, show similar solutions of re-thinking the limitations of property through architectural form, and thus increase real estate value by capitalizing on air space rather than land use.[499] [Figure: 4.20 -

[498] Neil M. Denari, *Gyroscopic Horizons* (New York: Princeton Architectural Press, 1999), 180. Andreas Broeckmann et al., eds., *The Art of the Accident* (Rotterdam: NAI Publishers/V2_Organisation,1998), 13, 15.
[499] Denari, *Gyroscopic Horizons*, 82-91, 166-71. Neil M. Denari, *Interrupted Projections: Cor-Tex Architecture: Another Global Surface, or Territorial Re-Codings on the World Sheet*, ed. Gallery MA (Tokyo: TOTO Shuppan, 1996), 42-43.

Figure: 21] These projects all show that nonconformist design can assist building mass to overcome the limitations of property.

Deviations

The establishment of city planning regulation in the U.S. goes hand in hand with the development of legal procedures for how to modify the rules when enacted. This seemingly contradictory procedure can be contextualized in the conclusion made earlier -- that zoning ignore all site specific conditions. Planning regulation creates guidelines for how to normalize urban development. However, as Lewis Tsurumaki Lewis's argues, "beneath the surface of the normal or familiar exists the strange or the unfamiliar."[500] Indeed every zoning resolution will face situations where unexpected circumstances challenge the meaning of the code, and public entities will always be required to develop procedures for how to classify and manage digression. In New York City, deviations to the zoning resolution have been categorized with the variance and the waiver. By examining the variance and the waiver, we will begin to uncover the methodology used by Denari to manipulate the zoning envelope.

The variance derives from a fundamental principle of American law, which is the right of property. As a part of the Fifth Amendment of the Constitution, the Takings Clause ensures "that the financial burdens of public policy are shared by the entire public and not unfairly placed on individual property owners."[501] Hence, when a public entity gains control over private property, there must be a way for the individual to claim compensation for any change that diminishes

[500] Lewis Tsurumaki Lewis, "snafu," 4.
[501] William B. Stoebuck, "Takings Clause," Answers.com http://www.answers.com/topic/takings-clause.

property value. This relationship between centralized land-use regulation and the hardship of private development has called for a mechanism to assure land owners the option to request deviations from the code, which is the variance.

The application for a variance is reviewed and decided by the Board of Standards and Appeals (BSA), which is an independent board assembled to grant exceptions to the code.[502] BSA was established in concurrence with New York's 1916 ordinance. In the wake of comprehensive zoning, it was anticipated that individual lots could be unjustifiably restricted by planning regulation. Due to the constitutional rights for compensation of reduced property value, public entities were concerned about becoming subjects to instant claims of unconstitutional taking of private property. By establishing BSA as an independent unit to operate parallel with the Department of City Planning, the possibility for broad constitutional challenges to the overall zoning was dramatically reduced. The application for a variance, however, is an uncertain process. The BSA requires different development scenarios for as-of-right, which makes the process expensive.[503] It also requires public hearings at several levels of governance, which, as Dana Cuff observes, often tend to delay development and obstruct nonconformist solutions.[504]

[502] New York City Government, "Bsa: Nyc Board of Standards and Appeals," New York City Government http://www.nyc.gov/html/bsa/html/mission/mission.shtml.
[503] The general provisions of the Board of Standards and Appeals are outlined in The City of New York, "Zoning Resolution," in *Article VII: Administration, Chapter 2: Interpretations and Variances* (New York: City Planning Commission, February 2, 2011), 72-01.
[504] Dana Cuff says that the increased public participation in planning process has changed the context for architectural work "so fundamentally that architects often express disdain for the hordes of community activists and special-interest lobbyists whose input muddles intentions, logistics, and schedules." See Dana Cuff, "Community Property: Enter the Architect or, the Politics of Form," in *Slow Space*, ed. Michael Bell and Sze Tsung Leong (New York: The Monacelli Press, 1998), 121.

The waiver, on the other hand, is a different way to modify the code. If the variance applies to the hardship of property, the waiver applies to land use.[505] Included in the New York City zoning ordinance as a method to modify regulation when development is hampered by local circumstances, the waiver can be described as a "site-specific land-use planning function."[506] Thus the incitement of the waiver is very different from the variance, and so is the amendment procedure. Managed by the Department of City Planning and approved by the Planning Commission, the waiver implies a certain level of autonomy, which makes the application procedure less time-consuming and more cost-effective.

When architectural solutions are hampered by zoning, and modifications to the code are required to overcome the divergence between development and legislation, then the efficiency of amendment procedure is measured by the level of autonomy in urban planning process. This argument can be analyzed if we compare the review procedure of the variance with that of the waiver. Urban planning in the U.S. and elsewhere is a disciplinary practice with certain levels of political and public influence.[507] As city regulations are managed through the domains of urban planning, so are the modifications to the code. It can be argued that the level of political influence in the process of code modification is measured through the connotation of public bodies and thus their impact on autonomous decision making. Hence, as the government of New York City requires public hearings to justify amendment, all code modifications in the borough

[505] Kenny Ramnarine, interview by Per-Johan Dahl, March 30, 2011. See also The City of New York, "Zoning Resolution," 72-01.
[506] Berg, *New York City Politics: Governing Gotham*, 25.
[507] Françoise Choay traces the formation or urbanism as an autonomous discipline, which founded modern urban planning. See Choay, *The Rule and the Model: On the Theory of Architecture and Urbanism*.Ildefons Cerdá used reform to manage the relationship between public and private interests. Reform was the constituting principle for the formulation of Bassett's 1916 ordinance. See, for example, Cerdá, *Cerdá: The Five Bases of the General Theory of Urbanization*. Bassett, *Zoning*.

of Manhattan face the political components of urban planning. There are, however, significant differences to the degree of political influences in the process of modifying the code. The variance, as we previously discussed, is managed through the BSA, thus amended outside the realm of City Planning, and granted only after public notice and hearing.[508] Headed by five commissioners appointed by the mayor, BSA's review of the variance can be described as a political process with very little disciplinary involvement. The waiver, on the other hand, conforms to the politics of urban planning through the ULURP process. Legislated in 1975 and amended in 1989, the ULURP process was introduced in New York City to "establish a standardized procedure whereby applications affecting the land use of the city would be publicly reviewed."[509] Founded on the idea of community participation in planning processes, the influence of ULURP on amendment procedure can be adjusted by the Planning Commission in concurrence with the estimated impact on surrounding areas. In other words, if an applicant files a waiver for a deviation with minor impact on surrounding areas, then the chairperson of the Planning Commission has the authority to grant the waiver without any public hearing. If the deviation is considered to have medium impact on surrounding areas, then the waiver application is required to go through a half ULURP process. The half ULURP process obliges the Planning Commission to listen to the community board, but does not require them to follow their recommendations. The final level is the application to waive a deviation with major impact on surrounding areas. This procedure requires a full ULURP process and the granting of a special

[508] "The Board of Standards and Appeals (referred to hereinafter as the Board) shall have the power, pursuant to the provisions of the New York City Charter and of this Resolution, after public notice and hearing…" See The City of New York, "Zoning Resolution," 72-01 (General Provisions).
[509] New York City Government, "The Uniform Land Use Review Procedure (ULURP)," New York City Government http://www.nyc.gov/html/dcp/html/luproc/ulpro.shtml; Berg, *New York City Politics: Governing Gotham*, 24-26.

permit.[510] The decisions made as a result of a full ULURP process must be based upon, and supported, by the record developed at the public hearing, which makes the third-level waiver a vestige of the variance. Based on this graduated commitment by City Planning to conform to the recommendation of public bodies, it can be argued that the waiver is a semi-autonomous construct used to adjust the level of political involvement in accordance with the estimated scale of impact on surrounding areas.

The City needs criteria to determine if a waiver results in low, medium, or high impact. These criteria are developed in concurrence with the tentative values for public good, which have been agreed up on when stipulating the guidelines in the zoning ordnance.[511] For HL23, it was imperative to prove medium impact on access to light and air, but also to prove its visual qualities. The criteria for light and air can be evaluated through computer simulations and thus on scientific grounds. The criteria for visual qualities, however, are more difficult to prove scientifically. Sightlines can, of course, be rendered and represented accurately, but aesthetic evaluations require some level of discretion. In any case, the compilation of these criteria establishes the grounds for evaluation and thus the matter of review. For the architect, it is important to navigate both the scientifically rendered data and the discretionary review. As we will see, rigorous geometry can assist this procedure.

[510] For the difference between the variance and the special permit, see also Babcock, *The Zoning Game: Municipal Practices and Policies*, 6-8.
[511] The values for public good are tentative. This argument is based on Dana Cuff's observation that "[d]etermining what constitutes a public good is a highly politicized process. Parties to a contentious project lobby with the explicit objectives of transforming the public opinion about what might serve its interests. Constructs of the public good are highly situational and are continuously being redefined." See Cuff, *The Provisional City: Los Angeles Stories of Architecture and Urbanism*, 76.

The alternative in the law generated by section 98-424 allowed Naman to apply for a waiver rather than a variance. The key issue for Naman, hence, was to avoid the third level of ULURP process, which would require a greater degree of political and public influence in the amendment procedure. Determined to safeguard medium impact on surrounding areas, the project had to be designed accordingly. And it is exactly at the intersection of the site-specific conditions and the technical implications of the waiver that Denari found the incentive to reconceptualize the zoning envelope. By setting up a design process in concurrence with the plastic qualities of form, the building was carefully shaped to avoid public opinion and to meet the expectations of both the City and the developer. The plastic qualities of form, however, needed to meet the Cartesian geometry of zoning. As we will see, this became the form generator of HL23.

EXCEEDING THE NORMATIVE

Taxonomy and Plasticity

The design of HL23 describes a battle against zoning where the shaping of mass set the parameters for space construction. Due to the complexity achieved by Denari's modeling process, the edifice complies with the concept of plasticity previously discussed. When moving around in the vicinity of and beneath the belly of HL23, we are confronted by a series of building elements which, when lumped together, serve to render the experience of a total work of architecture. [Figure: 4.22] The folded and twisted surfaces correlate with the visual and haptic quality of material to produce what Adolf Hildebrand would characterize as a "perception of …spatial attributes."[512] The augmented structure, which gradually cantilevers above the High Line Park, reduces the scale of the building, and unites subject and object. [Figure: 4.23] The transparent cladding which exposes the cantilevered steel frames provides splendid views for the residents, but it also creates a critical commentary on the conventional dichotomies of inside/outside and private/public. And the graphic treatment of the beams and the panels position the building in-between image and architecture, which recalls the "research of aesthetic formalism that developed in the late nineteenth and early twentieth centuries."[513] [Figure: 4.24]

[512] This observation confirms to Adolf Hildebrand's argument that the "faculties of sight and touch" provide spatial perception and that "[t]hese two different means of perceiving the same phenomenon…are united in the eye." Hildebrand says that "[o]ur relation to the world of vision consists chiefly in our perception of its spatial attributes." See Hildebrand, *The Problem of Form in Painting and Sculpture*, 14, 17.

[513] Sarah Whiting writes about Robert Vischer's "investigation into the relationship between the subject and the object." Whiting says that Adolf Hildebrand and others furthered Vischer's investigation with their research of aesthetic formalism, "focusing first on issues of visual perception and ultimately translating the relationship into fully, sensorial experiential terms." See Sarah Whiting, "Subjectifying the Modern," in *Differences: Topographies of Contemporary Architecture*, ed. Sarah Whiting (Cambridge, Mass: The MIT Press, 1997), xii.

Indeed the edifice that today occupies the property on West 23rd Street represents a total work of architecture to emphasize the plastic qualities of form.[514]

The shape of HL23, however, can not be described solely with reference to the plastic qualities of form. The aesthetics of the edifice -- equally bold and restrained -- describes a design process capable of complementing the complex endeavors of plastic form with a second layer geometrical manipulation. Ole Bouman characterizes Denari as an architect who "in one way or another seek legitimation for [his] work, on the one hand by placing [his] labours in a historical theoretical tradition, on the other hand by justifying [himself] vis-à-vis the relevant forces of [his] own age."[515] And it is precisely the skill of mastering the disciplinary connotations of design that provided Denari with the ability to reconceptualize the geometry of the zoning envelope. On his company website, Denari argues that the shape of HL23 is driven by NMDA's interest in "achieving complexity through simple tectonic operations."[516] If we unpack this argument, we will discover how the interaction of different design culture served his purpose.

Any building geometry that complies with planning regulation is approved as-of-right. The as-of-right volume measures the influx of light and air to determine bulk distribution in concurrence with the estimated values for public good. As Denari's commission required him to develop a

[514] In hallway discussion with the author, Neil M. Denari has explained the associative geometry of HL23. Denari said that the project was designed in Rhino because his office didn't work with parametric software at the time. He described the design of HL23 as a process, where his office established performance-based criteria to enable the instant modifications of the edifice, which were necessary to pursue in order to manage the formal relationship between the design intent and the expectations from local planning agency. He expressed the extensive labor this procedure required, and he argued that parametric software would have served his purpose by offering a higher degree of efficiently in the modeling process. Even if this hallway discussion never was recorded, it indicates that the design of HL23 was activated through the establishment of plastic relationships between various building elements.
[515] Greg Lynn, *Folds, Bodies & Blobs: Collected Essays* (Brussels: La Lettre Volée, 2004), 7.
[516] NMDA, "HL23 2010 / New York," NMDA http://www.nmda-inc.com/index.php?/projects/high-line-23/.

building that exceeded the as-of-right volume, he knew that he had to manipulate the code. Abiding by the standards of the zoning resolution, he also knew that the waiver provided the generative material for such procedure. The waiver can be described as a formal exception to the as-of-right volume. If a waiver is to be granted, it must be shown that the proposed building won't "adversely affect adjacent zoning lots by unduly restricting access to light and air to surrounding streets and properties."[517] Hence the waiver must be judged in accordance with a formal point of reference, which is the as-of-right volume.

Denari initiated the design process by modeling the as-of-right volume.[518] Using his Rhino model to draft the zoning envelope, he researched the geometrical limitations of the code to establish a formal point of reference. [Figure: 4.25 - Figure: 4.26] This point of reference, which outlines planning regulation, clearly resembles the Cartesian qualities of the zoning envelope previously discussed. After tracing the as-of-right volume, Denari abandoned the restrictions imposed by regulation and dedicated his practice to responding to the complex configuration of the site, and thus to shaping the building accordingly. With a set of formal operations "linked to each other in some explicit or implicitly declared relationship," he shaped the plastic edifice of HL23.[519] The objective was to meet Naman's interest by adding floor area to the right-of-way, but also to provide a formal composition that enhanced the character of the neighborhood and generated an architectural language that satisfied his own design agenda. With his as-of-right model as the formal point of reference, Denari established a datum by which his plastic form

[517] New York City Department of City Planning, "Zoning Resolution the City of New York, Web Version," (New York: New York City Department of City Planning, 27 April 2011), Chapter 4, Section 74-721-a-3.
[518] Neil M. Denari, interview by Per-Johan Dahl, October 19, 2010.
[519] Mark Burry, "Between Intuition and Process: Parametric Design and Rapid Prototyping," in *Architecture in the Digital Age: Design and Manufactoring*, ed. Branko Kolarevic (New York: Taylor & Francis, 2003), 150.

could be evaluated. As we already concluded, however, the geometric implications of the zoning envelope are interlocked rather than flexible. Hence, as long as planning regulations conform to the Eucledian concept of space, any building geometry that entails plastic interpretations of zoning will be thwarted by code. To have his shape approved, Denari had to find a way to translate plastic form into Cartesian language.

The waiver itself is merely an argument about inadequate rules to which exceptions should be granted. The waiver is judged by planning expertise, thus success or failure depends on the accuracy of evidences to support the argument. When the evidence considered, it is evaluated according to the established point of reference. For HL23, as we have seen, the point of reference was the Eucledian precedent of the as-of-right volume. The problem occurs, hence, when a plastic form has to confirm to Cartesian references. The painter, Jules Ziegler, faced a similar problem in 1863 when he demonstrated how complex forms could be explained by combining primary forms in a set of variations. [Figure 4.27] Acknowledged by Semper and included in *Der Stil*, Ziegler's schemes of classification described how a compound work of art "can be generated from the primitive mathematical forms of the circle and cube" and thus be conceived as a number of Cartesian variations.[520] Just like Ziegler's art works, Denari's building needed to be visualized in its parts in order to be capable of being evaluated by Cartesian measures. Indeed, plastic geometry would never meet the Eucledian routines of city planning. Denari had to translate the geometry of the building, and thus explain the plastic form through its parts. He

[520] Harry Francis Mallgrave, *Gottfried Semper: Architect of the Nineteenth Century* (New Haven: Yale University Press, 1996), 281-82.

could do so by adopting the discourse of tectonics. By describing the edifice through six different waivers, HL23 was broken down into incremental variations and thus given a tectonic quality.[521]

Fine-tuning the Future

Any architect commissioned to design a building is asked to forecast the future. The understanding, followed by the systematization and visualization of any architecture certainly postulates the creation of a reality that exists subsequent to the present. When the commission involves code manipulation, the future is more difficult to predict. As soon as the architect resists the *modus operandi* established by City governance, various institutions and public domains bring to bear regulatory power that threaten the realization of design. If the code is to be challenged, the architect must craft a strategy to manage the power relations established by public and private entities. It is the finessing of these methods that make the prediction successful or not.

The power relations that occur between public and private entities can be analyzed by referring to Gilles Deleuze's discourse on assemblages. Manuel DeLanda uses Deleuze's theory of assemblages to establish a platform for his own approach on social ontology. As social ontology is the study of the relationship between social entities, the theory can be applied to our objective of understanding the interaction between the public and private entities that, through code, threaten the realization of architecture. DeLanda explains that Deleuze differentiates between two constructs: totalities and assemblages. Both constructs are composed by autonomous

[521] The Environmental Assessment Statement says that "[t]he proposed building requires a CPC authorization pursuant to Section 98-424 of the Zoning Resolution, Authorization to Modify Bulk Regulations, to waive the requirements of Section 23-47, 23-533, 23-861, 98-421, 98-423, and 98-52 of the Zoning Resolution." See Philip Habib & Associates, "Environmental Assessment Statement High Line 23 Authorization," A-4.

entities. The difference, however, is the possibility to forecast what Deleuze refers to as the "relations of exteriority" between the entities.[522] Deleuze explains that for totalities, the linkages between entities "form logical necessary relations."[523] For assemblages, however, the relations are neither logical nor necessary. They may be; but that can also cease to exist, or mutate into new relations. Deleuze says that the relations in an assemblage are "contingently obligatory," which means that they "do depend on a component's properties but cannot be reduced to them since they involve reference to the properties of other interacting entities."[524]

If we look at the intersection of architecture and city planning through the lens of Deleuze's discourse, the plan-check is the pinnacle of interaction. When the building is approved by City Planning, the number of entities that threaten design is radically reduced and assemblages move toward totalities. The design process that precedes the plan-check can be described as a trajectory through the assemblages. By using design iterations to measure the provisional relationships of exteriority, which characterize the power play of entities, the architect can respond to targets and threats, and sketch out alternative routes to regulation. The critical point is to evaluate the power relations. Only by positioning her or his own constituent within the field of forces that constitute the assemblage, can the architect identify the pitfalls and thus trace the alternatives. If we look at Deleuze's theory through the lens of Michel de Certeau's discourse on strategies and tactics, the means of evaluating power relations can be analyzed and understood.

[522] Manuel DeLanda, *A New Philosophy of Society: Assemblage Theory and Social Complexity* (New York: Continuum, 2006), 10.
[523] Ibid., 11.
[524] Ibid.

Strategies and tactics are two different ways to sketch out alternative routes to regulation. de Certeau differentiates between strategies and tactics. A strategy, he says, is a position that can "serve as a base from which relations with an *exteriority* composed of targets or threats can be managed."[525] The stagey is, according to de Certeau, "the calculation (or manipulation) of power relationships that becomes possible as soon as a subject with will and power…can be isolated." A tactic, on the other hand, "is a calculated action determined by the absence of a proper locus." Contrasting the autonomous condition of strategies, tactics are useful when we can't rely on the power relations of entities, but are forced to operate ad-hoc and thus manage targets and threats by taking advantage of the opportunities presented to us.[526]

The transition from plasticity to tectonics previously outline didn't only provide Denari with a formal language possible to meet the vocabulary of code. It also gave him a geometrical strategy of how to shape an edifice with medium impact on the neighborhood. By taking five feet as his regulating unit, paraphrasing Le Corbusier's line,[527] Denari established a quantified geometry possible to use when shaping his edifice through tectonic operations. The five feet increment, he thought, was subtle enough to be squeezed through City Planning. "Ten feet…wouldn't have worked," he says. "It had to be subtle…if the movements were more apparently radical, [City Planning] would have looked at it and said too aggressive."[528] With his five feet increment, Denari was able to consolidate his formal objectives with a certain kind of sensibility towards the

[525] Certeau, *The Practice of Everyday Life*, 36.
[526] Ibid., 39.
[527] Le Corbusier said that "[t]he choice of a regulating line fixes the fundamental geometry of the work; it determines one of the fundamental impressions. The choice of a regulating line is one of the most decisive moments of inspiration, it is one on of the crucial operations of architecture." See Le Corbusier, *Le Corbusier: Toward an Architecture* (Los Angeles: The Getty Research Institute, 2007), 137.
[528] Neil M. Denari, interview by Per-Johan Dahl, October 19, 2010.

goals of City Planning. The five feet strategy became the DNA of HL23, providing the matter of tactical contention.

When Denari broke down his plastic form into tectonic elements, he set up a mixing table possible to operate through tactical maneuvers. Like a DJ who controls the relationship between two records, he used the five feet increments created when the building envelope was explained through tectonics to adjust the intersection between property constraints and site specific conditions. [Figure: 4.28 - Figure: 31] Denari himself says that the design process was like "a visual, subtle negotiation…it was like cutting somebody with a razor but they don't quite know they are bleeding yet." The sensible use of his five feet increments, he says, is "the only reason why the building was accepted."[529] The HL23 building gained its plastic form accordingly, through calculated actions determined by tectonic operations. Resisting the dichotomy of taxonomy and plasticity, Denari operated the design process to generate a building form that was at once equally receptive to the contemporary means of spatial perception, and at the same time to the Cartesian premises of zoning. It is at the intersection of the tectonic and the plastic qualities of form that the HL23 was created.

de Certeau says that tactics pin their hopes on a clever utilization of the "play [they] introduces into the foundations of power."[530] And it is exactly by turning the design process into a play with the Department of City Planning that Denari conducted the generative procedure of HL23. Developing a number of design iterations, Denari presumed the building shape to be receptive to

[529] Ibid.
[530] Certeau, *The Practice of Everyday Life*, 39.

the surroundings environment. In an interview he says that he was primarily working with "something [he] assumed [he] would get away with."[531] Determined to manipulate the zoning envelope by incrementally adjusting the size of his waivers, he added floor area to the right-of-way by measuring the distribution of bulk in concurrence with its impact on surrounding area. [Figure: 4.32 - Figure: 4.33] Constantly analyzing the consequences of his design decisions, he responded to the disciplinary objectives of city planning by instantly confirming to the estimated values for public good.[532] By using the tectonic variations of the building proposal to measure the influx of light and air, Denari fine-tuned the relationship between building mass and zoning envelope to arrive at a building envelope that met the City's expectations. With his fine-tuning exercise, Denari enhanced the character of the neighborhood while adding 54.7 percent of floor area to the right-of-way. [Figure: 4.34]

Amplifying Urbanism

The building that today occupies the corner of the High Line and West 23rd Street represents a radical departure from the shapes that conform to planning regulation. The formal gesture that so obviously resists the zoning envelope certainly distinguishes itself from the surrounding urban fabric. Being the only building in West Chelsea that visually interconnects -- even hovers over -- the High Line, HL23 hints at a set of new regulations to guide the concurrent development of the area.

[531] Neil M. Denari, interview by Per-Johan Dahl, February 17, 2011.
[532] Urbanism was regulated by the means of public good. For Ildefons Cerdá urban planning was a science that tackled social, political, moral, health, and economic issues. See Cerdá, *Cerdá: The Five Bases of the General Theory of Urbanization*, 64-72.

When zoning is altered, the exception tends to become the norm. This procedure is feared by most planning practices, and explains why city planning departments generally resist code modification. When the exception becomes the precedent, development defies policy. New York City is by no means of a different opinion. As we already have seen, Denari was told from the beginning to figure out a way to persuade City Planning to grant a deviation, while preventing the building from becoming a model for concurrent development. Throughout this chapter we have described Denari's approach to reconceptualizing the zoning envelope with a design process positioned at the intersection of architectural form and planning regulation. Even if this procedure explains his mode of operation, it doesn't tell the whole story. The HL23 building breaks most of the rules, and the City could have decided not to allow deviations. Urban planning has always been a science. Even if the light and air studies submitted to validate modification proved scientific qualities, they were also biased, as most such studies lack proper means of reference.[533] And some of Denari's waivers, such as the waiver for the sky exposure plane, could certainly have been rejected, as it challenged original New York City zoning codes purely on aesthetic grounds. HL23 was allowed as an exception to the rules, and we have to gain a better understanding about the relationship between architecture and city to understand why it could be squeezed through the code. We can gain this understanding by looking at the background and incentives of HL23 though the lens of Aldo Rossi's discourse on the architecture of the city.

[533] Françoise Choay argues that Ildefons Cerdá justified "his adoption of the Latin root *urbs* [to] define "*la palabra urbanización*," which for him designates both a concrete fact, the process we today call urbanization, and a normative discipline which we now call urbanism." Choay also argues that Cerdá "presents himself as the creator of a new science." Choay, *The Rule and the Model: On the Theory of Architecture and Urbanism*, 234, 36.

Rossi says that the city is "an entity constituted of many parts which are complete in them selves."[534] Building on Camillo Sitte, he examines the city on the premise of form rather than of technology.[535] Rossi recognizes three major forms that comprise any city, which are the gridiron, the radial, and the triangular.[536] Composed of "its dual aspect of urban structure and typological structure," these forms, he argue, are basically compositions able to be classified according to their fundamental types. The fundamental types are the elements that make up any structure, such as, the multi-story houses in a residential structure.[537] With Rossi's discourse, hence, the city is described by the condition of its parts to generate an instant relationship with the entity. If we comply with Rossi, it seems possible to alter the city by elaborating on its elements.

When Denari was commissioned to design HL23, the City had already initiated transformation of the West Chelsea District by elaborating on one of its elements, which was the High Line. With financial and political support, the preservation and reprogramming of the deteriorated railroad rapidly changed the area. When Rossi discusses the elements of the city, he discerns what he calls the primary elements. The primary elements, he say, "possess a value 'in themselves,' but also a value dependent on their place in the city." They are "disconnected from [their] original function, or over time take on functions different from those for which [they were] designed, [and]…as a generator of a form of the city, [their quality] remains constant."[538] Rossi compares

[534] Rossi, *The Architecture of the City*, 96.
[535] Also Rossi says that "in his search for laws of the construction of the city that were not limited to purely technical considerations [Camillo Sitte] took full account of the 'beauty' of the urban scheme, of its form." See Ibid., 34-35.
[536] Also Rossi quotes Camillo Sitte who argues that "[w]e have at our disposal three major methods of city planning, and several subsidiary types. The three major ones are the gridiron system, the radial system, and the triangular system. The sub-types are mostly hybrids of these three." See Ibid., 35.
[537] Ibid., 74.
[538] Ibid., 86-87.

the primary element with the monument and he argues about its capacity to accelerate the process of urbanization.[539]

It is not difficult to read the High Line through the lens of Rossi's theory on the primary element. Perfectly adjusting itself to the new function afforded by preservation, the former railroad successively gained a value in it self while becoming a significant asset in its surroundings. We have seen how property values increased in concurrence with renovation, but when the High Line Team, including James Corner and Ric Scofidio, was invited on 21 June 2011 to ring the opening bell at the New York Stock Exchange, it signified the economic impact of the elevated park. The idea of preserving the High Line began as an activist's response to the market forces' call for demolition. Adopted by the City, it was then turned into a monument to accelerate the process of urbanization.

The urbanization generated by the preservation of the High Line describes the originator of HL23. As we have seen, the tower would simply never exist without the transformation of the former railroad. Being the only building in West Chelsea that visually interconnects -- even hovers over -- the High Line Park, the tower implies a very specific relationship to the newly inaugurated monument. One of Denari's design tactics was to create a formal interconnection with the High Line Park. It was this maneuver that granted the exception to the rule.

Denari's plastic form produced an iconic building, which was exactly what the City wanted. New York City Department of City Planning told Denari already from the start that "if you're going to

[539] Ibid., 87.

break the rules it better be dramatic, and then we'll support it."[540] Denari used the complex configuration of the site to sanction the design of a non-conformist building, but so did the City. HL23 was approved on the terms that it not became a precedent. It was granted the exception to the rule because the iconic form of the building envelope amplified the urbanization already instigated by the preservation of the High Line. If the High Line Park encapsulates Rossi's definition of the monument, then HL23 encapsulates the affects of urbanization. Commanded to perform in alliance with the park, Denari's HL23 building became a *supermonument* engineered to increase the power of some forces already in place.

[540] Neil M. Denari, interview by Per-Johan Dahl, October 19, 2010.

CONCLUSION

The gap between zoning and site needs to be challenged if we want to obtain a higher degree of flexibility in city planning regulation. One way to unlock the code is to reconceptualize the zoning envelope. Neil M. Denari's HL23 condominium tower in West Chelsea, New York City, can be used as a prototype for this endeavor. With his building form, which overcomes the dichotomy between tectonic and plastic, Denari shows us that architectural design can be used to transform the zoning envelope from rigid to flexible, without altering the size and shape of the building footprint. Staying within the prescribed FAR, his reconceptualized envelope proves that architecture can redistribute bulk and add floor area to the right-of-way, while still complying with the tentative values for public good.

Still, the policy that allowed HL23 was an alternative to the code rather then a prospect of intermediate legislation. It conformed to the constitutional rights of property rather than to the actual conditions of the site. Thus, the policy that gave way to HL23 is still universal, not specific. For this particular case, it might be the strategy of the City to keep it that way, as HL23 serves its purpose of stimulating processes already in place. However, if the City is seeking to elucidate the potentials of marginalized practices, which, ever since Jane Jacobs, have proven prosperous for urban development, the alternatives to the code must respond to the conditions of site rather than to the premises of federal law. If we extrapolate from the HL23 saga, we can imagine similar processes being instigated by incremental initiatives, rather than by monumental designs. If the City wants to activate these piecemeal processes, then the policy needs to go in the opposite direction, away from universal legislation, in order to unleash the provisional qualities of the code. Drawing from Michael Sorkin's feedback loop, these incremental

initiatives will prosper in the intermediate ground between the specific and the universal, rather than within the realm of sovereign powers.[541]

If the Palms case of this dissertation suggested expanded research on associative relationships between units and sites, the HL23 case exemplifies a successful implementation of the associative relationship between site specificity, real estate, and urban planning. Indeed, with his design process, Denari collapsed the space between building elements and interdisciplinary correspondences to render a set of performance-based criteria able to "modify by means other than erasure and recomposition."[542] Drawing from his explicit design intent, he shaped the premises of site, not through autonomous form making, but rather through obedience to the objectives of real estate and urban planning. With his numerous design iterations, he used his architecture to negotiate complex relations between the universal and the specific aspects of urbanism.[543] This procedure would not have been possible to accomplish without a set of urban planning rules that remain responsive to the interpretations developed by design. In the case of HL23, it was the correlation of an abstract measure (the 75 feet of section 98-424) and a requirement for discretionary procedure that facilitated such responsiveness.

Drawing from previous observation, we can expand the definition of Emily Talen's flexible zoning. Proliferating with Jonathan Barnett's code modification, flexible zoning unveils two systems of urban governance, which, operating with shaped charge to regulate the form and use

[541] Michael Sorkin's feedback loop is outlined in the first chapter of this dissertation.
[542] Burry, "Between Intuition and Process: Parametric Design and Rapid Prototyping," 149.
[543] Neil M. Denari explains that 25 schemes were developed in Spring 2005 in order to determine the design concept. Neil M. Denari, interview by Per-Johan Dahl, October 19, 2010.

of architecture, often correlate.[544] On one hand, we have the codes that have been written with precise and explicit formulations to emphasize a particular stipulation. And on the other hand, we have the codes that incorporate discretionary reviews, hence introducing a second layer of flexibility through expertise. The special district zone that was drafted for West Chelsea incorporated both systems. Not necessarily reducing the complexity of sub-zones that Richard F. Babcock is concerned about, the two systems, however, coincided to permit the realization of HL23.[545]

This case study builds upon Dana Cuff's scholarship on the politics of property to raise questions about zoning's inability to process the specific aspects of site.[546] One reason for discrepancy between zoning and site can be found in the historical precedence of standardized review procedure. If zoning, with its present routines, was to regulate site instead of property, then the time and labor required for management and administration of specific reviews would become a costly enterprise. Researching the story of HL23, we do discover the considerable investment in time and labor that was made in order to succeed in squeezing the project through the code. Hence, a problem with the prevailing zoning system is the expense required to work out alternatives to the code. As a result, we can envision many good architectural solutions being obstructed by the time and cost aspects of code manipulation. In the case of HL23, it was the real estate potential of a complicated site that mobilized the necessary funding. Opportunity for

[544] Jonathan Barnett says that "[i]f you can modify existing regulations to improve development without raising the cost to the developer, you have a far better chance of success than if you seek to impose new controls that have not been part of the rules up to now." He says that the "most commonly used methods of overcoming the defects of traditional zoning regulations have been planned unit development, urban renewal controls, and zoning incentives." He also adds "special zoning districts" to the list. See Barnett, *An Introduction to Urban Design*, 67, 75.
[545] Richard F. Babcock's concern is outlined in the first chapter of this dissertation.
[546] Cuff, *The Provisional City: Los Angeles Stories of Architecture and Urbanism*, 62-117.

creative interpretations to the code may unfold when architecture can prove added value to a tricky site.

This case study suggests that codes could be unlocked if the geometric configuration of the zoning envelope moved from Cartesian to rhizomatic. This new geometry would encourage flexible city building, and call for updated means of analysis and administration. Elastic zoning envelopes, for example, would require development to be referenced by volume (cubic feet) rather than by level (square feet). The reviewer of such regulation would have to set aside the comprehensive values of Euclidean measurement to embrace the specific qualities of site. It is important, as we have seen, for the architect to produce a building form that meets the estimated values for public good. And, as the outcome of this case study certainly proves, the volumetric premises that, through planning policy, regulate the qualities of public good, do not necessarily comply with the Cartesian modules of height and setback. If elastic envelopes better conform to site-specific requirements, then resilient regulations will unfold unexpected synergies which will enhance the immediate surroundings.

HL23 was, just like Richard Meier's Westbeth Artists' Colony, approved by a newly-amended zoning code. Conforming to Jonathan Barnett's special district zoning, both HL23 and Westbeth were riding the tide of modified rules. One major difference between the two buildings, however, is what Also Rossi would describe as their compliance with the morphology of types. HL23 reproduced a well established building type, which is the condominium tower, whilst Westbeth produced a new building type, which is the loft. Hence, the HL23 building can never become a prototype for a new urban habitat on similar premises as Westbeth. The prototypical qualities of

HL23 are, rather, related to the intellectual procedures of design than to the physical implementation of building objects. The interconnections of design culture, manifested with HL23, point to an intellectual model of how to precede design processes in interdisciplinary constellations. The idea of combining the tectonic approach of Gottfried Semper's discourse with the plastic approach of Adolf Hildebrand, and through this interconnection unfold a sequence of activities that explicates design innovation, certainly acts as a thing to be replicated or learned from. To create new knowledge by combining disparate discourses is nothing new -- it is, in fact, the very core of any scholarly procedures. However, the awareness of different design cultures' resistance to, or compliance with, the apparatus of exercising powers, which Denari so skillfully demonstrates, describes a powerful model viable for any architect to use when concerned about implementing architectural designs beyond the constraints of universal code. Architecture can only direct interdisciplinary constellations when the design emanates from disciplinary precision.

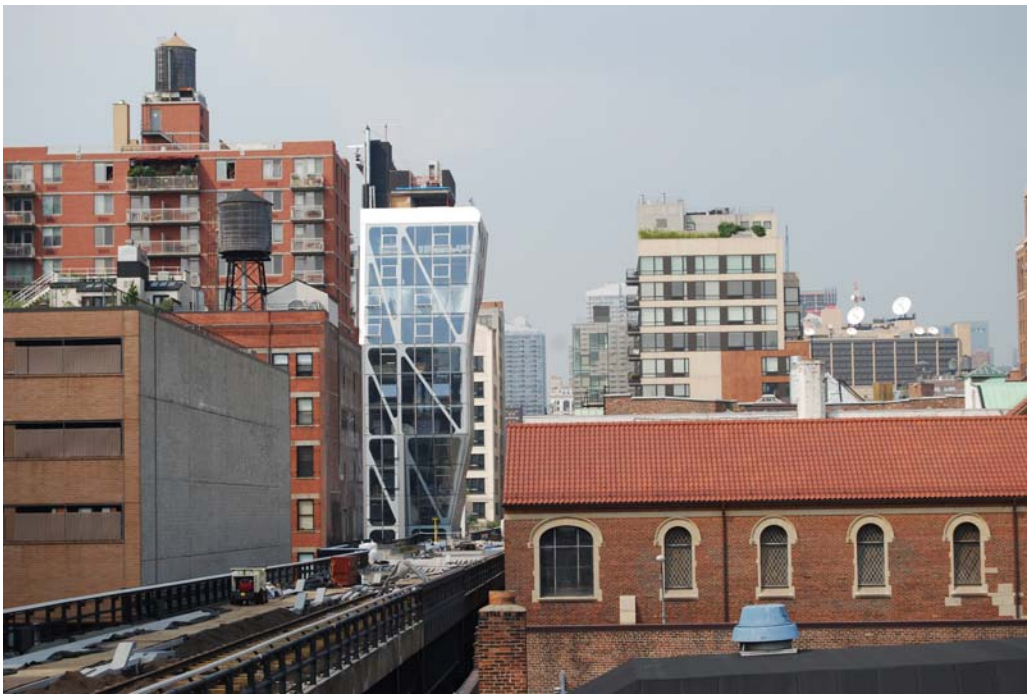

Figure 4.1: HL23 and the High Line Park under construction, July 7, 2010.
Photographer: Per-Johan Dahl.

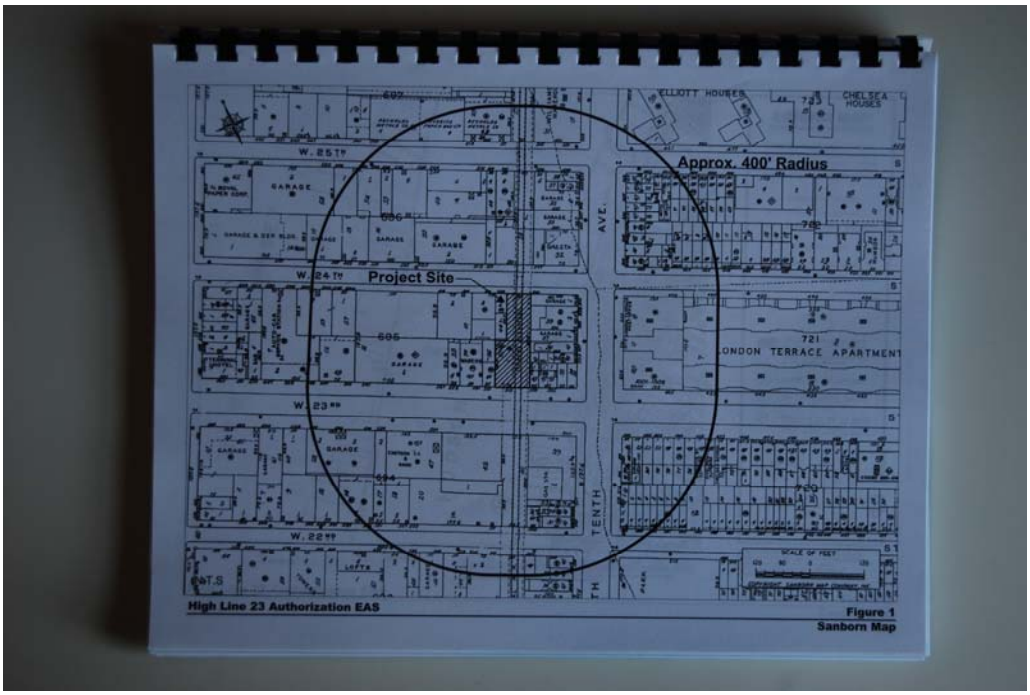

Figure 4.2: The project site and the urban context.
Page of the Environmental Assessment Statement High Line 23 Authorization (CEQR No. 06DCP050M, ULRUP No. N060336ZAM). Prepared by Philip Habib & Associates. Courtesy of Philip Habib & Associates.

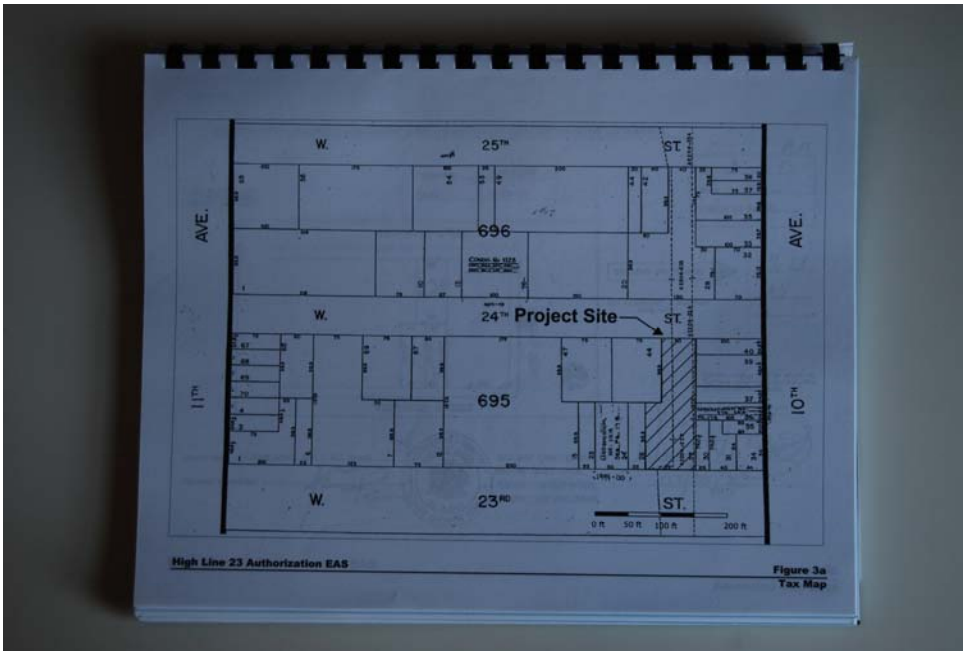

Figure 4.3: The project site.
Page of the Environmental Assessment Statement High Line 23 Authorization (CEQR No. 06DCP050M, ULRUP No. N060336ZAM). Prepared by Philip Habib & Associates. Courtesy of Philip Habib & Associates.

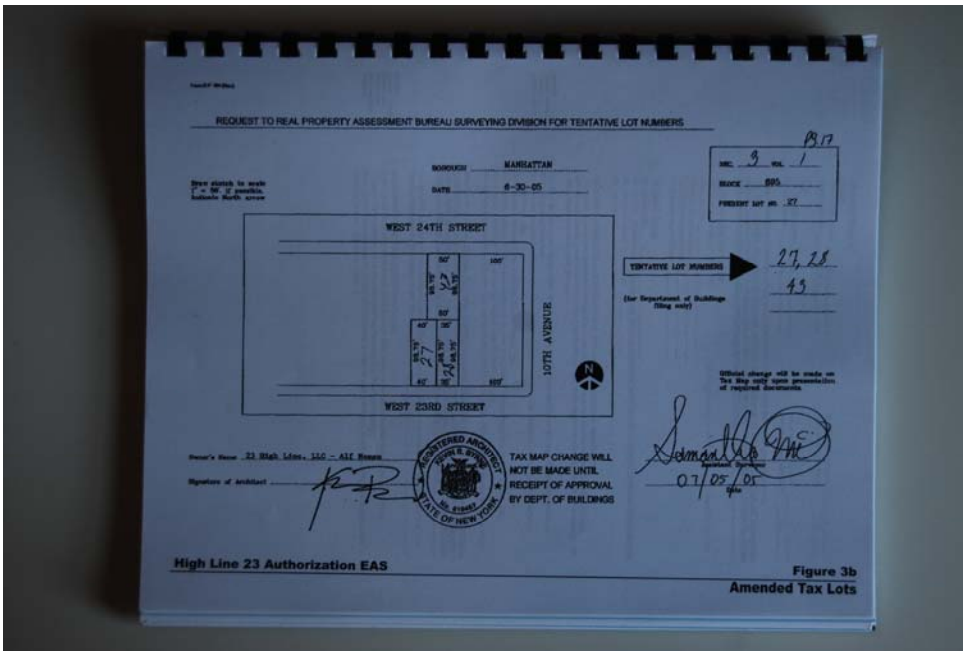

Figure 4.4: The project site and the tentative lot numbers.
Page of the Environmental Assessment Statement High Line 23 Authorization (CEQR No. 06DCP050M, ULRUP No. N060336ZAM). Prepared by Philip Habib & Associates. Courtesy of Philip Habib & Associates.

Figure 4.5: Neil M. Denari, Casey Kaplan Gallery interior, New York, New York, 2004.
Photographer: Per-Johan Dahl.

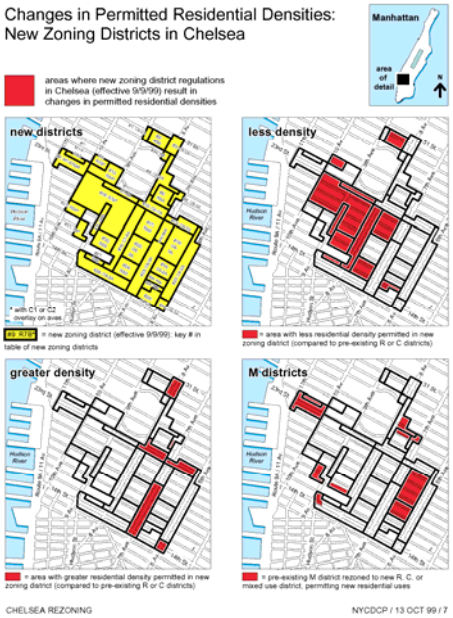

Figure 4.6: Plans showing changes in permitted residential densities.
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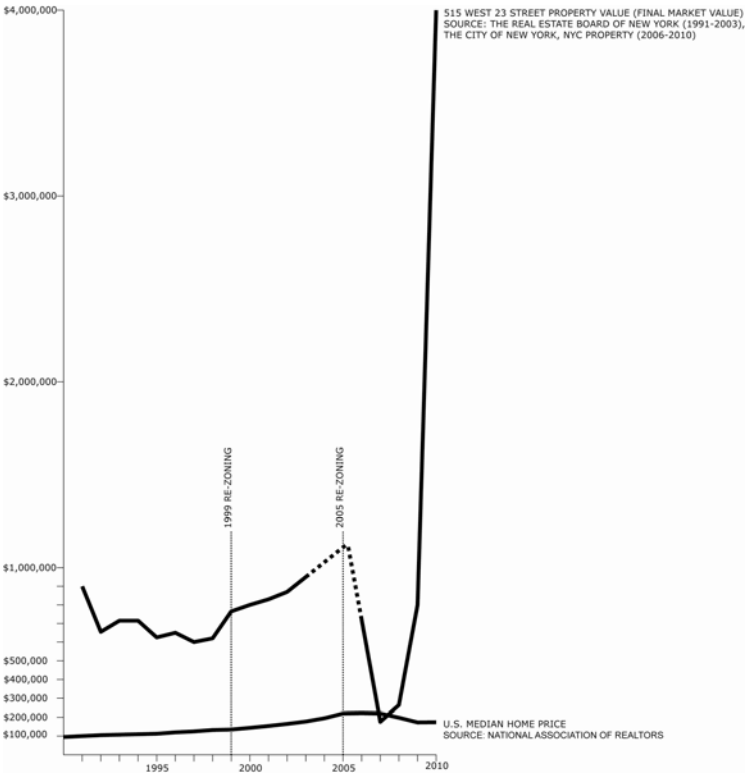

Figure 4.7: The property value of 515 West 23 Street, New York, New York, 1990-2010.
Diagram by Per-Johan Dahl.

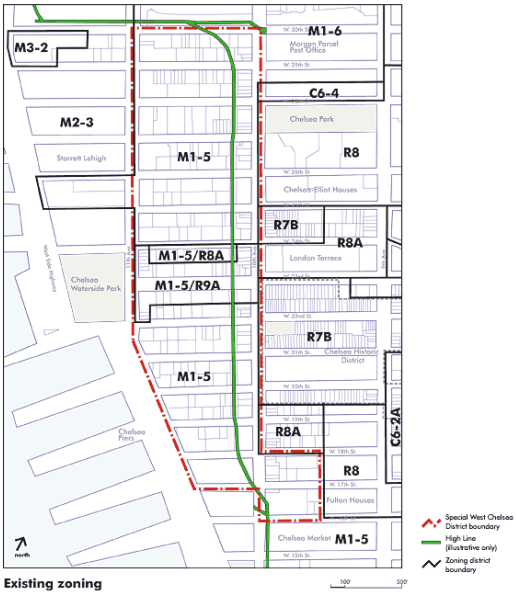

Figure 4.8: Zoning plan of the West Chelsea Special District.
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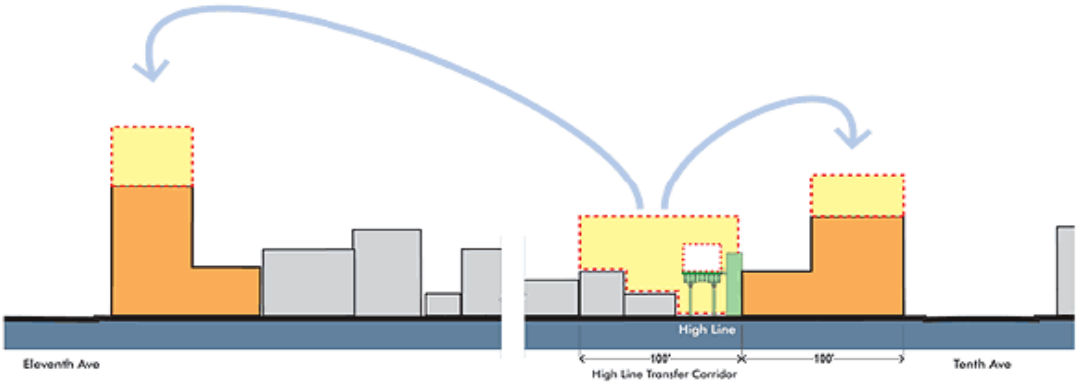

Figure 4.9: Section of the High Line Transfer Corridor.

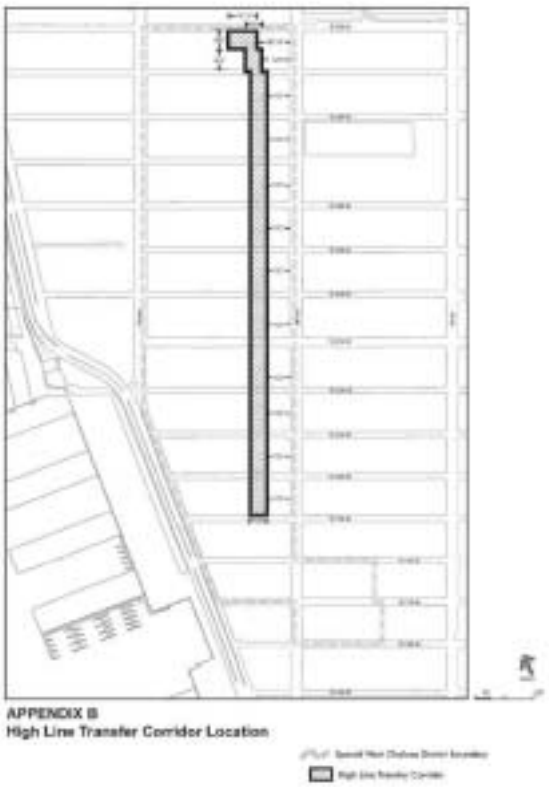

Figure 4.10: Plan of the High Line Transfer Corridor.

Figure 4.11: Raimund Abraham, Austrian Cultural Forum, New York, New York, 2002. Courtesy of David Plakke Media, NYC.

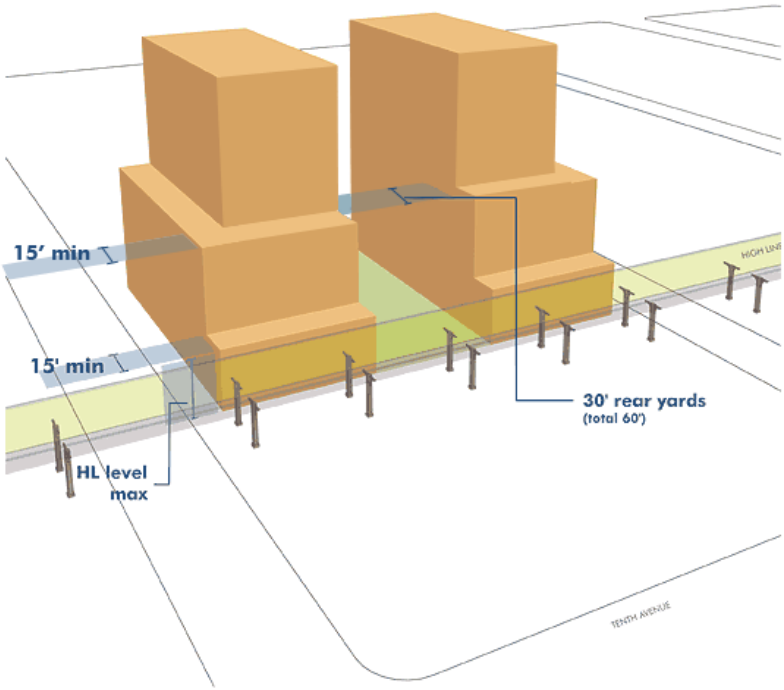

Figure 4.12: Rendering of setback requirements for the High Line Transfer Corridor. Used with permission of the New York City Department of City Planning. All rights reserved.

Figure 4.13: Ludwig Mies van der Rohe, Seagram Building and its plaza, New York, New York, 1958.
Photographer: Per-Johan Dahl.

Figure 4.14: MVRDV, Wozoco, Amsterdam-Osdorp, 1997.
Photographer: Rob 't Hart. Courtesy of MVRDV.

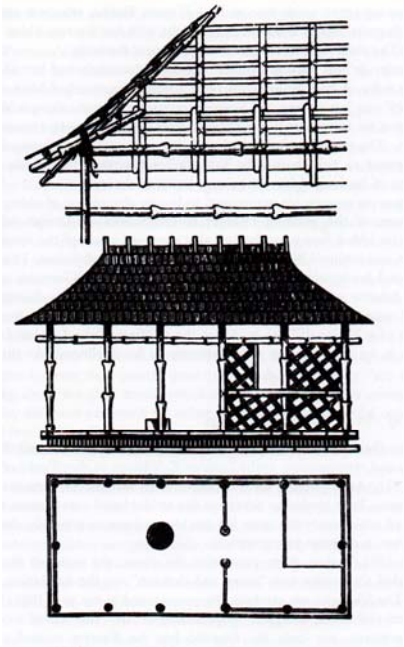

Figure 4.15: Caribbean Hut on display at the Great Exhibition of 1851 in London.
From G. Semper. *Der Stil*, vol. II, 1863.

Figure 4.16: Coop Himmelb(l)au, Gasometer Apartment Building, Vienna, 1995-2001.
Photographer: Per-Johan Dahl.

Figure 4.17: Coop Himmelb(l)au, Gasometer Apartment Building, Vienna, 1995-2001. Photographer: Per-Johan Dahl.

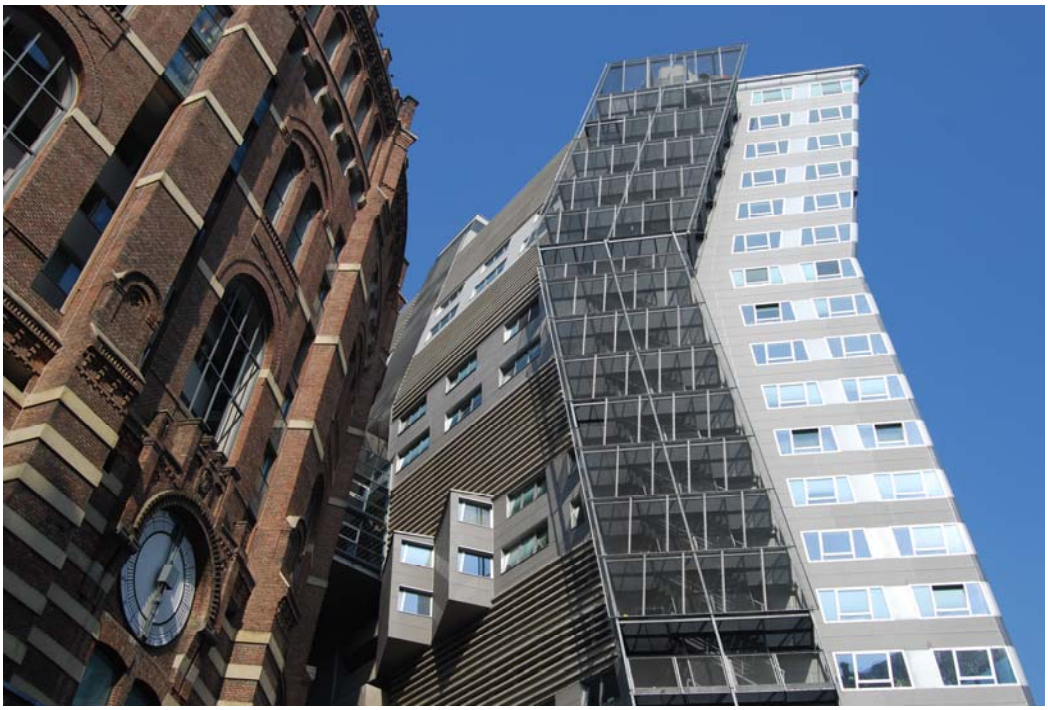

Figure 4.18: Coop Himmelb(l)au, Gasometer Apartment Building, Vienna, 1995-2001. Photographer: Per-Johan Dahl.

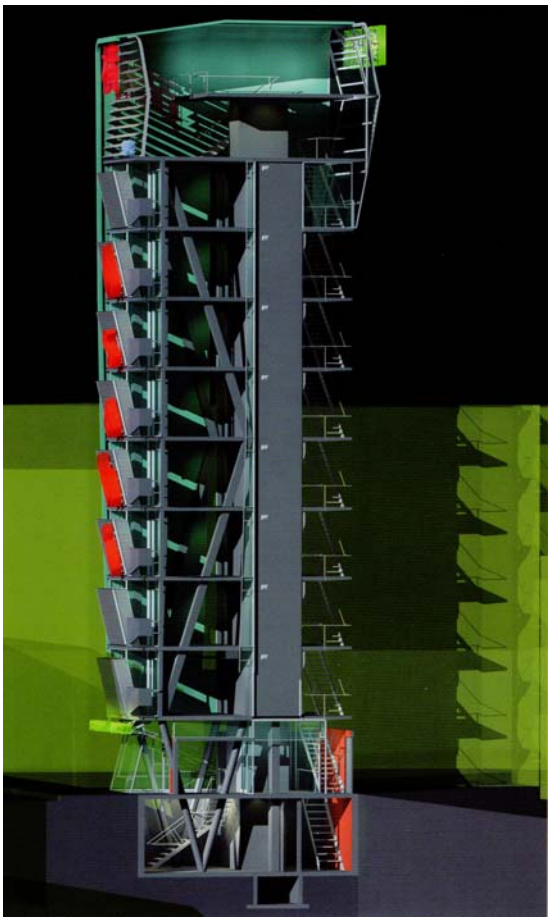

Figure 4.19: Neil N. Denari, Tokyo Minimum High-Rise Housing, Tokyo, 1995.
Courtesy of NMDA.

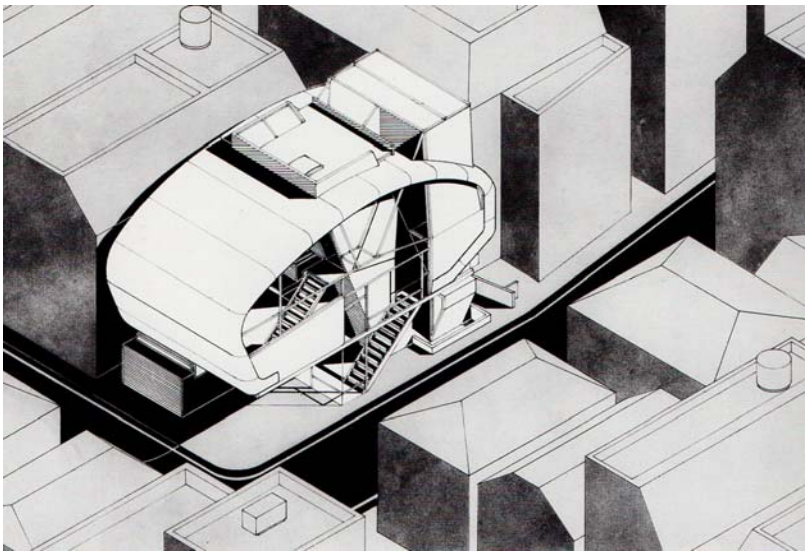

Figure 4.20: Neil M. Denari, Prototype House, Tokyo, 1992-1993.
Courtesy of NMDA.

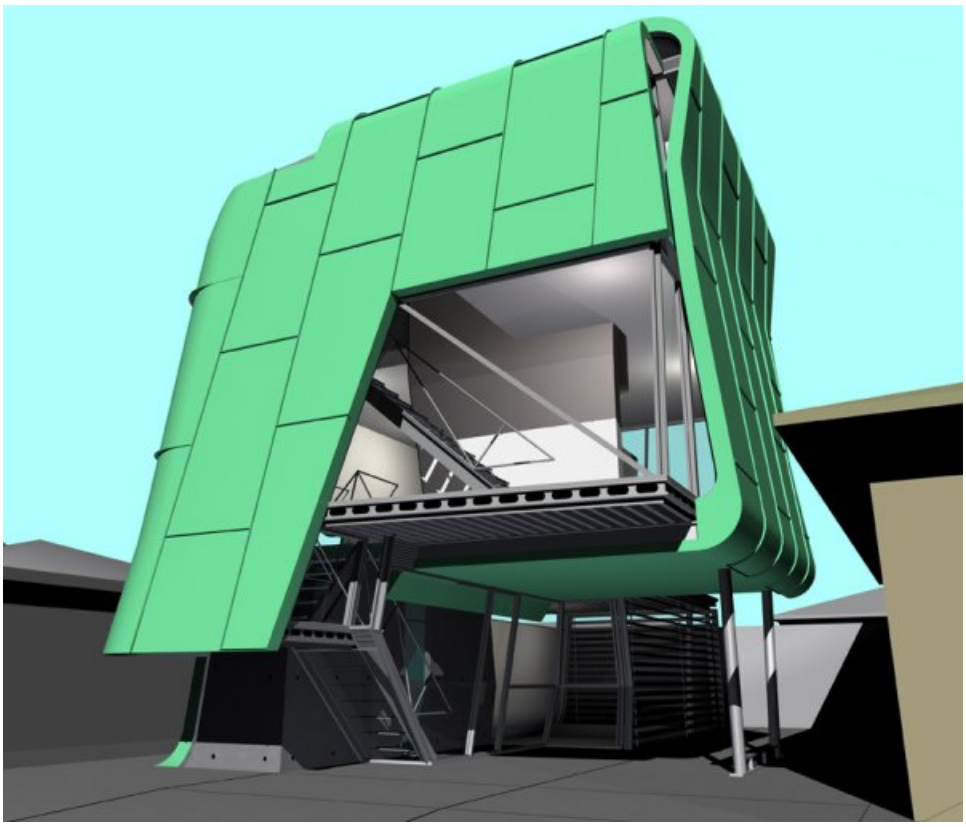

Figure 4.21: Neil M. Denari, Vertical Smooth House, Los Angeles, California, 1997. Courtesy of NMDA.

Figure 4.22: Neil M. Denari, HL23, New York, New York, 2011. Photographer: Per-Johan Dahl.


Figure 4.23: The augmented structure of HL23.
Photographer: Per-Johan Dahl.


Figure 4.24: The graphic treatment of HL23's façade.
Photographer: Per-Johan Dahl.

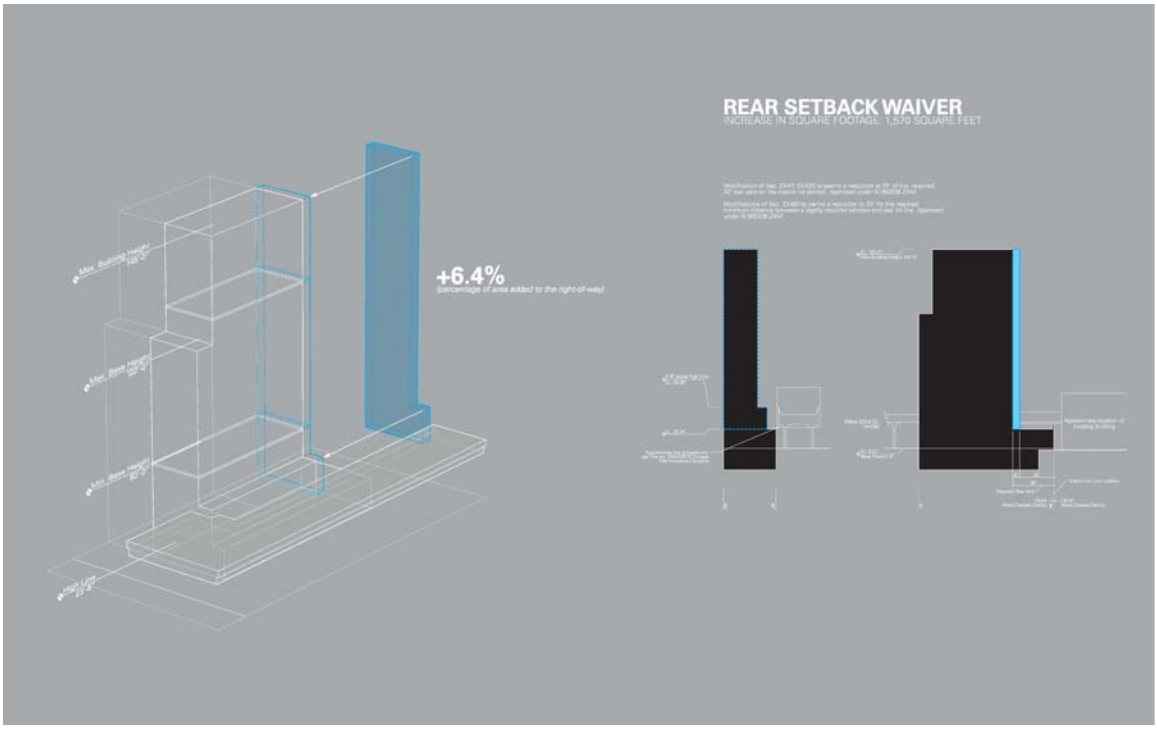

Figure 4.25: HL23. Diagram of rear setback waiver.
Courtesy of NMDA.

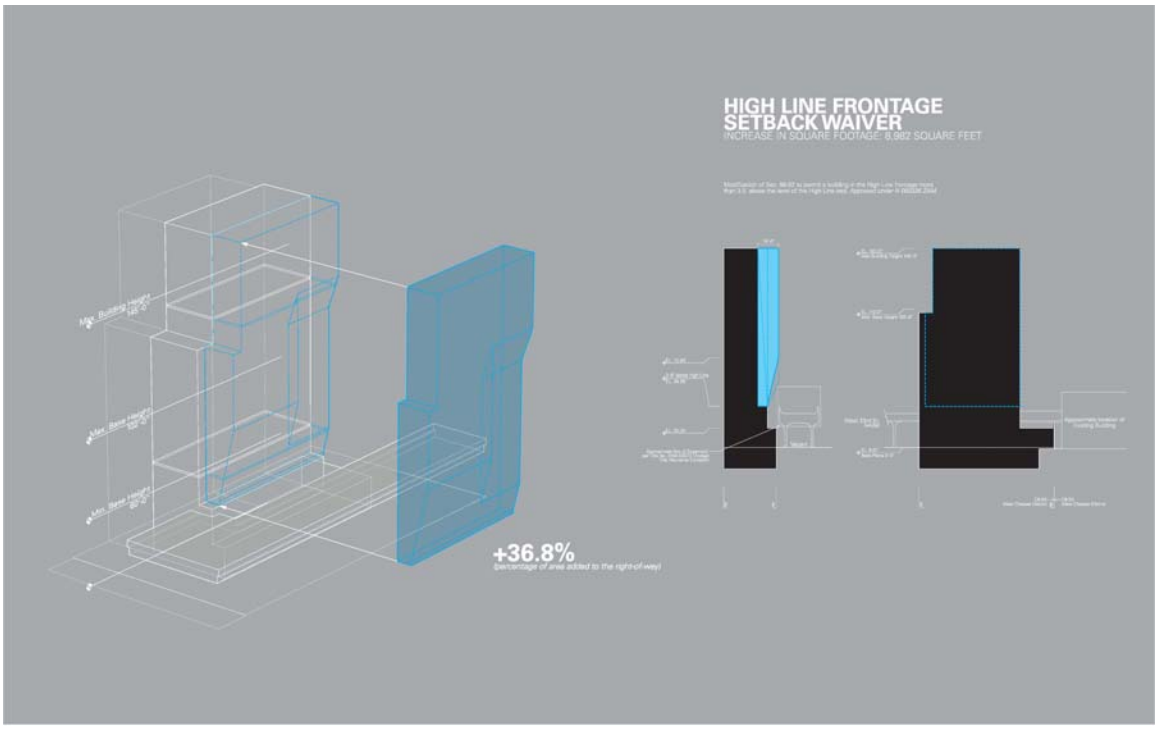

Figure 4.26: HL23. Diagram of High Line frontage setback waiver.
Courtesy of NMDA.

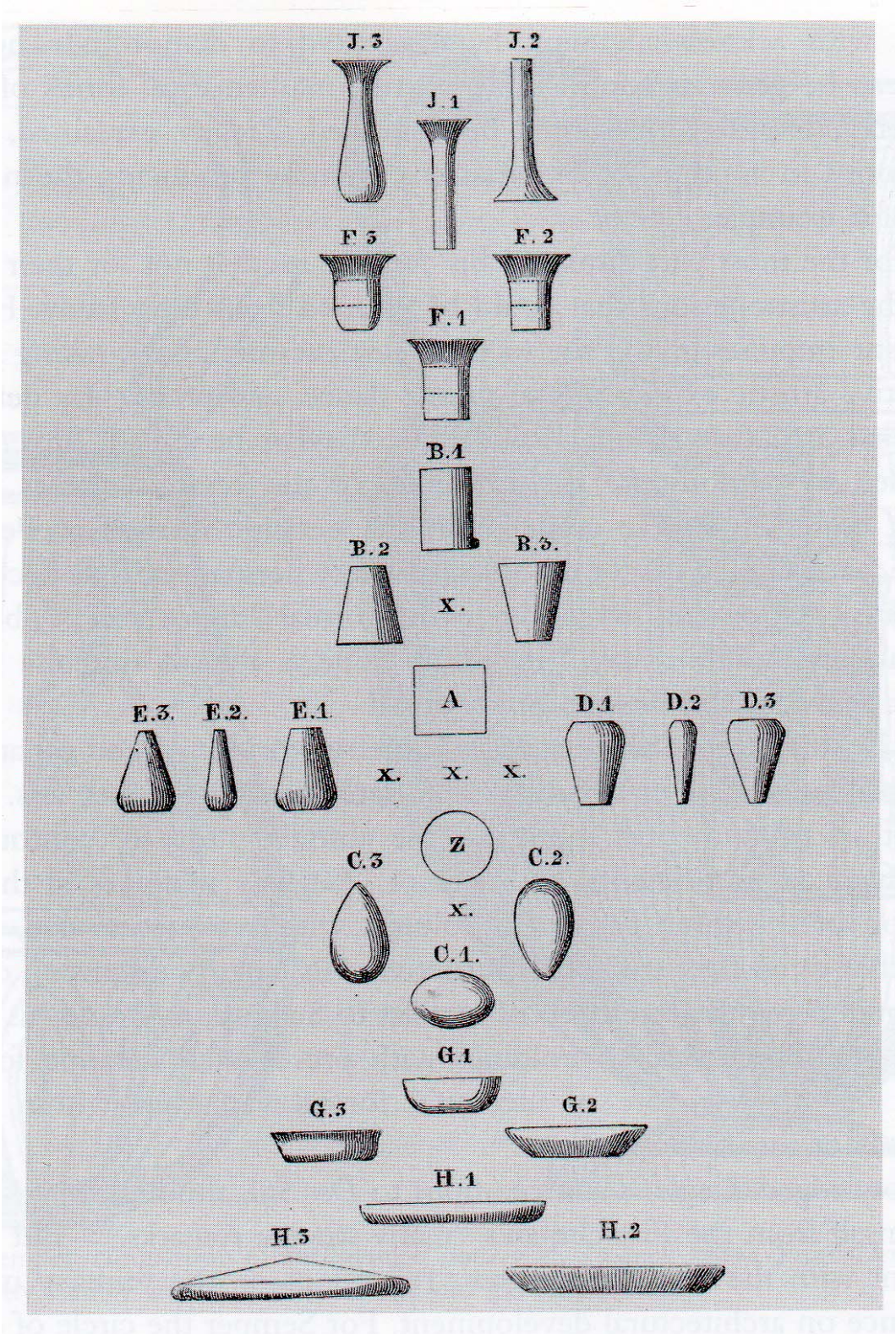

Figure 4.27: Plate from Jules Ziegler's *Etudes céramiques*, in G. Semper. *Der Stil*, vol. II, 1863.

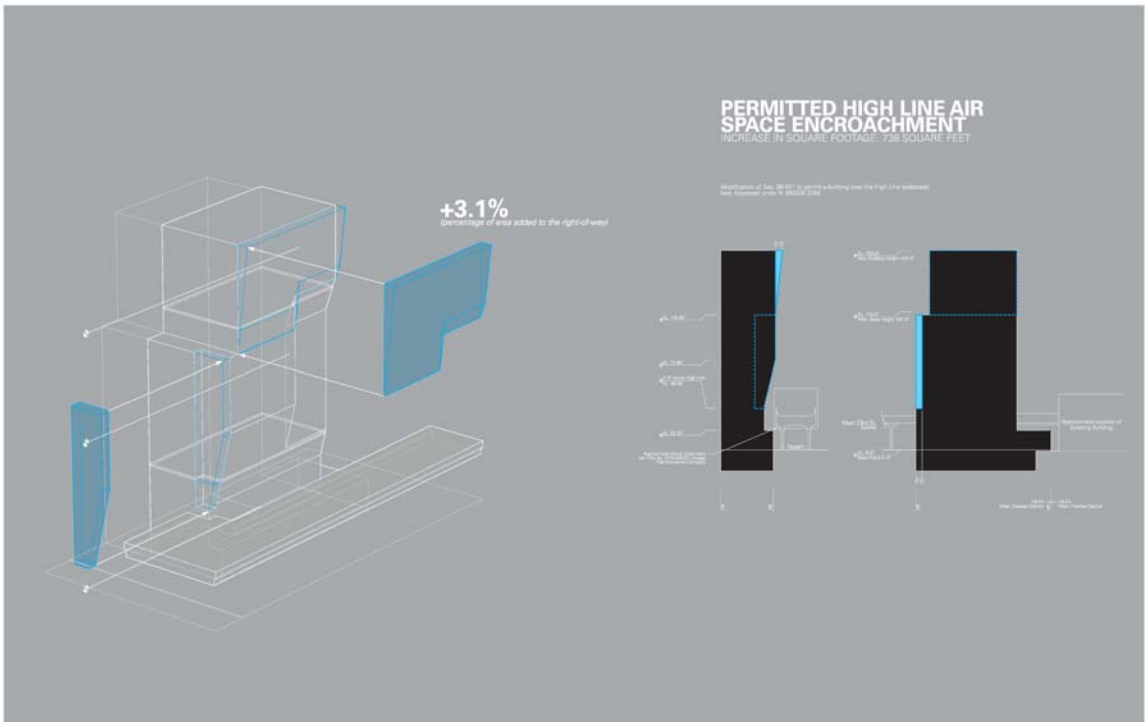

Figure 4.28: HL23. Diagram of permitted High Line air space encroachment.
Courtesy of NMDA.

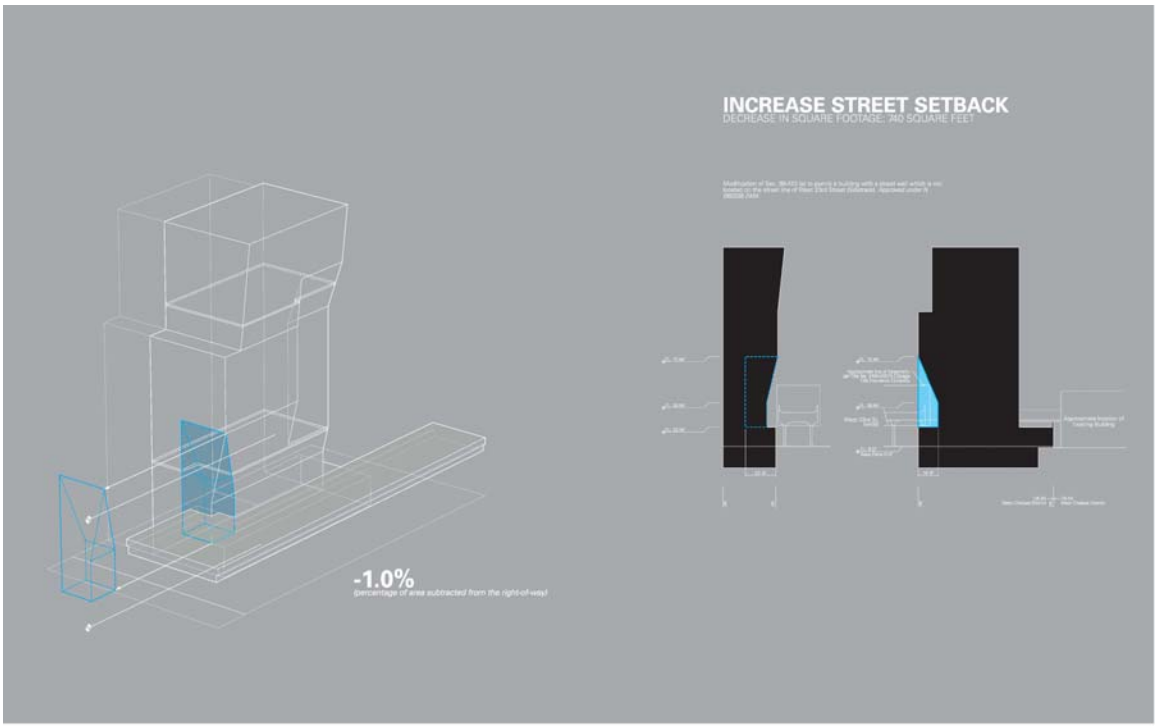

Figure 4.29: HL23. Diagram of increase street setback.
Courtesy of NMDA.

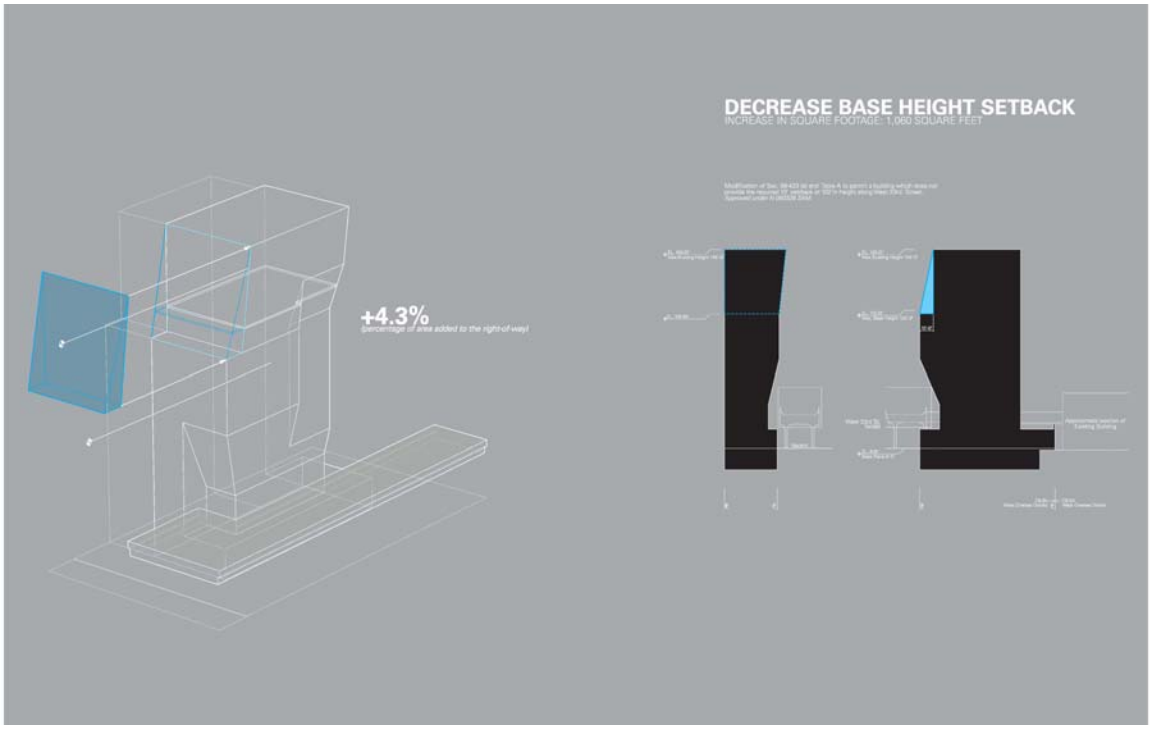

Figure 4.30: HL23. Diagram of decrease base height setback.
Courtesy of NMDA.

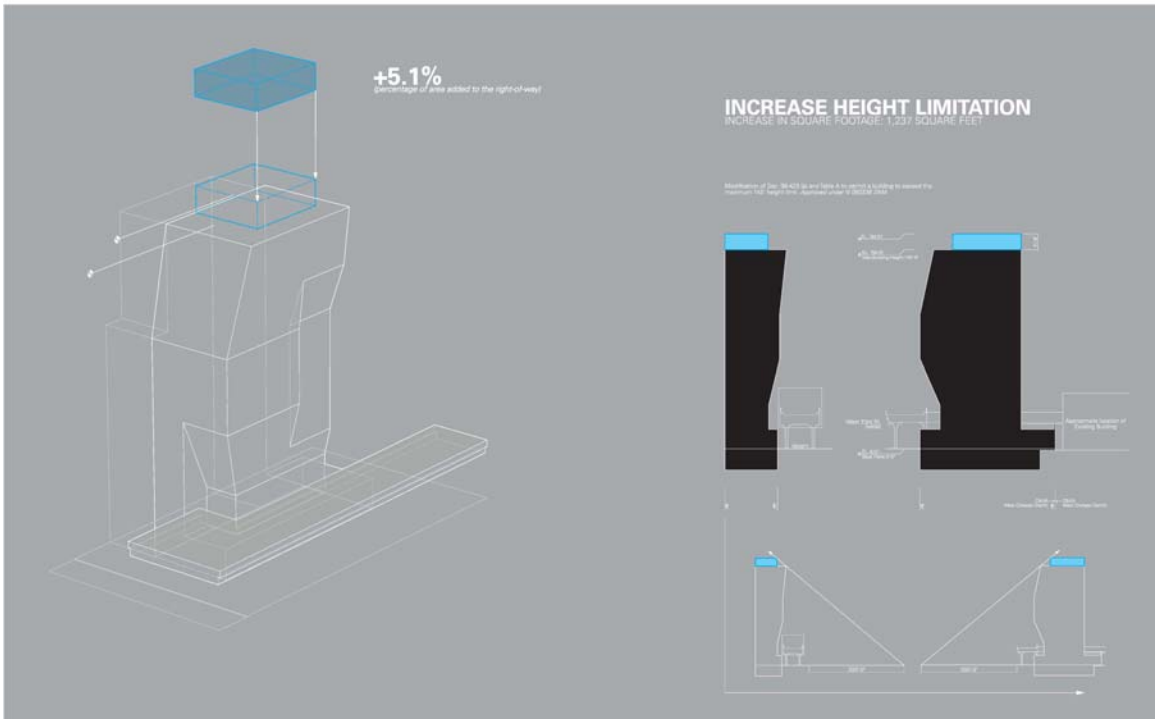

Figure 4.31: HL23. Diagram of increase height limitation.
Courtesy of NMDA.

Figure 4.32: HL23. Elevations.
Courtesy of NMDA.

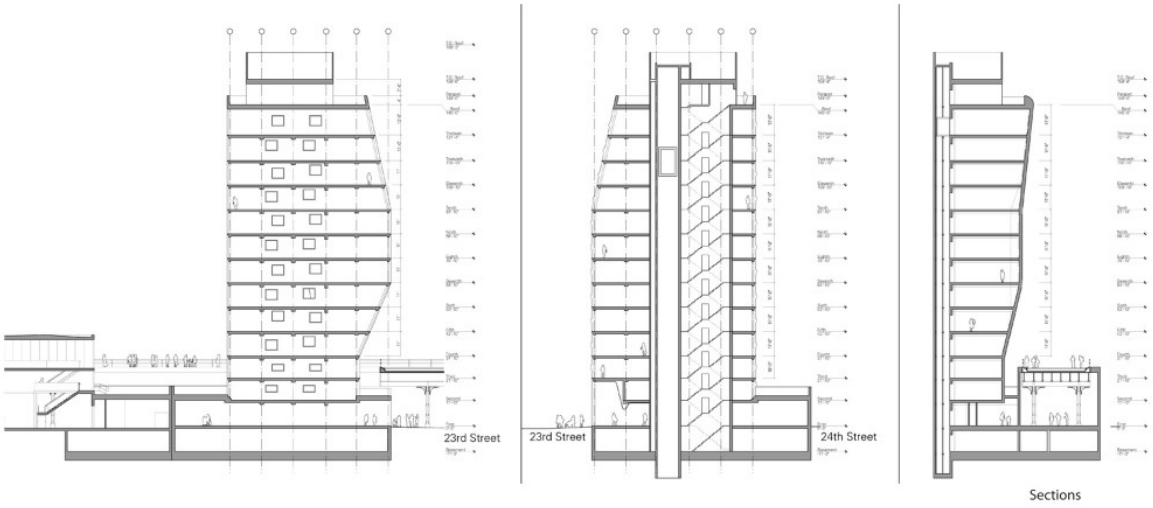

Figure 4.33: HL23. Sections.
Courtesy of NMDA.

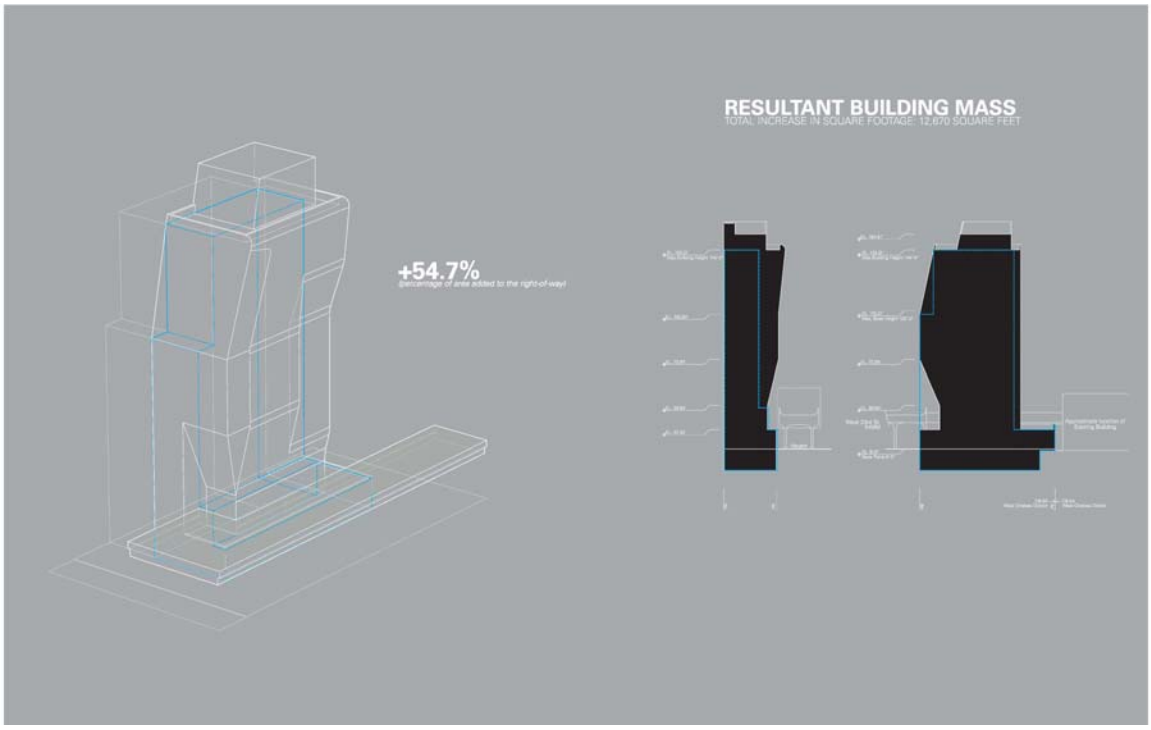

Figure 4.34: HL23. Diagram of the resultant building mass.
Courtesy of NMDA.

CHAPTER 5:

Ends and Beginnings

Taking three housing projects and the urban contexts from which they arise as subject matter for case study analysis, this dissertation illuminates that: 1) code manipulation can be used as generative material for architectural design, 2) code manipulation can be used by architects to mediate the universal and the specific aspects of urbanism, and 3) code manipulation can stimulate the production of both cities and discourse. The findings of this dissertation expand on these three detections, and examine issues that emerge from both the case studies, and from the use of architectural code manipulation as an analytical framework.

Code manipulation adds a trait within the discipline of architecture to be used for critical review of the city planning codes that regulate the form and use of buildings. Rendering social and geographical deviations equally important as the apparatus of exercising powers, code manipulation introduces an alternative both to TND New Urbanism's reformed codes, and to Rem Koolhaas's hidden specificities. Through the literature review of this dissertation, we have seen that TND New Urbanism represses the everyday, and that Koolhaas hides the marginalized forces within the Metropolitan construct. Even if the latter approach is quite poetic, and may unleash behaviors beyond the constraints of conformity, as it did in post-World War II New York City and late twentieth century Los Angeles, it eventually runs the risk of stimulating urbanization that circumscribes the prosperity of emerging prospects. Social and geographical deviations may find their way into the realm of the universal, as they did with the loft, and

possibly will do with the ADU. But, as Michel de Certeau reminds us, "[e]veryday life invents itself by *poaching* in countless ways on the property of others."[547] Hence, it is difficult for architecture to benefit from the combination of disparate systems when some parts of the culture remain hidden from the production of disciplinary knowledge.

Substituting TND New Urbanism and Koolhaas, code manipulation illuminates a trajectory in compliance with Michael Sorkin's code. Engineered to bridge memory and evolution, the feedback loop in Sorkin's code produces architecture in-between the specific and universal aspects of urbanism. As we have seen, however, Sorkin's resistance to the disciplinary connotations of form and content hinders implementation, while reinforcing his utopianism. Recognizing this dilemma, code manipulation goes beyond Sorkin's model to formulate means and methods of how to instigate similar procedures within the realm of physical construction. Not dismissing the importance of his utopia, code manipulation elucidates procedures where the disciplinary connotations of form and content can be used to activate the space in-between the specific and the universal.

To succeed at such a mission, code manipulation makes use of Dana Cuff's scholarship on the politics of property to expand on the responsiveness to environmental change that Sorkin is concerned about.[548] By reinterpreting the relationship between land, property, and site that she establishes, code manipulation turns Cuff's construct into a set of variables possible to be

[547] Certeau, *The Practice of Everyday Life*, xii.
[548] Michael Sorkin calls for models that render "architecture's ability to comprehend and respond to changes" within the realm of an ever evolving environment. See Sorkin, *Local Code: The Constitution of a City at 42 N Latitude*, 128.

appropriated -- perhaps even managed -- by architecture.[549] The associative manners of these variables raise a significant sub-question for this dissertation, as they form an intellectual compound feasible to be traversed from urbanism to architecture. When the inherent configuration of property and site has been reinterpreted, physical construction of architecture may be activated in response to the instant fluctuations, and eventually transformations, of the characteristics and manners implicit in the variables.

All three architects in the case study research recognize, in different ways, that design projects demand codes to be pushed, explored beyond the potentials of their intent.[550] Realizing that zoning codes are explicit and inflexible, yet permeable for multiple interpretations, this dissertation expands on the case studies to explicate how architects can participate in the development of urban form and use by critically re-thinking the premises of the planning regulations that constrain design implementation. Findings demonstrate how architecture, through code manipulation, can negotiate complex relationships between abstract principles and local significance. Instead of using prescriptive regulation to limit architecture's capacity to explore the rapid pace of urbanization, as advocated by TND New Urbanism, experiences in

[549] Cuff, *The Provisional City: Los Angeles Stories of Architecture and Urbanism*, 62.
[550] Richard Meier describes the code manipulation of Westbeth as "a nightmare" of interdepartmental bureaucracy. Richard Meier, interview by Per-Johan Dahl, March 29, 2011. When discussing the design of Palms' building envelope, the dialogue included references to Daly Genik Architects' Camino Nuevo schools. In light of these schools, Kevin Daly says that "almost everything is constrained by what's mandated by the codes, you know, so you really have a very limited number of things that you can design." Kevin Daly, interview by Per-Johan Dahl, December 17, 2010. Neil M. Denari realizes that City Planning can be supportive of contemporary architecture, which may require interpretations of its own standards. If the City "wants the best architecture that could happen," he says, "especially around the High Line, because it will definitely be one of the legacy projects of that administration, of City Planning but also Bloomberg; new park, everything, you know; I was just there on a weekend, it's packed. So if there was a sense that a new building would come in and make a promise, in a way, that would be pretty spectacular, that it would almost be a monument, I think that's the only way they look at it and go; if this is going to challenge our brand new zoning, it better be, you know, and amazing building." Neil M. Denari, interview by Per-Johan Dahl, October 19, 2010.

Greenwich Village, West Chelsea, and Venice, California, confirm that architecture can introduce new means of flexibility by serving as a productive intermediary between the universal and the specific aspects of urbanism.

Forced by the apparatus of exercising power to obey zoning codes, architects seek ways to manage opportunities and constraints. While there are two prevailing tendencies of either surrendering to the code or, much more rarely, rewriting the code, each of the cases examined in this dissertation explores a third path beyond common practices. Even if each of the three cases represents its own procedure, collectively, they offer a few lessons. Findings expand on critical research to propose design toolkits for, on the one hand, architects who seek to develop designs beyond the constraints of code and, on the other hand, policy makers who seek to understand how their own tools are masking, or repressing, lucrative potentials and tendencies. Rather than yielding full recipes, analyses only identify some ingredients. The following seven propositions emerge from the case study analyses, offering insights for both architects and policy makers.

1) Reconceptualize the zoning provision or conceptualize the target of zoning provision: All zoning codes enfold a series of abstractions. Molded into legislation, they conceptualize various aspects of urban life and geography. If architecture seeks to manipulate the code, design must establish relevant relationships to the very zoning provision that hamper implementation. If connections are established, then they can be either reconceptualized, or conceptualized to match the design intent. In this dissertation, we have seen how the intervention of the ADU and the implementation of Neil M. Denari's HL23 both established some relationship with the code to reconceptualize the zoning provision that hampered realization. The ADU overcame the

normative qualities of the suburban backyard by reconceptualizing the low-density factor of single-family zoning, and the HL23 unfolded new relationships between the architectural form and the estimated values of public good by reconceptualizing the zoning envelope. The proposition also points to Richard Meier's design of Westbeth's lofts, where a spatial typology was introduced to universal code through his conceptualization of the loft. While the ADU and the HL23 both used design to introduce new interpretations of the code that rejected them, Westbeth showed that design can be used to explain some spatial intentions to the universal premises of code. The choice of operation will not affect the generative aspects of architecture, as both reconceptualization and conceptualization yield non-conformist solutions. It may, however, affect possible transition from manipulation to modification, which is important if the architect seeks to promote permanent alliances with urban planning.

2) Persuade finance:

The trinity of design, finance, and entitlement drives the construction of architecture. When design seeks innovation outside the realm of the trinity, finance and entitlement respond with conformity. However if finance senses revenue beyond conformity, innovation might be accepted -- even entailed. If code manipulation points to profit, non-conventional design can revive the trinity and persuade finance to conquer entitlement. For Westbeth, it was the architectural effort of squeezing a spatial typology through federal mortgage guarantee programs that, through code manipulation, yielded innovation. And for HL23, it was the minimized real estate ratio of the site that explicitly requested non- conventional architecture, which was only possible to realize beyond the realm of code. The means of profit may vary from case to case, but the shaped charge of the trinity remains.

Both the loft and the ADU story include the transition from manipulation to modification. Hence, in both cases, architecture served to update legislation. As this dissertation focuses on design innovation being processed in conflict with zoning provision, no comparisons can be made on compliances with the code. We may suspect that the financial mechanisms operating in conformity with entitlement are more likely to repress non-conventional solutions. Still, the design and fabrication of the Palms residence was rendered in compliance with the code, and finance upheld innovation. While this dissertation can't point to reliable findings on the generative aspect of trinity in accord, it does prove that the ruptured trinity may stimulate non-conformist design solutions within the context of code manipulation. In other words, while associative relationships between design, finance, and entitlement may or may not stimulate non-conformist solutions, code manipulation may stimulate solutions beyond conformity when the associative relationships have been damaged.

3) Claim the relationship between city and site:

Urbanism can afford to ignore site, but architecture can't. Indeed, zoning regulates the city as a whole with no concern for its intrinsic parts, while design must always, to some extent, consider the social, cultural, economic, and geographical aspects of site. As zoning, in its current state of jurisdiction, relies on correlation between federal and local government, its capacity to deal with site will remain limited. For architecture, however, limitation to deal with urbanism can be defeated through expanded knowledge on disciplinary intersections. If architecture claims the relationship between city and site, new potentials for urban development will unfold. The Westbeth research shows that architecture can increase urban grain when unlocking the M1, and

the ADU research shows that architecture can amplify urban densities by undermining the R1. The HL23 research proves that unexpected qualities of urban space can be unfolded when site and city are reconnected. Looking explicitly at the Palms research, it is interesting to follow how new relationships between city and site spur architectural innovation. Disregarding the mere traditional means of site arrangement, Daly Genik Architects explored the lot in terms of transportation and assembly. Seeking to develop design that challenges the conventionality of theses systems, Daly Genik Architects establishes new relationships not only between architecture and site, but also between site and city.

The discrepancy between how regulated property and piecemeal land use change within the realms of site is, however, still to be solved. None of the cases in this dissertation point to satisfactory procedures for challenging conventional land use codes. The ADU still relates to residential architecture, and the program of HL23 complies with mixed-use zoning. The most promising case is rendered through the loft, which continued to spur land-use change within the realm of site, even after Westbeth. Failing to overcome real estate speculation, however, the loft was soon forced to entail substitutes to conventional land use codes. The findings in this dissertation suggest expanded research on the interconnection between regulated property and piecemeal land use change within the realms of site.

4) Recognize the illegal and engage the informal:

A space considered illegal by the apparatus of exercising powers can hold unexpected DNA for urban life. Indeed, it might be these illegal spaces that nurture new lifestyles and alternative living conditions. Accompanied by architecture, illegal spaces can become new territories for experimentation, and new markets for disciplinary practices. Both the loft case and the ADU case demonstrate such procedures. Emerging as illegal spaces, they were both used for form and content experiments.

When spaces emerge under the radar of local planning administration, they represent the informal aspects of urbanism. These spaces tend to reveal tell-tale discrepancies between urban planning praxis' and everyday practices. While these discrepancies incorporate the power to catalyze generative behaviors, they do need disciplinary procedures to engender substantial change. We have seen that Westbeth transformed the loft from informal space to building type in the late 1960s, and we have detected the ADU following a similar path today. It is important, however, to realize that this transition may be counterproductive for innovative architecture and city building. Obtained by the universal forces of consumption and production, certain conforming forces might hamper subsequent experimentation. One example briefly encountered encompasses the transition from code manipulation to code modification in the early '70s in New York City, which both stimulated and repressed innovation of loft architecture.

5) Experiment with forms and evaluate the implications:

Form experimentation drives code manipulation. Indeed, all three cases in this dissertation point to a similar conclusion: that experimentation on architectural form is imperative for code manipulation. The Westbeth case demonstrates that code manipulation needs form to process content. The Palms case demonstrates that density regulation can be manipulated through new relationships between architectural and urban form. And the HL23 case demonstrates that code manipulation can be rendered through the modeling of building form. None of the three cases, however, rendered code manipulation solely through autonomous form making. On the contrary, each of the cases expanded on architecture as a disciplinary practice to create form in compliance with some objectives stipulated by local planning administration, which enhanced the qualities of public space. The adaptive re-use of Westbeth's lofts conformed to the prevailing interest among local government to promote historic preservation and mixed-use urbanism; the increased density accomplished by L.A.'s ADUs conformed to state objectives of reducing greenhouse gas emission; and the expanded bulk of HL23 unfolded new and unexpected qualities for the High Line open space. Hence, even if form experimentation drives code manipulation, the implications of form experimentation must always be measured in compliance with the tentative objectives of local planning administration.

6) Follow up on revolts:

The universal aspects of urbanism marginalize the specific, while the specific aspects of urbanism revolt against the universal. Any revolt on the universal principles of zoning projects a possibility for amendment. The revolt could be vocal, such as the artists' revolt on Modernist city planning, and the mobilized defense of the High Line. Or it could be silent, such as the

revolt against low-density urbanism, operating in disguise behind L.A.'s suburban façades. When zoning has been wounded by social upheaval, then code manipulation can serve purposes beyond the disciplinary interests of architecture. Being installed to sniff out optional paths of legislation, architecture can inform urban planning of alternative routes to common praxis. The alternative routes can become zoning amendments, as with Westbeth and the ADU, or they can remain exceptions to the code, as in the HL23 case.

7) Think with precision, act broadly:

It takes intellectual precision to successfully manipulate the code. As zoning is one of many tools used by urban governance to carry out planning policy, various decisions and propositions are directly or indirectly associated with zoning provision. Disciplinary precision helps to usher an architectural objective through the complex -- sometimes fragmented -- realm of planning policy. Richard Meier, for example, dissected the means of architectural representation to persuade the code, and Neil M. Denari elaborated on intersected design cultures to manage digression. In each case, the architect drew from disciplinary connotations to navigate an explicit path within the realm of planning policy. It is important, however, to expand on precision and act broadly. Manipulation can serve as a prototype for amendment. As most planning agencies seek to avoid deviations to zoning provision, the manipulated code should point to added value possible to use by planning policy. Westbeth educated urban governance on how to legalize a behavior that had been proven lucrative for the state and the city; the ADU formulated an agenda for urban governance to deploy when legalizing a new approach to land use, which provided alternatives to a hopelessly outdated city building model repeatedly attacked locally, nationally, and globally; and HL23 provided an extra engine to accelerate the politically supported transformation of the

West Chelsea area. Hence, all three cases acted implicitly or explicitly as to greater issues of significance for the political goodwill of urban governance. Two of three case studies also point to the power of mass in urban transformation. Hence, the size of Westbeth and the proliferation of ADU were both key stipulations for the subsequent change in planning policy. It takes big moves and big voices to redirect urban government. Based on this proposition, it is safe to conclude that incremental change only works if a bundle of increments can point to significant benefit. The Lone Ranger of architectural practices might succeed in implementing dispersed ideas, but never to re-direct the rapid pace of urbanization.

CONCLUDING STATEMENTS

The seven propositions emerging from the case studies intersect with the previously outlined body of literature to raise five questions with relevance for the discipline of architecture: 1) How to expand the array of analytical frameworks within the discipline of architecture for evaluating the broader implications of the codes that regulate the form and use of buildings within the context of contemporary city planning; 2) How to interconnect universal and specific urban space; 3) How to improve architecture's role in the making of cities; 4) How to extract new forms of urban architecture that support emerging lifestyles; 5) How to elucidate new interconnections between property and site. These five questions are the most important statements because they evolve from within the scope of accomplished research, while pointing to undertakings beyond this dissertation.

1) We need to expand the array of analytical frameworks within the discipline of architecture for evaluating the broader implications of the codes that regulate the form and use of buildings within the context of contemporary city planning.

The literature review and the case studies of this dissertation intersect to prove that the zoning codes that regulate the form and use of buildings obstruct architectural innovation. This is, of course, a serious problem, not only for architecture, whose vitality is repressed by the systems in which it operates. It is also problematic for urbanism, whose procedures for organizing space all too often follow the rules and routines of scientific doctrines without processing the aesthetic relationship between social practices. As architecture has been the prime target of planning regulation in the U.S. ever since Edward M. Bassett unzipped the fabric of New York, we would expect an array of critical scholarship to have been produced within the discipline of architecture

to illuminate methods of how to traverse the constraints of code. However, drawing from the literature review, we must conclude the opposite. Interest in the technical aspects of zoning codes has, in fact, been dormant within the discipline of architecture. Therefore, we require a wider array of analytical frameworks for evaluating the prevailing discrepancies between zoning codes and architectural innovation.

We must ask ourselves why architecture has been absent from critical discourse on planning regulation. This lack of interest may be explained through the fact that zoning repeatedly has failed to respond to the shifting premises of urban life. Indeed, continuing to operate as an instrument of social reform, zoning remain impervious to the qualities of the urban age, to which planning scholars Bruce Katz, Andy Altman, and Julie Wagner pay attention.[551] The upheld mission of zoning to, through a set of reactionary principles, persistently redress public health crises that bear little relevance to contemporary life, has produced a dull and inept construct that architecture, paraphrasing Sylvia Lavin, generally considers "to be repulsive, an odious amalgam of…bad form and moralism."[552] The social reform tendency implicit in zoning is problematic. Not only because it maintains a hopelessly outdated approach on the constituting premises of urban space, but also because it raises a shield of rigid arguments often painfully hideous to break through. In fact, the limited amount of critical scholarship on zoning produced within the discipline of architecture may find its explanation in the fact that these codes rarely have been

[551] Katz, Altman, and Wagner, "An Agenda for the Urban Age."
[552] Sylvia Lavin says that "architecture generally considers environmental design to be repulsive, an odious amalgam of pseudoscience, bad form, and moralism." Lavin's remark on environmental design is used within the context of this dissertation to illustrate a certain attitude towards zoning that the author finds prevailing. However, due to the scientific approach on social progress, to which zoning adheres, the author can't call zoning 'pseudoscience'. See Sylvia Lavin, *Form Follows Libido: Architecture and Richard Neutra in a Psychoanalytic Culture* (Cambridge, Mass: The MIT Press, 2004), 3.

considered generative for design. On the contrary, for most architects -- scholars and practitioners -- zoning codes represent the epitome of servitude and boredom.

Therefore, we need analytical frameworks within the discipline of architecture that goes beyond the idea of social reform to instigate procedures of how to process the qualities of the urban age. The evaluation of zoning will only be useful for architecture if it proves relevant for the stimulation of that process generally constrained by code, which, as we have seen, is innovation. It is in light of this procedure that code manipulation offers vital grounds. All three case studies have explicated architectural practices that operate in opposition to conventional zoning provisions and, through the premises of design, turned the code into a generative material for architectural innovation. Processing code through form experimentation, they all point to procedures beyond the scientific measurements of planning regulation. Indeed, by targeting irrelevant bedrooms in Greenwich Village, obsolete city building patterns in L.A., and insufficient zoning variables in West Chelsea, all three case studies add a layer of analytical reflection to prove architecture's capacity to upgrade the premises of civic life beyond the realm of urban planning.

2): We need to develop means of interconnecting the universal and the specific aspects of urbanism.

The planning literature reviewed within the context of this dissertation shows that zoning has often failed to process issues beyond the universal aspects of urbanism. When elevated into federal law with *Euclid*, the division between the universal and the specific aspects of urbanism was cemented in planning doctrine. This divorce between the universal and the specific aspects

of urbanism has created a serious problem for the regulation of both buildings and cities all over the American continent, which the literature review certainly confirms. Directed by the lawyer, the surveyor, or the municipal engineer rather than by an expertise in space making, the primary task of city building has generally been not design, as Jonathan Barnett so critically observes, but "more abstract considerations of public health and welfare."[553] More specifically, the case studies in this dissertation prove that universal zoning principles have quarantined marginalized architectural types in New York City, which later were proven highly valuable for the social and economical prosperity of civic life. And, we have seen the repetition of such procedures in contemporary L.A. with the obstruction of ADU implementations. Indeed, when failing to process the specific aspects of urbanism, zoning has hampered emerging tendencies and prospects that might be valuable for the premises of civic life.

Drawing from both the literature review and the cases studies, we have seen multiple attempts being initiated by the planning doctrine to reconnect the specific and the universal aspects of urbanism. Indeed, urban planning has worked on closing the gap ever since Jane Jacobs battled Robert Moses.[554] The codes that Mayor John Lindsey's Urban Design Group of the New York Planning Commission modified in the 1960s and '70s, for example, certainly describe such an attempt. Developed within the discipline of urban design, and tailored to improve the planning of New York, both the literature review and the case studies confirm supplemented connotations. Lindsey's team, which was headed by Barnett, pursued "urban design innovations, [including] incentive zoning legislation, special design districts, programs for saving landmark buildings and

[553] Barnett, *An Introduction to Urban Design*, 60.
[554] Fishman, "Revolt of the Urbs: Robert Moses and His Critics."

rebuilding theater districts, and shopping streets," that had bearing for the planning of New York City and beyond.[555] In fact, due to their contextualization in Kevin Lynch's "explorations into the image of American cities," which Anastasia Loukaitou-Sideris and Tridib Banerjee pay attention to, these innovations have proven applicable to the rehabilitation of downtown areas all over the U.S.[556] For the context of this dissertation, however, we have mainly studied their impact on New York City. From Richard Meier's Westbeth to Neil M. Denari's HL23, these modified codes continue to inform the planning of New York City.

When comparing the cases in New York City with the one in Los Angeles, it is interesting to discover the different means by which east and west coast planning elaborate on zoning's ability to bridge the universal and the specific. If the planning administration in New York City seeks to overcome discrepancies by writing new rules in accordance with local agencies, the L.A. code was altered by opposite procedure.[557] Amended through state initiative, the rules in Los Angeles were updated on a meta-level to legalize implementation of ADUs in all California cities, including the ones in L.A. We have to ask ourselves what different implications these two procedures have on architecture. The modifications we saw in Mayor Lindsey's New York City certainly complied with architectural innovation to spur loft developments in Manhattan throughout the 1970s and '80s, on which urbanization capitalized. And HL23 provides us with a more recent example, wherein the City draws from the legacy of these codes to amplify urbanization through the veins of architecture. Similar patterns have not been visible in the City

[555] Loukaitou-Sideris and Tridib Banerjee, *Urban Design Downtown: Poetics and Politics of Form*, 69.
[556] Ibid., 67-70.
[557] Jonathan Barnett says that "[i]nstead of handing over designs or policy positions as an ostensibly finished product, designers of cities should seek to write the rules for the significant choices that shape the city, within an institutional framework that can be modified as time, and need, change." See Barnett, *An Introduction to Urban Design*, 12.

of Los Angeles. We could imagine, for example, that urban governance would have capitalized on the reconceptualized backyard, and thus stimulated urbanization through the new aesthetic relationships between social practices, which had thus been unfolded by architectural innovation. The uneven development pressure we experienced with the Palms case certainly encompasses one reason for the absence of such procedure. When we lack the financial incentives of the large-scale projects with which Dana Cuff is concerned, then jump-starting urbanization seems risky.[558] Perhaps L.A. could use the rehabilitation of a monument? Learning from the High Line, the universal processes accelerated by such initiative may intersect with the specific attributes of ADU architecture to catalyze financial incentives beyond the constraints of code. In fact, as we have seen, substantial change can certainly happen when design and finance join forces.

Still, even if Mayor Lindsey, through Barnett, did succeed in introducing some interconnections between the universal and the specific through code modification, the literature review intersects with the case studies to demonstrate that urban planning regulation continues to adhere primarily to the abstract filed of forces that always strive to repress the specific aspects of urbanism. We have seen in the literature review that modified zoning continues to limit architecture's capacity to explore the prospects beyond universal code. And the literature was proven correct by West Chelsea, where an alternative other than code allowed innovation. We have also examined other propositions from urban planning, such as Emily Talen's desire for "regulation that produces more exact outcomes," which certainly won't stimulate a higher level of resilience towards the social and cultural initiatives proliferating outside her moralizing vision of good urban form.[559]

[558] For Dana Cuff's large-scale projects, see Cuff, *The Provisional City: Los Angeles Stories of Architecture and Urbanism*, 4-14.
[559] Talen, *City Rules: How Regulations Affect Urban Form*, 184.

And even if planning scholar Eran Ben-Joseph's discourse on place-making offers some interesting remarks by advocating "experimentation and discretion," he still chooses to regulate civic life through rigid standards on building design.[560] Indeed, the literature review intersects with the case study research to prove that the urban planning doctrine lacks methods on how to trace, process, articulate, and represent the spatial needs, desires, and opportunities that occur on instant basis behind the zoning web, and how to incorporate these tendencies into the domains of urban governance. Drawing from the case studies of this dissertation, we can conclude that code manipulation provides architecture with an analytical framework viable to support urban planning in this endeavor.

3) We need to improve architecture's role in the making of cities.

We have traced, in the scope of the literature review, the gradual split between architecture and urbanism, which followed the publication of Leon Battista Alberti's treatise. The consequences of this split, which eventually was finalized in 1867, when Ildefons Cerdá published his book, shouldn't be underestimated, either for architecture or for urbanism.[561] Divorcing urbanism, architecture's role in city building was diluted, which Siegfried Giedion points to.[562] Thus architecture's capacity to influence the systems in which it operated was seriously reduced. And urbanism lost a critical companion, whose ability to reach outside the realm of disciplinary autonomy provided valuable means for urban analysis beyond the mere scientific approach of city planning. Indeed, the divorce between architecture and urbanism didn't gain any of the two disciplines.

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[560] Ben-Joseph, *Code of the City: Standards and the Hidden Language of Place Making*, 189.
[561] The split between architecture and urbanism is outlined in Choay, *The Rule and the Model: On the Theory of Architecture and Urbanism*.
[562] Giedion, *Space, Time, and Architecture: The Growth of a New Tradition*, 211-18.

The literature review of this dissertation intersects with the Westbeth case study to elucidate one attempt of reconnecting architecture and urbanism, which has been channeled through the discipline of urban design since the 1950s. Even though this initiative certainly sketches out a viable direction, still, as we have seen in the literature review, both the practical approach of Jonathan Barnett and the critical approach of Aldo Rossi continued to limit architecture's capacity to negotiate complex relations between the universal and the specific aspects of urbanism. All too often processing architecture through universal discourse, urban design rarely supported architecture's attempts at inventing new maneuvers in compliance with the specific circumstances of site, which HL23's battle against the zoning of West Chelsea confirms. Developed in the spirit of Barnett, the concept of special district zoning, which regulated Neil M. Denari's site, has assimilated into planning praxis through numerous amendments to become one of the sub-zones that Richard F. Babcock is concerned about.[563] Hence, its capacity to process site is limited. Based on this declaration, this dissertation calls for complementary constructs next to urban design to stimulate architecture's role in the making of cities. All three case studies in this dissertation demonstrate such constructs. Through innovative design, they all render interconnections between architecture and urbanism independent of urban design.

Rossi's universal typologies adhere to the abstract field of forces, which often constrain marginalized initiatives. Still, his disciplinary precision helped both Richard Meier and Denari to implement their site-specific interpretations through code manipulation. Indeed, the academic context to which Rossi conform has been proven vital for architecture when explaining some

[563] Babcock, *The Zoning Game: Municipal Practices and Policies*.

specific attributes of urbanism through the premises of design. His morphologies were not only useful to support development of architecture in compliance with emerging social practices, which we have seen with the loft and, to some extent, with the ADU, they were also proven useful when activating design processes in opposition to zoning provision, as particularly expressed in West Chelsea. We must ask ourselves why the universality of Rossi's discourse succeeds to stimulate elaborations of site. We may find the answer in the technique he deploys for investigating the architecture of his city. Rossi is explicit about the importance of universal rules for the structuring of architecture.[564] He is also notorious for communicating his rules by the means of architectural drawing. Peter Eisenman tells us in his introduction to *The Architecture of the City* that Rossi's drawings can be seen to evolve directly from his scholarly practice.[565] Hence, Rossi directs the morphology of his city, not through legal procedures or technical explanations, but through the architectural drawing. Indeed, with his drawing he represents, instead of regulates, the procedures of his morphologies. And it is exactly the differentiation between representation and regulation that makes Rossi's academic context open to the local and the intrinsic. The case studies correlate with the literature review to suggest that the specific aspects of urbanism can be represented through architectural drawing, but never explained through planning regulation. This suggestion unfolds an expanded field of research viable for subsequent practices to elaborate on when developing new tools and methodologies for the design of buildings and cities.

[564] Rossi, *The Architecture of the City*, 40.
[565] In his "Editor's Introduction," Peter Eisenman explains that "Rossi's drawings of the 'analogous city' can be seen to evolve directly from his writing of *The Architecture of the City*." Rossi's writing of his book can be described as a scholarly practice. See Ibid., 10.

The three case studies of this dissertation have proven architecture's capacity to stimulate urban change in both New York City and L.A. Indeed, despite different geographies and disparate planning administrations, all three cases succeed in expanding upon the premises of manipulated code to inform the making of urbanism through innovative design. Still, none of the cases has been carried out in a context regulated by the predictable codes of Talen. On the contrary, all three cases have been executed within urban contexts still regulated by conventional zoning controls. Indeed, the aptitude of architecture to manipulate the codes that today are so widely adopted in compliance with the norms and methodologies of TND New Urbanism has yet to be tested. It remains a task for code manipulation to prove its vitality within such context.

4) We need to extract new architectures to support emerging lifestyles.

The literature review intersects with the case studies to show that, ever since World War II, the universal aspects of urbanism have hampered the architecture of emergent lifestyles. Indeed, the aged buildings that Jane Jacobs's neighborhood was concerned about were threatened in the 1940s and '50s; the lofts were threatened in the '60s and '70s; and Los Angeles' ADUs have been threatened since the '80s. The intersection of literature review and case studies proves similar tendencies in New York and in Los Angeles. Hence, this issue is not geographically contextualized, but describes rather a widespread procedure.

In hindsight, universal zoning has gradually approved the architecture of emerging lifestyles. The preservation codes saved SoHo's cast iron façades, the loft was eventually legalized, and the Californian ADUs were slowly but surely approved by state amendment. However, universal zoning has only been responsive after decades of battle. This slow pace of zoning to respond to

tastes and behaviors other than those normalized by code encompasses a serious problem for the development of any urbanism. When the City's policy obstructs the making of environments responsive to emerging needs and desires, then the development potentials of that city are sincerely restrained.

We shouldn't underestimate the importance of increasing the pace of interaction between the apparatus of exercising powers and the appropriation of marginalized sites. The case study research of this dissertation, for example, proves that prevailing sluggishness seriously delays urban transformation. The extended loft saga encompasses such an example, but so do the grassroots initiatives that for many years battled the City to preserve the High Line. In fact, one of the most prosperous -- if not *the* most prosperous -- interventions that Manhattan has experienced for decades was already initiated in the 1980s by a Chelsea underdog's attempts to save a hopelessly outmoded and seriously deteriorated railroad structure from demolition. Hence, the "movements that counterbalance and combine themselves outside the reach of panoptic power," quoting Michel de Certeau, have repeatedly catalyzed urban transformation in New York City.[566] It may be cynical to profit from their practices, however it doesn't seem wise to continue delaying, or disregarding, the potentials imbedded in their needs and desires.

The procedures discovered in New York City have, to some extent, repeated themselves in the City of Los Angeles by means of ADU proliferation, but without similar implications on urban transformation. We have seen that the development pressure is uneven in L.A., which certainly postulates one explanation, as Dana Cuff's massiveness remains absent. Still, Los Angeles

[566] Certeau, *The Practice of Everyday Life*, 95.

continues to expand, as Michael Dear shows us in the Palms case, and thus development will continue.[567] If we compare the Manhattan cases, some interesting patterns unfold. Architectural development was catalyzed, both in SoHo and in West Chelsea, by the swiftly clustering of new businesses, which intersected with the needs and desires of emerging lifestyles to appropriate the potentials of underutilized buildings. Drawing from our experiences in New York City, we may suggest that the City of Los Angeles target some informal procedures of appropriating space, and channel these activities through the veins of architecture to stimulate the proliferation of businesses.

If we want to extract new architecture to support emerging lifestyles, we have to move beyond social reform and seek out a means to inform the making of the city with the qualities of the urban age. Indeed, any attempt to judge the needs and desires of emerging lifestyles through a set of reactionary principles is doomed to inefficiency. When leaving the bonds of social reform, both the literature review and the case studies of this dissertation point to a similar conclusion, that new architectures can be extracted through an intermediary process, pairing the universal forces of finance and governance with the possibilities excavated at the site. Hence, the feedback loop implicit in Michael Sorkin's code is a useful construct to deploy for such procedure. In his code, evolution is crucial for the progression of the city. In fact, when his city is "governed by a sense of variety," it goes beyond social reform to resonate the qualities of the urban age.[568] Additionally, his code is also concerned about the memory of the site. By cherishing the

[567] For Michael Dear's predicted urban growth, see Southern California Studies Center, "Sprawl Hits the Wall: Confronting the Realities of Metropolitan Los Angeles."

[568] Michael Sorkin develops a code that describes a city that is "informed by [the] fantasies of place and governed by a sense of variety." The code, he says, "sees the city as a medium of assembly and which takes its measure from people of foot." "It is an egalitarian city," he says, "in the sense that no hierarchy of privilege inheres in the physical differences it presents." Sorkin, *Local Code: The Constitution of a City at 42 N Latitude*, 128.

constellation of stories only possible to assemble and process in compliance with the specific aspects of a particular environment, he accelerates the pace of interaction between the apparatus of exercising powers and the appropriation of marginalized sites. It is within procedures such as Sorkin's feedback loop that the embryos of new urban architecture unfold. When zoning fails to comprehend these procedures, the tendencies beyond conformity are repressed and the evolution of civic life is hampered.

5) We need to elucidate new interconnections between property and site.

The architecture literature intersects with the case studies to show that the universal aspects of urbanism process property rather than site. The inability of zoning to consider the intrinsic qualities of site poses a major problem for any architect concerned with accomplishing solutions beyond conformity. When the legal instruments that regulate the form and use of buildings remain unaffected by the suggestions produced to improve or enhance the capacity of site, then architecture is likely to fail its mission of inventing procedures beyond the constraints of code. Indeed, we need to expand on the current course of action to introduce a greater sensitivity to the intrinsic qualities of site, within the context of planning regulation.

The intersection of literature review and case study research suggests such measures to be undertaken through new interconnections between property and site. Throughout the scope of this dissertation, we have framed Dana Cuff's scholarship on the politics of property to elucidate these relationships. Cuff, whose research traces the roots of property rights through the history and theory of land ownership, establishes some useful connections between land, property, and

site when describing the procedures of urban development in the U.S.[569] Focusing on the relationships of these three conditions, Cuff's scholarship, however, is not enough if we want to extract new interconnections between the legal premises of property and the architectural potentials of site. By reading Cuff through the lens of Michael Sorkin's code, new interconnections occur.

We have already been reminded about Sorkin's code, which activates a feedback loop between the universal aspects of evolution and the specific attributes of memory. By recognizing the associative connections between his two conditions, however remaining critical about "the notion of a direct relationship," Sorkin uses his code to render the manners of evolution and memory independent of one another.[570] Hence, the autonomy of his two conditions is maintained despite their associative correlation.

Looking at Cuff through Sorkin's code, her three conditions of land, property, and site can be reinterpreted. Following Sorkin's autonomy, they can be turned into a set of variables possible to adjust independently of their associative relationship. Moving from conditions to variables, land,

[569] Dana Cuff defines property ownership as "a set of relationship among people," which facilitates her research on several "conditions of property." She describes the process of converting land into property "when ownership comes into play," and she explains the transformation of property into site "when some development is intended." See Cuff, *The Provisional City: Los Angeles Stories of Architecture and Urbanism*, 62-93.

[570] Michael Sorkin expresses the prevailing lack of "satisfying visions of how the modern city might be wonderful." He says that the dominant discourse emanates either from nostalgia -- an "urban equivalent of the 'Family Values' debate in American politics" -- or from a "fallacy that form has a constant relationship to content." Sorkin's remark -- and particularly his concern about nostalgia -- is further elucidated when he warns for the general argument that "[i]f only traditional families or traditional cities could be reconstructed…all would be right." Expanding on this warning, we can unfold some important instructions for how to critically use his feedback loop. While he interconnects the conditions of evolution and memory, he also prevents problematic interpretations by reminding about the importance of their autonomy, such as the interpretation that urban evolution could be stimulated through the reconstruction of collective memory. See Sorkin, *Local Code: The Constitution of a City at 42 N Latitude*, 127-28.

property, and site can be studied and convoluted separately and without any hierarchies, and their interconnections can shift from tension to compression and back again. Thus the relationship between the variables can fluctuate and mutate independent of scale or internal logic. Drawing from the intersection of Cuff and Sorkin, we can elaborate on the intermediate of a single site and its zoning envelope, as Neil M. Denari did in West Chelsea. But we can also describe the site as an ecosystem that holds multiple properties within the realm of its constituting boundaries. This latter approach may be useful if, for example, we want to frame some specific qualities of the City of Los Angeles for establishing interconnections between multiple ADUs proliferating within the domains of several properties. It may also be useful if we want to stipulate new relationships between bundles of properties within the realms of a single building, thus expanding upon the experiences we gained from the Interim Multiple Dwelling type in New York City. When the site becomes an ecosystem, Sorkin's discourse resonates to turn architecture into the DNA of urbanism. Developed through associative -- even mutational -- interconnections rendered by independent elaborations of the three variables, architectural innovation may be stimulated through intermediary procedures, reconfiguring the conventional relationships between universal and specific urban space.

The previously outlined construct may provide the context for new interconnections between property and site. Additionally, we need to experiment with form to render representations of relevant outcomes. Indeed, by processing the interconnection between property and site through design iterations, as Denari did in West Chelsea, the associative relationships of the previously explained variables are elucidated through the premises of form. And it is exactly through this procedure that code can be reformatted and used as a generative material for architectural design.

We have seen, with both Denari and Daly Genik Architects, that form experimentation serves to reconceptualize the zoning provision, and thus yield new intersections between property and site. The case studies prove the relevance of this procedure for New York, as well as for the City of L.A. Indeed, operating on the associative relationships previously outlined, form experimentation visualizes new interconnections between property and site through the premises of code manipulation.

BIBLIOGRAPHY

Ábalos, Iñaki, and Juan Herreros. *Tower and Office: From Modernist Theory to Contemporary Practice*. Edited by Joan Ockman. Cambridge, Mass: The MIT Press, 2003.

Alan Altshuler, James P. Womack, John R. Pucher. *The Urban Transportation System: Politics and Policy Innovation*. Cambridge, Mass: The MIT Press, 1979.

Allen, Stan, and Hal Foster. "A Conversation with Kenneth Frampton." *October* 106 (Fall, 2003): 35–58.

Amateau, Albert. "High Line Reuse Picks up Steam." New York Architecture http://www.nyc-architecture.com/CHE/CHE029-TheHighLine.htm.

Anderson, Stanford, ed. *On Streets*. Cambridge, Mass: The MIT Press, 1978.

"Artists Fight to Save Lofts." *Village Voice* 8, no. 17 (Februari 14, 1963): 1, 7.

Aureli, Pier Vittorio. *The Possibility of an Absolute Architecture*. Cambridge, Mass: The MIT Press, 2011.

———. "Toward the Archipelago." *Log* 11 (Winter, 2008): 91-119.

Babcock, Richard F. *The Zoning Game: Municipal Practices and Policies*. Madison: The University of Wisconsin Press, 1966.

Babcock, Richard F., and Wendy U. Larsen. *Special Districts: The Ultimate in Neighborhood Zoning*. Cambridge, Mass: Lincoln Institute of Land Policy, 1990.

Babcock, Richard F., and Charles L. Siemon. *The Zoning Game Revisited.* Boston, MA: Oelgeschlager, Gunn & Hain, Publishers, Inc., 1985.

Baer, William C. "Customs, Norms, Rules, Regulations and Standards in Design Practice." In *Companion to Urban Design*, edited by Tridib Banerjee and Anastasia Loukaitou-Sideris, 277-87. New York: Routledge, 2011.

Baird, George. "Foreword." In *Site Unseen: Laneway Architecture and Urbanism in Toronto*, edited by Brigitte Shim and Donald Chong, 7-9. Toronto: University of Toronto Faculty of Architecture, Landscape and Design, 2004.

———. "On Building Downtown: Design Guidelines for the Core Area." Toronto: Design Guidelines Study Group, September, 1974.

Banham, Reyner. *Los Angeles: The Architecture of Four Ecologies*. Berkeley, CA: University of California Press, 1971.

Barnett, Jonathan. *An Introduction to Urban Design*. New York: Harper & Row, Publishers, 1982.

Barrett, William. "The Village: Bohemia Gone Bourgeois." *New York Times*, April 4, 1954, VI: 19-20, 22.

Bassett, Edward M. *Zoning*. New York: National Municipal League, 1932.

Bell, Michael. *16 Houses*. New York: The Monacelli Press, 2003.

Ben-Joseph, Eran. *Code of the City: Standards and the Hidden Language of Place Making*. Cambridge, Mass: The MIT Press, 2005.

Berg, Bruce F. *New York City Politics: Governing Gotham*. New Brunswick, N.J.: Rutgers University Press, 2007.

Berkeley, Ellen Perry. "Westbeth Artists in Residence." *Architectural Forum* (October, 1970): 45-49.

Bernstein, Roslyn, and Shael Shapiro. *Illegal Living: 80 Wooster Street and the Evolution of SoHo*. Vilnius, Lithuania: Jono Meko Fondas, 2010.

Bosoni, Giampiero. "Parasitic Architecture." *Lotus International* 133 (2008): 118-29.

Boyer, M. Christine. *Dreaming the Rational City: The Myth of American City Planning*. Cambridge, Mass: The MIT Press, 1983.

Broeckmann, Andreas, Joke Brouwer, Bart Lootsma, Arjen Mulder, and Lars Spuybroek, eds. *The Art of the Accident*. Rotterdam: NAI Publishers/V2_Organisation, 1998.

Brute Force Collaborative. "Dadus | Laneway Housing." http://bruteforcecollaborative.com/wordpress/2010/02/27/dadus-laneway-housing/.

Burrows, Edwin G., and Mike Wallace. *Gotham: A History of New York City to 1898*. New York: Oxford University Press, 2000.

Burry, Mark. "Between Intuition and Process: Parametric Design and Rapid Prototyping." In *Architecture in the Digital Age: Design and Manufactoring*, edited by Branko Kolarevic, 148-62. New York: Taylor & Francis, 2003.

Canguilhem, Georges. *The Normal and the Pathological*. New York: Zone Books, 1989.

Carson, Rachel. *Silent Spring*. Boston: Houghton Mifflin, 1962.

Cathy E. Creswell. "AB 1866 Section 65852.2 (Second-Unit Law)." edited by Division of Housing Policy Development. Sacramento, CA, August 6, 2003.

Cerdá, Ildefons. *Cerdá: The Five Bases of the General Theory of Urbanization*. Edited by Arturo Soria y Puig. Madrid: Electra, 1999.

Certeau, Michel de. *The Practice of Everyday Life*. Berkeley, CA: University of California Press, 1984.

Chapple, Karen, Jake Wegmann, Alison Nemirow, and Colin Dentel-Post. "Yes in My Backyard: Mobilizing the Market for Secondary Units." Berkeley, CA: The Center for Community Innovation, September, 2011.

Chavez, Patrick. "Evictions Rise: Loft Colony Holds Out as City Lays Siege." *Village Voice* 6, no. 21 (March 16, 1961): 1, 12.

Choay, Françoise. *The Rule and the Model: On the Theory of Architecture and Urbanism.* Cambridge, Mass: The MIT Press, 1997.

City Club of New York. *The Wastelands of New York City*. New York: City Club of New York, 1962.

"City Cooperates, but Artists Face New Problem: Demolition of Loft Area." *Village Voice* 7, no. 9 (December 21, 1961): 3, 8.

"City May Move to Legalize Artists' Lofts, Stop Strike." *Village Voice* 6, no. 44 (August 24, 1961): 3.

City of Los Angeles Department of City Planning. "Zone Information & Map Access System." http://zimas.lacity.org/.

City of New York. "Building Classification." City of New York http://nycprop.nyc.gov/nycproperty/help/hlpbldgcode.html.

City Planning Commission City of New York. "C 990453 Zmm." New York, July 21, 1999.

———. "N 050161(a) Zrm." New York, May 25, 2005.

"City Relaxes Pressure on Loft Studios." *Village Voice* 7 (December 4, 1961): 1.

Colomina, Beatriz. "Beyond Pavilions: Architecture as a Machine to See." In *Dan Graham: Beyond*, edited by Elizabeth Hamilton, 191-207. Cambridge, Mass: The MIT Press, 2009.

———. "Double Exposure: Alternation to a Suburban House, a Project by Dan Graham." *Prototypo* 3, no. 6 (December, 2001): 80-87.

Cook, Peter. *Morphosis: Buildings and Projects*. New York: Rizzoli, 1989.

Cosby, Arthur F. "Code of Ordinances of the City of New York." New York: The Banks Law Publishing Company, 1922.

Crouch, Dora P., Daniel J. Garr, and Alex I. Mundigo. *Spannish City Planning in North America*. Cambridge, Mass: The MIT Press, 1982.

Crow, Thomas. "Legend and Myth." In *Gordon Matta-Clark*, edited by Corinne Diserens, 8-21. New York: Phaidon, 2003.

Cruz, Teddy. "Border Cities: Tactics of Encroachment." edited by The Center for Humanities at the University of California San Diego: You Tube http://www.youtube.com/watch?v=u0saEe0caJ8, April 20, 2006.

Cuff, Dana. "Community Property: Enter the Architect or, the Politics of Form." In *Slow Space*, edited by Michael Bell and Sze Tsung Leong, 120-40. New York: The Monacelli Press, 1998.

———. "Los Angeles: Urban Development in the Postsuburban Megacity." In *Megacities: Urban Form, Governance, and Sustainability*, edited by André Sorensen, 273-87. New York: Springer, 2010.

———. *The Provisional City: Los Angeles Stories of Architecture and Urbanism.* Cambridge, Mass: The MIT Press, 2000.

———. "Tabula Futura Imperfecta: The Architecture of Disaster." In *Fast-Forward Urbanism: Rethinking Architecture's Engagement with the City*, edited by Dana Cuff and Roger Sherman, 75-93. New York: Princeton Architectural Press, 2011.

Cuff, Dana, and Per-Johan Dahl. "Rx for the R1: Sustaining the Neighborhood." *306090: Sustain and Develop* 13 (2010): 24-33.

Cuff, Dana, Tim Higgins, and Per-Johan Dahl. "Backyard Homes LA." Los Angeles: cityLAB UCLA Department of Architecture + Urban Design, 2010.

Dahl, Per-Johan. "The Shadows of L.A." *Critical Planning* 17 (Summer, 2010): 124-39.

Davis, Mike. *Ecology of Fear: Los Angeles and the Imaginaiton of Disaster*. New York: Metropolitan Books, 1998.

de Solà-Morales, Ignasi. *Differences: Topographies of Contemporary Architecture*. Edited by Sarah Whiting. Cambridge, Mass: The MIT Press, 1997.

de Solà-Morales, Ignasi. "Place: Permanence or Production." In *Differences: Topographies of Contemporary Culture*, edited by Sarah Whiting, 93-104. Cambridge, Mass: The MIT Press, 1997.

Dear, Michael, and Steven Flusty. "Los Angeles as Postmodern Urbanism." In *From Chicago to LA: Making Sense of Urban Theory*, 61-84. Thousand Oaks: Sage, 2002.

Debord, Guy. *The Society of the Spectacle*. New York: Zone Books, 1995.

DeLanda, Manuel. *A New Philosophy of Society: Assemblage Theory and Social Complexity*. New York: Continuum, 2006.

Deleuze, Gilles, and Félix Guattari. *Anti-Oedipus: Capitalism and Schizophrenia*. Minneapolis, MN: University of Minnesota Press, 1983.

———. *A Thousand Plateaus*. New York: Continuum, 2004.

Denari, Neil M. *Gyroscopic Horizons*. New York: Princeton Architectural Press, 1999.

———. *Interrupted Projections: Cor-Tex Architecture: Another Global Surface, or Territorial Re-Codings on the World Sheet*. Edited by Gallery MA. Tokyo: TOTO Shuppan, 1996.

Deutsche, Rosalyn, and Cara Gendel Ryan. "The Fine Art of Gentrification." *October* 31 (Winter, 1984): 91-111.

Dia Art Foundation. "The Dia Art Foundation Webpage." The Dia Art Foundation http://www.diacenter.org/.

Duany, Andres, and Elizabeth Plater-Zyberk. *Towns and Town-Making Principles*. Edited by Alex Krieger and William Lennertz. Cambridge, Mass: Harvard University Graduate School of Design, 1991.

Duany Plater-Zyberk & Co. "Smartcode Version 9.2." Ithaca, NY: New Urban News Publications, Inc., 2008.

Duplaix, Michel. "The Loft Generation." *Vogue* 55 (June 1961): 108-11.

Eccles, Jane. "West Village, Cont." *Village Voice* 6, no. 24 (April 6, 1961): 4.

Eisenman, Peter. "Digital Scrambler: From Index to Codex." In *Written into the Void: Selected Wrtings 1990-2004*, 133-50. New Haven: Yale University Press, 2007.

———. "Notes on Conceptual Architecture: Towards a Definition." *Casabella* 359-360 (November/December, 1971): 49-56.

———. *Written into the Void: Selected Writings 1990-2004*. New Haven: Yale University Press, 2007.

Ferriss, Hugh. *Power in Buildings: An Artist's View of Contemporary Architecture*. Santa Monica: Hennessey + Ingalls, 1998.

Fishman, Robert. *Bourgeois Utopias: The Rise and Fall of Suburbia*. New York: Basic Books, Inc., Publishers, 1987.

———. "Revolt of the Urbs: Robert Moses and His Critics." In *Robert Moses and the Modern City: The Transformation of New York*, edited by Hilary Ballon and Kenneth T. Jackson, 122-29. New York: W. W. Norton & Company, 2007.

Foucault, Michel. *Discipline & Punish: The Birth of the Prison*. Second ed. New York: Vintage Books, 1995.

"Four Letter Word." *Architectural Forum* 132 (March, 1970): 19.

Frampton, Kenneth. "Introduction." In *Richard Meier Architect: Buildings and Projects 1966-1976*, edited by Richard Meier, 7-17. New York: Oxford University Press, 1976.

———. *Studies in Tectonic Culture: The Poetics of Construction in Nineteenth and Twentieth Century Architecture*. Cambridge, Mass: The MIT Press, 1996.

———. "Towards a New Architecture 1915-1927." In *Le Corbusier*, 21-45. London: Thames & Hudson Inc., 2001.

Friedan, Betty Naomi. *The Feminine Mystique*. New York: W.W. Norton & Co, 1963.

Frigand, Sidney J. "A Perspective on Planning." In *The New City: Architecture and Urban Renewal (an Exhibition at the Museum of Modern Art, New York, January 23-March 13, 1967)*, edited by New York The Museum of Modern Art, 2-7. New York: The Museum of Modern Art, New York, 1967.

Gallion, Arthur B., and Simon Eisner. *The Urban Pattern: City Planning and Design*. Fifth ed. New York: Van Nostrand Reinhold Company, 1986.

Gayle, Margot, and Carol Gayle. *Cast-Iron Architecture in America: The Significance of James Bogardus*. New York: W.W. Norton & Company, 1998.

Gervis, Stephanie. "Loftless Leonardos Picket as Mona Merely Smiles." *Village Voice* 8, no. 17 (February 14, 1963): 1, 13.

Giedion, Sigfried. *Mechanization Takes Command: A Contribution to Anonymous History*. New York: Oxford University Press, 1948.

———. *Space, Time, and Architecture: The Growth of a New Tradition*. Fifth ed. Cambridge, Mass: Harvard University Press, 1967.

Giovannini, Joseph. "Richard Meier, Platonist." In *Richard Meier:Houses and Apartments*, edited by Ron Broadhurst, 74-81. New York: Rizzoli, 2007.

Godrey, Brian J. "Urban Development and Redevelopment in San Francisco." *The Geographical Review* 87, no. 3 (July, 1997): 309-33.

Goldberger, Paul. *The City Observed: New York*. New York: Vintage Books, 1979.

Goodman, Susan. "1,000 Artists at City Hall Picket for Their Lofts." *Village Voice* 9, no. 25 (April 9, 1964): 1, 18.

———. "City Still Cool to Artists on Loft-Housing Issue." *Village Voice* 9, no. 4 (November 14, 1963): 1, 17.

———. "Picket City Hall: State Softens on Artists, but City Will Not Relent." *Village Voice* 9, no. 22 (March 19, 1964): 1, 7.

———. "State May Allow Artists to Make Wide Use of Lofts." *Village Voice* 9, no. 17 (February 13, 1964): 1, 8.

Gorlin, Alexander. "Lofty Ideals." *Metropolis* 27, no. 1 (July-Aug, 2007): 112-15, 45.

Groves, Martha. "Pocket Farm Could End Up Dying on the Vine." *Los AngelesTimes*, July 31, 2009, A12.

Haar, Charles M. "Reflections on Euclid: Social Contract and Private Purpose." In *Zoning and the American Dream: Promises Still to Keep*, edited by Charles M. Haar and Jerold S. Kayden, 333-54. Chicago, Il: Planners Press, American Planning Association in association with the Lincoln Institute of Land Policy, 1989.

Haar, Charles M., and Jerold S. Kayden. "Part V: Anticipating the Future." In *Zoning and the American Dream: Promises Still to Keep*, edited by Charles M. Haar and Jerold S. Kayden, 331. Chicago, Il: Planners Press, American Planning Association in association with the Lincoln Institute of Land Policy, 1989.

———, eds. *Zoning and the American Dream: Promises Still to Keep*. Chicago, Il: Planners Press, American Planning Association in association with the Lincoln Institute of Land Policy, 1989.

Hartman, Chester. *Yerba Buena: Land Grab and Community Resistance in San Francisco*. San Francisco: Glide Publications, 1974.

Hayden, Dolores. "Reconstructing Domestic Space." In *Redesigning the American Dream: The Future of Housing, Work, and Family Life*, 173-208. New York: W.W. Norton & Company, 1984.

Heidegger, Martin. *Poetry, Language, Thought*. New York: Harper & Row, 1975.

Hildebrand, Adolf. *The Problem of Form in Painting and Sculpture*. New York: G. E. Stechert & Co., 1907.

Hines, Thomas S. *Franklin D. Israel: Buildings + Projects*. Edited by Joe Day and Dan Waterman. New Yok: Rizzoli, 1992.

Hodges, Samuel J., and Ellis G. Goldman. "Allowing Accessory Apartments." Washington, DC, October, 1983.

Houck, Jeanne. "Dixon Bain: An Oral History Interview Conducted for the Gvshp Westbeth Oral History Project." New York: The Greenwich Village Society for Historic Preservation, April 27, 2007.

———. "Joan Davidson: An Oral History Interview Conducted for the Gvshp Westbeth Oral History Project." New York: The Greenwich Village Society for Historic Preservation, March 13, 2007.

———. "Richard Meier: An Oral History Interview Conducted for the Gvshp Westbeth Oral History Project." New York: The Greenwich Village Society for Historic Preservation, November 8, 2007.

———. "Tod Williams: An Oral History Interview Conducted for the Gvshp Westbeth Oral History Project." New York: The Greenwich Village Society for Historic Preservation, April 2, 2007.

Hudson, James R. "Organized Groups, Land Use Decisions, and Ecological Theory." *Sociological Perspectives* 31, no. 1 (January, 1988): 122-41.

———. *The Unanticipated City: Loft Conversions in Lower Manhattan*. Amherst: University of Massachusetts Press, 1987.

Huge, Elijah. "Editorial Statement." *Perspecta* 35 (2004): 4-5.

Huxtable, Ada. "Bending the Rules." *New York Times*, May 10, 1970, 111.

Ingrassia, Michele. "SoHo in Chelsea: An Unlikely Neighborhood Is Suddenly the Epicenter of the Art and Club Scene." *Daly News*, July 1, 2001.

Institute for Local Government. "Santa Cruz Implements "Granny Flat" Program." http://www.ca-ilg.org/node/633.

"Instructive Disaster." *Architectural Forum* 124 (March 1966): 26.

J.M. Kaplan Fund. "History of the Fund." J.M. Kaplan Fund http://www.jmkfund.org/history.html.

Jackson, Peter. "Neighbourhood Change in New York: The Loft Conversion Process." *Tijdschrift voor Economische en Sociale Geografie* 76, no. 3 (1985): 202-15.

Jacobs, Jane. *The Death and Life of Great American Cities*. New York: Random House, Inc., 1961.

Jameson, Fredric. *Postmodernism, or, the Cultural Logic of Late Capitalism*. Durham: Duke University Press, 1991.

Johnston, Jill. *Jasper Johns: Privileged Information*. London: Thames & Hudson, 1996.

Joselit, David. *American Art since 1945*. London: Thames & Hudson Ltd, 2003.

Kaliski, John. "Re-Visualizing the Dream: Los Angeles and the Future of Single-Family Homes." In *Re: American Dream: Six Urban Housing Prototypes for Los Angeles*, edited by Roger Sherman, 15-24. New York: Princeton Architectural Press, 1995.

Katz, Bruce, Andy Altman, and Julie Wagner. "An Agenda for the Urban Age." In *The Endless City*, edited by Ricky Burdett and Deyan Sudjic, 474-81. London: Phaidon Press Ltd, 2007.

Kaufman, Stanley. "Loft Law Lives on but after 14 Years, Most Novel Issues Have Been Resolved." *New York Law Journal* 216, no. 37 (August 21, 1996).

Kayden, Jerold S. "The Law of Urban Design." In *Companion to Urban Design*, edited by Tridib Banerjee and Anastasia Loukaitou-Sideris, 175-85. New York: Routledge, 2011.

———. *Privately Owned Public Space: The New York City Experience*. New York: John Wiley & Sons, 2000.

Kelbaugh, Douglas S. *Repairing the American Metropolis*. Seattle: University of Washington Press, 2002.

Kelly, Eric Damian. "Zoning." In *The Practice of Local Government Planning*, edited by Frank S. So and Judith Getzels, 251-84. Washington D.C.: International City Management Associaiton, 1988.

Kendig, Lane. *Performance Zoning*. Washington, D.C.: Planners Press American Planning Association, 1980.

Khan, Shazia. "Distinct New High-Rise Springs up Beside High Line Park." *NY1.COM* (March 5, 2010).

Klanten, Robert , and Lukas Feireiss, eds. *Space Craft: Fleeting Architecture and Hideouts*. Berlin: Gestalten Verlag, 2007.

Kolnick, Kathy A. "Order before Zoning: Land Use Regulation in Los Angeles 1880 - 1915." University of Southern California, May, 2008.

Koolhaas, Rem. "Bigness: Or the Problem of Large." In *S, M, L, XL*, edited by Jennifer Siegler, 495-516. Rotterdam: 010 Publishers, 1995.

———. *Delirious New York*. New York: The Monacelli Press, 1994.

Koolhaas, Rem, and Bruce Mau. *S, M, L, XL*. Edited by Jennifer Siegler. Rotterdam: 010 Publishers, 1995.

"Korteknie Stuhlmacher Architecten: Parasite Las Palmas Rotterdam, the Netherlands 2001." *A + U. Architecture and Urbanism* 403, no. 4 (2004): 72-75.

"Korteknie Stuhlmacher Architecten: Parasite Las Palmas, Wilhelminakade, Rotterdam, 2001.". *Lotus International*, no. 133 (2008): 24-27.

Kostelanetz, Richard. *SoHo: The Rise and Fall of an Artists' Colony*. New York: Routledge, 2003.

Krauss, Rosalind. "Grids." *October* 9 (Summer, 1979): 50-64.

Krier, Léon. *Léon Krier, Houses, Places, Cities*. Edited by Demetri Porphyrios. London: AD Editions Ltd, 1984.

———. "Tradition - Modernity - Modernism: Some Necessary Explanations." In *Post-Modernism & Discontinuity*, edited by Andreas Papadakis, 38-43. London: AD Editions Ltd, 1987.

Kwinter, Stanford. "La Città Nuova: Modernity and Continuity." *Zone* 1/2 (May, 1986): 80-121.

Landmarks Preservation Commission. "Bell Telephone Laboratories Complex (Including the Former Western Electric Company and Hook's Steam-Powered Factory Buildings) (Now Westbeth Artists' Housing)." New York, October 25, 2011.

Lavin, Sylvia. "Fire Rated." In *Coop Himmelb(l)au: Beyond the Blue*, edited by Peter Noever, 178-81. Munich/Vienna: Prestel/MAK, 2007.

———. *Form Follows Libido: Architecture and Richard Neutra in a Psychoanalytic Culture*. Cambridge, Mass: The MIT Press, 2004.

———. "Order in the House." In *Re: American Dream, Six Urban Housing Prototypes for Los Angeles*, edited by Roger Sherman, 9-14. New York: Princeton Architectural Press, 1995.

———. "The Temporary Contemporary." *Perspecta* 34 (2002): 128-35.

Lavin, Sylvia, Per-Johan Dahl, and Sergio Miguel Figueiredo. "IAUS." *Log* 13/14 (Fall, 2008): 154-58.

Le Corbusier. *Le Corbusier: Toward an Architecture*. Los Angeles: The Getty Research Institute, 2007.

———. *Towards a New Architecture*. Thousand Oaks, CA: BN Publishing, 2008.

Lee, Pamela M. *Objects to Be Destroyed: The Work of Gordon Matta-Clark*. Cambridge, Mass: The MIT Press, 2000.

Lefebvre, Henri. *The Production of Space*. Malden, Mass: Blackwell Publishing, 1991.

Lehnerer, Alex. *Grand Urban Rules*. Rotterdam: 010 Publishers, 2009.

Lessig, Lawrence. *Code: And Other Laws of Cyberspace*. New York: Basic Books, 1999.

Lewis Tsurumaki Lewis. "snafu." In *Situaion Normal... (Pamphlet Architecture 21)*, 4-13. New York: Princeton Architectural Press, 1998.

Lin, Jan. "Los Angeles Chinatown: Tourism, Gentrification, and the Rise of an Ethnic Growth Machine." *Amerasia Journal* 34, no. 3 (2008): 110-26.

"Living Big in a Loft." *Life* (March 27, 1970): 62-63.

Loukaitou-Sideris, Anastasia, Evelyn Blumenberg , and Renia Ehrenfeuch. "Sidewalk Democracy: Municipalities and the Regulation of Public Space." In *Regulating Place: Standards and the Shaping of Urban America*, edited by Eran Ben-Joseph and Terry S. Szold, 141-66. New York: Routledge, 2005.

Loukaitou-Sideris, Anastasia, and Tridib Banerjee. *Urban Design Downtown: Poetics and Politics of Form*. Berkeley, CA: University of California Press, 1998.

Lynn, Greg. *Folds, Bodies & Blobs: Collected Essays*. Brussels: La Lettre Volée, 2004.

Mallgrave, Harry Francis. *Gottfried Semper: Architect of the Nineteenth Century*. New Haven: Yale University Press, 1996.

———. *Modern Architectural Theory: A Historical Survey, 1673–1968*. New York: Cambridge University Press, 2005.

Mandelker, Daniel R. "The Basic Philosophy of Zoning: Incentive or Restraint?" In *The New Zoning: Legal, Administrative, and Economic Concepts and Techniques*, edited by Norman Marcus and Marilyn W. Groves, 14-22. New York: Praeger Publishers, 1970.

———. *Environment and Equality: A Regulatory Challenge*. New York: McGraw-Hill Book Company, 1981.

Marcuse, Peter. "The Grid as City Plan: New York City and Laissez-Faire Planning in the Nineteenth Century." *Planning Perspectives* 2, no. 3 (1987): 287-310.

Meier, Richard. *Richard Meier Architect: Buildings and Projects 1966-1976*. New York: Oxford University Press, 1976.

———. "Westbeth and Flexible Code Interpretations: A Statement by Richard Meier." *Architectural Record* (March, 1970): 106.

———. "Westbeth Artists' Housing." In *Richard Meier Architect: Buildings and Projects 1966-1976*, edited by Richard Meier, 112-17. New York: Oxford University Press, 1976.

Metraux, Guy P. R. "Ancient Housing: "Oikos" and "Domus" in Greece and Rome." *The Journal of the Society of Architectural Historians* 58, no. 3 (September, 1999): 392-405.

Moffat, David. "Accessory Dwelling Units - Santa Cruz, California [Edra / Places Awards, 2004 -- Planning]." *Places* 16.3 (2004): 26-29.

Molotch, Harvey, and Mark Treskon. "Changing Art: SoHo, Chelsea and the Dynamic Geography of Galleries in New York City." *International Journal of Urban and Regional Research* 32.2 (June 2009): 517–41.

Morrish, William R., Susanne Schindler, and Katie Swenson, eds. *Growing Urban Habitats: Seeking as New Housing Development Model*. Richmond, CA: William Stout Publishers, 2009.

Mostafavi, Mohsen. "Landscapes of Urbanism." In *Landscape Urbanism: A Manual for the Machinic Landscape,* edited by Mohsen Mostafavi and Ciro Najle, 5-9. London: AA Publications, 2003.

Mumford, Eric. *The CIAM Discourse on Urbanism, 1928-1960*. Cambridge, Mass: The MIT Press, 2000.

———. *Defining Urban Design: CIAM Architects and the Formation of a Discipline, 1937-69*. New Haven: Yale University Press, 2009.

Mumford, Lewis. *The City in History: Its Origins, Its Transformations, and Its Prospects*. New York: Harcourt Brace & World, Inc., 1961.

———. *The Story of Utopias*. New York: Boni and Liveright, Inc., 1922.

———. "What Is a City?" *Architectural Record* 82, no. 5 (November, 1937): 59-62.

Myers, Barton. "Urban Consolidation." *Design Quarterly* Vacant Lottery, no. 108 (1978): 8-15.

Myers, Dowell, and Elizabeth Gearin. "Current Preferences and Future Demand for Denser Residential Environments." *Housing Policy Debate* 12, no. 4 (2001): 633-59.

National Endowment for the Arts. "National Endowment for the Arts 2011 Guide." edited by Don Ball. Washington, DC: National Endowment for the Arts, 2011.

New York Architecture. "The High Line." nyc-architecture.com http://www.nyc-architecture.com/CHE/CHE029-TheHighLine.htm.

New York City. "Appendix L Multiple Dwelling Law Article 7-C. Legalization of Interim Multiple Dwelling." New York, June 21, 1982.

New York City Department of City Planning. "33 (Cp-20183)." In *City Planning Resoluiton*. New York: New York City Department of City Planning, March 13, 1968.

———. "West Chelsea Special District (N 050161(a)Zrm)." New York: New York City Department of City Planning, June 23, 2005.

———. "West Chelsea Zoning Proposal - Approved: Background & Existing Conditions (Existing Zoning)." New York City Department of City Planning http://home2.nyc.gov/html/dcp/html/westchelsea/westchelsea2d.shtml.

———. "Zoning Resolution the City of New York, Web Version." New York: New York City Department of City Planning, 27 April 2011.

New York City Government. "About Zoning." New York City Government http://www.nyc.gov/html/dcp/html/zone/zonehis.shtml.

———. "BSA: NYC Board of Standards and Appeals." New York City Government http://www.nyc.gov/html/bsa/html/mission/mission.shtml.

———. "The Uniform Land Use Review Procedure (Ulurp)." New York City Government http://www.nyc.gov/html/dcp/html/luproc/ulpro.shtml.

New York State. "Rent Regulated Definitions." Homes & Community Renewal https://www1.dhcr.state.ny.us/BuildingSearch/popup.aspx.

New York State Division of Housing & Community Renewal. "History of Rent Regulation." TenantNet http://www.tenant.net/Oversight/50yrRentReg/history.html.

NMDA. "HL23 2010 / New York." NMDA http://www.nmda-inc.com/index.php?/projects/high-line-23/.

Office of Lower Manhattan Development. "Lower Manhattan Waterfront." New York: City Planning Commission, 1975.

———. "Special Greenwich Street Development District." New York: City Planning Commission, 1971.

Ouroussoff, Nicolai. "An Appraisal; Gardens in the Air Where the Rail Once Ran." *New York Times*, August 12, 2004.

———. "Downtown Skyscraper for the Digital Age." (February 9, 2011).

Page, Max. *The Creative Destruction of Manhattan, 1900-1940*. Chicago: The Chicago University Press, 1999.

Paterson, Joy. "Hard Lofts, Soft Lofts: What's the Difference?" Real Estate Pro Articles http://www.realestateproarticles.com/Art/6902/263/Hard-Lofts-Soft-Lofts-What-s-the-Difference.html.

Pedersen, Martin C. "The Granny Flat Grows Up: A Santa Cruz Program Promotes Garage Conversions as an Alternative to Sprawl." http://www.metropolismag.com/cda/story.php?artid=1597.

Pet Shop Boys. "Suburbia." Parlophone / EMI, 1986.

Philip Habib & Associates. "Environmental Assessment Statement High Line 23 Authorization." New York: New York City Department of City Planning, February, 2006.

Plumb, Barbara. *Young Designs in Living*. New York: Viking Press, 1969.

Plunz, Richard. *A History of Housing in New York: Dwelling Type and Social Change in the American Metropolis*. New York: Columbia University Press, 1990.

Pope, Albert. "From Form to Space." In *Fast-Forward Urbanism: Rethinking Architecture's Engagement with the City*, edited by Dana Cuff and Roger Sherman, 143-75. New York: Princeton Architectural Press, 2011.

Ranalli, George. "Architecture and Domestic Ritual: New York City Loft." *Avant Garde: A Journal of Theory and Criticism in Architecture and the Arts* 1 (Winter 1989): 54-61.

Reitz, Greg. "Movin' on Up: Challenges and Opportunities of Vertical, Infill, Mixed-Use Development." *Environmental Design + Construction: The Premier Source for Integrated High-Performance Buildings* (January, 2008): 14-16.

RIEA. *Reseach Institute for Experimental Architecture: The First Conference*. Edited by Peter Cook et al. New York: Princeton Architectural Press, 1990.

Riis, Jacob A. *How the Other Half Lives*, The Barnes & Noble Library of Essential Reading. New York: Barnes & Noble, Inc., 2004.

"Rockefeller Signs Loft Bill, Artists Await City Action." *Village Voice* 9, no. 28 (April 30, 1964): 3.

Rosenbaum, Ron. "Artists' Housing. SoHo in New York: A Fight for Survival." *Village Voice* 14, no. 56 (November 6, 1969): 1, 22-23, 25, 27.

Rosenhaft, Ann. "West Village, Cont." *Village Voice* 6, no. 24 (April 6, 1961): 4.

Rossi, Aldo. *The Architecture of the City*. Translated by Diane Ghirardo and Joan Ockman. Edited by Peter Eisenman, Oppositions Books. New York: The Institute for Architecture and Urban Studies, 1982.

Rowe, Colin. *As I Was Saying, Volume 2: Cornelliana* Cambridge, Mass: The MIT Press, 1999.

Rowe, Colin, and Alexander Caragonne. *As I Was Saying, Volume 3: Urbanistics*. Cambridge, Mass: The MIT Press, 1999.

Rowe, Colin, and Fred Koetter. *Collage City*. Cambridge, Mass: The MIT Press, 1978.

Rudofsky, Bernard. *Streets for People: A Primer for Americans*. New York: Doubleday and Company, 1969.

Rus, Mayer. *Loft*. New York: The Monacelli Press, 1998.

Ryder, Sharon Lee. "A Very Lofty Realm." *Progressive Architecture* 55 (October, 1974): 92-97.

Sadler, Simon. *Archigram: Architecture without Architecture*. Cambridge, Mass: The MIT Press, 2005.

Schulze, Franz. "Introduction." In *Ezra Stoller: The Seagram Building*, edited by Mark Lamster, 1-13. New York: Princeton Architectural Press, 1999.

Schwartz, Frederic, ed. *Alan Buchsbaum Architect & Designer: The Mechanics of Taste*. New York: The Monacelli Press, Inc., 1996.

———. "All Style(s)." In *Alan Buchsbaum Architect & Designer: The Mechanics of Taste*, edited by Frederic Schwartz, 12-15. New York: The Monacelli Press, Inc., 1996.

Schüco. "Austrian Cultural Forum Manhattan, New York." Schüco http://www.schueco.com/web/us/commercial/fassaden/references/reference_projects/manhatten_ny.

Semper, Gottfried. *Gottfried Semper: The Four Elements of Architecture and Other Writings*. Translated by Harry Francis Mallgrave and Wolfgang Herrmann. Cambridge, Mass: Cambridge University Press, 1989.

Seward, Aaron. "Profile: Alf Naman." *The Architect's Newspaper* (July 30, 2008).

Shane, David Grahame. *Recombinant Urbanism: Conceptual Modeling in Architecture, Urban Design and City Theory*. London: John Wiley & Sons Ltd, 2005.

Shanes, Eric. *Constantin Brancusi*. New York: Abbeville Press, 1989.

Shim, Brigitte, and Donald Chong, eds. *Site Unseen: Laneway Architecture and Urbanism in Toronto*. Toronto: University of Toronto Faculty of Architecture, Landscape and Design, 2004.

Sicha, Choire. "Hanging Garden of Babble-On." *The New York Observer* (November 16, 2003): 1.

Siegfried, Alanna, and Helene Zucker Seeman. *SoHo: A Guide*. New York: Neal-Schuman, 1978.

Simpson, Charles R. *SoHo: The Artist in the City*. Chicago: The University of Chicago Press, 1981.

Slesin, Suzanne, Stafford Cliff, and Daniel Rozensztroch. *The International Book of Lofts*. New York: Clarkson N. Potter, Inc., 1986.

Smith, Neil. *The New Urban Frontier: Gentrification and the Revanchist City*. New York: Routledge, 1996.

Smith, Patti. *Just Kids*. New York: HarperCollins Publishers, 2010.

Smith, Robert C. "Colonial Towns of Spanish and Portuguese America." *Journal of the Society of Architectural Historians* 14, no. 4 (December, 1955): 3-12.

SoHo-Lofts.com. "History of SoHo -- New York, Ny " SoHo Lofts: New York City, NY http://www.soho-lofts.com/soho-history.html.

"SoHo Artists Move into New York's Cast Iron District." *Architectural Record* 147 (June, 1970): 36.

Soja, Edward W. *Postmetropolis: Critical Studies of Cities and Regions*. Malden, Mass: Blackwell Publishing, 2000.

Sorkin, Michael. "The End(s) of Urban Design." *Harvard Design Magazine* (Fall 2006/Winter 2007): 5-18.

———. *Local Code: The Constitution of a City at 42 N Latitude*. New York: Princeton Architectural Press, 1993.

Southern California Studies Center. "Sprawl Hits the Wall: Confronting the Realities of Metropolitan Los Angeles." edited by Michael Dear. Los Angeles: The Southern

California Studies Center University of Southern California and The Brookings Institution Center on Urban and Metropolitan Policy, 2001.

Spann, Edward K. "The Greatest Grid: The New York Plan of 1811." In *Two Centuries of American Planning*, edited by Daniel Schaffer, 11-39. Baltimore: The Johns Hopkins University Press, 1988.

Steinberg, Darrell. "Bill Analysis." edited by Senate Transportation & Housing Committee. http://leginfo.ca.gov/pub/07-08/bill/sen/sb_0351-0400/sb_375_cfa_20080903_100317_sen_comm.html: Transportation and land use planning and the California Environmental Quality Act (CEQA), August 2008.

Stephens, Suzanne. "Semiotic Dimensions." *Progressive Architecture* (June, 1978): 85.

———. "The Sky Is Not the Limit: Midtown Zoning." *Skyline* (October, 1981): 5-7.

Stern, Robert A.M., Thomas Mellins, and David Fishman. *New York 1960: Architecture and Urbanism between the Second World War and the Bicentennial*. New York: The Monacelli Press, 1995.

Stewart, Barbara. "Making It Work: Westbeth Memories." *The New York Times*, November 20, 1994, 133.

Stoebuck, William B. "Takings Clause." Answers.com http://www.answers.com/topic/takings-clause.

Stratton, Jim. *Pioneering in the Urban Wilderness*. New York: Urizen Books, 1977.

Strom, Elizabeth. "Converting Pork into Porcelain: Cultural Institutions and Downtown Development." *Urban Affairs Review* 38, no. 1 (September, 2002): 3-21.

Sverbeyeff, Elizabeth, and Sue Nirenberg. "Robert Indiana." *House Beautiful* 112 (February, 1970): 52-55, 166.

Talen, Emily. *City Rules: How Regulations Affect Urban Form*. Washington, DC: Island Press, 2012.

The City of New York. "Zoning Resolution." In *Article VII: Administration, Chapter 2: Interpretations and Variances*. New York: City Planning Commission, February 2, 2011.

The City of Santa Cruz. "Accessory Dwelling Unit Manual." Santa Cruz, CA: The City of Santa Cruz, 2003.

———. "ADU Zoning Regulations Title 24 Zoning Ordinance of the City of Santa Cruz." Santa Cruz: The City of Santa Cruz, 2003.

The City of Seattle. "A Guide to Building a Backyard Cottage." edited by Seattle Planning Commission and Department of Planning and Development: The City of Seattle, June, 2010.

The City of Vancouver. "West Coast Environmental Law Municipal Code 20.91.202." http://wcel.org/city-vancouver-washington.

The Official Web Site of the High Line and Friends of the High Line. "High Line History." http://www.thehighline.org/about/high-line-history.

Triple Mint. "166 Perry Street - Asymptote." http://www.triplemint.com/triplemint/2007/07/166-perry-stree.html.

Wachowski, Larry and Andy "The Matrix." USA, 1999.

Waldheim, Charles. "Urbanism in the Aggregate: Toronto Laneways and the Centrality of Marginal Practice." In *Site Unseen: Laneway Architecture and Urbanism in Toronto*, edited by Brigitte Shim and Donald Chong, 31-37. Toronto University of Toronto Faculty of Architecture, Landscape and Design, 2004.

"Westbeth's Rehabilitation Project: A Clue to Improving Our Cities." *Architectural Record* (March, 1970): 103-06.

Whiting, Sarah. "Subjectifying the Modern." In *Differences: Topographies of Contemporary Architecture*, edited by Sarah Whiting, iii-xviii. Cambridge, Mass: The MIT Press, 1997.

Williams, Frank B. "Zone System Advocated to End City Congestion." *New York Times*, December 21, 1913, SM14.

Willis, Carol. *Form Follows Finance: Skyscrapers and Skylines in New York and Chicago*. New York: Princeton Architectural Press, 1995.

———. "Zoning and *Zeitgeist*: The Skyscraper City in the 1920s." *The Journal of the Society of Architectural Historians* 45, no. 1 (March, 1986): 47-59.

Woods, Lebbeus. *Radical Reconstruction*. New York: Princeton Architectural Press, 1997.

Voorhees Walker Smith & Smith. *Zoning New York City: A Proposal for a Zoning Resolution for the City of New York*. New York: City Planning Commission, 1958.

Yin, Robert K. *Case Study Reserach: Design and Methods*. 3 ed. Thousand Oaks: SAGE Publications, 2003.

Yukubousky, Richard. "Accessory Dwelling Units: Issues & Options." Seattle, WA: Municipal Research & Services Center of Washington, 1995.

Zukin, Sharon. *Loft Living: Culture and Capital in Urban Change*. New Brunswick, N.J.: Rutgers University Press, 1989.

———. *Naked City: The Death and Life of Authentic Urban Places*. New York: Oxford University Press, 2010.